

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

IN THE MATTER OF THE HEARING)
CALLED BY THE OIL CONSERVATION)
DIVISION FOR THE PURPOSE OF)
CONSIDERING:) CASE NO. 10685
CASE NO. 10686

APPLICATIONS OF HANSON OPERATING
COMPANY

REPORTER'S TRANSCRIPT OF PROCEEDINGS

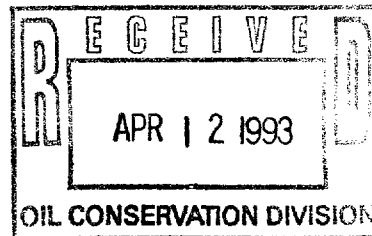
EXAMINER HEARING

BEFORE: Michael E. Stogner, Hearing Examiner

March 18, 1993

Santa Fe, New Mexico

This matter came on for hearing before the
Oil Conservation Division on March 18, 1993, at the
Oil Conservation Division Conference Room, State Land
Office Building, 310 Old Santa Fe Trail, Santa Fe, New
Mexico, before Deborah O'Bine, RPR, Certified Court
Reporter No. 63, for the State of New Mexico.



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March 18, 1993
 Examiner Hearing
 CASE NOS. 10685 and 10686

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A P P E A R A N C E S

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FOR THE APPLICANT CAMPBELL, CARR, BERGE &
AND YATES PETROLEUM SHERIDAN, P.A.
CORPORATION: P.O. Box 2208
Santa Fe, New Mexico 87504
BY: WILLIAM F. CARR, ESQ.

1 EXAMINER STOGNER: Call next case No. 10685.

2 MR. STOVALL: Application of Hanson
3 Operating Company for statutory unitization, Eddy
4 County, New Mexico.

5 EXAMINER STOGNER: Call for appearances.

6 MR. CARR: May it please the Examiner, my
7 name is William F. Carr. I'm with the Santa Fe law
8 firm, Campbell, Carr, Berge & Sheridan. I represent
9 Hanson Operating Company, Inc., and I have three
10 witnesses.

11 At this time, Mr. Examiner, I would request
12 that this case be consolidated for the purpose of
13 hearing with Case No. 10686, which is the waterflood
14 project within the unit area. Separate orders we
15 would request be heard, but the testimony would be
16 overlapping.

17 EXAMINER STOGNER: Thank you, Mr. Carr.
18 Are there any other appearances in 685?

19 MR. CARR: Mr. Stogner, I also need to
20 enter an appearance in the case on behalf of Yates
21 Petroleum Corporation. Yates is in support of the
22 application.

23 EXAMINER STOGNER: I'm sorry, Yates
24 Petroleum Corp.?

25 MR. CARR: Yes, sir.

1 EXAMINER STOGNER: Any other appearances?

2 At this time I'll case No. 10686.

3 MR. STOVALL: Application of Hanson
4 Operating Company, Inc., for approval of a waterflood
5 project, Eddy County, New Mexico.

6 EXAMINER STOGNER: Other than Mr. Carr
7 entering an appearance as far as Hanson and Yates, are
8 there any other appearances in either of these cases?

9 Thank you, Mr. Carr.

10 Will the witnesses please stand and be
11 sworn, all three of you?

12 (Witnesses sworn.)

13 MR. CARR: At this time, Mr. Stogner, we
14 call Ken Hammonds.

15 KENTON A. HAMMONDS,
16 the witness herein, after having been first duly sworn
17 upon his oath, was examined and testified as follows:

18 EXAMINATION

19 BY MR. CARR:

20 Q. Will you state your name for the record,
21 please.

22 A. Yes, sir. Kenton A. Hammonds.

23 Q. By whom are you employed?

24 A. Hanson Operating Company.

25 Q. And in what capacity?

1 A. As landman.

2 Q. Have you previously testified before this
3 division?

4 A. No, sir, I have not.

5 Q. Could you summarize for Mr. Stogner your
6 educational background?

7 A. I have a B.A. from Texas Tech University in
8 government and subsequent education including
9 designation as CPL.

10 Q. When did you receive your degree?

11 A. In 1973.

12 Q. Could you briefly review your work
13 experience since that time?

14 A. I've served 12 years in the oil and gas
15 industry, and prior to that time as an abstracter.

16 Q. Has the work with the oil and gas industry
17 been as a petroleum landman?

18 A. Yes, sir, it has.

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

21 A. Yes, sir, I am.

22 Q. Are you familiar with the status of the
23 lands involved in the proposed Benson Shugart
24 Waterflood Unit?

25 A. Yes, sir.

1 MR. CARR: We would tender Mr. Hammonds as
2 an expert witness and petroleum landman.

3 MR. STOVALL: Before you do, you referred
4 to CPL. We may know what it is, but the record won't.
5 What does it stand for?

6 THE WITNESS: It's Certified Professional
7 Landman by the American Association of Petroleum Landmen.

8 MR. STOVALL: Is that a designation that
9 has to be earned, or what are the requirements for that?

10 THE WITNESS: It is an eight-hour exam and
11 a limited -- or I think about ten years of experience
12 in landman work in the oil industry.

13 MR. STOVALL: Thank you.

14 EXAMINER STOGNER: Mr. Hammonds is so
15 qualified.

16 Q. (BY MR. CARR) Mr. Hammonds, would you
17 briefly state what Hanson seeks with this application?

18 A. We seek statutory unitization of our
19 proposed Benson Shugart Waterflood Unit and approval
20 of our proposed waterflood project in that unit.

21 Q. How large is the proposed unit?

22 A. Nine hundred and eleven acres.

23 Q. Could you refer to what has been marked for
24 identification as Hanson Exhibit No. 1, and first
25 identify this and review the information on this for

1 the examiner?

2 A. Exhibit 1 is our unit area plat. I've
3 colored in yellow the proposed Benson Shugart
4 Waterflood Unit and in blue an additional proposed
5 waterflood that I think the Commission is familiar
6 with, proposed by Yates Petroleum Corporation.

7 Q. Are there other waterfloods in this area?

8 A. Yes, sir. Previously existing floods in
9 Section 30 to the east as shown on the plat, Southland
10 Royalty has operated a waterflood there for many
11 years. I think in its most extended term of its life.
12 And to the south, B & A Operating operates the Culwin
13 Queen Unit.

14 Q. Could you initially review for the examiner
15 the efforts made by Hanson and Yates to develop this
16 area and to study the feasibility of it?

17 A. Yes, sir. We began three to four years ago
18 in a joint effort to study the feasibility of a flood
19 in this particular area. In concert, we retained
20 Williamson Petroleum Consultants to study from a
21 feasibility basis the feasibility of the flood itself.

22 That was completed. Feasibility was highly
23 recommended. And subsequent to that time, it was
24 concluded that the better way to proceed would be to
25 have two concurrent floods, cooperative in nature,

1 with two separate operators.

2 Q. And so on Exhibit 1, the acreage shaded in
3 blue is the Creek AL leased waterflood that is
4 currently being proposed by Yates?

5 A. That is correct.

6 Q. And then the unit area that we're talking
7 about here today is the acreage shaded in yellow on
8 Exhibit No. 1?

9 A. That's correct, sir.

10 Q. Let's go to Exhibit No. 2, and I'd ask you
11 to first just identify this.

12 A. Exhibit No. 2 is the Unit Agreement that
13 has been -- it's a boilerplate Unit Agreement that's
14 been approved and recommended for our use by the BLM.

15 Q. What is the character of the lands in the
16 unit area?

17 A. It is composed of both federal and fee
18 acreage. There's no state acreage involved.

19 Q. How much of the acreage is federal?

20 A. 95, approximately 95 percent.

21 Q. And then you have how much fee?

22 A. We have a 40-acre tract that is fee.

23 Q. Does this agreement provide for waterflood
24 operations?

25 A. Yes, sir, it does.

1 Q. And it sets out the participation for each
2 of the parties?

3 A. Yes, sir.

4 Q. Does it provide for the periodic filings of
5 plans and development?

6 A. Yes, it does.

7 Q. Will those plans be filed with the Oil
8 Conservation Division at the time they're filed with
9 other agencies?

10 A. Yes, sir, they will.

11 Q. Let's refer to Exhibit B to the Unit Agreement,
12 and I'd ask you to identify that, and then referring
13 to that, advise the examiner of the efforts made by
14 Hanson to obtain voluntary joinder in this project.

15 A. Exhibit B, the last page of Exhibit B sums
16 up the unit percentage participation interest on a
17 tract-by-tract basis.

18 Q. That's the last page of Exhibit No. 2?

19 A. Yes, sir, Exhibit B to that Unit
20 Agreement. We have, through certified mail, contacted
21 every economic interest in the unit and informed them
22 of the proposal. We have 92 percent in hand approval.

23 Q. Which of the working interest owners shown
24 on the last page of Exhibit No. 2 have not voluntarily
25 committed to this unit?

1 A. There are -- the first one would be Grover
2 N. Shrader, the second one appearing on that last
3 page. Mr. Shrader recently has elected to sell his
4 interest to Hanson Operating Company.

5 Q. Those agreements are not in hand though?

6 A. Those agreements are not in hand.
7 Conversation yesterday indicated they're in the mail
8 or deposited for collection with his bank. We're
9 handling it through a site draft.

10 The Loffland Group is composed of three
11 separate entities appearing on the exhibit. The first
12 interest, Barbara Loffland Middleton, and the second
13 to the last two entries at the bottom of the page, the
14 Margaret R. Loffland Trust and Tom R. Loffland.

15 Summed together, their unit interest would
16 be 2.29 percent. There has been a recent death in the
17 family, and things were in disarray. They haven't
18 elected to join. We think they will. We're being
19 patient and waiting on them.

20 The only entity that we expect will not
21 voluntarily join is Hilo, H-I-L-O, Development, and that's
22 the one interest that we don't expect to voluntarily
23 join, comprising 2.7 percent unit working interest.

24 Q. So if you are able to obtain voluntary
25 joinder from the Shrader and the Loffland interest,

1 how much of the unit working interest ownership will
2 be voluntarily committed to this effort?

3 A. Approximately 97.3 percent.

4 Q. Let's go to what has been marked as Exhibit
5 No. 3, and I'd ask you to identify that, please.

6 A. Exhibit No. 3 is a standard form Unit
7 Operating Agreement.

8 Q. Does it provide for a penalty if a party
9 does not voluntarily pay his share of the unit
10 expenses?

11 A. Yes, sir, it does. Article 11.5 provides
12 for a cost plus 200 percent penalty regarding a
13 participating party who defaults.

14 Q. And this is otherwise basically a standard
15 Unit Operating Agreement?

16 A. Yes, sir, it is.

17 Q. It just generally defines the rights and
18 obligations of the parties?

19 A. Yes, sir, it does.

20 Q. And you will have 97 percent of the working
21 interest owners you believe voluntarily committed to
22 this contract?

23 A. Yes, sir, we do.

24 Q. Has Hanson reviewed the proposed unit with
25 the Bureau of Land Management?

1 A. We have.

2 Q. Would you identify in that regard what has
3 been marked as Hanson Exhibit No. 4?

4 A. Hanson Exhibit No. 4 is the preliminary
5 approval letter that has been issued to us by the BLM
6 in Roswell.

7 Q. Did the BLM in fact suggest that the name
8 be changed to the Benson Shugart Waterflood Unit?

9 A. Yes, sir, they did.

10 Q. And did they propose any recommendations to
11 the boundary of the unit?

12 A. They did. They had us eliminate a 40-acre
13 tract in Section 35, being described as the southeast
14 of the northeast, which we had initially proposed to
15 be included which is now excluded.

16 Q. With the preliminary approval from the
17 Bureau of Land Management, that would give you the
18 approval of 95 percent of the royalty interest; is
19 that right?

20 A. That's correct.

21 Q. Now, as to the remaining 40-acre tract, has
22 that royalty interest been voluntarily committed to
23 the unit plan of development?

24 A. 50 percent of that royalty interest is in
25 hand, and the outstanding 50 percent, a gentleman we

1 have spoken with yesterday, he was unaware that he
2 needed to do anything in regard to the unit; and so I
3 advised him what he needed to do, and it's in the mail
4 he advised us.

5 Q. So you anticipate you'll have 100 percent
6 of the royalty interest participating in this unit?

7 A. Yes, sir, we do.

8 Q. What is the status of the overriding
9 royalty interest in the unit area?

10 A. There is a total of 4.8 percent overriding
11 royalty interest, 4.4 percent is committed, and .37
12 percent is uncommitted.

13 Q. In your opinion, Mr. Hammonds, have you
14 attempted to, in good faith, identify all interest
15 owners in the unit area and obtain their voluntary
16 joinder?

17 A. Yes, sir, we have.

18 Q. Has notice of this hearing been provided to
19 all working interest owners and all royalty interest
20 owners in the proposed unit area?

21 A. Yes, sir, it has.

22 Q. Could you identify what has been marked as
23 Hanson Exhibit No. 5?

24 A. Exhibit No. 5 is an Affidavit confirming
25 notice that application has been given in accordance

1 with the OCD rules and regulations.

2 Q. And then what is Exhibit No. 6?

3 A. Exhibit No. 6 are photocopies of the two
4 certified letters that we mailed informing all the
5 economic interest owners in the unit of the hearing
6 before the OCD.

7 Q. As to the statutory unitization in the
8 case, you've notified all owners in the unit area;
9 correct?

10 A. Yes, sir, we have.

11 Q. Who has been notified of the waterflood
12 application?

13 A. The same, the same people.

14 Q. Have you notified all leasehold operators
15 within a half mile of an injection well?

16 A. Yes, sir, we have.

17 Q. Have you notified the owner of the surface
18 of every tract on which an injection will be located?

19 A. We have.

20 Q. Were Exhibit 1 through 6 prepared by you?

21 A. Yes, sir, they were.

22 MR. CARR: At this time, Mr. Stogner, we
23 would move the admission of Hanson Exhibits 1 through
24 6.

25 EXAMINER STOGNER: Exhibits 1 through 6

1 will be admitted into evidence at this time.

2 Q. (BY MR. CARR) Mr. Hammonds, will Hanson
3 also call engineering and geological witnesses to
4 present the technical aspects of this case?

5 A. Yes, sir.

6 MR. CARR: That concludes my examination of
7 Mr. Hammonds.

8 EXAMINER STOGNER: Thank you, Mr. Carr.

9 Mr. Stovall?

10 EXAMINATION

11 BY MR. STOVALL:

12 Q. First, Mr. Carr, Mr. Hammonds, is it
13 correct to state that the people who have received
14 notice are those whose names appear on the exhibits,
15 Exhibit 6?

16 A. Yes, sir. We've attached the mailing list.

17 Q. Would you mind attaching that to --
18 modifying the affidavit and attaching that to the
19 affidavit to show --

20 A. Certainly.

21 MR. CARR: We'll do that.

22 Q. (BY MR. STOVALL) I notice there is a Gas
23 Balancing Agreement as part of the Unit Operating
24 Agreement?

25 A. Yes, sir.

1 Q. Are you familiar with that Gas Balancing
2 Agreement?

3 A. I am.

4 Q. What provision does it make, or is it an
5 issue with respect to royalty owners, payment of
6 sales? Do they receive their share regardless of who
7 is selling the gas?

8 A. I'm familiar with it, but I can't answer
9 that question at this point. We would have to get
10 into the agreement and look. We felt -- we don't
11 anticipate gas production. We felt it prudent to
12 attach one in anticipation of the possibility.

13 MR. STOVALL: Okay. I think that's all I
14 have

15 EXAMINATION

16 BY EXAMINER STOGNER:

17 Q. Just for the record, referring to Exhibit
18 No. 1, you mentioned that the BLM had you exclude a
19 40-acre tract. What is that 40-acre tract?

20 A. It is located in Section 35. There's a
21 40-acre tract that sticks down on the south end that
22 used to include the southeast-northeast contiguous on
23 the south side of that 40-acre tract, and it was
24 excluded at THE BLM request.

25 Q. And that is the only exclusion that has

1 been made?

2 A. That is correct.

3 Q. And you're seeking also the 200 percent
4 nonjoinder clause; is that correct?

5 A. Yes, sir.

6 EXAMINER STOGNER: I have no other
7 questions of Mr. Hammonds at this time.

8 MR. STOVALL: Let me just, one thing on the
9 200 percent, the statute provides for actual
10 forfeiture of the interest is permissible. If I read
11 the agreement correctly, you're not actually seeking a
12 forfeiture of the interest but rather a lien on the
13 proceeds of production?

14 THE WITNESS: That's correct.

15 EXAMINER STOGNER: Anything else of this
16 witness?

17 MR. CARR: Nothing further on Direct.

18 EXAMINER STOGNER: He may be excused at
19 this time.

20 THE WITNESS: Thank you.

21 MR. CARR: At this time we call Gary
22 Fitzsimmons.

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

EXAMINATION

BY MR. CARR:

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

A. Gary Fitzsimmons.

Q. By whom are you employed?

A. Hanson Operating.

Q. And in what capacity?

A. Chief geologist.

Q. Have you previously testified before this Division?

A. Yes, I have.

Q. At the time of that testimony, were your credentials as a geologist accepted and made a matter of record?

A. Yes, they were.

Q. Are you familiar with the applications filed in these cases on behalf of Hanson?

A. Yes, I am.

Q. Have you made a geological study of the portions of the formations which are involved in this case?

A. Yes, I have.

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

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1 EXAMINER STOGNER: Mr. Fitzsimmons is so
2 qualified.

3 Q. (BY MR. CARR) Have you prepared certain
4 exhibits for presentation here today?

5 A. Yes, I have.

6 Q. Before we do that, could you just identify
7 the formations we're attempting to unitize in this
8 project?

9 A. The specific formations that will be
10 flooded include the Seven Rivers, the Queen, and the
11 Grayburg. The overall formations included in the pool
12 designation by the OCD include the Yates, also.

13 Q. Let's go to what has been marked Hanson
14 Exhibit No. 7, and I'd ask you to identify and review
15 that for the examiner.

16 A. This is a log of the Ginsberg Federal No.
17 13. This is the well that we use to define the zones
18 that we're going to be flooding:

19 Q. Do you want to point out those zones for
20 us?

21 A. If you refer to the log, the Seven Rivers
22 zone, which we have designated as the Seven Rivers C
23 zone, is located from 2410 to 2440.

24 The Queen zone that we're going to flood is
25 a Penrose sand, which we refer to as the third Penrose

1 sand, which is located from 3100 to 3112.

2 And the Grayburg zone that we plan to
3 flood, we designate the third Grayburg sand which is
4 located 3383 to 94.

5 Q. Mr. Fitzsimmons, let's go now to Exhibit
6 No. 8. Would you identify this for the examiner?

7 A. Exhibit No. 8 is a Seven Rivers structure
8 map.

9 Q. Would you review this, please.

10 A. It shows that the regional dip is to the
11 southeast. It also contains the boundary of the Seven
12 Rivers Reservoir that we're planning on flooding. And
13 it also contains the cross-section line A-A', which
14 shows the specific zone that we're going to flood.

15 Q. Let's move to Exhibit No. 9, your structure
16 map on the Mid-Grayburg and now review that?

17 A. This is a Middle Grayburg structure map
18 that represents the Queen and Grayburg structure.
19 Again, it shows the same southeast dip. Also included
20 on the map is the boundary of the reservoir that we
21 plan to flood in the Queen and Grayburg.

22 And also contained is the cross-section
23 B-B', which shows those specific zones.

24 Q. If we look at Exhibits 7 and 8 together, it
25 appears that the floodable portion of the Seven Rivers

1 and the floodable portion of the Mid-Grayburg really
2 do not overlap; is that correct?

3 A. Yes -- you mean Exhibits 8 and 9?

4 Q. Yes.

5 A. Yes. We found, my interpretation is that
6 there is no overlap between the reservoirs found in
7 the Queen-Grayburg and the Seven Rivers Reservoir.

8 Q. Okay, Mr. Fitzsimmons, let's go now and
9 look at the northern boundary of this unit as shown on
10 Exhibit No. 9.

11 A. Okay.

12 Q. Could you review how you anticipate the
13 flood in the Mid-Grayburg to affect this portion of
14 this pool?

15 A. Okay. The eastern -- the northeast portion
16 of Section 25, as Ken mentioned earlier, there's a
17 flood that was put in effect in Section 19-30. And
18 it's been -- in my study, I found that the two wells
19 in the east half of the northeast of Section 25
20 received a flood response from an injection well
21 located in the northwest quarter of Section 30,
22 designated No. 7 on the map, and it's my understanding
23 that these wells are producing significant water at
24 this time.

25 In our wells located in the west half of

1 the northeast of Section 25, that would be the No. 3
2 and No. 4 well, we have yet to experience any of that
3 flood response. So it's my opinion that that flood
4 front that emanated from the No. 7 well has not
5 reached our wells, and that we have area there that
6 needs to be flooded.

7 The western part of the northern half is
8 Yates acreage, and they're going to go into a
9 cooperative flood with us. So the whole area
10 essentially will be flooded with two cooperative
11 floods.

12 Q. Let's now go to Hanson Exhibit No. 10.
13 Would you identify and review that?

14 A. This is the cross-section that designates
15 that the specific zone we plan to flood in the Seven
16 Rivers. We've elected to flood this particular zone
17 based on what we have determined from our production
18 histories. And we've determined that the
19 preponderance of the oil did come from this particular
20 zone in the Seven Rivers.

21 Q. Would you now go to your Exhibit 11, the
22 cross-section in the Queen-Grayburg and review that?

23 A. This, again, is a cross-section -- this
24 particular cross-section designates the two zones that
25 we're going to flood in the Queen-Grayburg. Again,

1 these zones were chosen because they provided the
2 preponderance of oil in the Queen-Grayburg producing
3 interval.

4 Q. Mr. Fitzsimmons, why is Hanson including
5 both of these zones in one waterflood project?

6 A. Because, to be consistent with the OCD
7 rules, the pool rules, we needed to include both.

8 Q. Let's go now to Hanson Exhibit No. 12.
9 Would you identify and review that?

10 A. This is a production map of production in
11 the area. When we determined our unit boundaries, we
12 selected production to be the primary factor on which
13 we determined the boundaries because, number one, the
14 field was in -- it's the last phases of primary
15 production, and a good well should represent good
16 reservoir, and a poor well should represent a poor
17 reservoir.

18 In addition, it's an old area with old
19 logs, and I found the logs not to be a diagnostic
20 determination of permeabilities.

21 Q. So in view of the quality of the logs
22 available to you, was production, in your opinion, the
23 most accurate tool to utilize in setting the
24 boundaries?

25 A. Yes, sir, I think it is.

1 Q. So that's how the overall boundary was set
2 for this production. And then the northern boundary
3 is just the lease line with Yates lease?

4 A. Right.

5 Q. Let's move to Exhibit No. 12. Identify and
6 review that.

7 A. Now, this is essentially a composite map
8 that pools all the previous information together. It
9 shows how we --

10 MR. STOVALL: Let me interrupt you just a
11 second. I think that's 13. Twelve is your production
12 map?

13 MR. CARR: I'm sorry, that's correct, this
14 is 13.

15 THE WITNESS: And it just pulls all the
16 information together. It shows the production of the
17 specific wells. It outlines the permeability limits
18 as determined by the production response. It shows
19 the Queen-Grayburg area that we plan to flood, the
20 Seven Rivers area that we plan to flood, and the
21 Queen-Grayburg area that has already experienced
22 flood.

23 Q. (BY MR. CARR) In your opinion, can the
24 portions of the pool which are included in the
25 proposed waterflood be efficiently and effectively

1 operated under the proposed unit plan of development?

2 A. I believe so.

3 Q. You believe these formations can be
4 effectively developed with the proposed cooperative
5 waterflood?

6 A. Yes.

7 Q. And these, in fact, are the same formations
8 that were involved in the Meridian or Southland flood
9 off to the east?

10 A. In the Queen-Grayburg, yes.

11 Q. Were Exhibits 7 through 13 prepared by you?

12 A. Yes, they were.

13 MR. CARR: At this time, Mr. Stogner, we
14 would move the admission of Hanson Exhibits 7 through
15 13.

16 EXAMINER STOGNER: Exhibits 7 through 13
17 will be admitted into evidence.

18 MR. CARR: That concludes my direct
19 examination of Mr. Fitzsimmons.

20 EXAMINATION

21 BY EXAMINER STOGNER:

22 Q. Mr. Fitzsimmons, when I look at your B-B'
23 prime cross-section down in the third Grayburg sand as
24 you're designating, I show a color variation. What
25 are you trying to indicate at this point?

1 A. This color variation, I'm using green to
2 represent oil production. I'm using blue to represent
3 water. If you refer to the structure map, you'll see
4 that the right portion of the cross-section was in a
5 downdip location, and we have never established
6 economic production out of those zones.

7 Q. Well, are you saying that's watered down or
8 --

9 A. I'm just saying that there's probably an
10 oil-water contact between the two wells, and that's
11 what the transition represents.

12 Q. But you're not trying to pinpoint where
13 that oil-water contact is?

14 A. No. I can just only approximate it.

15 Q. Is it your understanding the waterfloods or
16 the wells which will be utilized, are they going to be
17 specifically perforated to allow injection into these
18 three small intervals that you're talking about, or do
19 you visualize an overall open hole, multiple
20 perforation that extends beyond the little orange and
21 the green markings on your cross-section?

22 A. Initially, it's our intention to be very
23 specific on where we perforate because we want to have
24 control over the response so we can properly assess
25 the success of the flood.

1 Q. With that, let's look at the matrix between
2 the third Penrose sand and the third Grayburg sand.
3 What do I find in there?

4 A. You're referring to lithologies?

5 Q. Yes, please.

6 A. It's primarily carbonates with some sand
7 stringer, too, out. We think that there's adequate
8 separation between the two zones that we won't have
9 any communication. And our experience in producing
10 the field, we have had additional perforations
11 throughout those zones. And we found that as we add
12 zones, we didn't have significant increase in
13 production, and we feel that there's just no
14 communication between the two zones.

15 Q. Do I actually see a sand lens or a
16 different porosity in your three proposal intervals,
17 or what kind of a -- in your opinion, what kind of a
18 permeability factor do I have between those what I
19 assume to be porosity zones?

20 A. Well, that is very difficult for me to
21 determine, not having adequate logs and only being
22 dependent on production, and, in many cases, with
23 multiple zones being perforated through time, I have
24 no way of backing out the actual permeabilities.

25 Q. Let's refer back to those logs that you

1 were discussing. What type of whole logs are you
2 referring to? What do we see?

3 A. Generally, they were old neutron logs.

4 Q. Ran back in what era?

5 A. That is a late '50's, early '60's field.

6 Q. And that's when these logs were performed?

7 A. Um-hm, except for the Ute Federal No. 1 and
8 the Pueblo which were recent logs, but the Ute was
9 essentially wet, and the Pueblo -- or the Ute, we
10 never established production, and the Pueblo has been
11 a very poor producer. So I don't think that they will
12 represent for any of the zones that we plan to flood.

13 Q. Where did you obtain records or copies of
14 these old logs?

15 A. Hanson Operating established -- drilled the
16 initial wells. So they're in our well files, and the
17 other wells I picked up at the Permian Association and
18 researching in the OCD in Artesia.

19 Q. Have you been in communication or contact
20 with our geologist in the Artesia District Office, Mr.
21 Mark Ashley?

22 A. No, I haven't.

23 EXAMINER STOGNER: I have no other
24 questions of this witness at this time, Mr. Carr.

25 MR. STOVALL: I do have one, Mr. Examiner.

EXAMINATION

BY MR. STOVALL:

Q. You indicated, as far as geologically speaking, the Seven Rivers and the Queen Grayburg are really separate, in a separate reservoir from the --

A. They're a separate formation. Actually, each formation has a series of separate reservoirs within it, too.

Q. Right. This may be getting into the engineer's area, but is there some efficiency to be gained also in addition to the fact that they happen to be in the same pool under OCD nomenclatures, is there efficiency to be gained by operating this as a single unit?

A. I think Ray is going to answer those questions because he's in charge of -- oversees the operations and how they will develop.

Q. When you did the -- figured the unit participation, I assume that each area got credit for what it had in it?

A. Yes, it did. Participation was determined by the Williamson report and accepted by all participants.

MR. STOVALL: That's all I have.

EXAMINER STOGNER: I have no other

1 questions of Mr. Fitzsimmons.

2 Mr. Carr?

3 RAY WILLIS,

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

6 EXAMINATION

7 BY MR. CARR:

8 Q. Would you state your name for the record,
9 please.

10 A. Ray Willis.

11 Q. By whom are you employed?

12 A. Hanson Operating Company.

13 Q. In what capacity?

14 A. Vice-president.

15 Q. What are your responsibilities as
16 Vice-president of Hanson?

17 A. I'm responsible for the supervision
18 involving the engineering work and the overall
19 operation of the company.

20 Q. Do you also in that position -- are you in
21 charge of retaining and working with outside
22 consulting services?

23 A. Yes, I do.

24 Q. Have you previously testified before this
25 Division?

1 A. I have.

2 Q. How long have you been employed by Hanson?

3 A. Thirty-seven years.

4 Q. Are you a member of any professional
5 associations?

6 A. I'm an associate member of the American
7 Association of Petroleum Geologists, and I'm a member
8 of the Society of Petroleum Engineers.

9 Q. Are you familiar with the application filed
10 in this case?

11 A. Yes, I am.

12 Q. In each of the cases?

13 A. Yes, I am.

14 Q. Can you explain how it was that you and
15 Yates decided to have a joint engineering study made
16 of this area?

17 A. This was an area that had been jointly
18 operated by Hanson and Yates from day one. We have
19 reached a time when production is very marginal. We
20 have been in contact with Yates over the last five
21 years regarding a flood. The last three years has
22 been intensive. We got together with Theresa Sloan,
23 David Benoit, decided to hire an outside consultant
24 firm. Our in-house engineering departments on both
25 companies decided it was a very good prospect, and we

1 should go forward with it.

2 Q. Was the study and the work done developing
3 this prospect done at your request and under your
4 supervision?

5 A. Yes, it was.

6 Q. Were you responsible for providing raw data
7 and information to Williamson to support the study?

8 A. I did.

9 MR. CARR: Are the witness's qualifications
10 acceptable?

11 EXAMINER STOGNER: They are.

12 Q. (BY MR. CARR) Are you familiar with the
13 New Mexico Statutory Unitization Act?

14 A. Yes, somewhat.

15 Q. Have you prepared certain exhibits for
16 presentation in this case?

17 A. I have.

18 Q. Let's just identify what has been marked as
19 Hanson Operating Company Exhibit No. 14.

20 A. This is the feasibility study for a
21 proposed waterflood in the Shugart Field, Eddy County,
22 New Mexico.

23 Q. Is this the study that Williamson prepared
24 for you and Yates?

25 A. That is correct.

1 Q. Let's move to Exhibit 15, and I'd ask you
2 to identify this and review it for the examiner.

3 A. Exhibit 15 is a well status map. It shows
4 the outline of the unit that we are proposing. It
5 shows our waterflood station, the producing wells, and
6 it shows proposed water injection wells, which will be
7 the No. 17 Ute Federal, Pueblo Federal, and three
8 additional wells to be drilled.

9 Q. What does Hanson estimate to be the capital
10 cost of these additional facilities that are going to
11 be required for this project?

12 A. We anticipate \$1-1/2 million.

13 Q. What do you estimate the total project cost
14 actually to be?

15 A. \$2-1/2 million.

16 Q. If this is a successful flood, how much
17 additional oil production do you expect to obtain from
18 the project?

19 A. We can expect -- we expect to recover one
20 and a half million barrels of oil.

21 Q. Do you have a unit performance curve that
22 is included within the Williamson study?

23 A. Yes, it is. There is a performance curve
24 just in front of the tab listed as Tables. It is a
25 performance curve prepared by Williamson &

1 Associates. It indicates within one and a half to two
2 years, we would be producing approximately 500 barrels
3 of oil per day and then tailing off to economic limits
4 over about 14 years.

5 Q. This graph would also include the Yates
6 tract production forecast, would it not?

7 A. That is correct.

8 Q. About how much of the production that is
9 depicted on that graph would be attributed to the
10 Yates lease?

11 A. 29 percent.

12 Q. What would be the value of the estimated
13 total value of the additional production that you hope
14 to obtain from this waterflood?

15 A. We hope that it will have a value of \$30
16 million.

17 Q. And in setting this figure, what price for
18 the oil did you utilize?

19 A. We used \$20 per barrel for the life of the
20 project.

21 Q. Did you factor anything in for gas
22 production from the unit?

23 A. We don't think gas will be a significant
24 factor in these calculations. We will be producing so
25 much water, the oil is coming back. Most of the gas

1 which is produced will be used on lease for lease
2 purposes and treating oil, etc.

3 Q. If Hanson and the other interest owners in
4 the unit area are required to advance costs for a
5 party who has not voluntarily committed to this
6 project, do you believe it is appropriate for the 200
7 percent risk penalty set forth in the unit documents
8 to apply to that interest?

9 A. Yes, I do.

10 Q. If the current unsigned tracts, and here
11 I'm talking primarily about the Hilo interest, if it
12 isn't voluntarily contributed to the unit plan, what
13 impact would it have on the project?

14 A. It would have a big impact on the project
15 if it was removed. We think that is a good recovery
16 well on -- two of the wells would be good for
17 recovery. And if not unitized, we think the unit
18 would fail.

19 Q. Is unitized management necessary, in your
20 opinion, to effectively recover the oil in the unit
21 area?

22 A. Yes, it is.

23 Q. And do you believe that the waterflood
24 which you're proposing based on your engineering and
25 geological studies of this area, would the waterflood

1 be a feasible project?

2 A. Yes.

3 Q. What generally is the basis for the
4 participation formula in the Unit Agreement?

5 A. We based it on primary production. The
6 allocations went back to each individual well and each
7 individual well's percentage of production as to the
8 whole unit.

9 Q. Could you review for the examiner what has
10 been marked Hanson Exhibit No. 16?

11 A. No. 16 is a participation formula that we
12 have prepared that lists the wells operated by
13 Hanson. There are some wells at the time this was
14 prepared operated by Siete Oil & Gas Corp. that is now
15 operated by Hanson. We had the Yates Petroleum wells
16 in the overall picture. This came from the Williamson
17 report.

18 We remove the Yates wells from it, run the
19 factors up to 100 percent, and then the next table
20 down there has the conversion of the tract group as to
21 participation factors as is today.

22 Q. Does this allocation formula, in your
23 opinion, allocate production to the separately owned
24 tracts in the proposed unit on a fair, reasonable, and
25 equitable basis?

1 A. Yes, it does.

2 Q. Does Hanson seek authority from the
3 Division to commit additional wells to injection by
4 administrative procedures?

5 A. Yes, we do.

6 Q. Avoiding the necessity of further hearing?

7 A. Yes.

8 Q. In fact, you've already discussed an
9 additional well with Yates, and that is in the at
10 least discussion stage; is that not correct?

11 A. That's correct.

12 Q. Whereabouts would that well be located?

13 A. Somewhere in the northeast of Section 25.
14 We have not come to a firm conclusion as to the exact
15 location of it, but it would be somewhere between
16 wells No. 3 and 4, Ginsberg, on Hanson's acreage, and
17 wells No. 3 and 8 on Yates Creek AL acreage.

18 Q. And if you start seeing a response to your
19 injection, then that would be a possible additional
20 injection well?

21 A. That is a possible addition. We would
22 prefer to wait until such time as we see results from
23 the injection on our part and Yates part to conclude
24 those negotiations.

25 Q. In your opinion, will granting this

1 application for statutory unitization be in the best
2 interest of conservation, the prevention of waste, and
3 the protection of correlative rights?

4 A. Yes, it will.

5 Q. Could you now refer to what has been marked
6 as Hanson Exhibit No. 17 and identify that, please.

7 A. That is a completed Form C-108 with
8 attachments.

9 Q. And this is a new project, not an expansion
10 of an existing project; correct?

11 A. That is correct.

12 Q. Could you refer to pages 13 through 18 of
13 this exhibit and just identify for the examiner what
14 those are.

15 A. Those are proposed injection wells, which
16 13 is Pueblo Federal, 14 is Ute Federal. These two
17 wells are in existence. They are newly drilled
18 wells. The Ginsberg Federal 17 is to be a new drilled
19 well. Page 16 is Ginsberg Federal No. 18. And page
20 17 is Ginsberg Federal No. 19.

21 Q. What is shown on page --

22 A. Page 18 is the Keinath Federal proposed
23 injection well.

24 Q. On each of these plats, have you drawn a
25 circle with a half-mile radius to show the area of

1 review for each of the proposed injection wells?

2 A. That is correct.

3 Q. What is shown on pages 19 through 25 of
4 this exhibit?

5 A. That's tabular data on all the wells within
6 the area of review which penetrate the injection zone.

7 Q. And this sets forth the information
8 required by OCD Form C-108?

9 A. That is correct.

10 Q. Would you identify for the examiner what is
11 contained on pages 26 through 29 of this exhibit?

12 A. That is a wellbore sketch showing the size,
13 location of all plugs on plugged wells, showing the
14 casing strings that have been left in the well.

15 Q. Do you have a separate schematic for each
16 plugged and abandoned well within any of the areas of
17 review for any injection well?

18 A. That is correct.

19 Q. In your opinion, are the wells
20 satisfactorily plugged to assure that these wellbores
21 do not become a vehicle for the migration of injected
22 water?

23 A. Yes, it is.

24 Q. On pages 6 through 11 of this exhibit
25 there's some schematic drawings. Could you identify

1 those, please.

2 A. Six through 11 is proposed injection wells,
3 showing the present and proposed completions.

4 Q. That's for each injection well?

5 A. For each injection well, that's correct.

6 Q. And the injection intervals have been
7 defined previously by Mr. Fitzsimmons; is that
8 correct?

9 A. That's correct.

10 Q. What is the source of the water you propose
11 to inject in this project?

12 A. It will be water from the Penrose-Middle
13 Grayburg-Seven Rivers from water supply wells
14 identified on page 3, paragraph 4, of Exhibit 17.

15 Q. So basically you're going to be reinjecting
16 water into the producing formations?

17 A. That is correct, and we will use produced
18 water as the wells produce the water back, also.

19 Q. Do you intend to use fresh water as make-up
20 water?

21 A. No.

22 Q. What volumes are you proposing to inject?

23 A. We propose on an initial injection rate of
24 600 barrels of water per day for the Middle Grayburg,
25 Penrose injectors. For the Seven Rivers, we propose

1 100 to 250 barrels of water per day per well.

2 Q. So we've got different volumes per
3 interval, and these are figures per injection well?

4 A. That's correct.

5 Q. What would be the maximum daily rate you
6 would anticipate?

7 A. The Penrose-Middle Grayburg we anticipate
8 1000 barrels of water per day maximum. For the Seven
9 Rivers, 300 barrels per day.

10 Q. These would be per well figures again?

11 A. That's correct.

12 Q. Is this going to be a closed system?

13 A. It will be a closed system.

14 Q. Do you anticipate injection by gravity or
15 under pressure?

16 A. It will be under pressure.

17 Q. What is the maximum injection pressure you
18 propose to utilize?

19 A. Our maximum of 2,000 pounds per square inch
20 per each zone.

21 Q. Would this exceed a pressure limitation of
22 .2 pounds per foot of depth to the top?

23 A. Yes, it would.

24 Q. Would you recommend that higher pressures
25 be established after Division witness separate tests

1 on each of the zones in which you plan to increase
2 pressure over that .2 pound pressure limit?

3 A. Yes, I would.

4 Q. Could you identify pages 30 through 45 of
5 Exhibit 17?

6 A. Those are water analysis on the injection
7 fluid that we have taken from various wells in the
8 area.

9 Q. Are there fresh water zones in this area?

10 A. Yes, there are fresh water zones in the
11 area. However, it's only occasional water that will
12 be found in the Red Beds at about -- at less than 275
13 feet based on data from the State Engineer's Office.

14 Q. Are there any fresh water wells within one
15 mile of any of these proposed injection wells?

16 A. Yes, there is. There is one well situated
17 in the southeast quarter, northwest quarter, southeast
18 quarter of Section 26, Township 18 South, Range 30
19 East, which is known as the Snyder Ranch well shown on
20 the plat on page 46.

21 Q. And from what interval is it producing?

22 A. It's producing from the Red Beds at less
23 than 275 feet.

24 Q. On page 47 of Exhibit No. 17, is there a
25 water analysis of the water from this Snyder Ranch

1 well?

2 A. Yes, there is.

3 Q. Are the logs of existing wells in the unit
4 area which are going to be converted to injection on
5 file with this Division?

6 A. Yes.

7 Q. And, Mr. Willis, have you examined the
8 available engineering and geologic data on the area
9 involved in this application?

10 A. Yes, I have.

11 Q. As a result of that examination, have you
12 found any evidence of open faults or other hydrologic
13 connections between the injection interval and any
14 underground source of drinking water?

15 A. I have found none.

16 Q. In your opinion, will granting of this
17 application be in the best interest of conservation,
18 the prevention of waste, the protection of correlative
19 rights?

20 A. Yes, it would.

21 Q. What is Hanson's anticipated date for the
22 commencement of injection?

23 A. Sixty to 90 days from date of approval by
24 the Commission.

25 Q. If this application is approved, you would

1 expect to increase the amount of crude oil ultimately
2 recovered from the reservoir, would you not?

3 A. Yes, sir.

4 Q. Has this project area been depleted to such
5 an extent that it is now appropriate to apply the
6 enhanced recovery techniques that you are proposing
7 here today?

8 A. Yes, it is. These wells are down to less
9 than 2-1/2 barrels per day per well and less than 1
10 Mcf of gas in daily production for the average of the
11 wells.

12 Q. Based on your experience in the area, is
13 the proposed project both economically and technically
14 feasible?

15 A. Yes, it is.

16 Q. This application is not being prematurely
17 filed, is it?

18 A. We're late in the life of the reservoir.

19 Q. Do you believe that if you were to
20 effectively waterflood this unit, that it is
21 appropriate that this program be implemented as soon
22 as possible?

23 A. Yes, I do.

24 Q. Were Exhibits 14 through 17 either prepared
25 by you or compiled under your direction?

1 A. Yes, they were.

2 MR. CARR: At this time, Mr. Stogner, we
3 would move the admission of Hanson Operating Company's
4 Exhibits 14 through 17.

5 EXAMINER STOGNER: Exhibits 14 through 17
6 will be admitted into evidence.

7 MR. CARR: That concludes my direct
8 examination of Mr. Willis.

9 EXAMINATION

10 BY EXAMINER STOGNER:

11 Q. Mr. Willis, in looking at your C-108,
12 Exhibit 17, your list of all wells within a half-mile
13 radius, I assume that's what this is; correct?

14 A. Yes.

15 Q. What is the topmost perforation that you
16 anticipate to be injecting here?

17 A. The topmost perforation?

18 Q. In any of the wells or on average?

19 A. It would be -- let me look through here and
20 get it. 2469.

21 Q. Do you anticipate it to vary much between
22 injection wells?

23 A. Not too much. 2469 to 2487, for the most
24 part on the Seven Rivers. Penrose will be in the 3100
25 range. Middle Grayburg 3390, 3460.

1 Q. In looking through this listing of wells, I
2 see some that really blatantly stand out and some that
3 are somewhat questionable as far as the top of cements
4 on the production casing. One in particular on page
5 25, the Creek AL No. 11, I show top of cement at
6 3252. Is it my understanding that injection interval
7 is not cemented throughout that particular well?

8 A. Creek AL 11 is in an area that we do not
9 believe the water from the Seven Rivers will encroach
10 upon. However, we would be most happy to work with
11 the Oil Commission to ascertain that it does not.

12 Q. And if there are some others in there
13 subsequent to the hearing today that this Division
14 feels should be checked out in the method in which you
15 suggested, working with our Artesia District Office,
16 to either substantiate that the adequate cement is
17 across there or perhaps the injection water is not a
18 danger?

19 A. Yes, we definitely will.

20 EXAMINATION

21 BY MR. STOVALL:

22 Q. You heard the question I asked your
23 geologist, I've forgotten his name, regarding the
24 operation of this as a single unit and the efficiency
25 of it?

1 A. It would be much more efficient to operate
2 as a single unit. We'll have a single plant for
3 operations, and it will be much more efficient handled
4 in that manner.

5 Q. And you are requesting certification as a
6 secondary recovery unit for EOR tax credit purposes
7 under state law; is that correct?

8 A. That is correct.

9 Q. Are you familiar with that process?

10 A. Not 100 percent. I have went through some
11 of it.

12 Q. I think the critical part, the part that
13 you need to be concerned with, this is a new project,
14 so you won't have a problem with that part of the
15 qualification. As a secondary project, you have a
16 five-year period from the date that we certify it as
17 an EOR project to obtain a positive production
18 response.

19 Your testimony was, you anticipate getting
20 this project up and running and actually start
21 injection within 90 days of approval?

22 A. Immediately.

23 Q. And looking at, what is it, the Williamson
24 study, it looks like you anticipate getting a response
25 within, oh, two to three years at the most; is that

1 correct?

2 A. We think that would be the outside that we
3 will get good response. I think, personally, we will
4 see it much quicker than that.

5 Q. Sometimes in the case of waterfloods, we'll
6 not issue the certification until the operator is
7 ready to commence injection. It sounds to me in this
8 case -- the reason for that is to simply make sure
9 you've got five years of real injection to get the
10 response. It sounds to me in this case like we can go
11 ahead and issue the certificate about the time we
12 issue the order, and that that time is not going to be
13 a critical factor in the operation of this flood; is
14 that correct?

15 A. No, that will not be a critical factor. We
16 are ready to proceed. We are in the waiting time.
17 The applications are filed for the drilling of
18 additional wells. We're ready to go.

19 Q. Do you also understand that in getting the
20 positive production response, you not only have to get
21 the response, but you have to apply to us for a
22 certification of that response within the five-year
23 time period?

24 A. Yes.

25 Q. And I am assuming you're considering the

1 entire unit area as the project area for the purpose
2 of this waterflood?

3 A. Yes, we are.

4 Q. So that should be the area that's
5 certified?

6 A. That's correct.

7 Q. I advise you that at the time that you get
8 a positive production response, that we will look at
9 the area that is actually responding, and that that
10 area may be reduced for purposes of a tax credit.
11 Even though maybe you will be allowed to continue to
12 operate in that area, our certification of the entire
13 area as a project does not assure that that will be
14 certified as the area entitled to the tax credit based
15 upon the filing of your production response?

16 A. I understand.

17 Q. Did that make sense?

18 A. Yes, it did.

19 MR. STOVALL: Oh, good. Nothing further.

20 FURTHER EXAMINATION

21 BY MR. STOGNER:

22 Q. In referring to your Exhibit No. 15, that's
23 the plat showing the injection wells, there are three
24 conversions, if I read your application right. That's
25 the Ute Federal 1, Pueblo Federal 1, and the No. 17

1 Ginsberg; is that correct?

2 A. Those are existing wells, yes.

3 Q. Again, are those fairly new drills?

4 A. The Ute and Pueblo were drilled within the
5 last three years. The No. 17 I would guess six years
6 old, off the top of my head. We will run integrity
7 tests on all of those, ascertain that we are in
8 complete compliance with all the OCD regulations,
9 federal regulations, prior to any injection of water.

10 Q. But you do have some older wells out there
11 but not plans for conversion; is that correct?

12 A. That's correct.

13 Q. So with the oldest one being six years old,
14 the steel is probably in better shape out there than
15 most wells?

16 A. We think it will be very efficient.

17 Q. And the tubing is to be 2-3/8's plastic
18 coated?

19 A. Yes.

20 Q. No fresh water, is that correct, no fresh
21 water to be utilized?

22 A. We do not intend to use fresh water, that
23 is correct.

24 Q. What will the source water again be?

25 A. The source water will come from two or

1 three existing wells.

2 Q. When you say existing wells, what
3 production are they from?

4 A. Seven Rivers-Queen-Grayburg wells that have
5 watered out, making an extreme amount of water, on
6 page 3, paragraph 4 of 17. The Lanning Federal No. 4,
7 shut in, and the Lanning Federal No. 3 are shut in.

8 Q. Three and 4, Lanning?

9 A. That is correct.

10 Q. And that's in Section 25, aren't they?

11 A. Correct.

12 Q. Both -- it appears to be -- and they show
13 up on your Exhibit No. 15. I show them to be in the
14 east half of the southeast quarter; is that correct?

15 A. That is correct.

16 Q. Those are your source water wells?

17 A. That's where we're at at this stage. We
18 have another well that has good possibilities. In the
19 event those two do not produce enough water, our No.
20 16 Ginsberg, which is situated in the southwest of the
21 southeast of 25, that well flowed tremendous amounts
22 of brown water when we drilled it, and we could use
23 it, if it's necessary. However, in initial stage, we
24 prefer to use that as a recovery well.

25 Q. One last item on your calculations used to

1 show your top of cement on the wells within a half-
2 mile radius, is that formula that you utilized
3 included in the packet of exhibits today?

4 A. The --

5 Q. In your completion information, you show
6 the top of cement behind the production strings in
7 several instances, and that was performed by
8 calculation. Were those your calculations?

9 A. Yes, they were our calculations.

10 Q. Is that formula that you utilized in
11 calculating those tops included in here, in the packet
12 today?

13 A. I don't think there's a formula included.

14 MR. CARR: Mr. Stogner, I think we could
15 supply it. I've looked at the exhibit as well. I
16 don't believe the formula is set out there.

17 EXAMINER STOGNER: That's what I'm getting
18 it. If it's not included, if you could provide me
19 that calculation method, I would appreciate it.

20 I don't have anything further at this
21 time.

22 Any other questions of Mr. Willis?

23 MR. CARR: No further questions.

24 EXAMINER STOGNER: He may be excused.

25 Any other questions of Mr. Hammonds, Mr.

1 Fitzsimmons?

2 MR. CARR: No further questions.

3 EXAMINER STOGNER: Nothing here.

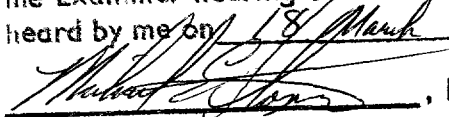
4 Do you have anything further, Mr. Carr?

5 MR. CARR: Nothing further, Mr. Examiner.

6 EXAMINER STOGNER: Does anybody else have
7 anything further in consolidated cases Nos. 10685 and
8 10686? If not, then these cases will be taken under
9 advisement.

10 Let's take a 20 minute recess.
11
12
13
14
15

16 I do hereby certify that the foregoing is
17 a complete record of the proceedings in
the Examiner hearing of Case Nos. 10685 & 10686
18 heard by me on 18 March 1993.

19  , Examiner
Oil Conservation Division
20
21
22
23
24
25

1 CERTIFICATE OF REPORTER

2
3 STATE OF NEW MEXICO)

4) ss.

5 COUNTY OF SANTA FE)

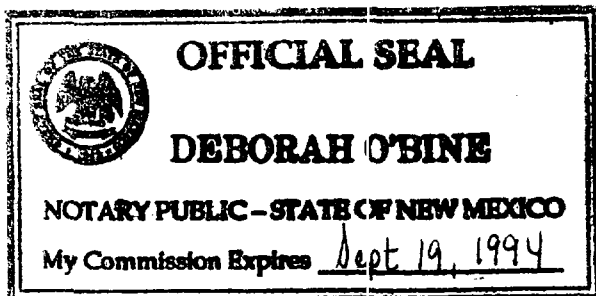
6 I, Deborah O'Bine, Certified Shorthand
7 Reporter and Notary Public, HEREBY CERTIFY that I
8 caused my notes to be transcribed under my personal
9 supervision, and that the foregoing transcript is a
10 true and accurate record of the proceedings of said
11 hearing.

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

16 WITNESS MY HAND AND SEAL, March 30, 1993.

17
18 

19 DEBORAH O'BINE
20 CCR No. 63



CUMBRE COURT REPORTING
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