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NEW MEXICO OIL CONSERVATION DIVISION
STATE LAND OFFICE BUILDING
STATE OF NEW MEXICO
CASE NO. 10413

IN THE MATTER OF:

The Application of Merrion
Oil & Gas Corporation to
revise the special rules and
regulations for the Snake
Eyes-Dakota "D" Gas Pool and
for an unorthodox gas well
location, San Juan County,
New Mexico.

BEFORE:

MICHAEL E. STOGNER
Hearing Examiner
State Land Office Building
November 21, 1991

REPORTED BY:

DEBBIE VESTAL
Certified Shorthand Reporter
for the State of New Mexico

ORIGINAL

1 EXAMINER STOGNER: Call next case, No.
2 10413, which is the application of Merrion Oil &
3 Gas Corporation to revise the special rules and
4 regulations for the Snake Eyes-Dakota "D" Gas
5 Pool and for an unorthodox gas well location in
6 San Juan County, New Mexico.

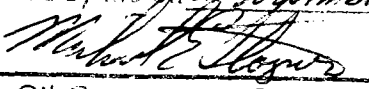
7 The applicant seeks to amend Order No.
8 R-4343, which originally authorized 320-acre gas
9 spacing and proration units and limited well
10 locations.

11 At this time the applicant has filed to
12 reestablish 160-acre gas spacing and proration
13 units and for a different limiting well location
14 requirement for said pool. This pool is in
15 sections -- covers Sections 17 and 20 in their
16 entirety of Township 21 South, Range 8 West.

17 The applicant, however, at this time
18 has requested that this case be continued to the
19 Examiner's Hearing scheduled for December 5,
20 1991, which is scheduled here in Santa Fe in this
21 office. Case No. 10413 will be continued.

22 (And the proceedings were concluded.)

23 I do hereby certify that the foregoing is
24 a correct record of the proceedings in
25 the Examiner's hearing of Case No. 10413,
heard by me on 21 November 1991.


_____, Examiner
Oil Conservation Division

1 CERTIFICATE OF REPORTER

2
3 STATE OF NEW MEXICO)
4 COUNTY OF SANTA FE) ss.

5
6 I, Debbie Vestal, Certified Shorthand
7 Reporter and Notary Public, HEREBY CERTIFY that
8 the foregoing transcript of proceedings before
9 the Oil Conservation Division was reported by me;
10 that I caused my notes to be transcribed under my
11 personal supervision; and that the foregoing is a
12 true and accurate record of the proceedings.

13 I FURTHER CERTIFY that I am not a
14 relative or employee of any of the parties or
15 attorneys involved in this matter and that I have
16 no personal interest in the final disposition of
17 this matter.

18 WITNESS MY HAND AND SEAL NOVEMBER 27,
19 1991.

20
21
22 
23 _____
24 DEBBIE VESTAL, RPR
25 NEW MEXICO CSR NO. 3

NEW MEXICO OIL CONSERVATION COMMISSION

EXAMINER HEARING

SANTA FE, NEW MEXICO

Hearing Date DECEMBER 5, 1991 Time: 8:15 A.M.

NAME	REPRESENTING	LOCATION
Maurice Trimmer	Byram Co.	SF
William A. Egan	Empell, Jan, Boyd & Shunder	Santa Fe
James Bauer	Hinkle Law Firm	Albuquerque
Bill Hawkins	Amoco	Denver
Barbara Sturgeon	Amoco	Denver
Eric L. Nitcher	Amoco	Denver
George Sharpe	Meridian Oil	Farmington
Tommy Roberts	"	"
Bob Statton	Gust & Statton	Midland, TX
Ruth Rose	SELF	Santa Fe
W. Kellerman	Kellerman Kellerman and Associates	Santa Fe
Ceci Leonard	Apache	HOUSTON
John Polasek	Apache	HOUSTON
Steve Spitzer	BTA Oil Prod	BTA
Kipby Cox	BTA Oil Producers	BTA Midland

NEW MEXICO OIL CONSERVATION COMMISSION

EXAMINER HEARING

SANTA FE, NEW MEXICO

Hearing Date DECEMBER 5, 1991 Time: 8:15 A.M.

NAME	REPRESENTING	LOCATION

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NEW MEXICO OIL CONSERVATION DIVISION
STATE LAND OFFICE BUILDING
STATE OF NEW MEXICO
CASE NO. 10413

IN THE MATTER OF:

The Application of Merrion Oil & Gas Corporation to revise the special rules and regulations for the Snake Eyes-Dakota "D" Gas Pool and for an unorthodox gas well location, San Juan County, New Mexico.

BEFORE:

DAVID R. CATANACH

Hearing Examiner

State Land Office Building

December 5, 1991

REPORTED BY:

DEBBIE VESTAL
Certified Shorthand Reporter
for the State of New Mexico

ORIGINAL

A P P E A R A N C E S

FOR THE NEW MEXICO OIL CONSERVATION DIVISION:

ROBERT G. STOVALL, ESQ.
General Counsel
State Land Office Building
Santa Fe, New Mexico 87504

FOR THE APPLICANT:

TANSEY, ROSEBROUGH, GERDING
& STROTHER, P.C.
Post Office Box 1020
Farmington, New Mexico 87401
BY: TOMMY ROBERTS, ESQ.

I N D E X

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Page Number

Appearances 2

WITNESSES FOR THE APPLICANT:

1. GEORGE F. SHARPE

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Examination by Mr. Stovall 22

Certificate of Reporter 31

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Exhibit No. 2 8

Exhibit No. 3 9

Exhibit No. 4 12

Exhibit No. 5 13

Exhibit No. 6 14

Exhibit No. 7 15

Exhibit No. 8 17

Exhibit No. 9 18

1 EXAMINER CATANACH: At this time we'll
2 go ahead and call the first case, 10413.

3 MR. STOVALL: Application of Merrion
4 Oil & Gas Corporation to revise the special rules
5 and regulations application for the Snake
6 Eyes-Dakota "D" gas pool and for an unorthodox
7 gas well location, San Juan County, New Mexico.

8 EXAMINER CATANACH: Are there
9 appearances in this case?

10 MR. ROBERTS: Mr. Examiner, my name is
11 Tommy Roberts. I'm an attorney in Farmington,
12 New Mexico. I'm appearing on behalf of the
13 applicant. I have one witness to be sworn.

14 EXAMINER CATANACH: Are there any other
15 appearances?

16 Will the witness, please, stand and be
17 sworn in.

18 GEORGE F. SHARPE
19 Having been duly sworn upon his oath, was
20 examined and testified as follows:

21 EXAMINATION

22 BY MR. ROBERTS:

23 Q. Would you state your name and your
24 place of residence for the record.

25 A. My name is George Sharpe. I live in

1 Farmington, New Mexico.

2 Q. And what is your occupation?

3 A. I'm a petroleum engineer with Merrion
4 Oil & Gas Corporation in Farmington.

5 Q. How long have you been employed in that
6 position?

7 A. Two years with Merrion. And I worked
8 as a petroleum engineer for eight years
9 previously with Chevron.

10 Q. Are you familiar with the operations of
11 Merrion Oil & Gas in the area of the Snake
12 Eyes-Dakota Dakota "D" gas pool?

13 A. I am intimately aware and familiar.

14 Q. Have you testified before the Oil
15 Conservation Division on any prior occasion?

16 A. I have once.

17 Q. In what capacity?

18 A. As an expert witness.

19 Q. In what field?

20 A. It was the Papers Wash Entrada field on
21 an application for a water flip.

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

24 A. Yes, I am.

25 MR. ROBERTS: I would tender Mr. Sharpe

1 as an expert in the field of petroleum
2 engineering.

3 EXAMINER CATANACH: He is so
4 qualified.

5 Q. Mr. Sharpe, would you briefly describe
6 the purpose of the application?

7 A. There are three goals of the
8 application. The first is to get the spacing
9 changed from 320-acre spacing to 160-acre
10 spacing. The second is to adjust the footage
11 requirements. And the third is to get a
12 nonstandard location approved for the Santa Fe
13 "20" No. 3 well.

14 Q. Briefly describe the well spacing and
15 location rules currently in effect for the Snake
16 Eyes-Dakota "D" gas pool.

17 A. The current spacing is 320-acre spacing
18 for gas wells. And the current footage
19 requirements are 990 feet from an outer boundary
20 and 330 feet from an inner boundary or
21 quarter-quarter.

22 Q. What additional operations in this pool
23 does Merrion Oil & Gas intend to conduct?

24 A. Merrion Oil & Gas would like to
25 recomplete the Santa Fe "20" No. 3 well, which is

1 a shut-in uneconomic Entrada producer, recomplete
2 it back to the Dakota formation. And to do that
3 we need a nonstandard location as well as a
4 spacing change.

5 Q. When was the Santa Fe "20"-3 well
6 drilled?

7 A. Santa Fe "20"-3 well was drilled in the
8 mid-1970s. It was produced from the Entrada
9 formation until earlier this year when it was
10 shut in and is uneconomic and not anticipated to
11 become economic in the Entrada at any time.

12 Q. Would you briefly summarize the reasons
13 which justify the amendments which Merrion Oil &
14 Gas seeks to this pool.

15 A. The reason for the spacing change is
16 that the current wells cannot drain 320 acres
17 based on the analysis of their performance and,
18 therefore, additional infill drilling is required
19 to adequately drain the reservoir and recover the
20 fluids.

21 And the footage requirements are too
22 strict to allow for reasonable development and
23 need to be adjusted to allow for a window for
24 drilling. And nonstandard location is required
25 to allow us to recomplete the Santa Fe "20" No. 3

1 existing well and take advantage of the revised
2 spacing if we're allowed to drill on tighter
3 spacing.

4 Q. You have a package of exhibits marked
5 Exhibits 1 through 9 in front of you. Would you
6 refer to what's been marked as Exhibit No. 1 and
7 identify it.

8 A. Exhibit 1 is a summary of the exhibits
9 that will be discussed, and again it's broken
10 into three sections. The first section is a
11 series of exhibits justifying tighter spacing, an
12 exhibit discussing footage requirements, and
13 Exhibit 9 discusses the nonstandard location
14 listing request.

15 Q. Now refer to Exhibit No. 2 and identify
16 it and explain its significance to the
17 application.

18 A. Exhibit No. 2 is a type log through the
19 Dakota formation from the Santa Fe "20" No. 4
20 well, which is one of the existing Dakota wells.
21 It identifies the main productive interval to be
22 the main Dakota "A" as shown on the exhibit.

23 Q. Can you highlight in some fashion the
24 zone of interest?

25 A. Again, about two-thirds of the way

1 down, main Dakota, the A zone is identified as
2 the main productive interval on the exhibit.

3 Q. Now, where is the Santa Fe "20"-4 well
4 in relationship to the Santa Fe "20"-3 well?

5 A. If you look at Exhibit 3, referring to
6 Exhibit 3, you can see that -- well, it's a
7 little bit difficult to see on that one. Santa
8 Fe "20" No. 4 is south of the Santa Fe "20" No. 3
9 as shown on that exhibit.

10 Q. Exhibit No. 7 might more clearly
11 illustrate it?

12 A. There it is, Exhibit 7. Shows the
13 relationship of those wells. And the Santa Fe
14 "20" No. 4 and the Snake Eyes No. 2 are the two
15 existing Dakota wells. They're both on stand-up
16 320s. They're both nonstandard locations which
17 have been approved. And the Santa Fe "20" No. 3
18 is shown on that exhibit as the additional well
19 we would like to recomplete.

20 Q. Okay. Now refer to what's been marked
21 as Exhibit No. 3 and identify that exhibit.

22 A. Exhibit No. 3 is a net hydrocarbon feet
23 map, which is used to determine the gas in
24 place. The shaded area -- the pool boundary is
25 identified on Exhibit No. 3, and the shaded area

1 shows what we feel to be remaining reserves
2 within Section 20 of 21 North, 8 West.

3 And the original gas in place, the
4 amount of gas contained in the main Dakota "A" in
5 that section is approximately 4.55 Bcf as
6 identified on the exhibit.

7 The two current producing wells are
8 identified and the proposed recompletion is
9 identified. And it is felt that the recompletion
10 is necessary to drain the northwest, or excuse
11 me, northeast quarter of that section.

12 It should also be pointed out that the
13 dry holes to the north in Section 17 and on the
14 north part of Section 20 are all Dakota producers
15 and have fully drained that northern lobe of this
16 net pay.

17 Q. This exhibit indicates that the pool
18 consists of Section 17 and Section 20. What
19 township, range, and county are we talking about?

20 A. We are in San Juan County in Township
21 21 North, 8 West, Range 8 West.

22 Q. Are we sure that's San Juan County?

23 A. I am pretty sure it's San Juan County.

24 Q. I've got a question in my mind whether
25 that is San Juan County, do you?

1 MR. STOVALL: It would affect the
2 advertising for sure because we would advertise
3 in San Juan.

4 THE WITNESS: It is San Juan County.

5 Q. (BY MR. ROBERTS) Okay. Mr. Sharpe,
6 with respect to the two existing Dakota gas wells
7 in Section 20, what spacing units have been
8 established for those wells?

9 A. Those two wells are on stand-up 320s.
10 And again, they are unorthodox in respect to the
11 current footage requirements and have approved
12 nonstandard locations for those wells.

13 Q. Would you briefly describe the
14 productive history of those two wells. When were
15 they drilled? What production has been obtained
16 from them?

17 A. The Snake Eyes No. 2, the well in the
18 southwest quarter, was drilled in the early
19 1970s, and it was completed as a Dakota well. It
20 produced approximately a quarter of a Bcf and was
21 plugged and abandoned. We reentered that well in
22 1991 and established production in the Dakota
23 formation, and it is tested at about 250 Mcf a
24 day and 4- or 500 barrels of water a day.

25 The Santa Fe "20" No. 4 was drilled as

1 an Entrada production well. It was unproductive
2 in the Entrada, and it was plugged back and
3 completed as a Dakota well in 1990, late 1990.
4 And it has been tested also at about 250 Mcf a
5 day and 4- or 500 barrels of water a day.

6 Q. You've indicated that the gas in place
7 is 4.55 Bcf. What factors were utilized in the
8 calculation of that figure?

9 A. That's a volumetric estimate of
10 original gas in place based on the net pay and
11 saturation, the same process that's determined
12 from logs. And as far as -- again, they were
13 determined for each well and contoured.

14 What a net hydrocarbon feet map is is
15 you actually calculate the product of porosity,
16 net pay, and gas saturation and contour that, and
17 that is what contoured here. So it is not
18 constant through the field but varies.

19 Q. Now refer to what's been marked as
20 Exhibit No. 4 and identify the exhibit.

21 A. Exhibit No. 4 is a calculation showing
22 the length of time to begin to affect the
23 reservoir boundary, to begin to drain to the
24 reservoir boundary. We conducted a buildup
25 analysis on the Snake Eyes No. 2 and determined

1 that the permeability of the formation is a
2 little over 1 millidarcy. That's a very tight
3 formation.

4 And if you use 1 millidarcy in the
5 calculation of time to reach pseudo-steady state,
6 it will take close to a year-and-a-half to even
7 begin to drain a 320-acre drainage area. That is
8 an unacceptable length of time to even begin to
9 effect to drain the reservoir. We feel it will
10 hamper being able to effectively recover reserves
11 from this reservoir because of the length of time
12 and the tightness of the formation.

13 Q. When was the pressure buildup analysis
14 done on the Snake Eyes No. 2 well?

15 A. The pressure buildup analysis was done
16 early in 1991.

17 Q. Now turn to what's been marked as
18 Exhibit No. 5 and identify the exhibit and
19 explain its significance to the application.

20 A. Exhibit No. 5 is a calculation showing
21 that with the current production from our
22 existing wells and a reasonable decline rate, our
23 recovery from the reservoirs will be excessively
24 low with just two wells.

25 Assuming an initial rate of -- well,

1 500 Mcf a day, which has been tested on the well,
2 we don't have any production history on these
3 wells yet. The economic limit is calculated to
4 be 145 Mcf a day combined from the two wells, and
5 assuming a 10 percent per year decline, the
6 reserves for the two wells is approximately 1.3
7 Bcf, or 29 percent of the original gas in place.

8 We feel that is excessively low; that
9 reasonable recovery should be well over 50
10 percent; and that additional infill wells are
11 required to effectively drain this reservoir.

12 Q. One of the variables you've used in
13 this calculation is an economic limit. How is
14 that calculated?

15 A. Economic limit was based on assumed
16 operating costs of \$5,000 per month for the
17 entire field, which includes operating a gas
18 plant and the wells. And it's basically
19 calculated at the point where revenue equals
20 operating expense. And at 145 Mcf a day in
21 current gas prices, revenue will equal operating
22 expenses and so we will have to shut the field
23 in.

24 Q. Turn to Exhibit No. 6 and identify it.

25 A. Exhibit 6 is a summary of the

1 incremental reserves and the incremental
2 economics of an infill well. It is felt that an
3 infill well will increase the production rate
4 from the field to -- again, assuming it's going
5 to perform much like the other two wells, 250 Mcf
6 a day, we feel that it's reasonable to assume
7 that it will also recover as much reserves as the
8 other two wells, or approximately .6 Bcf. And
9 that is a significant amount of profit to Merrion
10 Oil & Gas and a significant amount of royalty to
11 the royalty owners and taxes to the state.

12 Q. So that in summary then, this exhibit
13 illustrates your belief that more dense drilling,
14 in this case an additional well, will increase
15 recoverable reserves by 600 million cubic feet?

16 A. That is my belief, yes.

17 Q. Now turn to Exhibit No. 7 and discuss
18 the important factors or information in Exhibit
19 7.

20 A. Exhibit No. 7 shows the ownership in
21 and around the pool boundary. Of particular note
22 is that Section 20 where our current wells are
23 drilled and where we are proposing the
24 recompletion is all owned by -- or the lease
25 rights are owned by Santa Fe Pacific Railroad,

1 and it's operated by Merrion Oil & Gas.

2 So it's common ownership, both as
3 working interest and net revenue interest. And
4 there should be no accounting nightmares created
5 by changing the spacing from 320 to 160 acres.

6 Q. Are you operating in a lease with Santa
7 Fe Pacific Railroad Company, or is it an
8 operating agreement?

9 A. It is an operating agreement with Santa
10 Fe Pacific Railroad.

11 Q. To your knowledge, Santa Fe Pacific
12 Railroad owns the minerals, the oil and gas
13 rights under that particular tract?

14 A. Yes.

15 Q. Would you discuss further the nature of
16 the ownership, the types of leases involved in
17 some of the offsetting acreage.

18 A. The acreage to the south and directly
19 east and west of Section 20 is also a Santa Fe
20 Pacific Railroad operating agreement with Merrion
21 as operator. To the north and to the northwest
22 is all BLM land with a series of BLM leases.
23 Again, the entire pool, leases within the entire
24 pool, is operated by Merrion Oil & Gas. And
25 there is one state lease to the northeast of the

1 Section 20.

2 Q. Other than Merrion Oil & Gas
3 Corporation, identify other entities who own
4 operating rights within the pool or within the
5 mile of boundary for the pool.

6 A. Yates Petroleum Company is the operator
7 of record in Section 16 to the north, northeast
8 of Section 20 and Ronadero Company owns a small
9 parcel in the north half of the east half of
10 Section 18.

11 Q. Okay. Now turn to Exhibit 8. Identify
12 that exhibit.

13 A. Exhibit 8 addresses the footage
14 requirements. There are three diagrams on
15 Exhibit 8. The diagram in the top left corner
16 shows the current footage requirements, and the
17 current footage requirements are 990 feet from
18 the outer boundary, 330 feet from the inner
19 boundary, which basically is a point that you
20 must drill your well on to be in a standard
21 location. And this is excessively strict and
22 doesn't allow a window for reasonable movement of
23 the location.

24 The revision as it was requested in the
25 advertisement called for 330 feet from the outer

1 boundary and 330 feet from an inner boundary, or
2 quarter-quarter. In retrospect and review we
3 feel that that is probably too large of a window,
4 and we are revising our request to a more
5 conservative standard location which parallels
6 the state footage requirements, and that being
7 shown in the bottom left corner of the exhibit,
8 790 feet from the outer boundary, 130 feet from
9 the inner boundary, or quarter-quarter.

10 Q. In your opinion would the footage
11 requirements that you now request be less
12 intrusive with respect to drainage on offsetting
13 acreage than would the original requested footage
14 requirements?

15 A. They would be. They moved the standard
16 location closer to the center of the spacing unit
17 and for that reason will have a less effect on
18 surrounding acreage.

19 Q. Now turn to what's been marked as
20 Exhibit No. 9 and identify that exhibit.

21 A. Exhibit 9 is a C-102 form for the Santa
22 Fe "20" No. 3 showing the location of the well to
23 be 2220 feet from the north line and 990 feet
24 from the west line -- east line of Section 20 --
25 21 North, 8 West and showing the communitized

1 area that would be required for either a 160- or
2 320-acre location.

3 Q. Your application is stated in the
4 alternative with respect to spacing. You have
5 asked either for the right to drill an additional
6 well in existing Dakota spacing units or you've
7 asked for 160-acre spacing. Which is it that you
8 prefer?

9 A. We feel that the 160-acre spacing is
10 more reasonable. It is necessary to drill on
11 160s to efficiently drain the reservoir. We feel
12 that there will be no effect on the existing
13 operations because of the common ownership in
14 Section 20.

15 And while either way to state it, two
16 wells on 320- or 160-acre spacing would allow us
17 to do what we need to do to drain the reservoir,
18 we feel that the 160-acre spacing is probably the
19 way it ought to be.

20 Q. You've identified Yates Petroleum
21 Company and Ronadero Company, Inc., as offset
22 operators or owners of leasehold interests
23 offsetting the acreage within the pool. Have you
24 notified them of this application?

25 A. They have both been notified and have

1 had more than 20 days to respond.

2 Q. How were they notified?

3 A. They were notified by certified mail,
4 return receipt, and receipts were received.

5 Q. Have you had any response or any
6 contact directly with representatives of those
7 companies?

8 A. I received a waiver signed by Yates
9 saying they had no objections. And I spoke
10 verbally on the phone with Ronadero, and they had
11 no objections.

12 Q. Mr. Sharpe, in your opinion will the
13 granting of this application be in the interest
14 of conservation and result in the prevention of
15 waste and protection of correlative rights?

16 A. I believe that it will. It will allow
17 more efficient draining of the Dakota formation
18 in this pool and will increase the royalty to the
19 leaseholders as well as the value to the state.

20 Q. Were Exhibits 1 through 9 either
21 prepared by you or at your direction and under
22 your supervision?

23 A. They were prepared by me at your
24 direction.

25 MR. ROBERTS: Okay. We would move the

1 admission of Exhibits No. 1 through 9.

2 EXAMINER CATANACH: Exhibits 1 through
3 9 will be admitted as evidence.

4 MR. ROBERTS: I have no other questions
5 for this witness.

6 MR. STOVALL: First off, Mr. Roberts,
7 do you have the copies of the notice and the
8 waivers that Mr. Sharpe referred to?

9 THE WITNESS: I have a copy of the
10 waiver.

11 MR. STOVALL: Actually, we need the
12 original waiver, I think.

13 THE WITNESS: I actually have the
14 original.

15 MR. STOVALL: With respect to the
16 notice, if you would provide us with an affidavit
17 that indicates that you have notified all persons
18 entitled to notice under the rules of the
19 Division, identify those persons, and then attach
20 the return receipts with a copy of the notice.

21 THE WITNESS: Okay. I don't have that
22 with me.

23 MR. STOVALL: No, I understand that.
24 Mr. Roberts can once again give you direction on
25 how to get that prepared.

EXAMINATION

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BY MR. STOVALL:

Q. Has the BLM or the state been notified of this application?

A. Both have been notified.

Q. Are those included in your application, excuse me, in your cards? You sent notices to BLM?

A. I don't think they were given return receipt, no. They were notified however.

Q. Would you include that in the affidavit as a statement of the fact that they were notified --

A. Yes.

Q. -- and how that occurred. And am I correct in understanding that Santa Fe Railroad's interest is not -- there is no royalty interest associated with their lands within the pool; is that correct; that in fact is 100 percent working interest in the Section 20?

A. We are 100 percent working interest, and, that's correct, they own --

Q. They own the minerals?

A. They own the minerals, that's correct.

Q. But they are participating with you

1 under an operating agreement, and there is no
2 provision for a royalty to be paid to them under
3 this, or is it --

4 A. Yes. They -- it's a -- I am not --
5 it's -- they get like a 12 percent royalty. I
6 don't know if it's a royalty or override.

7 Q. But they get a non-cost bearing
8 interest?

9 A. They do get some money.

10 Q. Okay. And it's a non-cost bearing
11 interest?

12 A. That's correct.

13 Q. And Santa Fe also is aware of this
14 application, I assume?

15 A. Yes.

16 Q. Why do you believe that changing the
17 spacing to 160 is preferable to infill drilling?

18 A. The only real reason that we have, and
19 we try to come up with a real reason, was in
20 drilling additional wells, you'll be able to not
21 have to communitize the full 320 and be able to
22 drill a well on 160 acres and have it.

23 It has absolutely no effect on our
24 current situation, and it would only affect
25 additional drilling in the surrounding field and

1 basically to the south, and it's not going to
2 affect that either.

3 But it is going to have very little
4 effect. And we don't have a real strong position
5 on the 160 versus the 320, but we were advised by
6 our attorney that we needed to make it one way or
7 another.

8 Q. And with reference to the
9 communitization, Section 17 -- within the pool
10 boundaries itself, Section 17 is the only area
11 where communitization would be required; is that
12 correct?

13 A. That is correct.

14 Q. And it's your opinion that that's dry?

15 A. It is our opinion that --

16 Q. And drained?

17 A. -- that what was in Section 17 that was
18 productive has been drained.

19 Q. Those wells are all abandoned --
20 plugged and abandoned?

21 A. Yes.

22 Q. What do you suggest might happen in the
23 northwest of Section 20? If we went to 160s,
24 that would be a proration unit without a well; is
25 that correct?

1 A. That would be. We do not feel, based
2 on our current interpretation, that a well is
3 justified in the northwest of Section 20. The
4 Snake Eyes No. 1, as shown on Exhibit No. 3, we
5 feel has drained any reserves that is there.
6 That is an old Dakota well.

7 And again we feel that really that
8 those two pods are not in communication. There's
9 a separate break in the reservoir there and that
10 the northwest corner of Section 20 has been
11 drained.

12 MR. STOVALL: I don't have any further
13 questions.

14 EXAMINATION

15 BY EXAMINER CATANACH:

16 Q. Mr. Sharpe, do you plan on drilling any
17 additional wells in Section 29 or 28?

18 A. We, depending on the long-term
19 performance of the Santa Fe "20" No. 4 Snake Eyes
20 No. 2 and assuming we get this approved, Santa Fe
21 "20" No. 3, we certainly plan on drilling down
22 in Section 29 as our first step out.

23 The wells make a lot of water, and it
24 appears that this could be a very strong water
25 drive. We don't have enough data to tell at this

1 point. And if the water influx is such that it's
2 uneconomic, then we won't continue any
3 development of the field.

4 Q. All of Section 29 is also owned by
5 Santa Fe Pacific Railroad; is that correct?

6 A. Yes, sir.

7 Q. So whether or not the spacing is 160 or
8 320 will still not have any effect on Section 29?

9 A. Absolutely no effect. It really is the
10 160 versus two wells on 320. It doesn't matter
11 very much.

12 Q. On Exhibit No. 2 you said the A zone
13 was the main productive interval. Is there also
14 production from any other interval there?

15 A. There have been, yes. There have been
16 perforations in the B zone. There have been no
17 isolated tests of the B zone. Our interpretation
18 is that the B zone really is unproductive and is
19 mainly wet; that you have water sitting on top --
20 or gas sitting on top of water and that the A
21 zone is where the gas is located.

22 Q. Okay. Now, is it your conclusion that
23 the existing two wells will not drain Section 20
24 or they will not drain them in a reasonable
25 amount of time?

1 A. It is my conclusion that they will not
2 fully drain Section 20, and the main reason is
3 because you don't have the productivity. You're
4 still going to have an economic limit very near
5 150 Mcf a day. Even with an additional well,
6 it's not going to increase your costs for the
7 field that much.

8 And by having that additional straw in
9 there at your economic limit, you're going to
10 have recovered significantly more gas reserves.
11 It is our interpretation that that reservoir is a
12 continuous reservoir in Section 20.

13 And if you were able to produce those
14 wells forever and ever regardless of economic
15 limits, you would drain Section 20 and you would
16 drain Section 29 but not in an economic fashion.

17 Q. Now, the well you planned to
18 recomplete, the No. 4; is that right?

19 A. Santa Fe "20" No. 3.

20 Q. No. 3. That's located pretty close to
21 the No. 4 well?

22 A. If we were drilling a new well, we
23 would not drill it there. We would drill it a
24 little bit further to the north. But at the same
25 time, the economics of these wells with as much

1 water that they make and with as little gas that
2 they're starting out with as IP's, it would be
3 very difficult to justify infill drilling.

4 We need some long-term production
5 history to justify spending \$250-, \$300,000 to
6 drill another well. And for \$85,000 we can
7 recomplete the Santa Fe "20" No. 3 and get it on
8 production.

9 I do anticipate there will be some
10 communication between those two wells, but I
11 still feel the Santa Fe "20" No. 3 is going to
12 enhance recovery and going to do it in the most
13 economic fashion.

14 Q. Is it conceivable you might drill
15 another well in Section 20?

16 A. It's not inconceivable.

17 MR. STOVALL: Is that less strong than
18 conceivable?

19 THE WITNESS: Is that less strong than
20 conceivable? It's doubtful but not --

21 Q. (BY EXAMINER CATANACH) How did you
22 arrive at your decline rate for these wells?

23 A. Ten percent decline rate is a
24 historical decline rate that I've seen on many
25 Dakota cretaceous production wells, and when in

1 doubt it's what we use.

2 Actually, the actual decline of the
3 wells in the field is much greater than that. If
4 we use the existing wells in that north pod that
5 were drained to depletion, they declined. Within
6 two years they went from a million a day to
7 uneconomic.

8 So the 10 percent, if anything, is
9 probably optimistic, and it could be much greater
10 than that, indicating we'll recover even less
11 than the 1.3 Bcf we project, indicating we need
12 even more wells. If we need too many more wells,
13 we can't afford it.

14 Q. Basically what we have here is an
15 opportunity at a very low cost -- relatively low
16 cost -- to get additional production on in the
17 field. We think it's justified that we are not
18 going to drain the field with our current two
19 wells and that the additional production is
20 warranted.

21 And it allows us to get some production
22 history and some information from the reservoir
23 in general more quickly and do it more profitably
24 for us and the royalty owners in the state than
25 we would be able to otherwise.

1 And another addition here, we are in
2 the process of trying -- we had to lay a six-mile
3 line and put in a gas plant to process the gas.
4 We are in the process of trying to get that plant
5 on line and get these wells in production.

6 We will not recomplete the Santa Fe
7 "20" No. 3 until we have at least some
8 production history, be it a month or a couple of
9 weeks or something to tell us, "Yes, these wells
10 are not going to just turn into water wells."

11 And if the sustained production looks
12 like they are going to hold at 250 Mcf a day,
13 then we will proceed upon approval with the Santa
14 Fe "20" No. 3 recompletion.

15 EXAMINER CATANACH: Okay. I believe
16 that's all I have. The witness may be excused.

17 Is there anything further in this
18 case?

19 MR. ROBERTS: No.

20 EXAMINER CATANACH: There being nothing
21 further, Case No. 10413 will be taken under
22 advisement.

23 (The proceedings were concluded.)

24 I do hereby certify that the foregoing is
25 a complete record of the proceedings in
the Examiner hearing of Case No. 10413,
heard by me on December 5, 1991.

David R. Catanch, Examiner
Oil Conservation Division

