

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

IN THE MATTER OF THE HEARING )  
CALLED BY THE OIL CONSERVATION )  
DIVISION FOR THE PURPOSE OF )  
CONSIDERING: )  
APPLICATION OF YATES PETROLEUM )  
CORPORATION )

CASE NO. 11,322

**ORIGINAL**

REPORTER'S TRANSCRIPT OF PROCEEDINGS  
EXAMINER HEARING

BEFORE: MICHAEL E. STOGNER, Hearing Examiner

June 29th, 1995  
Hobbs, New Mexico

This matter came on for hearing before the New Mexico Oil Conservation Division, MICHAEL E. STOGNER, Hearing Examiner, on Thursday, June 29th, 1995, at Hobbs City Hall, Commission Hearing Room, 300 North Turner, Hobbs, New Mexico, Steven T. Brenner, Certified Court Reporter No. 7, State of New Mexico.

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## I N D E X

June 29th, 1995  
 Examiner Hearing  
 CASE NO. 11,322

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<u>PINSON McWHORTER</u> (Engineer)	
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\* \* \*

## A P P E A R A N C E S

## FOR THE DIVISION:

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## FOR THE APPLICANT:

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Suite 1 - 110 N. Guadalupe  
P.O. Box 2208  
Santa Fe, New Mexico 87504-2208  
By: WILLIAM F. CARR

\* \* \*

1           WHEREUPON, the following proceedings were had at  
2 10:00 a.m.:

3           EXAMINER STOGNER: Call next case, Number 11,322.

4           MR. CARROLL: Application of Yates Petroleum  
5 Corporation for underground gas storage, Chaves County, New  
6 Mexico.

7           EXAMINER STOGNER: Call for appearances.

8           MR. CARR: May it please the Examiner, my name is  
9 William F. Carr with the Santa Fe law firm Campbell, Carr  
10 and Berge.

11           We represent Yates Petroleum Corporation in this  
12 matter, and I have one witness.

13           EXAMINER STOGNER: Any other appearances in this  
14 matter?

15           Will the witness please stand to be sworn at this  
16 time?

17           (Thereupon, the witness was sworn.)

18           EXAMINER STOGNER: Mr. Carr, it's been a while  
19 since we have had an underground gas storage case, and I  
20 know it falls under the UIC, but -- and we're going to  
21 follow through that, but if you can be a little bit more --

22           MR. CARR: And Mr. Stogner, as you'll see, this  
23 is a somewhat unique underground gas storage project as  
24 well.

25           EXAMINER STOGNER: I want to be sure that all the

1 issues that need to be covered through the statute, or  
2 whatever the case may be, are covered in that, so...

3 MR. CARR: And I can tell you that we have  
4 checked the Application against both the OCD Rules and  
5 statute, and this is not the typical underground gas  
6 storage project.

7 We'll explain at the beginning what we're  
8 seeking. I think it will become clear as we go through it,  
9 the nature of this request.

10 EXAMINER STOGNER: Okay, thank you.

11 PINSON McWHORTER,  
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. My name is Pinson McWhorter.

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

19 A. Artesia, New Mexico.

20 Q. By whom are you employed?

21 A. Yates Petroleum Corporation.

22 Q. What is your current position with Yates  
23 Petroleum Corporation?

24 A. I'm a reservoir engineering supervisor.

25 Q. Have you previously testified before this

1 Division?

2 A. Yes, I have.

3 Q. At the time of that testimony, were your  
4 credentials as a petroleum engineer accepted and made a  
5 matter of record?

6 A. Yes, they were.

7 Q. Are you familiar with the Application filed on  
8 behalf of Yates in this matter?

9 A. Yes, I am.

10 Q. And are you familiar with the subject well and  
11 the proposed gas storage project?

12 A. Yes.

13 MR. CARR: Are the witness's qualifications  
14 acceptable?

15 EXAMINER STOGNER: They are.

16 Q. (By Mr. Carr) Mr. McWhorter, initially would you  
17 briefly review for Mr. Stogner exactly what Yates seeks  
18 with this Application?

19 A. Okay, what we're seeking is the approval of what  
20 we have entitled the Trailblazer Gas Storage Project. It's  
21 in the southeast quarter of the northeast quarter of  
22 Section 11, in 8 South, 27 East, in Chaves County, New  
23 Mexico.

24 And the thing that we're seeking is to be able to  
25 store gas -- The recent development of this Acme San Andres

1 pool has necessitated the ability to store the casinghead  
2 gas while we're waiting on the pipeline to be built, in  
3 order to sell the casinghead gas.

4 And what we're proposing to do is to store this  
5 gas in a well called the Trailblazer Number 2, a well that  
6 was drilled in the summer of 1993 and has produced on test  
7 mostly gas. It's producing -- It will produce from the  
8 same formation, the San Andres P-1 porosity zone.

9 Q. And basically, what you're proposing to do is  
10 inject the casinghead gas into the gas cap in this well?

11 A. Correct.

12 Q. For what period of time do you anticipate needing  
13 this authority to store gas in this fashion?

14 A. It's my opinion that we would need somewhere in  
15 the neighborhood of perhaps, on the outside, five to six  
16 months for this process to take place, for the permitting  
17 and the building of the line, to deliver it down to a sales  
18 point.

19 That's the time frame I'm looking at that we  
20 would probably actually be doing this project. We're not  
21 looking at a project where you're -- gas storage, where  
22 you're trying to meet -- storing gas to meet seasonal  
23 demand for natural gas or something like that.

24 Q. And by doing this you're going to be able, then,  
25 to continue to produce other wells in the area?

1           A.    That's correct, we'll be able to produce the oil  
2 producers in this pool.

3           Q.    And by doing that, are you going to be able to  
4 more effectively produce the reserves from the area?

5           A.    That's correct.

6           Q.    Are you going to be utilizing the -- Is the  
7 Trailblazer Gas Storage Project on property that is  
8 completely owned by Yates Petroleum Corporation?

9           A.    That is correct.

10          Q.    So no other operator should be affected?

11          A.    No.

12          Q.    In carrying forward with this proposal, will  
13 Yates Petroleum Corporation measure and report the gas  
14 that's injected and withdrawn as required by Oil  
15 Conservation Division 403?

16          A.    Yes, we will.

17          Q.    And you will be filing the forms that are  
18 required by the Division for a normal gas storage project?

19          A.    Right, that's correct.

20          Q.    Let's go to what has been marked for  
21 identification as Yates Corporation Exhibit Number 1.  
22 Could you identify this and review it for Mr. Stogner,  
23 please?

24          A.    Exhibit Number 1 is the OCD form C-108, the  
25 complete C-108.

1           Essentially, the source of gas to be injected in  
2 this project is the San Andres gas from the Southeast Acme-  
3 San Andres Pool, of which this well is a part.

4           You will note that we have classified this as a  
5 gas storage project. That's the most pertinent type of  
6 project that we could find to make this Application under.

7           If you look on page 4, you will see attachment A,  
8 and at page 4 of the C-108 there is the well data, specific  
9 well data concerning the downhole construction of the well  
10 and the injection formation into the San Andres, the  
11 perforated interval.

12           If there were any higher -- in section -- oil or  
13 gas zones, there are none in this area. There is potential  
14 in this area for production from the Ordovician, which  
15 would be a lower zone.

16           Q.    And this information on page 4 of Exhibit 1  
17 relates to the Trailblazer "ANL" State Number 2 well?

18           A.    That's correct.

19           Q.    And that is the well that you propose to use for  
20 the injection of this casinghead gas?

21           A.    That is correct.

22           Q.    What is the present status of this well?

23           A.    This well is currently shut in, waiting on a  
24 pipeline connection.

25           Q.    Let's go back to page 6 of Exhibit 1 --

1 A. Okay.

2 Q. -- and I would ask you to identify this plat and  
3 review the information on this page of Exhibit 1.

4 A. Page 6 is a plat which shows the location of the  
5 subject well, and we've highlighted that with a triangle  
6 over the subject well, the Trailblazer Number 2.

7 It also shows a two-mile-radius circle around the  
8 injection well, and the wells that are located -- depicts  
9 wells that are located within that two miles. It shows a  
10 lease ownership in that area, and also it shows a circle  
11 that is our area of review around the injection well, half-  
12 mile circle.

13 Q. Now, behind this page in Exhibit 1, we've got  
14 pages 7, 8 and 9. Can you identify those, please?

15 A. Yes, pages 7, 8 and 9, which are attachment C to  
16 the form C-108, outline all of the specific data that is  
17 called for, for the wells that are within the area of  
18 review, that half-mile circle.

19 It shows the well types, the names of the wells,  
20 the location, the construction of the well, when it was  
21 drilled, the depth, the record of completion, top of cement  
22 behind the production string, and as required per the OCD  
23 rules.

24 Q. Mr. McWhorter, Exhibit Number 1 is the actual  
25 Application that was filed with the Division seeking

1 approval of this project; is that correct?

2 A. That is correct.

3 Q. And this was prepared by you on June the 1st,  
4 1995?

5 A. That is correct.

6 Q. Since this Application was prepared, has there  
7 been additional drilling in the immediate area?

8 A. Yes, there has.

9 Q. Can you go to what has been marked as Exhibit  
10 Number 4 and explain first what this is and then review it  
11 for Mr. Stogner?

12 A. Exhibit Number 4 is essentially an addendum to  
13 the attachment C.

14 We -- Subsequent to the filing of this  
15 Application, we have continued to develop and drill in this  
16 pool, and we subsequently drilled a well called the Quincy  
17 AMQ State Number 13, which happens to fall on the edge of  
18 the area of review. So I have attached that in Exhibit 4,  
19 with all the specific well-construction information for the  
20 Quincy Number 13.

21 Additionally, on Exhibit Number 3 I have attached  
22 an additional plat, similar to the plat that was shown in  
23 the original C-108, but it includes the location on the  
24 plat of the Quincy AMQ State Number 13.

25 Q. And that well is the well that is on the

1 innermost circle in the southwest quarter of Section 12?

2 A. That's correct, it's located in Unit N of Section  
3 12, 990 from the south, 1550 from the west line.

4 Q. And what is Exhibit 4?

5 A. Exhibit 4 is the actual well construction data,  
6 as outlined for all the other wells in the area of review  
7 in this attachment C.

8 Q. And so Exhibits 3 and 4 simply bring the original  
9 Application forward and make it current as of today?

10 A. That's correct.

11 Q. Could you turn to page 10 in Exhibit 1?

12 A. Yes.

13 Q. Identify this and review it, please.

14 A. Page 10 is wellbore diagram, a wellbore  
15 schematic, which shows the well construction and the  
16 plugging information for a well that's within the area of  
17 review, and that well is the J. Horton State Number 2.  
18 It's in Unit P of Section 2, 8 South, 27 East.

19 And it's right on the edge of the area of review.  
20 You'll see it's right on the circle there in Section 2.  
21 It's the Collins Oil and Gas, Horton J State Number 2, the  
22 well symbol there.

23 And this schematic simply shows, as per the OCD  
24 Rules, the exact construction of the well and the nature of  
25 the plugs and setting depth of the plugs.

1 Q. Is this the only plugged-and-abandoned well  
2 within the area of review?

3 A. Yes, it is.

4 Q. All right, let's go back to page 5, the schematic  
5 on the proposed injection well, and I would ask you to  
6 review for Mr. Stogner the information on this exhibit.

7 A. Page 5 is a companion to the tabular data that's  
8 on page 4, about the well that we're proposing to inject  
9 the gas into, the Trailblazer Number 2.

10 This is a wellbore schematic which shows the  
11 construction of the well itself, the casing setting depths,  
12 cement tops, perforation locations, the location of tubing  
13 and packer, hole sizes, all of those things which are  
14 required in the rules.

15 Q. And basically what you're doing is taking San  
16 Andres production from this area and reinjecting the  
17 casinghead gas from the San Andres back into the San  
18 Andres?

19 A. That's correct.

20 Q. What volumes do you anticipate you'll be  
21 injecting?

22 A. We anticipate injecting volumes somewhere around  
23 400 MCF a day, and probably that will be about the max that  
24 we see, maximum daily injection rate also.

25 Q. And the well will be equipped so you can meter

1 and report the amount injected --

2 A. That's correct.

3 Q. -- and also you will be able to then meter and  
4 report any withdrawals of casinghead from the well?

5 A. Yes.

6 Q. What did you say the maximum daily injection rate  
7 would be?

8 A. The maximum we're estimating or projecting will  
9 probably be somewhere around 400 MCF a day.

10 Q. Since you're injecting casinghead gas, you will  
11 be injecting under pressure; is that right?

12 A. Yes, we will.

13 Q. What will be the maximum pressure you will need  
14 to utilize?

15 A. In calculating the maximum pressure, I know that  
16 generally in situations where we're talking about injecting  
17 some sort of fluid into a reservoir, we're concerned about  
18 creating fractures, and I know that the generally accepted  
19 rule until running of step-rate tests or something of that  
20 nature is .2 p.s.i. per foot.

21 The .2 p.s.i. per foot is determined by taking a  
22 conservative overburden pressure gradient of .7 p.s.i. per  
23 foot and a very supersaturated water column of .5 p.s.i.  
24 per foot, which is a very high gradient, very  
25 supersaturated solution. The difference between .7 and .5

1 is .2, and that's how we come up with what a sort of a  
2 surface operating pressure might limit out at.

3 But the key is the bottomhole pressure not  
4 creating these fractures.

5 In this project, the .5 p.s.i. per foot, the  
6 supersaturated water column does not apply because we'll be  
7 putting a gas column in the wellbore, and the gradient from  
8 the gas column is significantly less than a gradient in a  
9 water column. Even using .1 p.s.i. per foot gas gradient,  
10 which is high for this area, still .7 minus .1 gives you a  
11 .6 p.s.i. per foot surface operating pressure.

12 But we're really only asking for 500 pounds of  
13 surface operating pressure, and that is really the limit of  
14 our compressor.

15 But it is in excess of what we have sort of a  
16 generally accepted rule of .2 p.s.i. per foot. I think it  
17 calculates to be .23 p.s.i. per foot. And so we are asking  
18 for something a little bit above the .2, but there is some  
19 logic and rationale behind that calculation.

20 Q. And that is because you're going to be injecting  
21 gas instead of a water or other liquid?

22 A. Instead of water, that's correct.

23 Q. Could you refer to pages 11 and 12 in Exhibit  
24 Number 1, identify what they are and what they show?

25 A. Pages 11 and 12 I have included in the C-108.

1 Page 11 shows a gas analysis of the casinghead gas that is  
2 produced from the wells that will be the source of the  
3 casinghead gas, to be re-injected in this formation from  
4 the Quincy battery, from the Quincy AMQ State wells.

5 Page 12 is a gas analysis of the gas that was  
6 produced on tests from the Trailblazer State Number 2 well  
7 when it was tested in the summer of 1993.

8 Q. And what do they show?

9 A. They show that they're similar gases from the  
10 same source.

11 Q. Are there freshwater zones in this area?

12 A. There are freshwater zones in this area.

13 This area in Chaves county is in a unique  
14 juncture between the Roswell-Artesia Basin, which is an  
15 identified basin under the purview of the State Engineer's  
16 Office, and the Lea Basin, which is another identified  
17 water basin within the purview of the State Engineer's  
18 Office.

19 This area of Lea County was always in a gray area  
20 in between there. It was never put in either basin.  
21 Recently it has been put in the Lea Basin.

22 Consequently, in conversations with the State  
23 Engineer's office and looking at drillers' logs from water-  
24 well drillers, we have determined that the base of the  
25 freshwater aquifers is approximately 300 feet.

1 Q. Are there any freshwater wells within a mile of  
2 the proposed injection well?

3 A. No, we could find no record with the State  
4 Engineer or visual inspection of the ground of any  
5 freshwater well within a mile of the Trailblazer 2.

6 Q. Have you examined available engineering and  
7 geologic data, and have you found as a result of this any  
8 other open faults or hydrologic connections between the  
9 injection interval and any underground source of drinking  
10 water?

11 A. We have examined the data, and we have found no  
12 evidence of any open faults or any other hydrologic  
13 connection between our injection zone, our gas-storage  
14 zone, and these sources of potential fresh or drinking  
15 water.

16 Q. In view of the nature of what you're proposing,  
17 do you have an opinion as to whether or not there is any  
18 potential threat to any water supply in the area?

19 A. It's my opinion that there is absolutely no  
20 threat to water supplies, freshwater supplies in the area.

21 Q. Is the log on the proposed injection well on file  
22 with the Oil Conservation Division?

23 A. Yes, it is.

24 Q. Could you identify what has been marked as Yates  
25 Petroleum Corporation Exhibit 2?

1           A.    Yes, Yates Petroleum Corporation Exhibit 2 is an  
2 affidavit that shows notification by certified mail to the  
3 surface owner, Mr. Miller, and to two operators within the  
4 half-mile area of review, Collins Oil and Gas and Elk Oil  
5 Company, that we have fulfilled that requirement.

6           Q.    These are the only other operators within the  
7 area of review?

8           A.    That's correct.

9           Q.    In your opinion, will approval of this  
10 Application result in more efficient production of the San  
11 Andres reserves in this area?

12          A.    Yes, it will.

13          Q.    Is it otherwise in the best interests of  
14 conservation, the prevention of waste and the protection of  
15 correlative rights?

16          A.    Yes.

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

19          A.    They were.

20               MR. CARR: Mr. Stogner, at this time we move the  
21 admission into evidence of Yates Exhibits 1 through 4.

22               EXAMINER STOGNER: Exhibits 1 through 4 will be  
23 admitted into evidence at this time.

24               MR. CARR: And that concludes my direct  
25 examination of Mr. McWhorter.

## EXAMINATION

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BY EXAMINER STOGNER:

Q. Mr. McWhorter --

A. Yes, sir.

Q. -- bear with me here.

Okay, the actual injection perforations are in the San Andres formation, right?

A. That's right, the San Andres, what is locally called the P-1 porosity zone.

Q. Now, this is going to be an injection into the present gas cap?

A. Well, sir, it seems as you get updip in these wells that they become more gassy in the production.

When this well was production tested, it tested at a million a day, and just a little bit of oil. Within less than a 24-hour period, it made maybe 18 barrels of oil.

So you're getting very gassy, a lot of free gas in place, and suspect that there may be some free-gas zone in the San Andres porosity zone as you gain height in the formation.

A. Because I notice there was no reservoir or geological information presented here, so I'm trying to get a picture of this, if there is truly a gas cap, or is the reservoir a saturated gas interval, or what actually do you

1 have out here?

2 A. Well, basically, the model I'm trying to depict  
3 to you is that you have just monoclinial dip going basically  
4 from northwest to southeast on the top of the San Andres.

5 As we have drilled from west to east, from the  
6 Trailblazer east into the Quincy leases, we've picked up  
7 more of an oil column. And as we drilled our last most  
8 eastern well, we picked up nothing but water.

9 So we transition from the Trailblazer on the  
10 western edge of the pool, which is very gassy, suspecting  
11 that it may be some sort of free-gas zone, tracing that San  
12 Andres P-1 porosity zone and drilling to the east, we went  
13 through an oil column and then picked up nothing but a  
14 water column.

15 So it's just a classic stratigraphic trapping of  
16 gas, oil and water, from west to east, being that  
17 distribution of reservoir fluids.

18 So what we're proposing to do is to take the  
19 casinghead gas that we're not able to sell right now, till  
20 we can get a pipeline connection, and put it in this  
21 Trailblazer, which seems to be in this free-gas zone, to  
22 later be produced at a different time.

23 Q. And what is the western boundary of the  
24 reservoir? Is it a fault or a nonproductive -- I mean a  
25 low-porosity interval?

1           A.    Right, it's -- You have hit on it.  It's  
2           basically porosity occlusion.  This is a carbonate, and  
3           it's a dolomite, and the porosity is very dependent upon  
4           these chemical diagenetic processes.

5                     And to the west as you get updip and you get more  
6           shelfward, there is poorer porosity development,  
7           noncommercial porosity development in the western aspect.  
8           And there are penetrations out to the west that bear out  
9           that sort of geologic model.

10          Q.    Okay, let's look at the actual gas itself.  You  
11         said a maximum of 400 MCF a day?

12          A.    That's correct.

13          Q.    What wells will this injection --

14          A.    -- contribute to this injection?

15          Q.    Yes.

16          A.    Yes, okay, the wells that will contribute to this  
17         injection are the Quincy wells.  There's a -- There's quite  
18         a few of them.  The Quincy 2 and the 3 and the 1, the 4, 5,  
19         6, 7 and the 8, the 10, the 11, the 13, quite a few of them  
20         in Section 12, there, as depicted upon the plat.

21                     There are some wells within Section 12 that are  
22         operated by Collins Oil and Gas.  They're Collins Oil and  
23         Gas-Bill Thorpe State wells.  The gas from those wells will  
24         not be put in.  This will be the Yates Petroleum  
25         Corporation-operated gas that will be put in this Yates

1 Petroleum Corporation well.

2 Q. So it's just the Quincy lease gas production  
3 that's going to be injected?

4 A. That's correct.

5 Q. Okay. Now, what is the present position of the  
6 Trailblazer Well Number -- the proposed injection well? Is  
7 it a producing well?

8 A. No, sir, it's not. It's been shut in since  
9 around October -- September, October of 1993 -- waiting on  
10 pipeline connection. At that time, it was the only well  
11 there.

12 And as we have developed this field, there has  
13 been sufficient economic incentive to actually construct --  
14 to get the permits that are required, the right of way, and  
15 build this pipeline connection to a gas sales line.

16 And so we're at that stage now, and -- But we  
17 need to have sort of a temporary way to store all of this  
18 casinghead gas that we're making now, to be able to deliver  
19 it later into this proposed pipeline.

20 Q. The casinghead gas that is coming out of the  
21 Quincy wells, are they presently separately metered?

22 A. Okay, the gas is. The gas is. Of course, the  
23 oil goes into battery. But the gas is.

24 Q. So each Quincy well that's going to contribute to  
25 the injection gas is going to be separately metered?

1           A.    Yes, sir.

2           Q.    Okay.  Now, the Trailblazer, essentially you're  
3 bringing that well back on production.  Is there going to  
4 be some gas attributable out of the formation to the  
5 Trailblazer lease from that well once it's turned back on  
6 or when you start re-producing the injected gas?

7           A.    I see no way of preventing gas from not being --  
8 gas that's in place in the drainage area of the Trailblazer  
9 2 now, from being produced when we create a sink there and  
10 start to produce that gas in the gas sales.

11          Q.    So how are you going to separate what comes out  
12 of the Trailblazer well as Trailblazer-produced gas and  
13 reinjected gas?  Is there a formula?

14          A.    Well, no, there's not a formula.  But I guess I'm  
15 sort of at a loss of why we would need to do that.

16                We have common ownership throughout the leases  
17 and common royalty ownership throughout the Trailblazer  
18 leases and the Quincy leases.  We're just essentially  
19 putting gas and storing it over there.

20                Like any other gas storage project, if you're  
21 talking about a commercial gas-storage project where you're  
22 storing gas for peak-use periods, there's really -- When  
23 you work from your base gas into your working gas storage,  
24 there's really not much way of accounting for whose gas  
25 went in as part of your working gas.  The gas is in the

1 reservoir, and you can account for it from a pressure  
2 basis.

3 But the base of the gas that was there when you  
4 put gas in -- But as far as being able to attribute out how  
5 much was -- other than just on a pure volumetric basis,  
6 that we put so much gas into the reservoir, just knowing  
7 the daily rates.

8 Q. But you have two different state leases, right?

9 A. There are two different state leases, but they're  
10 the same royalty interest in the two different state  
11 leases.

12 A. Same beneficiary of the state lands?

13 A. Yes, I believe so.

14 Q. You believe so.

15 A. I can check --

16 Q. Who is the beneficiary of the state land?

17 A. Now, that I'm not real sure about. I'll have to  
18 get back with you on that information.

19 Q. Have you talked to the State Land Office about  
20 this project?

21 A. No, I have not, and we have -- Really, Yates  
22 Petroleum has not talked to the State Land Office about  
23 this project.

24 Q. Why not?

25 A. Because we saw it basically as not being a --

1 what we determined to be something that would be necessary,  
2 since we really weren't forming a unit or anything on state  
3 lands or anything of that nature.

4 Even when we have done pressure maintenance  
5 projects on state lands, if they did not involve a unit we  
6 didn't necessarily present that data to the State Land  
7 Office.

8 And so that was sort of the rule of thumb that we  
9 went by on this.

10 EXAMINER STOGNER: Mr. Carr, I'm looking at  
11 Statute Number 70-6-8, which is ownership of injected gas,  
12 and essentially what we have is a producing well or a well  
13 that's going to be possibly contributing to gas coming out  
14 of the Trailblazer well itself with the injection gas.

15 That does concern me a little bit, especially,  
16 and we don't know what the beneficiary is, and that's the  
17 whole idea when we do somewhat of a downhole commingle or  
18 even a surface commingling application, the State Land  
19 Office is involved to make sure that they approve of such  
20 commingling issues.

21 And that's essentially what this sounds to me  
22 like you have here, and -- But the ownership of the  
23 injected gas, of course, in this case, according to that  
24 statute, is the possession of the injector, I guess, the  
25 Yates Petroleum, at that point, which of course you're

1 already going to be metered out and everything before it  
2 goes to sales.

3 But what does concern me, and it may or may not  
4 even be an issue at the State Land Office, but we haven't  
5 addressed it here. That's my concern at this point.

6 MR. CARR: Mr. Stogner, we will review it with  
7 the Commissioner's staff, confirm who the beneficiary  
8 institutions are under each of the state leases and attempt  
9 to provide you with a waiver from the State Land Office.

10 EXAMINER STOGNER: Or at least an approval or  
11 preliminary approval or some sort of -- there.

12 Q. (By Examiner Stogner) Back to you, sir --

13 A. Yes.

14 Q. -- is there any -- you've got the -- And that's a  
15 Quincy AMQ State lease --

16 A. That's correct.

17 Q. -- the injection gas?

18 A. That's correct.

19 Q. Is there any possible other gas from any other  
20 lease that is going to be contributing to the injection  
21 gas?

22 A. We have no plans for gas from any other lease to  
23 come.

24 Q. Are there any other wells in the Trailblazer  
25 lease besides this one?

1           A.    On this lease, not that I'm aware of.  Again,  
2   I'll have to check on that to see specifically if there is.  
3   I'm not aware of one.

4           Q.    And we're only talking about five to six  
5   months --

6           A.    Right --

7           Q.    -- before the gas pipeline --

8           A.    -- about a maximum of maybe 400 MCF a day.  Right  
9   now the wells are making 234 MCF a day.

10                  So in other words, if we were to start injecting  
11   today, that's the rough range of gas, casinghead gas, that  
12   we would be injecting.

13           Q.    So over the next four or five months, you're  
14   going to be injecting at a maximum of 400 MCF a day.  And  
15   at the end of that time period, once the pipeline gets put  
16   in and this Trailblazer -- Let me back up a little bit  
17   here.

18                  Then the gas that is being injected into the  
19   Trailblazer will then start going into the line, the sales  
20   line?

21           A.    That's the plan, that's correct, sir.

22           Q.    And at the same time the Trailblazer will come  
23   back on and metered -- that gas will then be put into the  
24   sales line metered; is that correct?

25           A.    Yes, sir, that's correct.

1 Q. After the injected gas or the volume that gets  
2 re-produced, I guess, let's say that --

3 A. Right, uh-huh.

4 Q. -- or gets sold, then that well, the Trailblazer  
5 well, will it remain on production?

6 A. Currently, that is our plan, to leave that on  
7 production.

8 Q. Well, if you don't plan to leave it on  
9 production, are you assuming, then, that the 100 percent of  
10 the injected gas will be produced or re-produced or re-  
11 introduced?

12 A. Well, I would assume that 100 percent of the  
13 volumes that we had put in, that 100-percent volume,  
14 whatever amount of gas that comes out to be after that many  
15 months, would be produced back.

16 Q. On the Trailblazer well, do you visualize when  
17 you start producing it you're just going to open the valve  
18 without the assistance of a pump?

19 A. On the Trailblazer well?

20 Q. Yeah.

21 A. Yes, sir. The well, when we tested it, did  
22 produce without the assistance of a pump. The well would  
23 produce a million a day on a half-inch choke.

24 It was low pressure, 150 pounds, but the  
25 reservoir pressure was not all that high to begin with,

1 just a little over 700 pounds.

2 Q. I hate to play "what if", but how about if you  
3 put 100-percent gas in there and you only get 90 or 80  
4 percent back? And what happens to the royalty interest  
5 owners on that 20 or 10 percent that's lost?

6 There's been gas-injection projects in the state  
7 where we have had such a loss.

8 A. That is a risk, but -- I agree that is a risk,  
9 but as with any projects of this nature, you're aware there  
10 are risks, and I think it's -- to me, in my mind, it's a  
11 negligible risk.

12 It's a prolific formation, and we're able to  
13 produce the gas out at a million a day, as it exists -- as  
14 it originally existed.

15 There's -- With being able to take the  
16 compressors that we have now, sir, and would put the gas in  
17 under compression, if you were to sort of reverse that  
18 process, you could take the gas pressure down to  
19 significant levels that I think would produce more than  
20 the, let's say 400, more than the 7200 MCF of gas that we  
21 may put in the ground.

22 Q. What is the present mode of operation with the  
23 State Land Office or State royalty interest on lost gas per  
24 se? Do you still have to pay royalty on gas that's either  
25 vented or burned?

1           A.    Now, that -- I can't speak to that.  I'd have to  
2 research that.

3           EXAMINER STOGNER:  Mr. Carr, these are some  
4 issues I think are going to need to be covered --

5           MR. CARR:  Okay.

6           EXAMINER STOGNER:  -- but that will probably be  
7 brought up with the State Land Office.

8           MR. CARR:  We'll review that with them as well.

9           EXAMINER STOGNER:  In looking at the statute I  
10 know that we're looking at the C-108 and the injection  
11 process, but I think we need to be aware -- and I'm sure  
12 you will do that subsequent to this hearing today, because  
13 we'll probably have to leave the record open in this  
14 matter, pending State Land Office approval or denial or at  
15 least review of it.

16                    But how are some of these other concerns covered  
17 in Statue 70-6 -- how do they enter into this process at  
18 this point?

19                    We had a similar one with Exxon several years  
20 ago, and that was the last one I've done, and that's the  
21 reason I said what I said earlier when we started covering  
22 this.

23           MR. CARR:  We will review it with the State Land  
24 Office and --

25           EXAMINER STOGNER:  Brief us on the 70-6.

1 MR. CARR: -- provide you with a written summary  
2 of what we've done and also obtain from them concurrence,  
3 waiver, whatever.

4 EXAMINER STOGNER: And perhaps a brief of how the  
5 statutes on 70-6, which is known as Underground Storage of  
6 Natural Gas, Article 6...

7 Q. (By Examiner Stogner) Okay, now the actual well  
8 itself, this is going to be injected into tubing?

9 A. That's correct.

10 Q. Okay. Is it just going to be steel tubing, I  
11 assume?

12 A. Yes, that is correct.

13 Q. No need of fiberglass coating like we normally --

14 A. No, sir.

15 Q. Okay, have you done a -- On the injection  
16 pressure --

17 A. Yes.

18 Q. -- a 500 surface operating pressure --

19 A. Right.

20 Q. -- have you done an equivalent gradient, say if  
21 you were in there and introducing water at 500-foot  
22 injection?

23 A. At that depth?

24 Q. Yes.

25 A. Yes. If we were injecting water -- You mean the

1 bottomhole pressure of the hydrostatic column?

2 Q. Yes.

3 A. Is that what you're saying?

4 It's about 1083 pounds or so, at that depth, the  
5 weight of the water. That's using a .5 p.s.i. per foot,  
6 assuming --

7 Q. That's just the hydrostatic?

8 A. That's just the hydrostatic column of water.

9 Q. And then we would allow on top of that a  
10 .2-p.s.i.-per-foot additional --

11 A. That is correct.

12 Q. So this is well below?

13 A. Yes, sir, it is.

14 EXAMINER STOGNER: Mr. Carroll, do you have any  
15 questions or statements or comments at this time?

16 MR. CARROLL: Yes, I have a few questions.

17 EXAMINATION

18 BY MR. CARROLL:

19 Q. What pipeline connection are you waiting on?  
20 What pipeline is going to build the line to this well?

21 A. Well, Yates Petroleum is the Applicant for  
22 building essentially -- I guess you would call it a  
23 gathering type of line to build down to the sales line.

24 We -- Yates Petroleum Corporation will build that  
25 line.

1 Q. And who is the sales pipeline that you're  
2 building it to?

3 A. We're laying it down to a Transwestern line.

4 Q. It's my understanding you're going to report the  
5 production from these Quincy wells, the casinghead gas that  
6 is going to flow into the Trailblazer well?

7 A. That's correct.

8 Q. Are you also going to file, pursuant to OCD Rule  
9 1131, a monthly gas-storage report?

10 A. Yes, 1131-A, yes, that's correct.

11 Q. On the advertisement for this case, I see the  
12 correct quarter-quarter section was referenced in the cover  
13 letters to the notice sent to Collins and Elk, and the  
14 surface owner, Jim Miller. It refers to the southwest  
15 quarter-quarter section?

16 A. It is the southeast quarter, correct.

17 Q. Have you heard back from Collins or Elk or  
18 Miller, any objection filed?

19 A. We have not.

20 Q. And you testified that Elk and Collins were  
21 notified as being operators in the area of review?

22 A. That's correct.

23 Q. And how did you select the area of review? What  
24 is the area of review?

25 A. Well, the area of review is a one-half mile area

1 within the -- around the injection well. And that's --  
2 That's not something I capriciously selected.

3 It's something that is given on Roman numeral V  
4 of the form C-108 of the OCD that says attach a map that  
5 identifies all wells and leases within two miles -- which  
6 is the two-mile circle -- of any proposed injection well --  
7 which is the Trailblazer 2 -- and with a half-mile-radius  
8 circle drawn around each proposed injection well. This  
9 circle, i.e., the half-mile circle, identifies the well's  
10 area of review.

11 And so that's sort of how it came up.

12 MR. CARROLL: Okay.

13 (Off the record)

14 EXAMINER STOGNER: Mr. Carr, I'm going to leave  
15 the record open in this matter, pending your response.

16 MR. CARR: We will contact the Land Office either  
17 tomorrow or Monday, and we'll respond to you quickly on the  
18 matters that have been discussed here today.

19 EXAMINER STOGNER: And also on your written  
20 response, if you would, provide me a rough draft order in  
21 this matter.

22 MR. CARR: Yes, sir. We will include that with  
23 the response.

24 EXAMINER STOGNER: Does anybody else have  
25 anything further in Case Number 11,322?

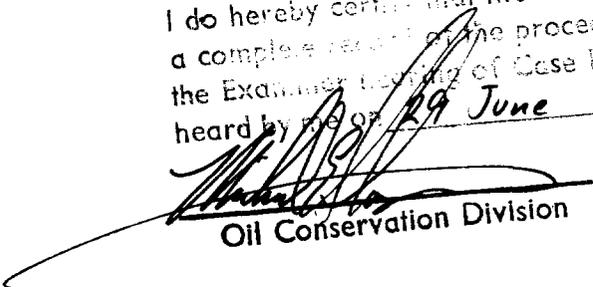
1           If not, then the record will remain open, pending  
2 notification of the State Land Office and approval or  
3 preliminary approval or their response.

4           With that, no further action will be taken in  
5 this case at this time.

6           (Thereupon, these proceedings were concluded at  
7 10:41 a.m.)

8                           \* \* \*

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21                           I do hereby certify that the foregoing is  
22 a complete record of the proceedings in  
the Examiner hearing of Case No. 11322  
heard by me on 29 June 1995.

23                             
24                           Oil Conservation Division, Examiner  
25

## CERTIFICATE OF REPORTER

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

I, Steven T. Brenner, Certified Court Reporter and Notary Public, HEREBY CERTIFY that the foregoing transcript of proceedings before the Oil Conservation Division was reported by me; that I transcribed my notes; and that the foregoing is a true and accurate record of the proceedings.

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

WITNESS MY HAND AND SEAL July 3rd, 1995.

  
 STEVEN T. BRENNER  
 CCR No. 7

My commission expires: October 14, 1998