

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 FALCON CREEK RESOURCES,)
 INC., FOR STATUTORY UNITIZATION,)
 LEA COUNTY, NEW MEXICO)

CASE NOS. 12,331

APPLICATION OF FALCON CREEK RESOURCES,)
 INC., FOR APPROVAL OF A WATERFLOOD)
 PROJECT FOR ITS WEST TEAS (YATES-SEVEN)
 RIVERS) UNIT AREA AND QUALIFICATION OF)
 THE PROJECT FOR THE RECOVERED OIL TAX)
 RATE PURSUANT TO THE ENHANCED OIL)
 RECOVERY ACT, LEA COUNTY, NEW MEXICO)

and 12,332

(Consolidated)

OIL CONSERVATION DIV
MAR - 2
PM 1:25REPORTER'S TRANSCRIPT OF PROCEEDINGSEXAMINER HEARING

BEFORE: MICHAEL E. STOGNER, Hearing Examiner

February 17th, 2000

Santa Fe, New Mexico

This matter came on for hearing before the New Mexico Oil Conservation Division, MICHAEL E. STOGNER, Hearing Examiner, on Thursday, February 17th, 2000, at the New Mexico Energy, Minerals and Natural Resources Department, Porter Hall, 2040 South Pacheco, Santa Fe, New Mexico, Steven T. Brenner, Certified Court Reporter No. 7 for the State of New Mexico.

* * *

I N D E X

February 17th, 2000
Examiner Hearing
CASE NOS. 12,331 and 12,332 (Consolidated)

	PAGE
EXHIBITS	3
APPEARANCES	4
APPLICANT'S WITNESSES:	
<u>LYNN D. BECKER</u> (Landman)	
Direct Examination by Mr. Carr	8
Examination by Examiner Stogner	19
<u>DENNY D. LEMAR</u> (Geologist)	
Direct Examination by Mr. Carr	23
Examination by Examiner Stogner	30
<u>JOE H. COX, Jr.</u> (Engineer)	
Direct Examination by Mr. Carr	36
Examination by Examiner Stogner	52
REPORTER'S CERTIFICATE	65

* * *

E X H I B I T S

Applicant's	Identified	Admitted
Exhibit 1	12	18
Exhibit 2	12	18
Exhibit 3	13	18
Exhibit 4	13	18
Exhibit 5	14	18
Exhibit 6	14	18
Exhibit 7	15	18
Exhibit 8	17	18
Exhibit 9	18	18
Exhibit 10	25	30
Exhibit 11	27	30
Exhibit 12	27	30
Exhibit 13	28	30
Exhibit 14	38	52
Exhibit 15	40	52
Exhibit 16	41	52
Exhibit 17	41	52
Exhibit 18	44	52
Exhibit 19	50	52

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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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By: WILLIAM F. CARR

* * *

1 WHEREUPON, the following proceedings were had at
2 8:57 a.m.:

3 EXAMINER STOGNER: At this time I'll call Case
4 Number 12,331.

5 MS. HEBERT: Application of Falcon Creek
6 Resources, Inc., for authority to inject water into six
7 wells in the proposed Teas-Yates Seven Rivers Unit
8 Waterflood Project Area, Lea County, New Mexico.

9 EXAMINER STOGNER: Call for appearances.

10 MR. CARR: May it please the Examiner, my name is
11 William F. Carr with the Santa Fe law firm Campbell, Carr,
12 Berge and Sheridan. We represent Falcon Creek Resources in
13 this matter, and I have three witnesses.

14 EXAMINER STOGNER: Okay, any other appearances?

15 Will all three witnesses please stand to be sworn
16 at this time?

17 (Thereupon, the witnesses were sworn.)

18 MR. CARR: Mr. Stogner, this case involves an
19 Application to inject water in six wells in the Teas-Yates-
20 Seven Rivers Unit.

21 Efforts to unitize this acreage have been ongoing
22 for over a year, and as part of these efforts, in August of
23 1999, Falcon Creek filed application for administrative
24 approvals for six injection wells in the Teas-Yates-Seven
25 Rivers Unit Waterflood Project area.

1 Objections to these Applications were received,
2 and this case, Case 12,272, was set for hearing.

3 Since that time, there have been substantial
4 negotiations between the parties, and I can report to you
5 that the interests of Mitchell Energy Corporation; Santa Fe
6 Snyder Corporation; Camterra Resources Partnership,
7 Limited; and Bass Enterprises Production Company have been,
8 in fact, acquired by Falcon Creek.

9 We stand before you in a situation today where
10 there is no longer an objection to this Application by
11 virtue of certain agreements that have been reached and the
12 acquisition of these property interests.

13 Now, on December the 28th, I filed applications
14 for Falcon Creek seeking statutory unitization of this
15 area, and filed an application again seeking approval of
16 the waterflood project. Those cases are docketed as Case
17 12,272 -- I'm sorry, Cases 12,331 and 12,332. There is an
18 overlap between the first case filed, 12,272, and Case
19 12,331.

20 We therefore request that the initial case, Case
21 12,272, the original waterflood application, be dismissed,
22 and that you now call Case 12,331 and Case 12,332, and that
23 those cases be consolidated for hearing.

24 EXAMINER STOGNER: Thank you. For the record,
25 I'll call Case Numbers 12,331 and 12,332.

1 MS. HEBERT: Application of Falcon Creek
2 Resources, Inc., for statutory unitization, Lea County, New
3 Mexico,

4 And Application of Falcon Creek Resources, Inc.,
5 for approval of a waterflood project for its West Teas
6 (Yates-Seven Rivers) Unit Area and qualification of the
7 project for the recovered oil tax rate pursuant to the
8 Enhanced Oil Recovery Act, Lea County, New Mexico.

9 EXAMINER STOGNER: Other than Mr. Carr
10 representing the Applicant, are there any appearances in
11 these cases?

12 Let the record show that the witnesses have been
13 sworn, and we'll dismiss Case 12,272, and both 12,331 and
14 12,332 will be consolidated for purposes of testimony.

15 Mr. Carr?

16 MR. CARR: May it please the Examiner, at this
17 time we call Lynn D. Becker.

18 MS. HEBERT: Has this witness been sworn?

19 EXAMINER STOGNER: Did we swear the witnesses?

20 MR. CARR: Yes, you did.

21 EXAMINER STOGNER: And you have been sworn?

22 MR. BECKER: Yes, I have.

23 EXAMINER STOGNER: And you did swear three in,
24 Mr. Brenner?

25 COURT REPORTER: Yes, sir.

1 EXAMINER STOGNER: Thank you.

2 LYNN D. BECKER,

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

5 DIRECT EXAMINATION

6 BY MR. CARR:

7 Q. Would you state your full name for the record,
8 please?

9 A. Lynn David Becker.

10 Q. And where do you reside?

11 A. 14085 Berry Road, Golden, Colorado.

12 Q. And by whom are you employed?

13 A. Falcon Creek Resources, Incorporated.

14 Q. Mr. Becker, what is your position with Falcon
15 Creek Resources?

16 A. I'm a senior landman.

17 Q. Have you previously testified before the New
18 Mexico Oil Conservation Division?

19 A. I have not.

20 Q. Would you briefly summarize your educational
21 background for Mr. Stogner?

22 A. I have six years post-college education, five
23 years in the College of Environmental Design, University of
24 Colorado, and one year in the School of Business, Regis
25 University.

1 Q. When did you graduate?

2 A. I did not graduate.

3 Q. When did you leave college?

4 A. 1978, spring of 1978.

5 Q. And since that time, would you review for the
6 Examiner your work experience?

7 A. I started my career with Mobil Oil Corporation.
8 I was there for two years when I was hired by Petro-Lewis
9 as an acquisition landman. I worked for them for five
10 years. Then I spent 11 years as an acquisition consultant,
11 two years with an exploration company in Denver, Westport
12 Oil and Gas, and the last two years of my 22-year career
13 with Falcon Creek Resources.

14 Q. And during this 22-year career you have been
15 working in various capacities as a petroleum landman; is
16 that correct?

17 A. Correct.

18 Q. Are you familiar with the Application filed in
19 each of these consolidated cases?

20 A. Yes, I am.

21 Q. Are you familiar with the status of the lands in
22 the proposed West Teas (Yates-Seven Rivers) Waterflood Unit
23 Area --

24 A. Yes, I am.

25 Q. -- West Teas (Yates-Seven Rivers) Pool?

1 A. Sorry. Yes, I am.

2 Q. Are you familiar with the efforts of Falcon Creek
3 to reach voluntary agreement with other interest owners in
4 the unit area for the further development of the minerals
5 under these lands?

6 A. Yes, I am.

7 Q. Are you familiar with the proposed unit agreement
8 and unit operating agreement for the West Teas Unit and the
9 status of the ratifications of the proposed units and
10 waterflood project?

11 A. Yes, I am.

12 MR. CARR: Mr. Stogner, at this time we would
13 tender Mr. Becker as an expert witness and petroleum
14 landman.

15 EXAMINER STOGNER: Mr. Becker, again, what was
16 your -- the college before -- Was it Regis?

17 THE WITNESS: Yes, one year at the School of
18 Business at Regis University and five years in the College
19 of Environmental Design at the University of Colorado.
20 School of Architecture, actually.

21 EXAMINER STOGNER: So you went to the University
22 of Colorado first, then Regis?

23 THE WITNESS: Yes, I did.

24 EXAMINER STOGNER: And you left Regis in 1978?

25 THE WITNESS: I've also taken one course in

1 mineral economics from the School of Mines.

2 EXAMINER STOGNER: Which School of Mines would
3 that be?

4 THE WITNESS: I'm sorry, Colorado School of
5 Mines.

6 EXAMINER STOGNER: Oh, okay, I'm from New Mexico,
7 so there was only one in my mind. Okay, so Colorado School
8 of Mines, the other School of Mines?

9 THE WITNESS: That's the other one, yes.

10 EXAMINER STOGNER: Okay, good.

11 THE WITNESS: Thank you, sir.

12 EXAMINER STOGNER: Consider yourself qualified,
13 and you won't have to go through these questions again when
14 you come up.

15 THE WITNESS: Thank you.

16 EXAMINER STOGNER: Mr. Carr?

17 Q. (By Mr. Carr) Mr. Becker, would you briefly
18 state what Falcon Creek seeks with this Application, or
19 with these Applications?

20 A. Yes, we seek the statutory unitization of the
21 proposed unit, West Teas (Yates-Seven Rivers) Unit Area,
22 comprised of 1320 acres, more or less, including federal,
23 state and fee lands, the approval of the waterflood project
24 itself for the unit, approval to inject water into the
25 reservoir, and qualification for the reduced severance tax.

1 Q. What is the current status of the acreage in the
2 unit area?

3 A. There are 18 tracts in the unit area. Ten of
4 those tracts are federal, seven are state and one is fee.
5 All of the lands are held by production, with the exception
6 of a 120-acre federal tract and a 40-acre state tract.

7 Q. Let's go to what has been marked as Falcon Creek
8 Exhibit Number 1. I'd ask you to identify it and then just
9 briefly explain to the Examiner what it shows.

10 A. This Exhibit Number 1 is an area map. It shows
11 an outline of the proposed unit area and other lands in the
12 immediate vicinity. Approximately one mile to the east of
13 the West Teas proposed unit boundary is the Teas Unit, and
14 you see several wells there that are producing from the
15 same Yates-Seven Rivers formation, and that is also a
16 Yates-Seven Rivers flood.

17 Q. Let's go to Exhibit Number 2. Would you identify
18 and review that?

19 A. This is an ownership plat of the lands within the
20 unit. The plat shows the record title ownership of the
21 lands. Each of the record title owners is shown there with
22 their lease designation in each one of the unit tracts.

23 Falcon Creek Resources is the operator of all of
24 the tracts. We just consummated three sales this last week
25 from parties within the unit, which gave us 100-percent

1 control of the operators.

2 The federal land in here comprises about 54.55
3 percent of the unit, the state land is 39.39 percent of the
4 unit, and there's an 80-acre fee tract which is 6.06
5 percent of the unit.

6 Q. Would you now identify Exhibit Number 3?

7 A. Exhibit Number 3 is the unit agreement for the
8 development and operation of the West Teas (Yates-Seven
9 Rivers) Unit. This unit agreement is a typical federal
10 form, which has been tentatively approved, preliminarily
11 approved, by the state and reviewed by them. It shows the
12 character of the lands, it defines the unitized formations,
13 it provides for the waterflooding of the unit, it sets out
14 the basis of participation for each of the parties in the
15 unit, and it provides for the periodic filing with the
16 NMOCD, the BLM and the State Land Office of plans of
17 operation and development.

18 Q. And Exhibit Number 4 is what?

19 A. Exhibit Number 4 is the unit operating agreement
20 for the West Teas (Yates-Seven Rivers) Unit. This document
21 sets out who the unit operator is going to be; it's stated
22 that Falcon Creek Resources will be the unit operator. It
23 outlines how the work will be supervised and how the
24 management of the unit will take place. It also defines
25 the rights and duties of all the parties within the unit,

1 all the working interest owners. It shows how the
2 investments and the costs are to be shared. It establishes
3 a voting procedure for all the decisions to be made by the
4 working interest owners as they go forward in the
5 development of this project. It has an exhibit that
6 defines the accounting procedures on how costs and expenses
7 are to be handled, and contains a multitude of other fairly
8 standard operating agreement clauses.

9 Q. Has Falcon Creek reviewed the Application and
10 these agreements with the Bureau of Land Management?

11 A. Yes, we have. I have an Exhibit Number 5.
12 Exhibit Number 5 is a letter from the Roswell Field Office
13 of the Bureau of Land Management, designating the West Teas
14 (Yates-Seven Rivers) Unit Area as a logical unit area.

15 Q. And have you also reviewed this Application with
16 the New Mexico Commissioner of Public Lands?

17 A. Yes, I have. Exhibit Number 6 is a copy of the
18 letter from the Commissioner granting preliminary approval
19 to our proposed West Teas (Yates-Seven Rivers) Unit.

20 Q. And as a condition for final approval, the Land
21 Office is requiring an order from the Oil Conservation
22 Division approving the unit; is that correct?

23 A. Yes, they are.

24 Q. Could you refer to what has been marked as
25 Exhibit Number 7, identify this first and then explain what

1 it is?

2 A. Exhibit Number 7 is a listing of working interest
3 owners by tract. It shows their ownership in each tract
4 and then whether or not they've executed a joinder, and
5 then it shows that percentage of -- voting percentage of
6 that joinder. It goes through all 18 tracts of the unit.

7 Q. And what percentage of the working interest is
8 voluntarily committed to the unit at this time?

9 A. On a unit basis, there is a little over 96
10 percent of the unit owners, unit working interest owners,
11 have committed their interest.

12 On a tract-by-tract basis, no less than 89
13 percent of the working interest owners in each tract have
14 committed their interest.

15 EXAMINER STOGNER: Okay, run those numbers by me
16 again, before we get off of that?

17 THE WITNESS: Okay, on a unit basis, 96.8 percent
18 of the working interest owners have committed their
19 interest to the unit.

20 On a tract basis, no less than 89 percent of the
21 working interest owners have committed their interest to
22 the unit.

23 Q. (By Mr. Carr) So every tract has at least 89
24 percent of the working interest voluntarily committed?

25 A. Correct. I'm only missing four owners.

1 Q. And who are those four owners?

2 A. In Tract 2C, Charles McNeese; he owns a 2-percent
3 interest.

4 In Tract 2E Kenneth English, and he owns a 10-
5 percent interest.

6 In Tracts 2B, -D and -F -- sorry, more
7 slowly -- -B, -D and -F, PATCO, Limited, has a 5-percent
8 interest.

9 And then all of Tracts 2 and 3, the partnership
10 of Sheehy and Richardson owns between 1- and 1-1/4-percent
11 interest.

12 Q. Have you been able to reach and visit with each
13 of these interest owners concerning their voluntary
14 participation in this effort?

15 A. Yes, since we began our attempts to unitize this
16 back in November of 1998, we've made three attempts to
17 purchase the interests of these owners. They've all
18 indicated that they would like to participate in the unit.
19 By telephone, I've talked to them multiple times to keep
20 them updated about our progress with the unit and to
21 solicit their written participation through ratification,
22 and they have been unwilling to return an executed
23 ratification and joinder.

24 Q. Let's go now to the royalty interests, and I
25 direct your attention to what has been marked Falcon Creek

1 Exhibit Number 8. Would you identify that and review it
2 for Mr. Stogner?

3 A. This is a similar document as the previous
4 document. It's a listing showing all of the royalty owners
5 and overriding royalty owners by tract.

6 It has attached to it copies of all the executed
7 ratifications.

8 One hundred percent of the royalty -- base
9 royalty owners, have committed their interests to the unit.
10 I am missing four overriding royalty interest owners, so
11 that gives me an overall participation percentage of
12 approximately 94 percent of the royalty and overriding
13 royalty interest owners committed to the unit.

14 Q. When you have the state and federal government
15 in, though, you have 100 percent of the --

16 A. Yes, when I say 100 percent of the base royalty,
17 I am including the state and the federal government.

18 Q. Is it your opinion that you've done all you
19 reasonably can to obtain the voluntary participation in
20 this unit of all working and royalty interest owners?

21 A. Yes, I've sent letters requesting their
22 participation and that they execute a ratification, and
23 I've followed up with telephone calls and have been unable
24 to induce these people to return their executed
25 ratifications.

1 Q. Would you identify what has been marked as Falcon
2 Creek Exhibit Number 9?

3 A. This is an affidavit from William F. Carr,
4 indicating that he has served notice to all the appropriate
5 parties, all the owners that would be subject to the
6 statutory unitization order, all leasehold owners and
7 surface owners within one-half mile of the unit boundary
8 that would be affected for unitization purposes for the
9 purpose of injection and the qualification for the --

10 Q. Mr. Becker, was a copy of Falcon Creek's Form
11 C-108 submitted to each of these owners?

12 A. Yes, it was.

13 Q. As well as the Application for statutory
14 unitization?

15 A. Yes, it was.

16 Q. Were Exhibits 1 through 9 either prepared by you
17 or compiled under your direction?

18 A. Yes, they were.

19 MR. CARR: May it please the Examiner, at this
20 time we would move the admission into evidence of Falcon
21 Creek Exhibits 1 through 9.

22 EXAMINER STOGNER: Exhibits 1 through 9 will be
23 admitted into evidence.

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

EXAMINATION

BY EXAMINER STOGNER:

Q. Okay, Mr. Becker, on Exhibit Number 7 you identify for me PATCO, Sheehy and Richardson, Charles McNeese and the PATCO, and a Kenneth English as being the parties that have not ratified; is that correct?

A. Correct.

Q. Okay. Now, you mentioned something, there are a few overriding royalty interests that have not, on Exhibit Number 8, and which ones would those be?

A. That would be Matt Muratta, and he has a .0083-percent interest in Tract 9; Conoco, Inc., and they have a 4.833-percent override in Tract 6; Bob Shackelford has a 5-percent override in Tract 1B; and Laguna Gatuna, Inc., has a 5-percent override in Tract 5A.

Q. Conoco in 6B, did you say that, or 6A?

A. It's 6A and B --

Q. 6A and B.

A. -- Tract 6.

Q. Now, were you an actual -- Well, okay. You were obviously in contact with Conoco and Laguna Gatuna.

A. Yes.

Q. How about Matt Muratta and the Bob Shackelford?

A. I've been in contact with Bob Shackelford. I know Bob over a series of transactions over the last year.

1 I don't know what happened to his particular ratification.

2 Matt Muratta, I have not been able to contact.

3 Q. Were you able to find them, an appropriate
4 address?

5 A. I do have an appropriate address for him.

6 Q. He just hasn't responded?

7 A. Right, and I was unable to make a telephone
8 follow-up call.

9 Q. Okay, explain to me -- You said you have been at
10 this for about a year; is that correct?

11 A. Since November of 1998.

12 Q. Okay, so you've been in actual contact, or at
13 least attempting contact, with these parties since that
14 time?

15 A. Yes.

16 Q. Why don't you give me a rundown on essentially
17 what has transpired over that time up until now, what kind
18 of communications, attempted communications and such?

19 A. Okay. Approximately at the beginning of November
20 of 1998, when we made the decision that we wanted to go
21 ahead with this unitization effort, we sent a letter to all
22 of the working interest owners in the area asking -- or
23 offering to purchase their interest, and we gave them an
24 offer. We did have some owners agree to sell their
25 interest at that time.

1 Then we put together preliminary unit documents
2 and circulated them to the owners, and at that time we also
3 called a working interest owners' meeting on January the
4 5th, 1999, in Midland, Texas. During that meeting, it was
5 decided that the owners wanted to use a different period
6 for current production than the one that we had chosen, so
7 we selected the time period from February through April of
8 1999. So all the parties went back to their various
9 companies and worked over their wells to get production up
10 to where they thought it ought to be.

11 And then we got together again in May of 1999 via
12 teleconferences and exchanged information, and we had
13 another working interest owners' meeting on July 15th in
14 the offices of Bass in Midland, Texas, and again discussed
15 the parameters for unitization.

16 At that time it became really apparent that there
17 was differences of opinion of those who had drilled wells
18 in more recent times, 1996, versus those who had drilled
19 the wells in 1960, and so we were trying to work out the
20 parameters and the weighting of the parameters in such a
21 way that it would give equity to everyone, and we agreed to
22 do some further studies, and we broke up from that meeting.

23 Then in August of 1999, really as a precursor for
24 us getting ready for our unit Application, we went ahead
25 and sent out the injection notice, because it does require

1 a longer notice period than unitization did. And at that
2 time the other working interest owners in the fee tract,
3 Mitchell, Camterra and Santa Fe, became alarmed that we
4 might be working too quickly, and so they filed protests
5 with the Commission, I believe, at that time, and we
6 continued the hearing on that for several months.

7 We continued our negotiations amongst the
8 parties, we bought a couple more owners during that time
9 period, and then we had another working interest owners'
10 meeting on or about November 10th, 1999, again in the
11 Midland offices of Santa Fe Snyder. And again, we got down
12 to some of the final details of how the unit would work,
13 but we also discussed buying out those interests, those
14 owners of those interests.

15 Then in December we received -- or late November,
16 I guess it would have been, we received an offer to sell
17 from Mitchell. We pursued that. That led, then, to offers
18 to both Santa Fe and Camterra, and here this first two
19 weeks of February we have consummated those sales and now
20 own those interests.

21 EXAMINER STOGNER: Okay. Any other questions of
22 this witness?

23 MR. CARR: No further questions.

24 EXAMINER STOGNER: You may be excused.

25 THE WITNESS: Thank you.

1 EXAMINER STOGNER: Mr. Carr?

2 MR. CARR: May it please the Examiner, at this
3 time we would call Denny LeMar.

4 DENNY D. LEMAR,
5 the witness herein, after having been first duly sworn upon
6 his oath, was examined and testified as follows:

7 DIRECT EXAMINATION

8 BY MR. CARR:

9 Q. Would you state your full name for the record,
10 please?

11 A. Denny D. LeMar.

12 Q. Mr. LeMar, where do you reside?

13 A. In Denver, Colorado.

14 Q. By whom are you employed?

15 A. Falcon Creek Resources.

16 Q. And what is your position with Falcon Creek?

17 A. I'm a senior geologist.

18 Q. Have you previously testified before the New
19 Mexico Oil Conservation Division?

20 A. No, I have not.

21 Q. Would you review your educational background for
22 Mr. Stogner?

23 A. I have a BS in geology from Northern Arizona
24 University.

25 Q. And when did you receive your degree?

1 A. 1980.

2 Q. And since that time, could you summarize your
3 work in the oil and gas industry?

4 A. I started my professional career with Amerada
5 Hess in Seminole, Texas, was transferred to Denver in
6 exploration with Amerada Hess. During that period I moved
7 back to Roswell, New Mexico, with an independent for four
8 years, I moved back to Denver, worked in various consulting
9 positions with Graham Resources and Bonnevillie Fuels and,
10 the last two years, Falcon Creek Resources.

11 Q. Are you familiar with the Applications filed in
12 these cases?

13 A. Yes.

14 Q. Have you made a geological study of the portion
15 of the West Teas (Yates-Seven Rivers) Pool that is involved
16 in this case?

17 A. Yes, I have.

18 Q. Are you prepared to share the results of your
19 work with the Examiner?

20 A. Yes.

21 MR. CARR: We tender Mr. LeMar as an expert
22 witness in petroleum geology.

23 EXAMINER STOGNER: Mr. LeMar, you got your
24 geology degree at Northern Arizona?

25 THE WITNESS: That's correct.

1 EXAMINER STOGNER: That's in Flagstaff?
2 THE WITNESS: Yes, sir.
3 EXAMINER STOGNER: And when did you get out?
4 THE WITNESS: 1980.
5 EXAMINER STOGNER: You went to Seminole?
6 THE WITNESS: Yes, sir.
7 EXAMINER STOGNER: How long were you at Seminole?
8 THE WITNESS: Two and a half years.
9 EXAMINER STOGNER: Two and a half long years?
10 THE WITNESS: They were enjoyable --
11 EXAMINER STOGNER: Well, good.
12 THE WITNESS: -- yeah, I'll have to confess.
13 EXAMINER STOGNER: Flagstaff to Seminole.
14 THE WITNESS: Uh-huh.
15 EXAMINER STOGNER: All right, so qualified.
16 Thank you, sir.
17 THE WITNESS: Thank you.
18 Q. (By Mr. Carr) Mr. LeMar, you have prepared
19 exhibits for presentation in this case, correct?
20 A. Correct.
21 Q. Initially, could you identify for us the
22 formation that's being unitized?
23 A. The formation is the Yates-Seven Rivers.
24 Q. And how is that defined?
25 A. It's defined by Exhibit 10, I believe. This is

1 the Olsen Energy Snyder State Number 1, is what I've chosen
2 for a type log, and it's located in Unit Letter J of
3 Section 16.

4 And what we have is, the Yates has been
5 subdivided into three different intervals. The top
6 interval is characterized by siltstones, sandstones,
7 interbedded anhydrites and shales.

8 Zone 2 is carrying a higher percentage of the
9 anhydrites, dolomites.

10 And Zone 3 is more layered as far as the sand and
11 siltstones are concerned. The Seven Rivers occurs in this
12 well at approximately 3300 feet, and the Capitan Reef lies
13 about 60 feet below that.

14 Q. Is this the type log that was used to identify
15 the formations in the unit agreement?

16 A. That's correct.

17 Q. Has the portion of the reservoir which you
18 propose to waterflood been recently defined by development?

19 A. Yes, it has.

20 Q. And as we go through your geological
21 presentation, you're going to be talking about these three
22 separate zones within the Yates formation; is that correct?

23 A. That is correct.

24 Q. Does Falcon Creek propose to waterflood all three
25 zones at the same time?

1 A. Yes, it does.

2 Q. Let's go to what has been marked as your Exhibit
3 11, and it's in three parts, 11a, -b and -c. I'd ask you
4 to identify this and review it for the Examiner.

5 A. 11a, -b and -c are structure maps on each of the
6 individual zones. They have been defined as the Yates Zone
7 1, Zone 2 and Zone 3.

8 What both structure maps show is an asymmetrical
9 anticline. Basically the crest of the feature is in
10 Section 16, plunging to the north northeast. The steeper-
11 dipping limb is on the eastern side of the field and has
12 been fairly well defined as far as dry holes and limits to
13 production by the amount of sand in those wells.

14 Q. And all of the structure maps seem to mirror one
15 another, the formation getting somewhat larger as you move
16 down?

17 A. That is correct, there's not a -- There's
18 approximately 250 feet of closure on each one of the
19 layers.

20 Q. Let's go now to the isopachs for the unit area,
21 Exhibits 12a through -c, and again I'd ask you to review
22 these for Mr. Stogner.

23 A. Again, the first map is on Yates Zone 1, and what
24 it shows is a thick in the northern portion of the field.
25 As we come to the south, down into Section 16, we have some

1 areas of localized absence. This map is contoured on a
2 five-foot interval, using a 10-percent density porosity
3 cutoff.

4 The next map is on Zone 2, and what it shows is
5 the northern portion of the field in Section 4, the limit
6 of the sand, and as you proceed to the south there are
7 localized areas of the sand being present but the porosity
8 development is not there. Down in Section 16 we see that
9 the sand is fairly continuous throughout the unitized area.

10 Zone 3, this shows that -- is probably the most
11 insistent thickness of any of the Yates zones, and it's
12 fairly concurrent with the structural picture that we have
13 for Zone 3.

14 Q. All right, let's take out the cross-section.
15 It's a large exhibit, you may want to stand up and spread
16 this out. You first might review the trace for the cross-
17 section on the right-hand side of the exhibit and then move
18 across the cross-section and review the information on each
19 of the wells.

20 A. This is cross-section C-C', basically a north-
21 south cross-section, north being on the left. It's hung on
22 a structural datum of approximately plus 600 feet. And
23 what we see in a general -- that all three zones are
24 present across the entire structure.

25 Okay, as we start on the north end, the first two

1 wells, Scharbauer "4" 1, Anasazi "4" 3, we can see that
2 Yates Zone 1 is very well developed. As we proceed to the
3 south across the structural high portion of the field,
4 these zones show a decrease in porosity.

5 As we go down to Zone 2, we see that the northern
6 two wells do not have any sand development in these. As we
7 proceed to the south, especially in the Federal 9-2, the
8 pay interval is present and continues on down to the south.

9 Zone 3 is the most persistent interval across the
10 entire structure.

11 Q. Mr. LeMar, can the portion of the pool which is
12 included in the proposed unit area be effectively and
13 efficiently operated under this unit plan of development?

14 A. Yes, I believe from the current present
15 structural position that we have well defined inside the
16 unit boundaries, the proposed unit boundaries, several
17 offstructure wells have defined the structure as far as
18 being wet or too far offdip, and the wells in the southern
19 portion of the field have defined some of the limits of the
20 sand production as we see it today.

21 Q. And the unit boundaries fairly well match the
22 formation that you're including within the unit
23 application?

24 A. Correct, they're concurrent with the structural
25 picture, more or less.

1 Q. Mr. LeMar, were Exhibits 10 through 13 prepared
2 by you or compiled under your direction?

3 A. Yes, they were.

4 Q. Will Falcon Creek be calling an engineering
5 witness to review that portion of the case?

6 A. Yes.

7 MR. CARR: May it please the Examiner, at this
8 time we would move the admission into evidence of Falcon
9 Creek Exhibits 10 through 13.

10 EXAMINER STOGNER: Exhibits 10 through 13 will be
11 admitted into evidence.

12 MR. CARR: And that concludes my direct
13 examination of Mr. LeMar.

14 EXAMINATION

15 BY EXAMINER STOGNER:

16 Q. Let's stay on Exhibit Number 13 here, while we've
17 got it out and spread out in front of us.

18 Were most of these wells and their logs, were
19 they from about the same era, and when were they drilled,
20 and when were the logs run?

21 A. No, they're not. The structural crest of the
22 field was developed in the early 1960s, and those would be
23 the wells on the south end. And what you see there is a
24 dominance of sonic logs, gamma-ray neutron logs. That was
25 the crustal portion during the early development.

1 What has happened since 1960 is, we've come off
2 with a stratigraphic entrapment down the nose or the plunge
3 of the structure, and what we'll see is more modern logs,
4 1990 vintage, on the down -- on the plunge of the nose of
5 the structure. So that's why you're getting a dominance of
6 more modern logs in the northern end of the field.

7 Q. Do you know if the discovery log was utilized, or
8 discovery well, just by off chance?

9 A. I don't believe it's on this cross-section, but I
10 have other cross-sections with the discovery well on it.

11 Q. Was that about 1960 also?

12 A. That's correct.

13 Q. Okay, I'm looking at the south end here,
14 beginning with that fifth well from the left. That's an
15 open hole; is that correct?

16 A. Right, the Lea 6015 Federal Number 1.

17 Q. And then there's another open hole, and that
18 would be the second one, the Snyder Number 1?

19 A. That's the sixth from the left?

20 Q. Second from the left.

21 A. Second from the left.

22 Q. Second from the left.

23 A. Okay.

24 Q. Am I reading this right?

25 A. That's the Scharbauer 4-1?

1 Q. Did I say second from the left? I meant second
2 from the right, I'm sorry, we're looking at the wrong one.
3 Snyder Number 1.

4 A. Okay. And your question, sir?

5 Q. Is that open hole Seven Rivers?

6 A. Yes, it is, it's a sonic log, and the top of the
7 Seven Rivers was just barely penetrated in that well.

8 Q. Okay. But the Yates was --

9 A. Right, there's a full section of Yates Zone 1, 2
10 and 3 in that well.

11 Q. Okay. You have a notation here in the last well
12 on the right, "Hole full of water, P&A". Was this an open
13 hole completion, or what can you tell me about it?

14 A. It was completed as a dryhole, I believe what
15 they probably got into was the lower portion of the -- or
16 the upper portion of the Seven Rivers. These wells usually
17 have to be frac'd upon completion for any type of
18 commercial production other than the Seven Rivers.

19 Q. And this well is off of the unit boundary; is
20 that correct?

21 A. Right.

22 Q. So this marks your southern end of your --

23 A. Yes, sir.

24 Q. -- unitized area? Right? I mean, you utilized
25 this well as essentially the ending of the southern portion

1 of your unitized area?

2 A. Correct.

3 Q. Now, when I skim these logs --

4 A. Uh-huh.

5 Q. -- and I don't know if they're representative of
6 the area, what kind of production, if any, has come from
7 the Seven Rivers?

8 A. Most of the Seven Rivers wells are slightly north
9 of -- or slightly south of the last two wells on the cross-
10 section. They're more crestal in position, and they're
11 characterized by fairly high water cuts. The zones usually
12 don't have to be stimulated. They're in a carbonate.
13 Usually some acid will do the trick. You'll get either
14 large volumes of water or oil and water.

15 Q. Okay, now in referring to the type log, Exhibit
16 Number 10 --

17 A. Uh-huh.

18 Q. -- you show the top of the Capitan Reef right
19 below the Seven Rivers. Is that prevalent throughout this
20 unitized area?

21 A. I believe so. There's limited penetrations into
22 the Capitan. Most of these wells just topped the Seven
23 Rivers.

24 Q. Do you know if there's communication between that
25 Capitan Reef and the base of the Seven Rivers, as far as

1 the water?

2 A. I do not, and possibly our engineer, Joe Cox,
3 will have some water resistivities that may help with that.

4 Q. Okay. Do you have any wells that you reviewed in
5 the unitized area that went through the Capitan Reef?

6 A. Yes, there are. There are some -- two deep
7 Morrow tests.

8 Q. Were they on the log map -- I'm sorry, on the map
9 at the right end of your Exhibit 13?

10 A. Yes, sir. One is currently being used as a
11 disposal well in the Delaware by Falcon Creek Resources,
12 the Anasazi 16 Number 1.

13 Q. Anasazi 16 Number 1.

14 A. Right. And if you look right north of the third
15 well from the south --

16 Q. Okay, that's the one that's shown --

17 A. -- yeah, as an open hole.

18 Q. Now, the unitized substance -- Oh, okay, first of
19 all, I want to make sure my Exhibit Number 10 is also the
20 referenced well that sets the unitized formation; is that
21 correct? That was your type log, and also that was the one
22 mentioned in the unit agreement?

23 A. Yes, sir.

24 Q. Okay. Are these three Yates zones fairly
25 consistent as far as deposition, when they were laid down?

1 A. It appears so in that the units themselves, the
2 gross interval, can be fairly well easily correlated over
3 the entire proposed unit interval. What's controlling some
4 of the production in Zones 1 and 2 is the -- sort of the
5 stratigraphic nature. The porosity and permeability within
6 these zones vary quite a bit. The thickness varies. We
7 have a thick on the north end, as evidenced by one isopach
8 map. The Zone 3 appears to be the most widespread and
9 consistently thick interval in the proposed area.

10 Q. What was the depositional environment on these
11 three zones?

12 A. Shallow shelf, basically. A lot of -- If you'll
13 notice, a lot of the sands that are associated with the
14 pays have a high gamma-ray content, and what I believe this
15 is coming from is, they're probably feldspathic arenites.
16 There's a lot of plagioclase, a lot of clays in there, that
17 are causing a high gamma-ray reading.

18 EXAMINER STOGNER: Any other questions of this
19 witness?

20 MR. CARR: No further questions.

21 EXAMINER STOGNER: You may be excused. Thank
22 you, sir.

23 THE WITNESS: Thank you.

24 MR. CARR: May it please the Examiner, at this
25 time we would call Joe Cox.

1 JOE H. COX, Jr.,

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. CARR:

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

7 A. My full name is Joe H. Cox, Jr.

8 Q. Mr. Cox, where do you reside?

9 A. In Littleton, Colorado.

10 Q. By whom are you employed?

11 A. Falcon Creek Resources.

12 Q. And what is your position with Falcon Creek
13 Resources?

14 A. I am the senior engineer.

15 Q. Mr. Cox, have you previously testified before the
16 New Mexico Oil Conservation Division?

17 A. I have.

18 Q. At the time of that testimony, were your
19 credentials as an expert in petroleum engineering accepted
20 and made a matter of record?

21 A. Yes, they were.

22 Q. Are you familiar with the Applications filed in
23 these consolidated cases?

24 A. Yes, I am.

25 Q. Have you made an engineering study of the area

1 which is involved in this case?

2 A. Yes.

3 Q. And are you prepared to share the results of that
4 work with Mr. Stogner?

5 A. I am.

6 MR. CARR: Mr. Stogner, are Mr. Cox's
7 qualifications acceptable?

8 EXAMINER STOGNER: They are.

9 Q. (By Mr. Carr) Mr. Cox, you're familiar with the
10 Statutory Unitization Act?

11 A. Yes.

12 Q. And you've prepared certain exhibits for
13 presentation in this case?

14 A. I have.

15 Q. Let's go to what has been marked as Exhibit
16 Number 14, and I'd ask you to identify it and review it for
17 the Examiner.

18 A. Okay. Not sure if I have a copy. It's --

19 MR. CARR: Mr. Examiner, I might point out that
20 Exhibit 14 is an isopach map. We are using this isopach
21 map not because of the contours -- this is an interval
22 other than those reviewed by Mr. LeMar -- but when we were
23 looking at our well-status map we discovered we had earlier
24 tract numbers on them, and to avoid confusion you -- we
25 tried to have a plat that has the same tract numbers on it.

1 The contours are not part of Mr. Cox's testimony, but the
2 well symbols, in fact, are.

3 EXAMINER STOGNER: Okay.

4 Q. (By Mr. Carr) If you'd like to review Exhibit
5 14, Mr. Cox.

6 A. Okay. On Exhibit 14 it identifies with the
7 triangles the proposed injection wells, and I've got a
8 black-and-white, but I believe the red triangles are of
9 Stage 1, which would be the earlier part of the flood.

10 The red circles will be the Stage 1 producers.

11 And then the blue triangles would be Stage 2
12 injectors, which would be developed after we start getting
13 a response out of the first stage of the flood.

14 And the blue circles would be additional drilling
15 that's planned for that time.

16 Q. During Stage 1 you'll have six injectors?

17 A. That's correct.

18 Q. And 11 producing wells -- or -- no, how many
19 producers?

20 A. Thirteen producing wells during Stage 1.

21 Q. Stage 2, you go to 11 injection wells and then
22 how many producing wells?

23 A. Eighteen producing wells, so we'd be adding five
24 injectors and five producers.

25 Q. Now these areas, the Stage 1 and Stage 2 areas,

1 actually overlap, do they not?

2 A. That is correct.

3 Q. How are you going to go about developing this, if
4 you could just review your plans for Mr. Stogner?

5 A. As far as Stage 1 goes, we would be converting
6 the six wells. They're all existing wells. Four of those
7 produce from the Yates alone, one of those is a Yates and
8 Seven Rivers producer, and one of them is a shut-in Yates
9 producer.

10 Q. Then is it your intention to go forward with
11 these six wells and then wait until you see a response from
12 those wells before you start implementing Phase 2?

13 A. That's correct, yes, sir.

14 Q. And so you're going to make your initial
15 investment, then once you get the -- what are you -- Are
16 you tying your effort into performance in other reservoirs
17 in the area, or using that and other experience, other --
18 operate as an analog?

19 A. Yeah, Teas field, as Mr. Becker mentioned, to the
20 east, was our analog for this flood.

21 Q. And if you get the response you hope for, then
22 you'll be moving into Stage 2?

23 A. That's correct.

24 Q. Let's go to Exhibit Number 15, and I'd ask you to
25 identify this and review it for the Examiner.

1 A. Okay, Exhibit 15 is economic printouts. The
2 first page is the total waterflood economics, so it
3 includes the primary and secondary production. It shows
4 the production streams and the investments and the
5 anticipated cash flows from the project.

6 Page 2 is the same type of display for the
7 primary reserves. This would be the field without any
8 waterflood.

9 And then the third page would be the difference,
10 which is the incremental secondary economics for the
11 waterflood.

12 Q. In fact, if we look at the third page of Exhibit
13 15, this is really what you're hoping to achieve with the
14 waterflood project, is it not?

15 A. That's correct, this would be the benefit.

16 Q. It shows both the increase in reserves and the
17 value that you have assigned to those?

18 A. That is correct, yes.

19 Q. What price were you utilizing in computing these
20 figures?

21 A. It nets to a \$17.80-per-barrel oil price and a
22 \$1.86 gas price.

23 Q. And if we look at page 3, in fact, we'd be able
24 to see the volume of hydrocarbons that could be wasted if,
25 in fact, you are unsuccessful with this waterflood effort?

1 A. Yes, under the gross oil barrels column it shows
2 2.1 million barrels at the bottom of that column, and that
3 would be the volume we wouldn't recover without the flood.

4 Q. Let's go to Exhibit Number 16. Will you identify
5 and review that for the Examiner?

6 A. Okay, Exhibit 15 [sic] is -- The first part of it
7 is historical production, and then the projection of the
8 waterflood performance starts after that. So it's just the
9 overall performance of the flood as we anticipate.

10 Q. Okay. And what we have is, we have the oil in
11 green, and the spike we see as we go forward is, in fact,
12 what you're hoping to achieve through unitization and the
13 implementation of this project?

14 A. That is correct.

15 Q. Based on your experience or your knowledge of the
16 Teas unit to the east, do you foresee any problems with
17 implementing a waterflood project in this reservoir?

18 A. I don't. The stratigraphic section is very
19 similar. Our number of injectors and producers is even
20 very similar, and the pattern we've chosen is similar to
21 what they've used there, so...

22 Q. Exhibit 17 is another production curve. Could
23 you refer to that and just point out the differences
24 between the two for Mr. Stogner?

25 A. The only real difference here is, we've projected

1 the primary production also, with the more solid-looking
2 green curve being the oil and the more solid-looking red
3 curve being the projected gas.

4 Q. Again, we can look at this exhibit and see the
5 anticipated additional recovery coming from the unitization
6 and waterflood project?

7 A. That's correct.

8 Q. And when we talk about the allocation of
9 production from this unit, in your opinion does the formula
10 in the unit agreement allocate production to the separately
11 owned tracts in this unit on a fair, reasonable and
12 equitable basis?

13 A. Yes, I believe it does.

14 Q. And can you explain that to the Examiner?

15 A. Well, we went through a long process, as was
16 discussed earlier, going over the issues with the owners,
17 the previous owners, and we came up with a formula that was
18 generally agreeable to all the owners. In fact, it was the
19 basis for the purchase price that all parties agreed to.

20 The formula included remaining primary oil in
21 place, the usable wellbores in the field and the EOR
22 primary.

23 Q. By applying these various factors on a tract-by-
24 tract basis, will each interest owner in the unit receive
25 its fair share of the additional production that will be

1 obtained as a result of this waterflood project?

2 A. Yes, they will.

3 Q. And is it fair to say that unitization and
4 implementation of this waterflood project will, in fact,
5 benefit all working interest owners and all royalty
6 interest owners in the unit area?

7 A. Yes, we feel it will.

8 Q. Unitization is necessary, is it not, Mr. Cox, to
9 effectively implement and carry on the secondary-recovery
10 operations?

11 A. That is correct.

12 Q. And your Exhibits 16 and 17 show the additional
13 recovery that you can achieve through this Application?

14 A. That's correct.

15 Q. Does Falcon Creek seek authority to commit
16 additional wells to injection in orthodox and unorthodox
17 locations within this unit area by an administrative
18 procedure?

19 A. We do.

20 Q. When you get to Stage 2, you're going to need to
21 come back to the Division with an additional request; is
22 that not correct?

23 A. That is our plan, yes.

24 Q. And at that time you would be submitting C-108
25 information on each of the additional injection wells?

1 A. That's correct.

2 Q. Your hope is that you would be able to do that
3 without the necessity of additional hearings?

4 A. Yes, sir.

5 Q. Could you identify -- I'd like to focus now for a
6 minute on the waterflood project aspect of the case. Could
7 you identify what has been marked as Falcon Creek Exhibit
8 18?

9 A. Exhibit 18 is our C-108, the Application for
10 Authority to Inject.

11 Q. And this is not an expansion of an existing
12 project; this is a new waterflood, correct?

13 A. That's correct, there's no previous flood here.

14 Q. Let's go to the plat which is set forth on page
15 11 of Exhibit 18.

16 A. Page 11 is an area map that again identifies the
17 injection wells with triangles and the area of
18 investigation around those -- half-mile radius around each
19 of those wells.

20 Q. And this is a similar map to that reviewed by Mr.
21 Becker, is it not?

22 A. That's correct.

23 Q. You've just added the area of review to this
24 exhibit?

25 A. That's right.

1 Q. You have reviewed, have you not, at this time,
2 the status of the six wells that you intend to convert to
3 injection as part of Stage 1?

4 A. We have.

5 Q. Let's go to pages 12 and 13 of this exhibit, and
6 I would ask you to identify for Mr. Stogner what is set
7 forth on those pages.

8 A. Okay, this table shows all of the wells within
9 that area of study for the Application. It gives the
10 wells' names and locations, the spud dates for the wells,
11 their depths and the mechanical -- the casing depths and
12 cement used on the casings, and the completed intervals.

13 Q. And this provides all information on each well
14 within an area of review as required by OCD Form C-108?

15 A. That is correct.

16 Q. Let's look now at pages 14 through 20. Would you
17 tell me what these are?

18 A. Okay, these are wellbore diagrams for the dry
19 holes that fall within this area of review.

20 Q. And these are plugged and abandoned wells?

21 A. That is correct.

22 Q. Is all plugging detail shown on each of these
23 wellbore summary pages?

24 A. It is, complete from what we were able to obtain
25 from the State.

1 Q. Does this exhibit also contain schematic drawings
2 for the proposed injection wells?

3 A. Yes, they're --

4 Q. -- pages 5 through 10?

5 A. That's correct.

6 Q. And what have you set forth on these pages?

7 A. These pages show the proposed configuration of
8 the injectors in their injection application. It shows the
9 approximate packer locations, the tubing strings --

10 Q. Is the annular space on each of these wells to be
11 filled with an inert fluid and put through the gauge as
12 required by the Federal Underground Injection Control
13 Program?

14 A. Yes, it will.

15 Q. And you are proposing to inject into what
16 formation? Just the Yates, or the Yates and Seven Rivers?

17 A. It will be just the Yates.

18 Q. And approximately what is the depth of the Yates
19 sands you're going to be injecting into?

20 A. They're found from 3000, approximately 3000 feet,
21 to about 3450.

22 Q. And the thickness of those sands is approximately
23 what?

24 A. That varies from about 40 feet to 100 feet in net
25 thickness.

1 Q. What kind of a porosity and permeability are you
2 encountering in this Yates interval?

3 A. On average for the field, we think it's about
4 15.7-percent average porosity and about 1 millidarcy
5 permeability.

6 Q. Are there any other oil-productive zones in the
7 immediate area?

8 A. Outside of the Yates and Seven Rivers, the only
9 zones that are in the area are deeper, below the unitized
10 interval.

11 Q. Are they objectives for Falcon Creek in this
12 effort to unitize and waterflood?

13 A. They are not.

14 Q. What is the source of the water you're proposing
15 to inject in the subject well?

16 A. All of the water is proposed to be produced water
17 from the Yates and Seven Rivers.

18 Q. And will it be coming, in fact, from the West
19 Teas (Yates-Seven Rivers) Unit?

20 A. Yes, all of it will.

21 Q. And what volumes are you proposing to inject?

22 A. With the initial six wells, about 3000 barrels of
23 water per day, about 500 barrels per day, per injector.

24 Q. Okay, and what is the maximum daily injection
25 rate you're proposing?

1 A. We anticipate as high as 4500 barrels of water
2 per day, which would be 750 per injector.

3 Q. And this will be a closed system?

4 A. That's correct.

5 Q. Are you going to be injecting under pressure?

6 A. Yes, we will be.

7 Q. And what pressure do you propose to utilize?

8 A. We anticipate 600 pounds average injection
9 pressure. We've applied for 1200 pounds maximum pressure.

10 Q. And that is in -- 1200 pounds is in excess of the
11 .2-pound-per-foot-of-depth of the top of the injection
12 interval, is it not?

13 A. That's correct.

14 Q. Has an injection pressure of 1200 pounds
15 previously been approved in this area by the Oil
16 Conservation Division?

17 A. Yes, the operator of the first wells we acquired
18 in this area have done a step-rate test on the B.F. State
19 Number 4 well.

20 Q. And when was that test run, do you know?

21 A. January 26th, 1998.

22 Q. And what is the location of that well?

23 A. It's the northeast-northeast of Section 16.

24 Q. And that's in --

25 A. -- in 20-33.

1 Q. -- in 20-33?

2 A. Yes.

3 Q. And what was the approved surface injection
4 pressure for the Yates formation that resulted from that
5 test?

6 A. Okay, the State approved a 1282-p.s.i. pressure.

7 Q. And you are prepared to run whatever additional
8 step rate tests might be required by the OCD?

9 A. We are, yes.

10 Q. Would you just identify the water analysis that
11 is set forth in this exhibit?

12 A. Okay. Pages 23 and 24 of the C-108 have water
13 analyses.

14 Q. What is this of? Of the water that will be
15 injected into the reservoir?

16 A. Yes, the first one, page 23, is probably
17 representative of the average water that would be injected.
18 Page 24 shows -- This is from a well that produces just
19 Seven Rivers, so it's slightly fresher.

20 Q. Are there freshwater zones in this area?

21 A. We contacted the State Engineer's Office for
22 information on that. The only zones they identified were
23 within the surface casing interval.

24 Q. And are there any water wells within a mile of
25 any of the proposed injection wells?

1 A. Not within a mile, not.

2 Q. In fact, the nearest well is actually the well in
3 Section 5, just based on the State Engineer Office report;
4 is that not correct?

5 A. That's correct, yeah.

6 Q. Have you examined the geologic and engineering
7 data available on this reservoir and concluded as a result
8 of that examination that there are no hydrologic
9 connections between the disposal zone or any underground
10 source of drinking water?

11 A. Yes, everything we've seen indicates that there
12 is no connection.

13 Q. Now, as to the Falcon Creek Application for the
14 enhanced oil recovery tax rate, is Exhibit Number 19 a
15 letter application seeking qualification of this project?

16 A. Yes, it is.

17 Q. And this letter sets forth basically the things
18 required by Oil Conservation Division rules?

19 A. Yes, it does.

20 Q. What are the estimated capital costs to be
21 incurred in this project?

22 A. For the total project, Stage 1 and Stage 2, it
23 would be \$3.4 million.

24 Q. And how much additional production does Falcon
25 Creek anticipate it will obtain from this waterflood

1 project?

2 A. About 2.1 million barrels.

3 Q. And how much natural gas will you also be
4 producing?

5 A. About 426 million cubic feet.

6 Q. Can you tell us a general value for this
7 additional production?

8 A. It's approximately \$8 million.

9 Q. And what do you base that upon?

10 A. That's on the \$17.80-per-barrel price that I
11 mentioned.

12 Q. And so we have a situation here where you will be
13 recovering substantially more in terms of the value of the
14 hydrocarbons than the cost that it will take to pursue
15 those?

16 A. That's correct. The \$8-million value is after
17 the expenditure for the waterflood.

18 Q. So that's what you will get over and above the
19 \$3.4 million?

20 A. That's correct.

21 Q. So the waterflood project clearly is feasible
22 economically in the area?

23 A. Yes, sir.

24 Q. Does Exhibit C attached to 19, Exhibit 19, this
25 plat, does it set out the production history and the

1 forecast for oil, gas and water from the area as required
2 by OCD rules?

3 A. Yes, sir, it does. It's another plot similar to
4 the first ones. This one includes the projected water
5 production.

6 Q. In your opinion, will approval of this
7 Application and implementation of the proposed waterflood
8 project in the West Teas (Yates-Seven Rivers) Unit be in
9 the best interests of conservation, the prevention of waste
10 and the protection of correlative rights?

11 A. Yes.

12 Q. Were Exhibits 14 through 19 prepared by you or
13 compiled under your direction?

14 A. Yes, they were.

15 MR. CARR: Mr. Stogner, at this time we move the
16 admission into evidence of Falcon Creek Exhibits 14 through
17 19.

18 EXAMINER STOGNER: Exhibits 14 through 19 will be
19 admitted into evidence.

20 MR. CARR: And that concludes my direct
21 examination of Mr. Cox.

22 EXAMINATION

23 BY EXAMINER STOGNER:

24 Q. Mr. Cox, what's the average production of the
25 wells presently producing from this pool in this unit area?

1 A. Let's see, we're currently at about 4000 barrels
2 a month, and we have about -- So about 20 barrels per day,
3 average. Excuse me 200 barrels per month, average.

4 Q. That's average per well?

5 A. That's correct.

6 Q. So these are classified as stripper wells; is
7 that correct?

8 A. Yes.

9 Q. Okay, you mentioned the well up there in Unit
10 A -- that's of Section 16 -- as having a step rate test
11 back earlier last year; is that correct?

12 A. That's correct.

13 Q. Is that an injection well now?

14 A. Stevens and Tull, the previous operator of that
15 well, had applied to make a saltwater disposal well out of
16 that, and then they went through the procedure of step rate
17 testing, but there was an offsetting operator that
18 protested their saltwater disposal application, so it never
19 was an active disposal well.

20 Q. Do you know who objected or anything more about
21 that particular application?

22 A. It was -- Just from the material that we've seen
23 in the files, I believe it was Shackelford Oil that had
24 protested it, but I don't know much more than that about
25 it.

1 EXAMINER STOGNER: I'll take administrative
2 notice of that application, whatever file we have on it,
3 Mr. Carr.

4 Q. (By Examiner Stogner) On page 18 of your Exhibit
5 Number 18, this is a plugged and abandoned well, the Lea
6 886 State Well Number 2 of Sinclair Oil Company.

7 A. Yes, sir.

8 Q. I show an open hole completion up to the top of
9 the casing interval, which is 2950. Is this all that's
10 still within the Yates formation, that you know of, up to
11 this 2950?

12 A. I think that also included the top of the Seven
13 Rivers in that.

14 Q. Well, yeah, but the Yates is above the Seven
15 Rivers; is that correct?

16 A. That's correct, yes, sir.

17 Q. Okay. And the zone above the Yates? I guess my
18 question is, where is the base of the Yates formation in
19 this -- I'm sorry, where is the top of the Yates formation
20 in this area? Maybe the geologist can answer that
21 question.

22 A. Yeah, right offhand I don't know. I'm assuming
23 that they topped the Yates when they set casing, but I
24 don't find it.

25 EXAMINER STOGNER: Perhaps Mr. LeMar could answer

1 that, Mr. Carr?

2 MR. CARR: Mr. LeMar?

3 MR. LEMAR: The top of the Yates in that well is
4 approximately 409. Do you have that KB there?

5 THE WITNESS: Yeah, ground level is 3544, so
6 about 3953, 3960.

7 EXAMINER STOGNER: I'm sorry, 29- --

8 THE WITNESS: Twenty-nine --

9 Q. (By Examiner Stogner) 2953, so this is still in
10 the Yates; is that correct?

11 A. Yes, yes. I calculated that backward. It's 403?

12 MR. LEMAR: 409.

13 THE WITNESS: 409. So it would be three thousand
14 -- 44 minus 9 -- thirty-five, top of the Yates.

15 Q. (By Examiner Stogner) I'm sorry, what?

16 A. 3035; is that correct, Denny? If you had 3544 --

17 MR. LEMAR: KB, Joe?

18 THE WITNESS: I've got a ground level of 3544.

19 MR. LEMAR: 3544?

20 THE WITNESS: Right.

21 EXAMINER STOGNER: Mr. LeMar, why don't you step
22 up forward here?

23 MR. LEMAR: Okay.

24 EXAMINER STOGNER: What I'm concerned about is,
25 this particular well goes up -- In other words, if there is

1 some channeling up to the top of that casing interval at
2 2950. What is the matrix of the top of the Yates, and
3 what's found above the top of the Yates in this area?

4 MR. LEMAR: Above the top of the Yates would be
5 probably anhydrite, basically, maybe a few scattered salt-
6 shale stringers in there, but I believe the bulk of the
7 formation would be anhydrite above there.

8 EXAMINER STOGNER: Along this same line of
9 questioning, while I've got you here, what do we find at
10 the base of the Seven Rivers, right before or right at that
11 area that the top of the Capitan Reef is found at? What
12 matrix is there? Is that a permeable layer or an
13 impermeable layer?

14 MR. LEMAR: The few wells that I can think of
15 offhand, it's usually fairly tight on top of the Capitan
16 itself, so there should be some type of barrier there,
17 barring any type of fracturing. I don't know if I can
18 readily identify any type of fracturing occurring in the
19 Seven Rivers itself.

20 EXAMINER STOGNER: How thick is that interval,
21 would you say?

22 MR. LEMAR: The Seven Rivers?

23 EXAMINER STOGNER: This impermeable layer at the
24 base of the Seven Rivers.

25 MR. LEMAR: Oh, 20 to 30 feet.

1 EXAMINER STOGNER: Has either one of you seen an
2 actual water quality from the Capitan Reef in this
3 particular area underlying that proposed unit area?

4 MR. LEMAR: I have not.

5 THE WITNESS: I have not either. We have the
6 Seven Rivers analysis, which is about 12,500 parts per
7 million.

8 Q. (By Examiner Stogner) I'm sorry, the Seven
9 Rivers was how many parts per million?

10 A. 12,500 total dissolved solids.

11 EXAMINER STOGNER: I'm going to take about a 15-
12 minute recess at this time, Mr. Carr.

13 (Thereupon, a recess was taken at 10:07 a.m.)

14 (The following proceedings had at 10:25 a.m.)

15 EXAMINER STOGNER: This hearing will come to
16 order.

17 Mr. Carr?

18 MR. CARR: Yes, sir.

19 EXAMINER STOGNER: The Capitan Reef in New
20 Mexico, and an extent down in Texas, it had some -- is a
21 source of fresh water, it's a source of protection, and the
22 policy and the procedure from us and the State Engineer's
23 Office over the may years has essentially led us to protect
24 the Capitan Reef quite extensively, no matter what depth.

25 And when anything occurs around the Capitan Reef,

1 definitely it raises awareness of it. And there has never
2 been any approval to directly, of course, inject into the
3 deeper Capitan Reef, which, of course, there has been
4 applications. I think there might have even been
5 applications when you were working for the OCD.

6 So these were the extent of my concerns --

7 MR. CARR: Sure.

8 EXAMINER STOGNER: -- at this particular point.
9 I understand that the other Teas waterflood, up -- that has
10 been alluded in this particular Application, is up there in
11 that same area, and I'm assuming that it's above the
12 Capitan Reef also.

13 So that's the reason I'm focusing my attention a
14 lot on the completions into the Seven Rivers, and also I'm
15 going to be asking about the proposed completion techniques
16 of these injection wells, is there any fracs planned, what
17 kind of fracs it's been or what the general completion
18 procedures have been in this area.

19 So with that in mind, Mr. Cox, I think you kind
20 of see where I'm leading to at this particular point.

21 The six injection wells -- First of all, let's go
22 back.

23 Is it my understanding the proposal is to limit
24 it to 600 p.s.i. at this time, the injection pressure? Was
25 that my understanding?

1 MR. CARR: The initial pressure was to be 600
2 p.s.i. They were asking for a maximum pressure of 1200
3 based on the step rate tests and were prepared to conduct
4 additional step rate tests if needed by the OCD, before
5 they go to the higher pressure.

6 EXAMINER STOGNER: Okay, I understand.

7 MR. CARR: So I guess my answer was yes.

8 EXAMINER STOGNER: Okay. Well, with that in
9 mind, I can tell you I'm not going to approve the 1200
10 based on the information on this old well. I don't really
11 have it, and I will look that up. But with this in mind,
12 I'm going to relay that on to our UIC Director, on how
13 those procedures should enact.

14 But as far as your 600, that's what I'm going to
15 limit it to at this particular time.

16 MR. CARR: And that's Mr. Catanach?

17 EXAMINER STOGNER: Yes, that would be Mr. David
18 Catanach.

19 MR. CARR: You know, Mr. Stogner, we were aware
20 of the concern with the Capitan. We had discussed this
21 with Mr. Catanach, and, yeah, we'll be happy to try and
22 respond to any of these questions you have. We were trying
23 to keep it up in the Yates for the -- That was one of the
24 main reasons.

25 But anything we can provide for you here today we

1 will, and anything you need after this we'll certainly get
2 to you.

3 EXAMINER STOGNER: Okay, I'd like to try to get
4 as much on the record --

5 MR. CARR: Sure.

6 Q. (By Examiner Stogner) As far as these six
7 injection wells, the initial injection wells, are they
8 identified on this C-108?

9 A. Yes.

10 Q. Are they the first six, or --

11 A. Page 4 lists those six wells.

12 Q. Okay. Now, you're limiting your injection into
13 just the Yates interval; is that correct?

14 A. That's correct.

15 Q. Now, you show a couple of wells that have
16 perforations in the Seven Rivers, but those have already
17 been blanked off with a cast iron bridge plug; is that
18 right?

19 A. In most cases it's been cast iron bridge plug and
20 cement, yes.

21 Q. Do you know if they were squeezed?

22 A. Some of them have been. Some of them had
23 retainers and then were squeezed out of these wells. I
24 don't --

25 Q. Do you know if there's any wells, any of the

1 planned producers or current producers, presently producing
2 from that Seven Rivers interval?

3 A. Yes, it's actively being produced and will
4 continue to be -- It's planned to continue being produced
5 during this flood. It's made about a half million barrels
6 of oil to date, and I think there's about another 87,000 in
7 the primary.

8 Q. Realistically, how many wells are producing from
9 the Seven Rivers within the unitized area, now? Not all of
10 them are producing from that Seven --

11 A. No, just -- A close guess would be about six or
12 seven wells right now are producing from the Seven Rivers.
13 Most of those are commingled, but two or three of those are
14 isolated.

15 Q. Okay now, when we say "commingled", the West Teas
16 (Yates-Seven Rivers) is considered one pool --

17 A. Yes.

18 Q. -- one source of supply?

19 A. That is correct.

20 Q. So when you say "commingling", we're not talking
21 in the legal sense, other than in the engineering sense,
22 that you recognize there's two formations?

23 A. Right.

24 Q. What has been the completion technique in these
25 producing wells in this pool?

1 A. They've generally required a frac stimulation.
2 We, in the development plans, have been aware of the
3 sensitivity to the Capitan and to the Seven Rivers, which
4 has got a fairly strong water drive on it, and have
5 designed smaller frac jobs for those recompletions into the
6 Yates 3 Zone, the -- overlying the Seven Rivers.

7 Q. Are there any wells presently open-hole completed
8 and producing?

9 A. I don't believe there are anymore. There were
10 earlier in the life of the field, but I don't think --
11 They're all cased-hole completions at this time.

12 Q. Have you or anybody with Falcon Creek Resources
13 discussed this proposed project with the Hobbs District
14 Office, in particular the geologist down there, Mr. Paul
15 Kautz? Do you know?

16 A. Yeah, I have talked to him in the process of
17 putting this together. I don't know that we've discussed
18 this particular issue.

19 EXAMINER STOGNER: Mr. Carr, I don't think
20 there's anything further at this particular time that we
21 can put in the record, other than reviewing the information
22 or --

23 MR. CARR: Mr. Stogner, we want you to know that
24 if on your review there are questions, if you want to
25 reopen the case or if you'd like to communicate with us,

1 we'll be delighted to supplement the record, however you
2 would desire.

3 EXAMINER STOGNER: Well, it just depends. If we
4 find anything, then we can act accordingly at that point,
5 worst-case scenario being reopening of the case and taking
6 additional testimony subsequent to our contact with you
7 upon specifics.

8 MR. CARR: That would be fine.

9 Q. (By Examiner Stogner) What's the time interval
10 that Falcon Creek Resources is planning on starting with
11 the workovers for the injectors?

12 A. We would start those as soon as we got approvals.

13 EXAMINER STOGNER: Well, it's in my best interest
14 to get this thing moving too, so let's make sure that me
15 and you communicate on a regular basis in the next two
16 weeks.

17 MR. CARR: I will. I will contact you next week
18 and -- in terms of additional information or drafting or
19 anything that you need in regard to this matter.

20 EXAMINER STOGNER: Okay. With that, is there
21 anything further in any of these three cases?

22 MR. CARR: Nothing further at this time.

23 EXAMINER STOGNER: And for the record again,
24 original Case 12,272 will be dismissed, and I will take
25 Cases 12,331 and 12,332 under advisement, with possible

1 additional information needed, and that will be contacts
2 through you.

3 If there's anything further, then we'll proceed
4 on.

5 MR. CARR: Thank you, Mr. Stogner.

6 (Thereupon, these proceedings were concluded at
7 10:35 a.m.)

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13 I do hereby certify that the foregoing is
14 a complete record of the proceedings in
the Examiner hearing of Case No. _____
heard by me on _____ 19____.

15 _____, Examiner
16 Of Conservation Division
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CERTIFICATE OF REPORTER

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

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

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

WITNESS MY HAND AND SEAL February 21st, 2000.



STEVEN T. BRENNER
CCR No. 7

My commission expires: October 14, 2002