

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. 13,351

APPLICATION OF EDGE PETROLEUM)
EXPLORATION COMPANY TO RESTRICT)
THE EFFECT OF THE SPECIAL RULES)
AND REGULATIONS FOR THE DOS HERMANOS-)
MORROW GAS POOL, EDDY COUNTY, NEW MEXICO)

ORIGINAL

REPORTER'S TRANSCRIPT OF PROCEEDINGS

EXAMINER HEARING

BEFORE: DAVID R. CATANACH, Hearing Examiner

October 7th, 2004

Santa Fe, New Mexico

2004 OCT 21 AM 10 59

This matter came on for hearing before the New Mexico Oil Conservation Division, DAVID R. CATANACH, Hearing Examiner, on Thursday, October 7th, 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.

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 Examiner Hearing
 CASE NO. 13,351

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A P P E A R A N C E S

FOR THE APPLICANT:

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FOR V-F PETROLEUM, INC.:

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 Santa Fe, New Mexico 87504-2208
 By: WILLIAM F. CARR

* * *

1 WHEREUPON, the following proceedings were had at
2 10:05 a.m.:

3 EXAMINER CATANACH: And at this time I will call
4 Case 13,351, the Application of Edge Petroleum Exploration
5 Company to restrict the effect of the special rules and
6 regulations for the Dos Hermanos-Morrow Gas Pool, Eddy
7 County, New Mexico. Call for appearances in this case.

8 MR. BRUCE: Mr. Examiner, Jim Bruce of Santa Fe,
9 representing the Applicant. I have three witnesses to be
10 sworn.

11 EXAMINER CATANACH: Call for additional
12 appearances.

13 MR. CARR: May it please the Examiner, my name is
14 William F. Carr with the Santa Fe office of Holland and
15 Hart, L.L.P. We have one witness, and I represent V-F
16 Petroleum, Inc.

17 EXAMINER CATANACH: Okay, can I get the witnesses
18 to please stand and be sworn in?

19 (Thereupon, the witnesses were sworn.)

20 JEFF A. SIKORA,
21 the witness herein, after having been first duly sworn upon
22 his oath, was examined and testified as follows:

23 DIRECT EXAMINATION

24 BY MR. BRUCE:

25 Q. Would you please state your name and city of

1 residence.

2 A. Jeff Sikora, Houston, Texas.

3 Q. Would you spell your last name for the Examiner,
4 please?

5 A. That's spelled S-i-k-o-r-a.

6 Q. Who do you work for and in what capacity?

7 A. I work for Edge Petroleum Exploration company,
8 and I am a senior landman there.

9 Q. Have you previously testified before the
10 Division?

11 A. Yes, I have.

12 Q. And were your credentials as an expert petroleum
13 landman accepted as a matter of record?

14 A. Yes, they were.

15 Q. And are you familiar with the land matters
16 involved in this Application?

17 A. Yes.

18 MR. BRUCE: Mr. Examiner, I'd tender Mr. Sikora
19 as an expert petroleum landman.

20 EXAMINER CATANACH: Any objection?

21 MR. CARR: No objection.

22 EXAMINER CATANACH: Mr. Sikora is so qualified.

23 Q. (By Mr. Bruce) Mr. Sikora, could you identify
24 Exhibit 1 and just briefly state what is depicted on that?

25 A. Exhibit 1 is a land plat that outlines the Dos

1 Hermanos Draw-Morrow Gas Pool in green and also highlights
2 the north half of Section 29, which is where Edge desires
3 to drill a well.

4 Q. Okay. Now, who are -- and let's skip over to
5 Exhibit 4. What is Exhibit 4, Mr. Sikora?

6 A. Exhibit 4 is a -- what that is is a list of wells
7 within a one-mile radius of the Dos Hermanos-Morrow Pool,
8 that have been drilled within a one-mile radius of the Dos
9 Hermanos-Morrow Pool, that actually penetrated the Morrow.

10 The first set of wells are all the wells that
11 penetrated the Morrow. The second set, it says there,
12 those four wells actually produced from the Dos Hermanos-
13 Morrow, and as you can see, there's only one active well in
14 the pool right now, and what we're trying to show here in
15 the third category there is the only active well producing
16 the Dos Hermanos today, is the V-F Petroleum Federal Well
17 Number 2.

18 Q. Now, a couple of things, looking at these two
19 exhibits. On Exhibit 1, the green outlines the current
20 boundaries of the pool, does it not?

21 A. Yes.

22 Q. And on Exhibit 4 there was a well, the Texas
23 International Petroleum Hudson Federal Number 1, which
24 actually tested the Morrow, did it not?

25 A. It did, yes, in the south half of Section 29.

1 Q. Okay. And there will be some other testimony on
2 that. But that was not a commercial Morrow producer, was
3 it?

4 A. No, sir, that was not a commercial Morrow
5 producer in the south half of 29.

6 MR. BRUCE: And Mr. Examiner, the Division never
7 did -- even though that well did produce some from the Dos
8 Hermanos Pool, the Division never expanded the pool to
9 include Section 29.

10 Q. (By Mr. Bruce) Mr. Sikora, so at this point the
11 only operator in the pool or of a Morrow well within a mile
12 of the pool is V-F Petroleum?

13 A. Correct.

14 Q. What are the special rules for the Dos Hermanos-
15 Morrow Gas Pool?

16 A. The Dos Hermanos Draw-Morrow Gas Pool is
17 currently spaced on 640 acres, and it allows for one well
18 per section. Wells can be no closer than 1650 feet to the
19 outer boundary of the well unit and no closer than 330 feet
20 to a quarter-quarter section line.

21 Q. What does Edge request today?

22 A. Edge requests that the special rules be limited
23 to the current boundaries of the pool, that being Sections
24 21, 22, 27 and 28.

25 Q. Why does Edge make this request?

1 A. Based on the current statewide rules, Edge would
2 prefer to develop its acreage on statewide rules.

3 Q. Okay. And also, there's already been, in a
4 sense, a noncommercial Morrow well in the south half of 29,
5 has there not?

6 A. Yes.

7 Q. Now, regarding the different well locations
8 between the pool and the statewide rules, are well location
9 is a problem in this area?

10 A. Yes, they are. This area is right in the middle
11 of the potash enclave, and getting locations approved is
12 difficult.

13 Q. Is Edge at this point trying to obtain a location
14 to drill in Section 29?

15 A. Not a surface location, no. We're currently
16 trying to obtain a surface location in Section 28 to the
17 east.

18 Q. Okay, and then directionally drill?

19 A. And then directionally drill into the northeast
20 quarter of Section 29.

21 Q. This is primarily federal acreage out here?

22 A. Yeah, the majority of the acreage is federal
23 acreage. Our particular lease in the north half of Section
24 29 is a state tract that we acquired at the July state
25 sale, but all of the surface locations and all the acreage

1 surrounding us there to the west is federal acreage.

2 Q. Is there another nearby Morrow pool in which your
3 proposed well could be placed if it's a commercial
4 producer?

5 A. Yes, there is, the Golden Lane-Morrow Gas Pool is
6 to the south. It includes the east half of Section 31, and
7 that pool is currently spaced on statewide rules.

8 Q. Was V-F notified of this hearing?

9 A. Yes.

10 Q. And was anyone else notified of this hearing?

11 A. We also notified Brad Bennett, Inc., who is the
12 operator of the well in the south half of Section 29.

13 Q. That well is currently a Strawn well, is it not?

14 A. Correct.

15 Q. But he is the deep gas operator?

16 A. Yes, he is.

17 Q. And you have had discussions with him also?

18 A. I have been in contact with Mr. Bennett, yes.

19 Q. Okay. And is Exhibit 2 simply the affidavit of
20 notice, showing the notice given to the parties?

21 A. Yes.

22 MR. BRUCE: Mr. Examiner, and Exhibit 3 is simply
23 a notice published in Eddy County giving publication notice
24 of this Application.

25 Q. (By Mr. Bruce) Mr. Sikora, were Exhibits 1

1 through 4 prepared by you or under your supervision or
2 compiled from company business records?

3 A. Yes.

4 Q. And in your opinion, is the granting of Edge's
5 Application in the interests of conservation and the
6 prevention of waste?

7 A. Yes.

8 MR. BRUCE: Mr. Examiner, I'd move the admission
9 of Exhibits 1 through 4.

10 EXAMINER CATANACH: Exhibits 1 through 4 -- I'm
11 sorry, any objections?

12 MR. CARR: No objection.

13 EXAMINER CATANACH: Exhibits 1 through 4 will be
14 admitted as evidence.

15 Mr. Carr?

16 CROSS-EXAMINATION

17 BY MR. CARR:

18 Q. Mr. Sikora, when did Edge acquire its interest in
19 the north half of Section 29?

20 A. In the July state sale this year.

21 Q. When you acquired this property, were you aware
22 that it was governed at that time by 640-acre spacing
23 rules?

24 A. No, sir, I was not.

25 Q. You were not?

1 A. No.

2 Q. Were you aware of its proximity to the potash
3 enclave?

4 A. We were aware that it was in the potash.

5 Q. You testified that the well in the southeast
6 quarter of Section 29 was a noncommercial well?

7 A. In the Morrow.

8 Q. Have you checked to determine what the cumulative
9 production from that well actually --

10 A. I think we have that information that will be
11 presented by our geologist, but I believe it was about a
12 third of a BCF of gas.

13 Q. Okay, 303 MCF --

14 A. Something like that.

15 Q. -- something like that?

16 A. I think.

17 Q. Were you aware that at that time the well was
18 initially, when the forms were filed by the operator, they
19 indicated it was in the Golden Lane, but the OCD changed
20 those forms to place it in the Dos Hermanos?

21 A. I'm not an expert, I'm now not --

22 Q. You are aware that the rules for the Dos Hermanos
23 require 640-acre spacing; is that right?

24 A. Yes, sir.

25 Q. And that those wells, by the terms of those

1 rules, extend to any development within a mile of that?

2 A. Correct, yes.

3 Q. And so what you're trying to do is get rid of
4 that provision?

5 A. We're trying to get rid of the mile buffer, yes.

6 Q. And if you do that, then, in fact, your acreage
7 adjoining the Dos Hermanos Pool would be developed under
8 statewide rules?

9 A. Yes.

10 Q. And that would mean that you would only have had
11 320-acre spacing units?

12 A. Yes.

13 Q. That would be a standard unit if the pool rules
14 were limited?

15 A. That would be a statewide standard unit, yes.

16 Q. And the well locations would only be 660 feet
17 back from the outer boundary of that acreage; isn't that
18 also --

19 A. Yes --

20 Q. -- where it would be?

21 A. -- yes, that's correct.

22 Q. And so by changing the pool rules, it would
23 enable you to have a well 660 feet from the east line of
24 your spacing unit?

25 A. Yes.

1 Q. And offset development to the east of there would
2 have to be back 1650 feet; isn't that correct?

3 A. That's correct under the current pool rules.

4 Q. If we look -- You testified, I believe, that
5 there was only one well currently producing in the Dos
6 Hermanos Pool; is that right?

7 A. Yes.

8 Q. And that's the well in Section 22?

9 A. Yes.

10 Q. You're also aware, are you not -- and I think it
11 shows on your exhibit that V-F Petroleum also has recently
12 drilled a well in the southwest of Section 21, have they
13 not?

14 A. Yes.

15 Q. And that well is drilled pursuant to those pool
16 rules, and it's 650 feet back from the lease line?

17 A. Correct, yes.

18 Q. And so if what you're seeking here today is
19 granted, you can be 660 feet out of the corner of your
20 acreage?

21 A. Yes, that's correct.

22 Q. And yet V-F is just currently drilled 1650 feet
23 out of the offsetting diagonal section to the northeast?

24 A. Yes.

25 Q. And so you would in effect be almost three times

1 as close to their acreage as they are to yours?

2 A. We would under that, yes.

3 Q. Okay. Now, if we were to look at the interest in
4 Section 20, until this acreage is granted, that would be
5 within the one-mile buffer, would it not, of the Dos
6 Hermanos Pool?

7 A. It would.

8 Q. And so today wells drilled there would have to be
9 back 1650 feet from the outer boundary?

10 A. Correct.

11 Q. So if someone in the north half of Section 20
12 today was to drill a well, they would be governed by Dos
13 Hermanos Pool rules?

14 A. Right.

15 Q. If the Application is granted, you'll be able to
16 drill 660 feet from their acreage?

17 A. Correct, and they'll be able to drill 660 from
18 ours.

19 Q. But in effect what you're doing, are you not, is
20 getting an unorthodox location without even notifying the
21 people that you're changing the rules? Isn't that really
22 what we're doing here?

23 We're going to have one set of rules for Edge in
24 the north half of 29 and the people to the east are going
25 to be on another set -- developed under a different set of

1 rules?

2 A. Well, all I can say to that is, if anybody wants
3 to drill a well 660 off one of those corners to the east
4 edge, we would not object to that.

5 Q. But you understand --

6 A. We have no objection, we just want to drill our
7 well on statewide rules.

8 Q. But you do understand that V-F has just drilled
9 under pool rules and had to be 1650 feet away from you?

10 A. I understand.

11 Q. And you understand that they object to the fact
12 that you could be 660 feet from them, and because of this
13 change in pool rules you'd have a standard location and no
14 penalty applied to your well?

15 A. I understand that.

16 Q. You said that this well could also be placed in
17 the Golden Lane-Morrow Pool; is that correct?

18 A. Yes.

19 Q. Now, that would be the east half of Section 31;
20 is that right?

21 A. East half of Section 31, yeah.

22 Q. And that the well you're proposing is actually
23 more than a mile away from the current boundary of the
24 Golden Lane-Morrow, is it not?

25 A. I'm not exactly sure where the boundary of the

1 Golden Lane-Morrow Pool is.

2 Q. I think in your Application you indicated it was
3 the east half of Section 31.

4 A. Then we would be less than a mile away.

5 Q. On the diagonal, are you less than a mile?

6 A. I'm not sure.

7 Q. You have notified just the operator of the south
8 half of the section; is that right?

9 A. In Section 29?

10 Q. Yes.

11 A. Yes, we did.

12 Q. And you did that because the special pool rules
13 would provide that a nonstandard unit would require that
14 you just not notify the operator of anyone being cut out,
15 or why did you --

16 A. Well, his well -- that well had penetrated the
17 Morrow, and on advice of Mr. Bruce, we felt like we should
18 go ahead and notify him.

19 Q. If the rules aren't changed and you want to
20 develop on a 320-acre north-half unit, you'd need to get a
21 nonstandard spacing unit, would you not?

22 Q. Uh-huh.

23 A. If the rules are not changed? Yes, that would --

24 Q. And then you'd have to give notice to the
25 offsetting operator, and that would be Mr. Bennett. He's

1 the operator, is he not?

2 A. In the south half, yes.

3 Q. And other people that own interest in the south
4 half, who might be affected, were not notified, were they?

5 A. Right, I'm not aware of the others. Mr. Bennett
6 was the operator; he was the only one we notified.

7 Q. And you don't know that Hudson and Hudson also
8 owned interest?

9 A. I don't have any of the mineral ownership in the
10 remainder of the south half of 29.

11 Q. So you don't know that Yates Petroleum
12 Corporation also owns down there or Heyco?

13 A. No.

14 Q. You didn't take your search that far?

15 A. Well, we didn't do any -- we didn't check the
16 ownership. We just -- we checked that Mr. -- just the
17 operator.

18 Q. Are you the person who talked to Mr. Bennett?

19 A. I talked to him one time.

20 Q. Did you explain to him that what the effect would
21 be, would be that he wouldn't be sharing in Morrow
22 production in the north half of that acreage?

23 A. I explained to him that we're trying to get the
24 statewide spacing, which would infer that, yeah.

25 Q. You didn't tell him, though, or go beyond just

1 the general --

2 A. I don't recall, Mr. Carr.

3 Q. Okay. So if your Application is granted, what
4 we have is one set of rules in 29, and that those rules are
5 different than what we have in the unit itself?

6 A. Well, the rules -- It would be one set of rules,
7 I guess, for the mile buffer around the entire pool, which
8 would include 29.

9 Q. You'd have one set of rules in the four sections
10 that are in the pool; those are the special pool rules?

11 A. Right.

12 Q. And you would have a different set of rules for
13 you in Section 29?

14 A. That would be correct.

15 Q. And your well would be 660 from the common lease
16 line?

17 A. Yes.

18 Q. And V-F Petroleum's is 1650 from the common lease
19 line?

20 A. That's correct.

21 Q. But if the rules are changed, both would be
22 standard locations?

23 A. If the rules were changed.

24 Q. Both would be standard locations?

25 A. I guess that would be correct.

1 MR. CARR: That's all I have. Thank you.

2 EXAMINATION

3 BY EXAMINER CATANACH:

4 Q. Mr. Sikora, the well that you propose to drill,
5 that was the directional well you were talking about?

6 A. Yes.

7 Q. You're going to start that well in Section 28?

8 A. We don't have a permit, but we're working on it.
9 That's where we think we can get the surface location.

10 Q. And I guess what's important is, what is the
11 bottomhole location that you determined that that will be
12 at in Section 29?

13 A. At this time it's 660 feet off the north line and
14 660 feet off the east line of Section 29.

15 Q. There are no producing wells in Section 28 at
16 this time, right?

17 A. The well in Section 28 shows to be inactive, so I
18 think that's correct, first two, with the USA Emperor Oil.

19 Q. Okay, that shows to be inactive, but you don't
20 know if -- that's not plugged, is it?

21 A. I don't believe it's plugged, no.

22 Q. Okay. And the new well that V-F just drilled is
23 in Section 21 --

24 A. Correct, yes.

25 Q. -- in the southwest quarter?

1 A. Southwest quarter, yes.

2 Q. Okay. And you guys notified Bennett and who
3 else?

4 MR. BRUCE: V-F Petroleum.

5 EXAMINER CATANACH: And V-F, being the only
6 active operator in the Dos Hermanos Pool.

7 MR. BRUCE: (Nods)

8 EXAMINER CATANACH: And you also gave publication
9 notice.

10 I'd just like to state that yesterday I took a
11 phone call from Brad Bennett, unknowing that he was
12 involved in this case, and I answered some general
13 questions about the hearing process to Mr. Bennett. During
14 the course of my conversation, he expressed to me that he
15 supported V-F's position on this case. But I also note
16 that he has not submitted anything in writing. So I just
17 thought I'd state that.

18 MR. BRUCE: He has also called me, Mr. Examiner.

19 MR. CARR: And he has also called me, Mr.
20 Examiner.

21 MR. BRUCE: And he asked me questions, which I
22 answered.

23 EXAMINER CATANACH: I believe that's all I have
24 of this witness.

25 You may be excused.

1 HOWARD CREASEY,
2 the witness herein, after having been first duly sworn upon
3 his oath, was examined and testified as follows:

4 DIRECT EXAMINATION

5 BY MR. BRUCE:

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

7 A. My name is Howard Creasey.

8 Q. How do you spell your last name?

9 A. C-r-e-a-s-e-y.

10 Q. Where do you reside?

11 A. I reside in Spring, Texas, north of Houston.

12 Q. Who do you work for and in what capacity?

13 A. I work for Edge Petroleum. I'm a chief
14 explorationist for Edge Petroleum.

15 Q. Have you previously testified before the
16 Division?

17 A. No, I have not.

18 Q. Could you summarize your education and employment
19 background for the Examiner?

20 A. I graduated in 1978 from Stephen F. Austin State
21 University, I worked on a master's at University of Houston
22 for a year and a half and have over 25 years of experience
23 in the oil and gas industry as a geologist and
24 geophysicist.

25 Q. What companies have you worked for?

1 A. I worked for Digicon Geophysical, Houston Natural
2 Gas, Ocean Energy, which became Devon Energy, and was an
3 independent geologist for 14 years, and now with Edge
4 Petroleum.

5 Q. Does your area of responsibility at Edge include
6 this part of southeast New Mexico?

7 A. It does.

8 Q. And are you familiar with the geology involved in
9 this Application?

10 A. Yes, sir, I am.

11 MR. BRUCE: Mr. Examiner, I would tender Mr.
12 Creasey as an expert petroleum geologist.

13 MR. CARR: No objection.

14 EXAMINER CATANACH: Mr. Creasey is so qualified.

15 Q. (By Mr. Bruce) Mr. Creasey -- and Mr. Examiner,
16 we're probably going to take these exhibits out of order a
17 little bit -- but first of all, starting with Exhibit 5,
18 Mr. Creasey, could you identify that for the Examiner?

19 A. Exhibit Number 5 is a Dos Hermanos-Morrow field
20 map, that I call a production map, that shows the wells
21 that produce in the Dos Hermanos field. It shows in red
22 the original unit of the Dos Hermanos field. In yellow was
23 the one-mile boundary around that original unit.

24 In Section 31 it shows the Golden Lane-Morrow
25 field discovery well that we discussed earlier.

1 To the south in Section 33 -- excuse me, 660 off
2 the west lease line -- is a well that was completed as a
3 Golden Lane-Morrow producer. It was not a commercial well.
4 They tested noncommercial quantities of gas and plugged
5 back for the Strawn.

6 Q. Now, that well, when it was drilled, was placed
7 on 320-acre spacing --

8 A. Correct.

9 Q. -- was it not?

10 A. It was. The V-F Petroleum recent completion is
11 shown in Section 21. That is in a pre-existing 640-acre
12 unit. In Section 22 is a new application or a permit for a
13 directional well that V-F Petroleum has acquired, which is
14 660 feet off the west lease line and is also within the
15 pre-existing unit, and the well with API Number 3001520556
16 is the only active well in the Dos Hermanos field.

17 Q. So the second permitted well of V-F is at an
18 unorthodox location?

19 A. Correct, it is.

20 Q. And of these wells, apparently only three of them
21 are or were commercial wells?

22 A. Correct, the well in Section 22 that V-F
23 Petroleum operates currently, the well in Section 21 and
24 the well in Section 28. Below each of these wells are the
25 Morrow cums, and I have notated in parentheses the gross

1 Morrow interval in which these wells produced from. Middle
2 Morrow is MMRW, lower Morrow is LMRW. And there's one well
3 from the upper Morrow in Section 29.

4 Q. Are the wells in this area primarily middle
5 Morrow and lower Morrow producers?

6 A. Correct, there's one particular zone in the
7 middle Morrow that seems to be the most prolific, and that
8 is the middle Morrow C zone, which is a lower middle Morrow
9 zone.

10 Q. All right, Mr. Creasey, let's move on next to
11 your Exhibit 10, which is a structure map. Could you
12 identify that and discuss the structure effects in this
13 area?

14 A. This is a structure map on top of the lower
15 Morrow. It gives a rate of dip on the lower Morrow sand.
16 Regional dip in this particular area is to the east
17 southeast. Subsea tops are posted next to each well.

18 There was a well that tested water in the lower
19 Morrow, and I have notated the highest known water of minus
20 9015.

21 The wells in red are the four wells which
22 actually perforated this zone and produced in the lower
23 Morrow.

24 Q. Is the structure, insofar as water goes, only
25 important in the lower Morrow?

1 A. Generally speaking, it is. I do not have any
2 information to show that the middle Morrow is a significant
3 water drive reservoir and water encroachment would be a
4 problem. In the lower it certainly is.

5 Q. Okay. Next, Mr. Creasey, and Mr. Examiner, let's
6 move to Exhibit 8.

7 A. Exhibit 8 is an isopach map of the lower Morrow
8 net sand. I have put the highest known water, dashed in in
9 blue. Next to each well that I had logs on and had
10 information, I have a net sand number and a net porous
11 number. This map is contoured on the net sand number and
12 the top number. I have again noted under each well the
13 cums that they produced, and you'll notice in Section 29
14 that well perf'd the lower Morrow and tested gas
15 noncommercial.

16 Q. Do you hope to test the lower Morrow in Edge's
17 proposed well?

18 A. Yes, we do. It certainly -- If we have the sand
19 and good porosity, we should be significantly high to the
20 highest known water.

21 Q. Let's move on next to your Exhibit 6, Mr.
22 Creasey. What sand does that depict?

23 A. Exhibit 6 is an isopach map of the -- what I call
24 the middle Morrow C net sand. Again to the right of the
25 well is a net sand number over a net porous number. The

1 wells in red are wells that produced out of the middle
2 Morrow C zone, which is a lower sand zone.

3 The well that you'll notice in the northwest
4 corner of Section 33 that was drilled on 320-acre spacing,
5 660 feet off the west lease line, was perforated and tested
6 in the same middle Morrow zone that is in the Dos Hermanos-
7 Morrow field. It did test gas noncommercial, and they
8 plugged back to the Strawn.

9 Q. Next is Exhibit 7. What does that reflect?

10 A. Exhibit 7, I threw this in kind of at the last
11 minute. It is a net sand isopach that is inclusive of the
12 two gross intervals in the middle Morrow above the C zone.
13 There were four wells that actually perf'd this zone that
14 are shown in red. Based on DST information and initial
15 flow rates in these zones, I do not feel like that this was
16 a substantial producing zone.

17 The well in Section 29, in the south half of 29,
18 tested this zone also and tested gas noncommercial.

19 Q. So based on these maps, what you're hoping to
20 test primarily in your proposed well would be the lower
21 Morrow and the middle Morrow C?

22 A. That's correct. From a cross-section that you'll
23 see in a minute, you'll see that in all of these wells a
24 gross interval was perforated in some of -- not all of
25 them, in some of the wells -- that included the whole

1 middle Morrow section as well as the lower Morrow section.

2 Q. Let's move on next to Exhibit 11, Mr. Creasey,
3 the cross-section. Would you discuss that and also how
4 many -- not only the number of wells, but how many -- what,
5 this includes wells from both the Dos Hermanos Pool and the
6 Golden Lane Pool, does it not?

7 A. That's correct. On the previous exhibits they're
8 in a brown square. The wells are numbered that coincide
9 with the numbering system on top of the well in brown on
10 this cross-section.

11 This is a stratigraphic cross-section hung on the
12 middle Morrow shale. The first well, Well Number 1, is the
13 well in Section 31, which was perforated in the middle
14 Morrow section and was in the Golden Lane Morrow field on
15 320-acre spacing.

16 We'll go to Well Number 3, which tested the lower
17 Morrow, and also middle Morrow C and the middle Morrow A
18 and B zones, and they wound up completing that well in an
19 upper Morrow zone, which may or may not be a sand zone, but
20 completely different zone than any other well in this area
21 that produced from the Dos Hermanos-Morrow field.

22 Moving to the northeast, the Well Number 4 is the
23 well in the northwest quarter of Section 33, which again
24 was perforated in the middle Morrow C zone, the same zone
25 that produces in the wells to the northeast, and again that

1 well was put in the Golden Lane-Morrow field on 320-acre
2 spacing, 660 feet off the west lease line.

3 The Well Number 5 is the discovery well for the
4 Dos Hermanos-Morrow field. They actually had two sets of
5 perfs. This is an instance of a well where they perf'd the
6 lower Morrow section and then perf'd the lower middle
7 Morrow section. The numbers to the right of the log are my
8 net sand and net porous numbers, using a gamma-ray cutoff
9 and a porosity cutoff of 8 percent to get those numbers.

10 That well was completed in May of 1965. In March
11 of 1980 they added a zone in the upper middle Morrow B
12 zone. You'll see on the cross-section that it tested water
13 and no gas, and it -- I think two years later they plugged
14 this well back for the Strawn.

15 The next location is the recent completion of V-F
16 Petroleum. We do not have a log on that well at this time.

17 Moving to the east are two additional wells which
18 were commercial wells in the Dos Hermanos-Morrow field, and
19 you'll note that they perf'd a very thick gross section in
20 both of these wells, and it was difficult to determine
21 where the significant amount of gas came from in each one
22 of those wells.

23 At the bottom of the log in red is the cum gas
24 attributed to the Morrow in each well. In the green is the
25 cum condensate or oil, and the perforations are listed

1 above.

2 The next well, Number 8, is the permitted
3 location that V-F Petroleum has acquired that is 660 feet
4 from the west lease line of Section 22, which I believe is
5 an exception to the Dos Hermanos 640-acre spacing unit.

6 The last well, Section 10 [sic], was probably a
7 noncommercial well. It did produce from a gross section,
8 including the middle Morrow A and B zone, the middle Morrow
9 C zone and the lower Morrow. It's an old log -- that's a
10 gamma-ray/neutron log on the left -- and counting pay was a
11 little difficult, but I have made notations of the net sand
12 in that porous sand next to each well.

13 Q. Now, looking at your geologic maps, Mr. Creasey,
14 is there any reason ever to distinguish geologically
15 between wells in the Golden Lane-Morrow and the wells in
16 the Dos Hermanos Pool?

17 A. No, the same zones in the Golden Lane-Morrow
18 field were perforated that produce in the Dos Hermanos-
19 Morrow field.

20 Q. And these are typical Morrow sands, aren't they?
21 They're discontinuous, lenticular in nature?

22 A. Correct, the lower Morrow seems to have better
23 perm in the porosity, and that's no exception here. The
24 middle Morrow is a fluvial/marine-influenced deposit and
25 the drainage area on those sands typically are not 640-acre

1 spacing, which is shown throughout the state as 320-acre
2 spacing.

3 Q. And with -- Let's move on to your final exhibit,
4 Exhibit 9. What does that reflect?

5 A. Exhibit 9 is what I call a drainage production
6 and drainage map. What we've done is, we have, based on
7 the cum for each well and the average pay, based on my 8-
8 percent cutoff on the logs, we calculated a recovery, MCF
9 per acre-foot, and backed into an area that those wells
10 potentially drain.

11 And you'll see in Section 21, Well Number 7, for
12 instance, drained 45 acres with an average pay of 72 feet,
13 which is inclusive of the lower Morrow and middle Morrow
14 section. And you'll notice that the recent completion that
15 V-F Petroleum has drilled is within that pre-existing 640-
16 acre unit that that well produced from.

17 In Section 22, Well Number 9, we backed into a
18 drainage area of 80 acres, based on 24 feet of net pay.
19 And the proposed location by V-F Petroleum within that pre-
20 existing 640-acre unit would, I think, tell you that that
21 well is not capable of draining 640 acres.

22 Q. So based on what you've seen, additional wells
23 are needed; whether it's inside the four section boundaries
24 of this pool, you need more than one well per section?

25 A. Certainly, and we would not be opposed for Mr.

1 Bennett or anyone else offsetting our leases to drill 660-
2 acre locations. We think it's probably in the best
3 interests of the State of New Mexico that potentially there
4 could be another well drilled in the southwest quarter of
5 Section 29, which would put two Morrow wells in that
6 section.

7 Q. So Edge doesn't see any reason not to relax the
8 well-location requirements in the Dos Hermanos Pool itself,
9 does it?

10 A. No, we have no qualms with the Dos Hermanos Pool.
11 If they want to continue to drill wells 1650 off lease
12 lines and 640-acre spacing, that's their choice. We do not
13 feel that that's an adequate spacing pattern to drain gas
14 reserves in the Morrow section.

15 Q. Okay. So really, you just want to be -- whether
16 it's the Dos Hermanos Pool or outside of it, you'd like to
17 see two wells per half-section?

18 A. Correct.

19 Q. Or at least the option to drill two wells per
20 half-section?

21 A. Correct, and in a lot of areas of Eddy and Lea
22 County, you're seeing downspacing of wells that are being
23 drilled on 160-acre spacing, so...

24 Q. And as to -- if Edge does end up drilling its
25 well to a bottomhole location 660 feet from the north and

1 east lines, Edge has no objection to anyone having similar
2 setbacks on an offset well?

3 A. No. No, we do not.

4 Q. Were Exhibits 5 through 11 prepared by your under
5 supervision, Mr. Creasey?

6 A. Yes, they were.

7 Q. And in your opinion, is the granting of Edge's
8 Application in the interests of conservation and the
9 prevention of waste?

10 A. Yes, I do.

11 MR. BRUCE: Mr. Examiner, I'd move the admission
12 of Exhibits 5 through 11.

13 EXAMINER CATANACH: Any objection?

14 MR. CARR: No objection.

15 EXAMINER CATANACH: Exhibits 5 through 11 will be
16 admitted.

17 Mr. Carr?

18 CROSS-EXAMINATION

19 BY MR. CARR:

20 Q. Mr. Creasey, let's go to Exhibit Number 5 --

21 A. Okay.

22 Q. -- and what is the yellow line on this exhibit?

23 A. Can you see the legend, sir, Mr. Carr?

24 Q. Yes.

25 A. It's a one mile from the Dos Hermanos Unit.

1 Q. The Dos Hermanos Unit?

2 A. Dos Hermanos-Morrow Unit, that's correct.

3 Q. You're talking about just the spacing unit in
4 Section 28, that's not the Dos Hermanos Pool; is that
5 right?

6 A. I was asked to notate the original 640-acre unit
7 within the Dos Hermanos-Morrow field and put a yellow
8 square one mile around that.

9 Q. Okay, so when we look at this, your red line --
10 your red dashed line around Section 28 is simply indicating
11 a single 640-acre spacing unit; that's not intended to be
12 the pool boundary?

13 A. No, it is not.

14 Q. All right. And then you've gone out a mile from
15 that, but you recognize that the pool also includes
16 Sections 21, 22 and 27, and the pool rules extend a mile
17 beyond those as well?

18 A. As well as it does the well in Section 33 that
19 was drilled 660 off the lease line --

20 Q. I just --

21 A. -- in the Golden Lane-Morrow field.

22 Q. All right.

23 A. Correct.

24 Q. Now, if we look at the various maps you have
25 prepared, the production map, the structure map and isopach

1 maps, I don't see anything in these -- and correct me if
2 I'm wrong -- that shows any physical and geological
3 separation between the Morrow in Section 28 and the Morrow
4 formation in Section 29; is that right?

5 A. There is no separation between Section 28 and
6 Section 31. There is no separation between Section 28 and
7 Section 33; they're both in the Golden Lane-Morrow field.
8 And there is no separation between Section 28 and Section
9 29, although stratigraphically the reservoirs have got low
10 porosity and low perm, and they won't drain those areas.

11 Q. Is it fair to say that Section 28 and 29 are in a
12 common reservoir?

13 A. They're in a common formation.

14 Q. Would it be a common accumulation? I mean, if
15 you drilled in the north half of 29 at your proposed 660
16 bottomhole location and you got a good well, say comparable
17 to the well in Section 28, it's possible that you would
18 drain across that, that eastern boundary; is that right?

19 A. It is possible that we could drain 320 acres,
20 which is what we propose in Section 28. But let me add
21 that I think our engineer will show you that based on
22 pressure information, that the well in Section 28 will not
23 pressure deplete more than 10 percent any well within that
24 area, so --

25 Q. I'm just -- I just --

1 A. -- they may be a common formation, sir, but I
2 don't know that I would put them in the same reservoir.

3 Q. Well, is there anything that you can see with
4 your geological interpretation that shows separation
5 between Sections 28 and 29? And if you can, I'd like --

6 A. There are no faults.

7 Q. And there is -- You haven't mapped anything that
8 would prevent movement across that --

9 A. There are no faults.

10 Q. Now --

11 A. But porosity does limit movement of
12 hydrocarbons --

13 Q. -- have you mapped a --

14 A. -- obviously.

15 Q. -- porosity barrier, or do you have anything that
16 would establish a barrier along the west half of Section
17 28?

18 A. Absolutely. We have backed into a drainage area
19 on Exhibit 9, which tells me, and I think that would tell
20 most engineering people that have a background, that that
21 well did not drain a substantial area that would include
22 Section 29. Is that what you're referring to?

23 Q. I'm just asking if there is a barrier. I see
24 radial drainage on the drainage map.

25 A. Well, a barrier can be a fault, a barrier can be

1 sands that are discontinuous, and a barrier can be a lack
2 of porosity and perm.

3 Q. Are the sands discontinuous across there?

4 A. The middle Morrow sands, regionally, can be
5 discontinuous.

6 Q. Are they? Have you mapped them so they are
7 discontinuous?

8 A. They appear to be very correlative, but --

9 Q. That's right.

10 A. -- the well in Section 28 does not appear to have
11 drained into Section 29. So again, I would contend that
12 reservoir properties in the middle Morrow do not allow them
13 to drain more than the area we've shown.

14 Q. If I look at your isopach maps, they show, it
15 appears to me, a general trend to the Morrow sands in here
16 that go sort of northeast to southwest; is that right?

17 A. I don't know that I would say that.

18 Q. Do you see any general orientation to the Morrow
19 sands in this area?

20 A. I think the lower Morrow sand is more of a
21 fluvial channel deposit, and you may be seeing some of that
22 influenced in the well in Section 27 where you have a fixed
23 sandbody. And so you may be seeing some channel-type
24 deposits oriented in a northwest-southeast fashion.

25 Are you referring to the middle Morrow or the

1 lower Morrow?

2 Q. Well, I'm just --

3 A. They're very different.

4 Q. You were saying the channels were in what Morrow
5 interval?

6 A. This is the lower Morrow.

7 Q. What about the middle Morrow? Do you see the
8 same development there with a --

9 A. The middle Morrow in the C zone, middle Morrow
10 also being a fluvial deposit that has some marine
11 influence, you do happen to see some sort of channel-type
12 bar oriented northwest-southeast.

13 Q. Okay. If we go to -- I've got these out of order
14 also.

15 A. Beg pardon?

16 Q. I've got my exhibits out of order, I'm trying
17 to --

18 A. Well, mine are out of order too. I apologize.
19 We had a different numbering convention when we came in.

20 Q. Let's take a -- Let's go briefly to the drainage
21 map. You're seeing radial drainage; is that correct?

22 A. Correct.

23 Q. This drainage, is this any particular Morrow
24 sand, or is this all the same?

25 A. The Dos Hermanos-Morrow field does not designate

1 middle Morrow or lower Morrow; it designates Morrow which,
2 as shown in the well in Section 29, that was productive in
3 the upper Morrow, which I contend may not even be a sand.

4 Q. If we look at the middle Morrow and lower Morrow
5 and you could see these channels trending from the
6 northwest to the southeast, would that have any bearing on
7 these drainage areas as they are mapped?

8 A. You know, it could. I think that the net sand
9 map is not specific as to a net porous map, and I purposely
10 did that because the porosity on a lot of these logs was
11 very difficult to ascertain, but a gamma-ray log on a net-
12 sand map is much easier to count. In general, your net
13 porous will mimic the net sand -- in general, not always,
14 but in general.

15 Q. So is it your testimony that the radial drainage
16 patterns depicted on Exhibit Number 9 are reasonably
17 accurate?

18 A. I think they are. I think the well in Section 28
19 could just as well be more oriented in an oblong shape,
20 northwest-southeast.

21 Q. If the radius of drainage that you've mapped on
22 these are basically radial, isn't it fair to say that a
23 well 660 out of the northeast corner of Section 29 would
24 also demonstrate a radial drainage pattern?

25 A. It could.

1 Q. And if that's the case, then it would be draining
2 reserves from the east half -- I'm sorry, the west half of
3 Section 28, and also the southwest corner of Section 21; is
4 that right?

5 A. Just as easily as the V-F Petroleum well in
6 Section 22 that is 660 feet from the lease line drains the
7 reserves in Section 21.

8 Q. And that well, you said, is at an unorthodox
9 location?

10 A. I assume it is.

11 Q. It's a Strawn well, though, isn't it?

12 A. I do not know that.

13 Q. If it's a Strawn well, it's at a standard
14 location; isn't that correct?

15 A. I was told that that was permitted in the Dos
16 Hermanos-Morrow field.

17 Q. Well, if it is a Strawn, then, on 320, it would
18 be standard; isn't that right?

19 A. Well, are we talking Strawn or are we talking
20 Morrow?

21 Q. Well, you're the one that's testifying. Do you
22 know which formation it's in?

23 A. I was told that that well was permitted as a
24 Morrow -- Dos Hermanos-Morrow field.

25 Q. Did you independently check that?

1 A. It was -- It's drilled to a depth to test the
2 Morrow. So was it -- is it drilled to a depth to test the
3 Morrow, but it's only drilled to produce from the Strawn?

4 Q. Well, it's a question of do you know what
5 interval that is producing from?

6 A. Well, it's a proposed location, sir.

7 Q. All right. Do you know what well [sic] they
8 intend to produce the well from?

9 A. I do not know what V-F Petroleum's intentions
10 are.

11 Q. If we look in Section 21, we have a well in the
12 southwest of Section 21, do we not?

13 A. Yes, sir.

14 Q. And that well has not yet been completed; is that
15 right?

16 A. I have not idea.

17 Q. You don't know the status of that well?

18 A. I was told that it -- they ran pipe on the well.
19 I am not a working interest partner of V-F Petroleum and do
20 not have scouts on their location.

21 Q. So you don't know?

22 A. I don't know what they completed that well in.

23 Q. Now, I want to ask you about your cross-section.
24 You indicated, I believe, in your testimony that you felt
25 the middle Morrow was more prolific; is that right?

1 A. Beg pardon?

2 Q. I thought you stated that you thought the middle
3 Morrow was the most prolific interval in the Dos Hermanos
4 Pool; was that your testimony?

5 A. No, that was not my testimony.

6 Q. All right. If we -- Do you know of any pressure
7 testing of any individual zones that has been done?

8 A. I believe our engineer does have some pressure
9 information. I believe what I said was that of the middle
10 Morrow zones -- and I have grouped them into three gross
11 zones; some people group them into smaller zones -- but of
12 the three middle Morrow zones, the middle Morrow C zone was
13 the most prolific of the middle Morrow zones. The lower
14 Morrow is probably more prolific than the others.

15 Q. Without pressure testing, you would agree that
16 virtually all the Morrow zones are open to each of the
17 wells in the Dos Hermanos Pool; isn't that right?

18 A. I would argue that point to my death.

19 Q. Okay. Well, let's see, is the Number -- Let's
20 take a look at the wells and see where they are. The
21 Number 1 well, what pool is that?

22 A. That well is in the Golden Lane Morrow field.

23 Q. What about the Number 2?

24 A. That well I don't think attempted any
25 perforations in the Morrow.

1 Q. The Number 3 well, that's in the Dos Hermanos
2 Pool, is it not?

3 A. It's in the upper Morrow, which is not the same
4 zone that produced in any of these other wells, correct.

5 Q. Wasn't it perforated throughout the Morrow
6 interval?

7 A. Correct, yes, sir.

8 Q. Was it tested in the lower zones?

9 A. It was.

10 Q. What about the Number 4 well? Is that in the Dos
11 Hermanos?

12 A. That well was permitted in the Golden Lane-Morrow
13 field, and it -- as well the Well Number 3, it tested gas
14 noncommercial in the middle Morrow zone.

15 Q. But we're talking about the Dos Hermanos, so we
16 have the Number 3 well in the Dos Hermanos, correct?

17 A. Well, you asked me about Well Number 4 --

18 Q. Yeah, I did, but I asked you what pool --

19 A. -- say that that's in the Golden Lane, that's in
20 the Golden Lane, that was in the Golden Lane-Morrow field.

21 Q. Would you identify for me the wells on this
22 cross-section that are in the Dos Hermanos?

23 A. Well Number 5, Well Number 6 -- assuming that V-F
24 Petroleum completes in the Morrow -- Well Number 7, Well
25 Number 9 and Well Number 10.

1 Q. And Well Number 3, correct?

2 A. And Well Number 3, correct.

3 Q. So we have five wells that have been completed in
4 the Dos Hermanos?

5 A. Correct.

6 Q. We have one well, the Number 6, that may be
7 tested in the -- we don't know, that's just a location at
8 this time; is that right?

9 A. Well, they set pipe on it, it's much more than a
10 location.

11 Q. Do you have any data on that well?

12 A. Do I have any data --

13 Q. Uh-huh.

14 A. -- like well data --

15 Q. Uh-huh.

16 A. -- or --

17 Q. Well data.

18 A. -- no, I do not.

19 Q. Okay. So of the five wells, you have log data in
20 the Dos Hermanos --

21 A. Well, I take that back. I think in verbal
22 conversation we were told by the principals, one of the
23 principals, Jerry Gahr, that that pipe was set on that
24 well. So it is more than a proposed location. But I do
25 not have any physical data.

1 Q. You have physical data on the 3, the 5, the 7,
2 the 9 and the 10, correct?

3 A. Correct.

4 Q. And all of those show that they have tested or
5 perforated throughout the Morrow interval; isn't that
6 right?

7 A. That's correct.

8 Q. And that you don't know of any production tests
9 that you personally know of that would establish from what
10 zone Morrow production is coming?

11 A. On all those wells?

12 Q. (Nods)

13 A. No, I have production data that shows where
14 production is coming from in those zones.

15 Q. And you have it by individual Morrow interval?

16 A. Well, Well Number 3, Mr. Carr --

17 Q. Yes, we know that.

18 A. -- would you say that that well cum'd .3 of a B
19 in the upper Morrow?

20 Q. I'm not answering questions here, I'm asking you.
21 I'm asking you if the log sections that are shown on this
22 exhibit show that the entire Morrow interval was actually
23 tested in each of the wells in the Dos Hermanos. That's
24 the question.

25 A. Well, Well Number 5 did not perforate the A and B

1 zone in the middle Morrow.

2 Of course Well Number 4 within that one-mile
3 area, the one-mile radius of the original well, was in the
4 Golden Lane-Morrow field, so it can't be used, although it
5 did not perforate the middle Morrow nor the lower Morrow.

6 But other than the -- those two wells, I would
7 say the whole Morrow section, excluding Well Number 5 and
8 -- well, I would say excluding Well Number 5, perforated
9 the whole section, from top to bottom of the middle Morrow
10 to the lower Morrow.

11 MR. CARR: I have no further questions of this
12 witness.

13 EXAMINATION

14 BY EXAMINER CATANACH:

15 Q. Mr. Creasey, the wells that you have drainage
16 data on, they're -- obviously the well in Section 28 is the
17 best well in the pool so far.

18 A. Yes, sir.

19 Q. Are there geologic differences to explain why the
20 other wells don't -- haven't drained as large an area?

21 A. As I was trying to explain earlier, I think the
22 middle Morrow and lower Morrow section or the formation is
23 continuous in the area, Mr. Examiner, but I do not think
24 reservoir quality is continuous within the area. I think
25 that the lower Morrow section in that well contributed a

1 significant amount of production, and possibly the
2 reservoir quality in Wells Number 7 and 9 did not have as
3 good reservoir in the lower Morrow as the well did in
4 Section 28, Well Number 5.

5 Q. So you're saying the well in Section 28, you
6 think that produced basically most of those reserves from
7 the lower Morrow?

8 A. No, I think it probably had significant impact
9 for the middle Morrow also, but I think potentially the
10 lower Morrow was more significant there than it was in the
11 other wells to the northeast.

12 Q. Based on your geologic interpretation, what do
13 you anticipate your well in Section 29 to be, to encounter?

14 A. The -- Our engineer and I have discussed that
15 very matter this morning, and -- based on 80-acre drainage
16 and the recovery per acre-foot numbers that we're using,
17 and I think he's using between 35 and 40 foot of net pay,
18 which would be middle Morrow and lower Morrow, we're coming
19 up with about 2.2 BCF, which at these prices is infinitely
20 commercial.

21 And there are also, Mr. Examiner -- I will have
22 to admit, there are also significant uphole objectives.

23 Q. What does the 2.2 BCF translate in terms of
24 drainage area?

25 A. 80 acres.

1 Q. 80 acres?

2 A. Correct. So if -- you know, if we could drain
3 more we would take that, but we were trying to be very
4 conservative.

5 And of course as you get to the outer limits of
6 the drainage of Well Number 5, your pressure sink is much
7 less. And so, you know, we feel like that we could
8 significantly do better than 2.2 B's.

9 Q. Okay, so you're just assuming an 80-acre drainage
10 for that --

11 A. We are, and we kind of base that on Well Number
12 9. If Well Number 5 is extremely anomalous and we can't
13 hope to do that well, we use the 80-acre drainage from Well
14 Number 9, just to see if that would give us a commercial
15 reserve.

16 Q. Well, could you, in fact, get a well that is like
17 the well in Section 28 and drains an area of over 300
18 acres?

19 A. Yes.

20 Q. So it's entirely possible, right?

21 A. Absolutely, and we would love to find that.

22 And we -- I'll be honest, I -- we do not -- we
23 would not contest other people drilling 660 off lease
24 lines. And I believe -- and I may be wrong, Mr. Bruce, but
25 I believe that Brad Bennett was told that he could have a

1 660 location in the southwest quarter of his lease, and I
2 think it allows -- this spacing allows for additional wells
3 to be drilled within this area, as opposed to having one
4 well hold a section for the reason that it's difficult to
5 get surface permits. And that is an issue, surface permits
6 is a very big issue.

7 Q. Okay, the sands in the Morrow are generally
8 continuous in this area, you're not saying that there's any
9 kind of barrier between the Golden Lane and the Dos
10 Hermanos Pool?

11 A. No, I'm not. I think the formation itself is
12 very continuous, but I think that the lack of porosity and
13 perm limits the area that those sands can drain.

14 EXAMINER CATANACH: Okay, I believe that's all I
15 have.

16 Anything further, Mr. Bruce?

17 MR. BRUCE: Just a couple of questions, just to
18 clarify something.

19 REDIRECT EXAMINATION

20 BY MR. BRUCE:

21 Q. In looking at -- you can take any one of your
22 maps, Mr. Creasey -- these aren't the only Morrow wells in
23 this area, are they?

24 A. No, they're not.

25 Q. To the south I see some wells that appear to be

1 deep enough to test the Morrow, correct?

2 A. Yes, that's right.

3 Q. And those are spaced on statewide rules, to the
4 best of your knowledge?

5 A. Correct.

6 Q. And even to the northwest, there's a well
7 that's -- I don't know if that's Morrow or not, 12,300 feet
8 deep.

9 A. You know, I'm not sure if that's a Morrow well.
10 But we did do a search within this general vicinity when we
11 found out that there were some older 640-acre spacing
12 rules, and this was one of the few 640-acre spacings left
13 in this area that we could find. I've been told that there
14 are additional 640-acre spacings in the deeper part of the
15 Basin in Lea and Eddy County. But I think that by and
16 large, most of these wells in this area are on statewide
17 320-acre spacing.

18 Q. Okay. And under your proposal, if you did make a
19 good well, obviously somebody in Section 20 could come and
20 offset you --

21 A. Absolutely.

22 Q. -- to counteract drainage if that's going to
23 occur?

24 A. Yes, sir.

25 MR. BRUCE: Thank you, Mr. Creasey.

1 EXAMINER CATANACH: Just one more.

2 FURTHER EXAMINATION

3 BY EXAMINER CATANACH:

4 Q. Mr. Creasey, your proposed location in Section
5 29, you would not drill that at a 1650 setback from the
6 east boundary, would you?

7 A. No, we would not.

8 Q. So that's based on geology?

9 A. Correct.

10 Q. So you want to get -- you want to encounter the
11 thickest part of the Morrow; is that --

12 A. We hope to get into the same channel or in a
13 similar type of area in drainage that the well in Section
14 28 is in, obviously. But there are some other shallower
15 objectives that we're looking at also, Mr. Examiner.

16 EXAMINER CATANACH: Okay, that's all I have.

17 MR. BRUCE: That's all I have of this witness.

18 THE WITNESS: Thank you.

19 JAMES KEISLING,

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

22 DIRECT EXAMINATION

23 BY MR. BRUCE:

24 Q. Would you please state your name and city of
25 residence for the record?

1 A. James Keisling -- that's K-e-i-s-l-i-n-g --
2 Houston, Texas.

3 Q. Who do you work for and in what capacity?

4 A. Edge Petroleum Corporation as vice president of
5 production.

6 Q. Have you previously testified before the
7 Division?

8 A. No, I have not.

9 Q. Could you summarize your educational and
10 employment background for the Examiner?

11 A. I received a bachelor's of science, civil
12 engineering, from New Mexico State University in 1970,
13 started out with Texaco, Incorporated, in Midland, Texas,
14 that year, and have over 35 years of experience with
15 various companies, Mitchell Energy, Pan-Canadian Petroleum,
16 Mesa Petroleum, Seagull Energy, Edge Petroleum.

17 Q. Does your area of responsibility at Edge include
18 this part of southeast New Mexico?

19 A. Yes, it does.

20 Q. And with the other companies did you also work
21 the Permian Basin, at times?

22 A. Yes, I have, at times.

23 Q. And are you familiar with the engineering
24 involved in this Application?

25 A. Yes, I am.

1 MR. BRUCE: Mr. Examiner, I'd tender Mr. Keisling
2 as an expert petroleum engineer.

3 MR. CARR: No objection.

4 EXAMINER CATANACH: Mr. Keisling is so qualified.

5 Q. (By Mr. Bruce) Mr. Keisling, if you could, just
6 referring to Exhibit 9, which is the production map, were
7 you involved in calculating the drainage from the wells in
8 this area?

9 A. Yes, I was.

10 Q. Could you talk a little bit about the areas being
11 drained and perhaps address some of these other issues,
12 such as whether the acreage drained is radial and pressure
13 differences between the wells, et cetera?

14 A. Yes, I can. The discovery well was the well in
15 Section 28. It was drilled and completed in May of 1965.
16 Based on the cum production of 9.4 BCF, the well had an
17 average pay of 50 feet. We've calculated the well to have
18 drained 315 acres, radial drainage in that area, and that
19 is from both the middle Morrow and lower Morrow intervals.

20 The next well to be drilled in this field --
21 well, the field rules were established in 1968, and the
22 next well to be drilled in this Dos Hermanos-Morrow field
23 was in May of 1972, and that was the well in the southwest
24 quarter of Section 22. And that well has cum'd 1.2 BCF,
25 and based on 24 feet of net pay the well has drained 80

1 acres, and that's what that green circle represents.

2 The third well to be drilled and tested in this
3 area, as far as timing -- well, and it was also produced in
4 the Morrow -- was the well in the southeast quarter of
5 Section 29, and that was drilled and completed in August of
6 1973. And that well has cum'd .3 BCF, and average pay that
7 was perforated and completed in that well -- and it appears
8 to be in the upper Morrow interval only -- has only drained
9 50 acres, and that's what that green circle represents.

10 In May of 1974 the fourth well was drilled and
11 completed in the southeast quarter of Section 21. It has
12 cum'd 1.9 BCF, and based on 72 feet of net-pay thickness,
13 it has drained 45 acres.

14 And based on these drainage areas from the
15 various intervals, both in the middle Morrow and lower
16 Morrow intervals that were perforated, you can see that one
17 well per section is not adequately draining each of the
18 sections that have Morrow completions in them. And that's
19 why -- one of the reasons that we're asking to go to the
20 statewide spacing, which is well accepted throughout the --
21 Lea and Eddy County, New Mexico, where there can be two
22 wells per section, and drilled 660 from the section lines.

23 Q. You just said two wells per section. You're
24 actually talking two wells per half section; is that
25 correct? That's what Edge would be allowed to do in the

1 north half of 29 if it got approval; isn't that correct?

2 A. No, one well in the 320-acre spacing unit, north
3 half of Section 29. Right?

4 MR. BRUCE: Mr. Examiner, we're here actually
5 seeking normal statewide rules --

6 EXAMINER CATANACH: Right.

7 MR. BRUCE: -- for that acreage.

8 EXAMINER CATANACH: I understand.

9 Q. (By Mr. Bruce) What about -- and obviously by
10 the fact that on this map V-F is in the -- apparently in
11 the process of completing what's noted as Well Number 6,
12 V-F thinks that more than one well per section is necessary
13 to drain this acreage too; is that a fair statement?

14 A. Yes, that's a correct statement.

15 Q. What types of pressures are in these wells?

16 A. Based on the information that I found in the
17 State records, the discovery well, the original bottomhole
18 pressure was reported to be 5362 pounds, with a shut-in
19 pressure, original shut-in pressure, of 3828 pounds. And
20 that was the discovery well in the northwest corner of
21 Section 28. That was in 1965, in the Morrow zone.

22 In Section 21, southeast quarter, there was a
23 reported bottomhole pressure in the State records of 3679
24 pounds, which is slightly but almost the same as the
25 original discovery well, and that was nine years later,

1 after the well had came on production.

2 The well in Section 22, there was a shut-in
3 tubing pressure there reported of 3260 pounds, and that was
4 in May of 1972, which would have been seven years after the
5 original well was discovered and put on production.

6 Q. What was that number again?

7 A. That was 3260 pounds.

8 Q. Okay. Those are the shut-in pressures?

9 A. Shut-in tubing pressures at surface, right.

10 The one anomaly to this is, in Section 29, in the
11 southeast corner, there was a bottomhole pressure reported
12 of 6266 pounds, and that was from DST information, and that
13 would be much higher than the original discovery well
14 pressure of -- the original discovery well pressure was
15 5362 pounds that was reported to the State.

16 Q. Okay. And that well in the south half of 29,
17 that was drilled some years after the discovery well, was
18 it?

19 A. Yes, that was drilled in August of 1973, so eight
20 years later.

21 Q. I just have a couple more questions, Mr.
22 Keisling. Acreage -- or I should -- excuse me, drainage is
23 depicted as radial, but that's not always the case in these
24 Morrow reservoirs, is it?

25 A. No, it's not, if we can determine the exact size

1 and direction of the Morrow intervals that are being
2 drained, then it would be -- the drainage pattern would
3 probably follow those intervals. So until there's enough
4 well history and enough wells drilled in a certain area,
5 it's all interpretation by the geologist.

6 Q. Okay. And Mr. Carr asked some questions of Mr.
7 Creasey of perhaps a well in the northeast corner of
8 Section draining Section 28. Section 28 or that well in
9 the northwest quarter has already drained quite an area,
10 has it not?

11 A. Yes, it's drained, based on our calculations, 315
12 acres, and that's over 50 feet of net-pay thickness.

13 Q. And so they have had an opportunity to protect
14 their correlative rights in the northwest quarter of 28?

15 A. That's correct.

16 Q. Do you have anything else at this time, Mr.
17 Creasey?

18 A. I don't believe I do.

19 Q. And did you help prepare the figures set forth on
20 Exhibit 9?

21 A. Yes, I did.

22 Q. And in your opinion is the granting of Edge's
23 Application in the interest of conservation and the
24 prevention of waste?

25 A. I'll agree to that.

1 MR. BRUCE: Mr. Examiner, I'd pass the witness.

2 EXAMINER CATANACH: Mr. Carr?

3 MR. CARR: Just a few questions.

4 CROSS-EXAMINATION

5 BY MR. CARR:

6 Q. If we -- I understood your testimony to be that
7 the exact drainage area really isn't known until you can
8 determine the size and orientation of the various Morrow
9 sands; is that right?

10 A. I believe that's a correct statement, is not
11 knowing how all the reservoirs are oriented and --

12 Q. Another thing that would affect drainage -- what
13 you could drain with the well you're proposing, would be
14 the acreage that has previously been drained by offset
15 wells; isn't that fair to say?

16 A. Restate that question.

17 Q. I mean, the drainage area that you're looking
18 for, for the well you're proposing in the north of 29, the
19 area that actually is going to be drained will be impacted
20 by the orientation of the sands. It also will be impacted
21 by reserves previously drained from that formation; isn't
22 that right?

23 A. Yes, it could, in fact -- our location could be
24 potentially drained from the well in Section 28.

25 Q. Mr. Bruce asked you if V-F had had a chance to

1 protect its correlative rights in 28 with its well. My
2 question to you would be, have they had a chance to protect
3 their correlative rights in the southwest of 21 with the
4 well they've just recently drilled?

5 A. They could have come to the Commission and asked
6 for changing the field rules also, that would...

7 Q. But they honored the pool rules and they drilled
8 1650 back from the corner; isn't that right?

9 A. That's correct.

10 Q. And you're proposing to not change the field
11 rules but just limit them to the V-F acreage?

12 A. That's correct.

13 Q. And that would mean you could be 660 out of the
14 corner and they're 1650?

15 A. That's right.

16 Q. Wouldn't that give you a drainage advantage, when
17 you're three times as close to the common point between
18 your lands?

19 A. It could possibly. But based on what we're
20 seeing from the drainage of the Morrow wells in this area,
21 we don't feel like that would be an advantage, and based on
22 the statewide Morrow spacing rules that would not put us in
23 the -- any advantage of other wells that are drilled in the
24 area and throughout the state.

25 Q. So it's your testimony that being three times

1 closer to your neighbor isn't an advantage; isn't that what
2 you're saying?

3 A. Well, as you can see in Section 21, the drainage
4 area of that well that is produced out of the Dos Hermanos
5 didn't effectively drain more than 45 acres. So I mean we
6 could end up with a well like that and not affect any of
7 our offset.

8 Q. Are you the engineer that is involved with
9 deciding to develop the north half of 29?

10 A. Yes.

11 Q. You certainly didn't anticipate that you'd get a
12 well that would only drain 45 acres; isn't that fair to
13 say?

14 A. No, sir, but I calculated my economics based on
15 drilling the well, based on 80 acres.

16 Q. On 80 acres.

17 A. Yes.

18 Q. So what's the radius on that 80-acre drainage
19 circle in 22, do you know?

20 A. Yes, it would be a thousand feet.

21 Q. So if you're 660 from the line with a radius that
22 you're projecting 1000 feet, you've got about 400 feet on
23 your neighbor's property; isn't that right?

24 A. If it is radial drainage.

25 Q. And if you were at a 1650 location and had a

1 1000-foot radius, you would stay on your own property;
2 isn't that right?

3 A. That's correct.

4 MR. CARR: Thank you.

5 EXAMINER CATANACH: I have no questions.

6 MR. BRUCE: That's all I have in this direct, Mr.
7 Examiner.

8 EXAMINER CATANACH: Okay.

9 MR. CARR: May it please the examiner, at this
10 time we call Louis Mazzullo.

11 LOUIS J. MAZZULLO,

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

14 DIRECT EXAMINATION

15 BY MR. CARR:

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

17 A. Louis J. Mazzullo.

18 Q. Mr. Mazzullo, where do you reside?

19 A. I live in Albuquerque, New Mexico.

20 Q. By whom are you employed?

21 A. I'm an independent geologic consultant.

22 Q. And what is your relationship with V-F Petroleum,
23 Inc.?

24 A. I am a consultant for V-F Petroleum, Inc.

25 Q. Have you previously testified before the Oil

1 Conservation Division and had your credentials accepted and
2 made a matter of record?

3 A. Yes, I have.

4 Q. Were you qualified as an expert in petroleum
5 geology?

6 A. Yes, I am.

7 Q. Are you a certified petroleum geologist?

8 A. I am a certified geologist and a registered
9 geologist in several states.

10 Q. Are you familiar with the Application filed in
11 this case on behalf of Edge Petroleum Exploration?

12 A. Yes, I am.

13 Q. Have you made a geological study of the area
14 that's the subject of this Application?

15 A. I have.

16 Q. Are you prepared to review your work with the
17 Examiner?

18 A. Yes.

19 MR. CARR: We tender Mr. Mazzullo as an expert in
20 petroleum geology.

21 EXAMINER CATANACH: Any objection?

22 MR. BRUCE: No, sir.

23 EXAMINER CATANACH: Mr. Mazzullo is so qualified.

24 Q. (By Mr. Carr) Would you briefly state what it is
25 that V-F Petroleum seeks in this case?

1 A. Briefly stated, we simply seek denial of Edge
2 Petroleum's Application to amend the pool rules. We state
3 that the Morrow formation is more of a common source of
4 supply across the lease line, certainly within a mile of
5 the Dos Hermanos Pool limits. If the Application is
6 granted, it would grant one pool with two sets of rules,
7 one for Edge and one for everybody else involved, and the
8 results would be the impairment of V-F's correlative
9 rights.

10 Q. Have you prepared exhibits for presentation here
11 today?

12 A. Yes, I have.

13 Q. Would you refer to what has been marked V-F
14 Exhibit Number 1 and review it for the Examiner?

15 A. Exhibit Number 1 is a structure map drawn on my
16 top of the lower Morrow, which may or may not be the same
17 as Mr. Creasey's top of the lower Morrow, showing the
18 outlines of the Dos Hermanos Pool as we know it from the
19 OCD records. It actually encompasses five sections,
20 including Section 29.

21 Q. On what did you base that determination that it
22 included Section 29?

23 A. The well in Section 29 was drilled, I believe, in
24 1974. It was designated in the Dos Hermanos-Morrow Pool at
25 that time.

1 Q. Was that designated by the OCD?

2 A. Yes, it was.

3 Q. Let's take a look for a minute at the well in the
4 southeast of Section 29. Do you agree that that has
5 produced -- I guess it's shown on your exhibit --
6 approximately or close to a third of a BCF?

7 A. Yes, it has.

8 Q. Did it produce any gas?

9 A. It produced gas from the upper Morrow, above the
10 zones that are producing in the rest of Dos Hermanos field.

11 Q. Can you tell from the information you have on
12 that well whether or not that acreage was drained by prior
13 Morrow development in the area?

14 A. I can't tell, but the results of the testing of
15 that well, which was drilled some eight years after the
16 discovery well in Section 28 -- it had a large radius of
17 drainage, according to Edge's deposition -- produced only,
18 as they say -- I didn't see records of gas too small to
19 measure, but they did -- they found the lower and the
20 middle Morrow noncommercial, which I could only assume is
21 either because there's no porosity, which is contradicted
22 by what's seen on the log, or it was drained.

23 Q. Now, V-F has currently drilled a well in the
24 southwest of Section 21; is that correct?

25 A. Yes, they have.

1 Q. Do you know the status of that well?

2 A. It's currently been cased, casing has been run
3 through the Morrow, but it hasn't been completed yet to my
4 knowledge.

5 Q. And that is at a standard location for the pool
6 rules that govern this area?

7 A. Yes, the bottomhole location, the surface
8 location because of the potash considerations, was drilled
9 adjacent to the existing well in the southeast quarter, but
10 the bottomhole location is within 1650-1650 of the
11 southwest corner of that section.

12 Q. Mr. Mazzullo, if the Application of Edge is
13 granted and they locate their well 660 feet out of the
14 northeast quarter of 29, do you have an opinion as to
15 whether or not they gain an advantage on the offsetting V-F
16 acreage in Section 21?

17 A. Owing to the geology of the Morrow in this area
18 -- and this comes from 25 years of experience and
19 publication of the Morrow in southeastern New Mexico -- the
20 Morrow here is composed not only of fluvial northwest-to-
21 southeast-trending channels, but there are also southwest-
22 to-northeast-trending marine and shallow marine and deltaic
23 sands as well. They're all mixed up together here, they're
24 all perforated in unison in many of the wells. There's
25 been -- several different types of sands have been

1 perforated in a number of the wells -- in all of the wells
2 in Dos Hermanos field.

3 The potential for drainage of the Budge Number 1
4 location, in my opinion, though -- is not based on any
5 engineering studies but on geologic knowledge of the area
6 -- in my opinion is high, from the Edge Petroleum proposed
7 location 660 out of the northeast corner.

8 Q. And the Budge Number 1 is the V-F well in
9 Section --

10 A. It's the new well in the southwest quarter of
11 Section 21.

12 Q. You heard the testimony from Edge that they
13 wouldn't oppose other operators drilling 660 from that?
14 You heard that, didn't you?

15 A. That's correct, yes.

16 Q. V-F has already drilled, however; isn't that
17 right?

18 A. Yes, they have.

19 Q. And they're back 1650?

20 A. Yes.

21 Q. In your opinion, does being -- wells at this
22 location give an advantage to the Edge location?

23 A. I don't know if it does or not, I don't have any
24 engineering data on it, but we are within the -- we are
25 within the confines of the pool rules at that location.

1 Q. Let's move to what is V-F Exhibit Number 2.
2 Would you identify that, please?

3 A. V-F Exhibit Number 2 is cross-section A-A' which
4 runs southwest to northeast across Dos Hermanos Pool and
5 encompasses four of the five wells of that pool.

6 Q. Is there a trace for that cross-section shown on
7 Exhibit Number 1?

8 A. Yes, it's the blue line labeled A-A' on Exhibit
9 Number 1.

10 Q. And what does this exhibit show?

11 A. This exhibit shows that there is quite a bit of
12 lateral continuity of the various Morrow sands. And before
13 I go any further, the letter designations on the sands, A,
14 B, C, D, et cetera, are there for nothing more than
15 correlation purposes. They do not necessarily correspond
16 to the same designations presented by Mr. Creasey.

17 This Exhibit Number 2 shows that there is a large
18 amount of lateral continuity of the various lettered sands
19 across Dos Hermanos field, largely because a lot of these
20 sands in this area are shallow marine in nature, and
21 instead of trending north-south to southeast they trend
22 southwest to northeast, pretty much along -- the line of
23 the cross-section is pretty much along the line of strike
24 of those sands.

25 Q. Do you have an opinion as to whether or not the

1 sands that are present or would be present in a well at the
2 proposed Edge location would correlate to the sands that
3 are present at the Budge location that's just been drilled
4 by V-F in the southwest of Section 21?

5 A. Yes, if you look on cross-section A-A', or
6 Exhibit 2, I have the Edge Petroleum proposed location
7 projected onto this cross-section, and the Budge well --
8 the sands in the Budge well pretty much correlate one for
9 one to the sands in Section 21, the Federal G well. And so
10 I have no reason to doubt that they would correlate
11 similarly to the Edge location if they were to drill there.

12 Q. Geologically, is there any reason that those two
13 wells wouldn't be competing in those intervals for the same
14 reserves?

15 A. They would be competing for the same reserves, I
16 believe.

17 Q. What conclusions can you reach from your geologic
18 work?

19 A. My geologic work, for one thing, I don't think
20 radial drainage is going to work in these types of sands,
21 because the orientation of the sands is different depending
22 on where you are in the section, and that there is a
23 potential -- we are -- and when V-F drilled the Budge
24 Number 1, they drilled it under the understanding that they
25 probably would be drained by production in the offset well,

1 in the well that they offset.

2 Similarly, we believe that drainage will occur
3 from Edge Petroleum being three times closer to our
4 location than the statutes allow for Dos Hermanos Pool.

5 Q. Were Exhibits 1 and 2 prepared by you?

6 A. Yes, they were.

7 MR. CARR: May it please the Examiner, at this
8 time we move the admission of V-F Petroleum Exhibits 1 and
9 2.

10 EXAMINER CATANACH: Any objection?

11 MR. BRUCE: No.

12 EXAMINER CATANACH: Exhibits 1 and 2 will be
13 admitted.

14 MR. CARR: That concludes my direct of Mr.
15 Mazzullo.

16 EXAMINER CATANACH: Mr. Bruce?

17 CROSS-EXAMINATION

18 BY MR. BRUCE:

19 Q. Mr. Mazzullo, on your Exhibit 1 there's a number
20 of wells to the south. Are those Morrow wells?

21 A. Some of them are Morrow wells, some of them are
22 Strawn wells.

23 Q. Okay.

24 A. The Morrow wells are indicated -- well, there's
25 one Morrow well that's indicated in Section 31, but there

1 are others that have produced from the Morrow or may have
2 been recompleted in the Strawn since then.

3 Q. Okay, but it looks like two and three wells per
4 section have been drilled to the Morrow?

5 A. No, some of them were drilled only to the Strawn,
6 and some of them were only completed in the Strawn.

7 And as an aside, most of the -- some of the wells
8 in the Dos Hermanos field have been recompleted to the
9 Strawn as well.

10 Q. Is there any preliminary pressure data from the
11 Budge well in Section 21?

12 A. We didn't run any drill stem tests, and as far as
13 I know they haven't run any bottomhole tests either,
14 because they haven't -- as far as I know, they haven't
15 perforated. They may have. I don't have privy to that
16 information at this time.

17 Q. Was that well selected based on geologic reasons?

18 A. Yes, it was.

19 Q. So were you the geologist involved in selecting
20 the location?

21 A. Yes, I was.

22 Q. So you thought that was a preferable geologic
23 location than moving, say, further to the south and west?

24 A. I actually selected that location for the morrow
25 and the Strawn as well, for two -- and in selecting it for

1 the Morrow we needed to keep it within the 1650 from the
2 edge lines.

3 Q. But V-F Petroleum does believe that infill
4 drilling is necessary in the Dos Hermanos-Morrow Pool, does
5 it not?

6 A. I don't know what V-F Petroleum thinks, but -- I
7 can't speak for --

8 Q. Do you think it's necessary?

9 A. Do I think it's necessary? I told them that they
10 were probably going to be drained at the Budge Number 1.
11 They elected to go ahead and drill it.

12 Q. Well, why not drill to the north?

13 A. Well, maybe they might -- well, for one thing,
14 there are restrictions to where we can drill because of the
15 potash consideration. We only had one surface location
16 available to us in Section 21, I believe. We may have had
17 more.

18 Q. Well, you could have drilled further to the north
19 from that same surface location, couldn't you?

20 A. Yeah, we could have, and they might -- I don't
21 know if they will or not, if they'll elect to do it or not.

22 Q. Now, you said that -- in talking about your
23 cross-section, there's continuity of sand.

24 A. Uh-huh.

25 Q. What about continuity of porosity?

1 A. Well, the porosity seems -- Mr. Creasey pointed
2 out very accurately that porosity is a little hard to read
3 on some of these older logs, particularly the old neutron
4 logs. But on the sonic log there appears to be continuity
5 of porosity between wells that -- I show here some of the
6 zones in yellow are variously porous, but there is some
7 porosity registered on the sonic logs, as well as on the
8 neutron logs.

9 Q. Okay. Well, looking at your cross-section, the
10 original well in Section 28, you have -- there's some data
11 you have printed out right under the DST stuff that shows
12 an FSIP of 4939; is that correct?

13 A. That's correct, uh-huh.

14 Q. And then over in Section 22 the well on the
15 right-hand side of your cross-section -- which was drilled
16 what, seven years later?

17 A. Seven years later, yes.

18 Q. That has an FSIP of 4917; isn't that correct?

19 A. Yes.

20 Q. It really doesn't show that there's any drainage
21 effects --

22 A. Do we know what zone that pressure data -- what
23 zone or zones that pressure data registered? We don't
24 know.

25 Q. I'm asking you.

1 A. No, I don't know what zones they're actually
2 gauging, because they --

3 Q. But just from those numbers, it doesn't show any
4 drainage?

5 A. Well, as you can see, they DST across several
6 different zones, some of which were perforated and some of
7 which were not.

8 Q. Okay.

9 A. So we don't know where it's coming from.

10 Q. And I think you said that based on your studies
11 over the years, most of these Morrow zones trend northwest-
12 southeast?

13 A. No, it's variable, there are highly variable
14 depositional environments in this part of the Basin in the
15 Morrow.

16 Q. Okay, what about this area, which directions?

17 A. There are -- As pointed out, there are northwest-
18 to-southeast-trending fluvial channels. There are also
19 northeast -- I'm sorry, southwest-to-northeast-trending
20 shallow marine bar sands. And there are also lobate-shaped
21 deltaic sands, or channel-mouth bar sands, as it will.
22 There are all different shapes and geometries involved in
23 the sands in this section.

24 Q. Okay. So if the geology is trending northwest-
25 southeast, then drainage would be along that direction,

1 would it not?

2 A. But that's not the predominant -- that's not the
3 only direction that the geology is -- that the sands are
4 trending. They're trending in different directions
5 throughout the section.

6 Q. Okay. But just as easily, the well in Section 28
7 could have already depleted Edge's acreage in Section 29?

8 A. Yes.

9 Q. And if Edge were allowed to drill at its location
10 -- V-F is the operator in Section 28, is it not?

11 A. I'm not sure if they are. I think it's McRae and
12 Henry, but I --

13 Q. But an operator could go up there and offset
14 Edge's well, could it not?

15 A. 1650 out of the northwest quarter.

16 Q. Well, Edge has already said it wouldn't object to
17 a 660-660 location.

18 A. Well, they can't change the pool rules. It has
19 to be changed administratively, it has to be changed
20 through an unorthodox location.

21 Q. But you can get an unorthodox location?

22 A. Sure.

23 Q. Especially where the offset operator has already
24 waived objection?

25 A. I don't know if McHenry wants to do that, that

1 offset operator wants to do that. We wouldn't do it, V-F
2 wouldn't do it.

3 Q. Why wouldn't V-F do it?

4 A. Well, because we're abiding by the pool rules
5 until -- You know, we don't have any reason to do it,
6 because we feel that the Morrow is going to be drained. A
7 lot of these wells -- Most of these wells that I proposed
8 for V-F are Strawn tests.

9 Q. What wells have you proposed for V-F?

10 A. Well, there are other wells that -- Mr. Creasey
11 mentioned a well in the northwest quarter of Section 22,
12 which was permitted to 12,303. Now, I don't know what V-F
13 ultimately permitted that for, but I proposed that as a
14 Strawn test, and since it was a Strawn test with a surface
15 location in the southwest quarter, the reason the depth
16 showed up as 12,303 is, that's the true depth -- that's the
17 measured depth, that's not the true vertical depth of the
18 proposed well. True vertical depth of the proposed well is
19 more on the order of 11,600 feet.

20 Q. Have you proposed additional Morrow wells out
21 here?

22 A. Have I proposed additional Morrow wells out
23 there? Not on our acreage, because we don't have any more
24 room to maneuver, you know.

25 Now, there might be a difference between what I

1 proposed to V-F and what V-F permitted, but I don't know
2 that for sure.

3 MR. BRUCE: That's all I have, Mr. Examiner.

4 EXAMINATION

5 BY EXAMINER CATANACH:

6 Q. Mr. Mazzullo, do you know anything about the
7 proposed well in Section 22?

8 A. The one in the northwest quarter --

9 Q. Yes.

10 A. -- of 22? Only as I proposed it as a Strawn test
11 to V-F.

12 Q. Okay, that is a Strawn test and not a Morrow?

13 A. That's what I proposed. What V-F is going to do
14 with it, I don't know. I'm not a working interest owner,
15 so I have no say in it.

16 Q. Okay. So basically your testimony is saying that
17 you don't see a lot of difference in the porosity
18 continuity between these sands?

19 A. No, I -- A difference in continuity? I see a
20 high degree of continuity in the sands, yes.

21 Q. A high degree of continuity.

22 A. Yes.

23 Q. And porosity?

24 A. And porosity. It's variable but, you know, if
25 you have two feet of porosity in one well and eight feet of

1 porosity in another well, that's continuity. Unless you
2 could establish a permeability or porosity barrier between
3 the two wells -- I see no reason to do that at this time,
4 so I have to assume that there's continuity.

5 Q. And you see no barrier between the well in
6 Section 28 and the acreage in Section 29?

7 A. No, I don't. There's no structural barriers, and
8 I don't see any geologic barriers.

9 Q. But due to the varying directions in which these
10 sands trend, you can't say what the -- if it's not radial
11 drainage, you can't determine what the drainage
12 orientation --

13 A. No, you can't what the drainage -- First of all,
14 you don't know where the gas is coming from. Just because
15 they perforated across the entire, you know, package of --
16 for instance, most of the sands in Section 21, you don't
17 know where the reserves are coming from. And so it's hard
18 to tell whether or not you're getting a radial drainage or
19 whether you're getting elongate drainage along one of the
20 channel-mouth bar sequences which might be more permeable
21 than some of the other sands. We don't know that.

22 Unless you go in there and individually test
23 every one of those sands, pressure-test every one of those
24 sands, we really have no way of telling where the gas is
25 coming from.

1 Q. Okay, based upon your examination of the geology
2 of this area, do they have a viable location 1650 feet off
3 that west -- the east --

4 A. As viable as our Budge location was in Section
5 21.

6 Q. Is it geologically favorable for them to move to
7 the east?

8 A. It would be -- according to their drainage, if
9 they move -- you mean -- move to the west, you mean?

10 Q. Well, they're moving from 1650 to the east?

11 A. Oh, they're moving from 1650. Well, according to
12 their own drainage and what their projected drainage in
13 their location is, they're going to be drained by the well
14 in Section 28, it would be more favorable if they backed
15 away from Section 28, in my opinion.

16 Q. You believe they have a viable location 1650?

17 A. They have as viable a location as I believe we
18 had at the Budge.

19 EXAMINER CATANACH: Okay, I have nothing further.

20 MR. CARR: Nothing.

21 MR. BRUCE: Nothing further.

22 MR. CARR: I have a closing.

23 EXAMINER CATANACH: Okay.

24 MR. CARR: Are you ready?

25 EXAMINER CATANACH: Sure.

1 MR. CARR: Mr. Catanach, I think it's important
2 to re-track this. The question before you isn't how many
3 wells should be drilled on a section in the Morrow, because
4 that's not before you.

5 If they had wanted to change the number of Morrow
6 wells or change the spacing, they could have changed the
7 pool rules, they could have abolished the special pool
8 rules, but they didn't.

9 They came in here with a lot of speculation and
10 really nothing more. They don't know where the reserves
11 are going to be drained, they don't know what they're going
12 to receive, because no one does until they drill the well.
13 But what they're doing is, in effect, changing the rules,
14 changing the rules so they can be closer to V-F than V-F
15 under the rules has been able to be closer to them.

16 They testified they didn't know they were
17 purchasing acreage that was governed by 640-acre spacing.
18 But Mr. Catanach, nobody has shown you anything that would
19 suggest any sort of a geological boundary. No one has
20 suggested any geological boundary, no one has suggested we
21 have anything other than one common source of supply. And
22 yet what they want is one set of rules for them and one set
23 of rules for everybody else.

24 You asked, well, is there a geologically viable
25 location, other than 660, for them? That's for them to

1 decide, based on their geology. But the effect of what
2 they are seeking is that their 660 location, which is three
3 times closer to us than we are to them, bears no penalty
4 because their location would be standard.

5 I would suggest you look, when you consider this
6 Application, at Rule 104.F. 104.F.(6) provides that
7 whenever an unorthodox location is approved, the Division
8 may order an action necessary to offset any advantage of
9 the unorthodox well location.

10 And what they're seeking is a change that steps
11 outside that rule and says, yes, you say it's all right to
12 be three times closer to us than we are to them.

13 They tell you they hope for a well with a
14 drainage radius of 1000 feet. Well, if we get a 1000-foot
15 drainage radius at our location, we stay on our property.
16 If the do, they drain from us. And if they played under
17 one set of rules, we could request a penalty, and we've
18 been denied that opportunity.

19 I submit to you that correlative rights doesn't
20 mean you pay off your well by draining from your neighbor
21 and that you have got to look at the definition and see how
22 we are being denied our opportunity to receive our fair
23 share, because -- I mean, if you change the rules, we play
24 under one set of rules that are more restrictive, and they
25 play under a set of rules that are not, that step outside

1 the process, you will declare their well standard, no
2 penalty, and at the same time let them be three times
3 closer to us than we are to them.

4 We think if you're going to protect correlative
5 rights, the Application has to be denied, they ought to
6 come in and seek an unorthodox location, we'll then present
7 a case requesting that if they are at that location they be
8 penalized to offset the advantage they're gaining on us.

9 EXAMINER CATANACH: Thank you, Mr. Carr.

10 Mr. Bruce?

11 MR. BRUCE: Mr. Examiner, we're here today
12 because the 640-acre pool rules are dinosaurs. There are
13 only a few 640-acre Morrow pools in New Mexico, and what
14 people have been doing over the years, like in the
15 McMillan-Morrow gas pool and the Cinta Roja-Morrow Gas
16 Pool, have been coming in and seeking leaving the spacing
17 as is to avoid impairing current well production rights,
18 leaving the 640-acre spacing intact, limiting the effect of
19 those pool rules, as in the McMillan-Morrow, to its
20 specific pool boundaries, asking for one well per quarter
21 section and loosening up the well-location requirements so
22 that there's a standard 660 feet off the quarter section
23 line and 10 feet off of a quarter-quarter section line.

24 V-F could have done that. I've done it for
25 several clients. I think I've done -- this is the -- I've

1 done it for about four at this point. The Division has
2 readily granted those applications because people want to
3 drill one well per quarter section.

4 V-F didn't do it. Why, I don't know. But they
5 chose to drill their well at the 1650-1650 location. Mr.
6 Mazzullo said it was a good geologic location. They're
7 setting pipe. They've obviously got a good well. Their
8 correlative rights are unharmed.

9 Edge is not seeking an advantage over anyone,
10 they just want to drill on statewide rules. As a result,
11 they came in and gave notice as required by Rule 1207 to
12 current operators in the pool. There are no outside
13 spacing units where people would be affected adversely by
14 their request.

15 And as a matter of fact, one of the reasons we
16 did not seek to abolish the pool rules was because V-F --
17 and I can put on testimony for this if you want -- V-F did
18 not want a reduced spacing. They wanted to keep 640-acre
19 spacing. They have certain land reasons for doing that.
20 That's fine, we don't care.

21 But certainly we have presented enough evidence
22 today that if the Division so chose it could leave the 640-
23 acre spacing intact, allow one well per quarter section and
24 loosen up the well-location requirements. Edge doesn't
25 care, they're not trying to seek an advantage over anyone.

1 As far as the location being closer to V-F, yes
2 it is. What's that well going to drain? Maybe 80 acres.
3 It might have already been affected by drainage from
4 Section 28. That's life.

5 If necessary, V-F or another offset operator
6 could come in, if Edge successfully drills its well, and
7 offset that well. We fail to see anyone being harmed in
8 this situation.

9 Again, these 640-acre pool rules, no one is
10 pushing these at this point, and they ought to be limited
11 so that people can go about their way and develop on
12 statewide rules.

13 EXAMINER CATANACH: Thank you, Mr. Bruce.

14 Anything further?

15 MR. CARR: Nothing further.

16 EXAMINER CATANACH: There being nothing further,
17 Case Number 13,351 will be taken under advisement.

18 (Thereupon, these proceedings were concluded at
19 11:44 a.m.)

20 * * *

21 I do hereby certify that the foregoing is
22 a complete record of the proceedings in
23 the Examiner hearing of Case No. _____,
24 heard by me on _____.

25 _____, 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 October 10th, 2004.



STEVEN T. BRENNER
CCR No. 7

My commission expires: October 16th, 2006