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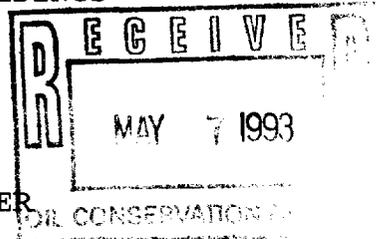
STATE OF NEW MEXICO
ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT
OIL CONSERVATION DIVISION
CASE 10,712

EXAMINER HEARING

IN THE MATTER OF:

Application of Yates Petroleum Corporation for
amendment of Division Order No. R-2178, as
amended, which approved a carbon dioxide/water
injection project known as the Yates Petroleum
Corporation Loco Hills CO₂/Water Injection Pilot
Project in the Fourth Sand Member of the Grayburg
Formation, Eddy County, New Mexico

TRANSCRIPT OF PROCEEDINGS



BEFORE: DAVID R. CATANACH, EXAMINER

ORIGINAL

STATE LAND OFFICE BUILDING

SANTA FE, NEW MEXICO

April 8, 1993

CUMBRE COURT REPORTING
(505) 984-2244

A P P E A R A N C E S

FOR THE DIVISION:

ROBERT G. STOVALL
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Santa Fe, New Mexico 87504

FOR THE APPLICANT:

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Attorneys at Law
By: WILLIAM F. CARR
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P.O. Box 2208
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I N D E X

Page Number

Appearances

2

ROBERT S. FANT

Direct Examination by Mr. Carr

5

Certificate of Reporter

17

* * *

E X H I B I T S

APPLICANT'S EXHIBITS:

Exhibit 1

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Exhibit 2

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Exhibit 3

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Exhibit 4

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Exhibit 5

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* * *

1 WHEREUPON, the following proceedings were had
2 at 5:38 p.m.:

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 EXAMINER CATANACH: At this time we'll call
 Case 10,712.

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 MR. STOVALL: Application of Yates Petroleum
 Corporation for amendment of Division Order No. R-2178,
 as amended, which approved a carbon dioxide/water
 injection project known as the Yates Petroleum
 Corporation Loco Hills CO₂/Water Injection Pilot
 Project in the Fourth Sand Member of the Grayburg
 Formation, Eddy County, New Mexico.

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 EXAMINER CATANACH: Are there appearances in
 this case?

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 MR. STOVALL: May it please the Examiner, my
 name is William F. Carr with the Santa Fe law firm
 Campbell, Carr, Berge and Sheridan.

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 I represent Yates Petroleum Corporation, and
 I have one witness who has previously been sworn.

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 EXAMINER CATANACH: Let the record reflect
 that the witness has previously been sworn.

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 Any additional appearances? None at this
 time.

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ROBERT S. FANT,

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

DIRECT EXAMINATION

BY MR. CARR:

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

A. Robert S. Fant.

Q. And by whom are you employed?

A. I am a petroleum engineer with Yates Petroleum.

Q. And you are employed in what capacity?

A. As a petroleum engineer.

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

A. Yes, sir, I have.

Q. And at the time of that prior testimony, were your credentials accepted and made a matter of record?

A. Yes, sir, they were.

Q. In fact, Mr. Fant, you were the witness in Case 10,476, which resulted in the Order last summer which approved the CO₂ pilot project; is that not correct?

A. Yes, sir, that is.

Q. Are you familiar with the Application filed

1 in this case?

2 A. Yes, sir.

3 MR. CARR: Are the witness's qualifications
4 acceptable?

5 EXAMINER CATANACH: Certainly.

6 Q. (By Mr. Carr) Mr. Fant, would you state what
7 Yates Petroleum Corporation seeks with this case?

8 A. We are seeking an amendment to Order R-2178
9 as amended. The purpose is to permit the drilling of
10 an injection well, the West Loco Hills G4S Unit Tract
11 13, Well 12, the conversion of the West Loco Hills G4S
12 Unit Tract 1 Well Number 10 from CO₂ water injection to
13 production, and the realignment of the pilot pattern.

14 Q. Mr. Fant, what is the current status of this
15 pilot project?

16 A. It is a pilot project for CO₂ injection. It
17 was approved last summer by Order Number R-2178-D on
18 July 9th of 1992.

19 We propose to inject CO₂ into the fourth sand
20 member of the Grayburg formation within the Loco Hills-
21 Queen-Grayburg-San Andres pool.

22 This area was waterflooded as a project that
23 was originally approved by Division Order R-2178 in
24 1962.

25 Q. And who was the Applicant in that case?

1 A. Newmont Oil Corporation.

2 Q. Yates has since taken over the project and is
3 proposing a pilot CO₂ flood?

4 A. Yes, sir, we are.

5 Q. Has this project been qualified for the
6 recovered oil tax rate, pursuant to the New Mexico
7 Enhanced Oil Recovery Act?

8 A. Yes, sir, it has.

9 Q. Could you identify what has been marked as
10 Yates Exhibit Number 1?

11 A. This is a copy of Order 2178-E, qualifying
12 this project for the incentive tax rate.

13 Q. Why have you brought this project back to the
14 Division for review at this time?

15 A. We need to make some adjustments in what we
16 originally proposed, based upon some evidence that we
17 will present, and R-2178-D does not contain provisions
18 which permit adjustments to be made administratively.

19 Q. Now, are you proposing to make any
20 adjustments to the project boundary?

21 A. No, sir, we only need to change the injection
22 pattern.

23 Q. All right. Let's next identify what has been
24 marked Yates Exhibit Number 2.

25 A. That is the completed form C-108 showing our

1 proposed changes.

2 Q. Now, this C-108 is a revision of the same
3 form that was filed and was the basis for the case that
4 resulted in the Order last summer approving the CO₂
5 project; is that correct?

6 A. Yes, sir.

7 Q. You are not proposing to change injection
8 volumes?

9 A. No, sir.

10 Q. You are not proposing changes in the
11 pressures that will be used in the project area?

12 A. No, sir.

13 Q. The only difference is, you have an
14 additional schematic for an injection well which just
15 follows along behind the change you're proposing?

16 A. Yes, sir.

17 MR. CARR: Mr. Catanach, with your permission
18 we would like to request that the record and the
19 testimony in Case 10,476, which resulted in the
20 original Order approving this project, be incorporated
21 into this proceeding here today and that we not be
22 required to re-present the entire C-103 Application
23 because it is, with the exception of this one new well,
24 virtually identical to the C-108 which was presented
25 last summer.

1 EXAMINER CATANACH: Okay, Mr. Carr, at your
2 request the record in Case 10,476 will be incorporated.

3 Q. (By Mr. Carr) Mr. Fant, would you refer to
4 what has been marked Yates Exhibits 3 and 4 and,
5 referring to these exhibits, simply explain to the
6 Examiner the change that you're proposing in this
7 project?

8 A. Okay, Exhibit 3 was the original project as
9 approved last summer.

10 Exhibit 4 is what we are proposing in these
11 revisions. It proposes a conversion of Well 1-10,
12 which is in the center of the southern pattern on
13 Exhibit 3, from injection to production.

14 Well 13-12 had provisions in the previous
15 order for drilling. We wish to move that location of
16 that well. It has not been drilled yet. We wish to
17 move that location to the east and south and drill that
18 well as an injector.

19 We want to delete Well 1-3, the most
20 southeasterly well, from the pattern area.

21 We want to add Well 13-11 to the project.

22 Q. And that's the westernmost well on Exhibit
23 Number 4?

24 A. And we will, in essence, create a line-drive
25 pattern instead of two five-spot patterns.

1 And again, the project boundary as defined in
2 the original Order remains unchanged.

3 Q. And that original Order is included in the --
4 in Yates Exhibit Number 2; is that correct?

5 A. Yes, that's correct. Page 7, in the second
6 paragraph of the findings, outlines the project area.

7 Q. Okay. Now have you reviewed for the Examiner
8 why you're being required to make this change?

9 A. Well, there's no provisions in the original
10 Order for administrative changes.

11 Q. And then what are the technical factors that
12 resulted in this change?

13 A. Okay, we initiated the project, as you see on
14 Exhibit 3.

15 In September, we began water injection into
16 wells 1-9 and 1-10. That proceeded for about two and a
17 half months.

18 In late November we took water samples from
19 each of our wells and concluded that we had had water
20 breakthrough in Well 1-8. It was our belief this
21 probably came from Well 1-10, but we weren't absolutely
22 positive at the time.

23 We decided to move forward with the
24 initiation of CO₂ injection, and that began in early
25 December.

1 We initiated the CO₂ injection, and two days
2 after beginning CO₂ injection we had CO₂ production at
3 1-8. Two days. We were concerned about this.

4 We restricted the flow in Well 1-8. The
5 following day, after restricting the flow, we had CO₂
6 production at Well 6-1, the most southwesterly well.

7 We ran tests in terms of shutting off the
8 injection well 1-10 to determine which well this was
9 coming from, and we concluded that Well 1-10 was
10 causing the breakthrough to these two wells.

11 We decided that -- You know, at that point we
12 stopped injection into 1-10, because no sense in
13 wasting CO₂.

14 We -- I put together this new pattern area to
15 allow for it to -- allow this to get around these
16 problems that we had.

17 I believe that the communication caused in
18 Well 1-8 and 6-1 probably relates to fractures that
19 were initiated while Well 1-8 and 6-1 were injection
20 wells. They were injection wells in the original
21 waterflood project. There was a period of time back in
22 the early Sixties when the injection pressures on those
23 two wells was above parting pressure, so they probably
24 initiated some fractures. That's why the same process
25 did not occur in the northern pattern.

1 If we moved Well 13-12 to where we have
2 proposed, convert 1-10 to production and set up a line-
3 drive system, we can utilize these fracture systems
4 that have been created in this line-drive pattern and
5 proceed with our project. Otherwise, we can't in its
6 original form.

7 And that's basically the reasons for the
8 changes.

9 Q. Now, is it your understanding that this
10 project was certified to the Taxation and Revenue
11 Department as a qualified project prior to the time CO₂
12 was injected?

13 A. Yes, sir, we advised the OCD prior to
14 injection, and it's our understanding the project was
15 certified to the Taxation and Revenue Department.

16 Q. In your opinion, with the changes you have
17 made in the project, does it remain a technically and
18 economically viable project as originally presented in
19 the Application for the enhanced oil tax rate?

20 A. Yes, sir.

21 Q. And you would request that that certification
22 remain in place and unchanged because of the
23 adjustments you have made in this proposal?

24 A. Yes, sir.

25 Q. Who are the leasehold operators of all tracts

1 within a half mile of any injection well?

2 A. Yates Petroleum Corporation is the only
3 leasehold operator.

4 Q. And who is the owner of the surface of the
5 land on which the new injection well will be located?

6 A. The Bureau of Land Management.

7 Q. Is Exhibit Number 5 an affidavit confirming
8 that notice of this Application has been provided to
9 the Bureau of Land Management?

10 A. Yes, sir, it is.

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

15 A. Yes, sir.

16 Q. How soon do you -- would you like to go
17 forward with the new CO₂ injection well?

18 A. Immediately upon receiving approval from the
19 OCD.

20 Q. And do you request that the Order in this
21 case be expedited to the extent possible?

22 A. Yes, sir.

23 Q. Were Exhibits 1 through 5 prepared by you or
24 compiled under your direction?

25 A. Yes, sir.

1 MR. CARR: At this time, Mr. Catanach, we
2 move the admission of Yates Petroleum Corporation
3 Exhibits 1 through 5.

4 EXAMINER CATANACH: Exhibits 1 through 5 will
5 be admitted as evidence.

6 MR. CARR: And that concludes my direct
7 examination of Mr. Fant.

8 EXAMINER CATANACH: I have no questions of
9 the witness.

10 MR. STOVALL: Just one -- One item for
11 clarification is, actually, at this time we do not
12 certify to Tax and Rev; we certify to the operator that
13 it's qualified and advise Tax and Rev.

14 MR. CARR: All right.

15 MR. STOVALL: And I'm not sure -- Yates --
16 I'm not sure if the actual paper has gone out, but
17 Yates is certified and I will state that on the record,
18 that this is a qualified project. It was qualified and
19 certified prior to the time of injection.

20 I do remember the communication. I think
21 we've revised the certification forms, and I'm not sure
22 they're --

23 MR. CARR: Okay, and Mr. Stovall, one last
24 comment: This is the first time -- in fact, this was,
25 I believe, one of the first two projects certified

1 under the Act.

2 MR. STOVALL: Yes.

3 MR. CARR: It's also the first time, to my
4 knowledge, that there has been for technical reasons a
5 requirement or a necessity of amending the original
6 proposal.

7 MR. STOVALL: The other thing about it is, is
8 that original certificate does not identify wells. It
9 only identifies land areas, so there's not a problem.

10 MR. CARR: And we believe the original
11 testimony as to the tax credit would still be
12 applicable and are assuming that there would be nothing
13 necessary new to maintain that certification as we go
14 forward.

15 MR. STOVALL: I agree, yes. No, that's
16 absolutely -- That's perfectly within the scope of what
17 that intended.

18 MR. CARR: And that's all we have in this
19 case, Mr. Catanach.

20 EXAMINER CATANACH: Mr. Carr, could I get a
21 rough draft order from you?

22 MR. CARR: Yes, sir.

23 EXAMINER CATANACH: Oh, and by the way, could
24 you expedite that, please?

25 MR. CARR: To the extent possible.

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EXAMINER CATANACH: Thank you.

There being nothing further, Case 10,712 will
be taken under advisement.

And this hearing is adjourned.

(Thereupon, these proceedings were concluded
at 5:50 p.m.)

* * *

