

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 McQUADRANGLE, L.C.,)
FOR STATUTORY UNITIZATION OF THE SOUTH)
RED LAKE II UNIT AREA, EDDY COUNTY,)
NEW MEXICO)

CASE NO. 13,489

ORIGINAL

REPORTER'S TRANSCRIPT OF PROCEEDINGS

EXAMINER HEARING

RECEIVED

BEFORE: DAVID R. CATANACH, Hearing Examiner

JUN 30 2005

June 16th, 2005
Santa Fe, New Mexico

Oil Conservation Division
1220 S. St. Francis Drive
Santa Fe, NM 87505

This matter came on for hearing before the New Mexico Oil Conservation Division, DAVID R. CATANACH, Hearing Examiner, on Thursday, June 16th, 2005, at the New Mexico Energy, Minerals and Natural Resources Department, 1220 South Saint Francis Drive, Room 102, Santa Fe, New Mexico, Steven T. Brenner, Certified Court Reporter No. 7 for the State of New Mexico.

* * *

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June 16th, 2005
Examiner Hearing
CASE NO. 13,489

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A P P E A R A N C E S

FOR THE APPLICANT:

HOLLAND & HART, L.L.P., and CAMPBELL & CARR
 110 N. Guadalupe, Suite 1
 P.O. Box 2208
 Santa Fe, New Mexico 87504-2208
 By: WILLIAM F. CARR

* * *

1 WHEREUPON, the following proceedings were had at
2 8:18 a.m.:

3 EXAMINER CATANACH: At this time I'll call Case
4 13,489, the Application of McQuadrangle, L.C., for
5 statutory unitization of the South Red Lake II Unit area,
6 Eddy County, New Mexico.

7 Call for appearances.

8 MR. CARR: May it please the Examiner, my name is
9 William F. Carr with the Santa Fe office of Holland and
10 Hart, L.L.P.

11 We represent McQuadrangle, L.C., in this matter,
12 and I have two witnesses.

13 EXAMINER CATANACH: Are there any additional
14 appearances in this case?

15 May I get the two witnesses to stand at this time
16 and be sworn in?

17 (Thereupon, the witnesses were sworn.)

18 MR. CARR: May it please the Examiner, in this
19 case McQuadrangle, L.C., seeks statutory unitization of the
20 South Red Lake II Unit area. This area has been developed
21 and produced pursuant to a unit agreement.

22 The unit was originally approved in 1965 by Order
23 Number R-2875. At that time it was called the South Red
24 Lake-Grayburg Unit. The unit boundary before you today is
25 very close to the original boundary, then a couple of very

1 minor adjustments.

2 Waterflood operations were also approved in 1965,
3 and accordingly the project does not now qualify for
4 consideration for the enhanced oil recovery tax rate.

5 By letter dated September 18, 1998, the BLM
6 terminated the unit. The property was operated by a prior
7 operator. They had ceased production for in excess of 60
8 days, and certain leases were canceled at that time.

9 After meeting with the OCD, McQuadrangle was
10 permitted to continue operations on a lease basis, and
11 since that time waterflood operations and injection has
12 continued on a lease basis.

13 But McQuadrangle, following a lawsuit, became the
14 successor operator. They have put all the interests back
15 together.

16 All property interests have now been resolved,
17 and today we're only seeking statutory unitization to put
18 the acreage together, close all windows in the unit, have
19 all interests in, so that for the remainder of the life of
20 this enhanced recovery project we can conduct those
21 operations in the most efficient manner.

22 And that's all we're here for today, it's just to
23 put those lands back together.

24 And so at this time I would call our land
25 witness, Mr. Jim Pierce.

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JIM L. PIERCE,

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

DIRECT EXAMINATION

BY MR. CARR:

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

A. Jim Pierce.

Q. Mr. Pierce, where do you reside?

A. Roswell, New Mexico.

Q. By whom are you employed?

A. I'm self-employed.

Q. What is your relationship with McQuadrangle, L.C.?

A. I'm a contract landman.

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

A. Yes, I have.

Q. Would you summarize for the Examiner your educational background?

A. I have a bachelor of arts from a certified university in Texas.

Q. Would you review your work experience for the Examiner?

A. I've been an independent landman since 1980; I started in 1977, about 28 years.

1 Q. Have you also been active in the New Mexico
2 Landman's Association?

3 A. Yes, I was president of the Landman Association,
4 secretary, treasurer, went through the whole gamut.

5 Q. Have you been involved with the American
6 Association of Petroleum Landmen?

7 A. Yes, for about 28 years.

8 Q. Are you a registered petroleum landman?

9 A. Yes, I am.

10 Q. Are you the land person that has been responsible
11 for putting the interests back together in the South Red
12 Lake Unit area in preparation for today's hearing?

13 A. Yes, I am.

14 Q. Are you familiar with the Application filed in
15 this case?

16 A. Yes, sir.

17 Q. And are you familiar with the status of the lands
18 involved in the proposed South Red Lake II Unit area?

19 A. I am.

20 MR. CARR: We tender Mr. Pierce as an expert in
21 petroleum land matters.

22 EXAMINER CATANACH: Mr. Pierce is so qualified.

23 Q. (By Mr. Carr) Mr. Pierce, would you briefly
24 summarize for the Examiner what it is that McQuadrangle
25 seeks with this Application?

1 A. Statutory unitization.

2 Q. And how many acres are involved in the unit area?

3 A. 961.61, I believe.

4 Q. And you are unitizing for the purpose of
5 continuing waterflood operations; is that right?

6 A. Yes, sir.

7 Q. Could you provide Mr. Catanach with a brief
8 history of this unit?

9 A. As you mentioned earlier, the unit was originally
10 formed as the South Red Lake-Grayburg in 1965. In 1998 the
11 BLM terminated the unit. A company by the name of Mason
12 Phillips of Florida was the operator at that point, and
13 they were not operating the unit properly. Production had
14 ceased, one state lease had terminated.

15 After the termination of the unit, Mr. Delbert
16 McDougal, who had a production permit underneath this old
17 unit and wasn't getting paid, decided that he needed to go
18 in and resurrect -- save the production, save the leases,
19 so forth, acquired it through a legal process, Fifth
20 Judicial Court, Eddy County, New Mexico, and has been
21 working to get the remaining leases and wells unitized.

22 Q. And is Mr. McDougal the president of
23 McQuadrangle?

24 A. Yes, sir, that or general manager. It's an L.C.

25 Q. And today we're seeking just to complete the

1 effort and put all interests back together so we can
2 continue operations as a unitized area for enhanced
3 recovery?

4 A. Yes, sir.

5 Q. Could you identify what has been marked as
6 McQuadrangle Exhibit Number 1?

7 A. I believe that to be the unit boundary map.

8 Q. Yes, sir.

9 A. Yes, sir.

10 Q. Shaded in yellow is the current proposed unit
11 boundary?

12 A. Yes, sir.

13 Q. And this is just offered for the purpose of
14 general orientation?

15 A. Correct.

16 Q. What is Exhibit Number 2?

17 A. It is also a unit boundary map, it's also the
18 exhibit to -- Exhibit A to the unit agreement.

19 Q. What is the character of the land in the unit
20 area? State, federal or fee?

21 A. It's all state and federal.

22 Q. And do you know the percentage breakdown between
23 federal and state lands?

24 A. Yes, sir, as evidenced in the unit agreement it's
25 almost a 50-50 percent. Let me see here. State tracts

1 equal 50.06 percent of the unit area, federal tracts equal
2 49.94 percent.

3 Q. Is McQuadrangle Exhibit Number 3 a copy of the
4 unit agreement for the subject unit?

5 A. Yes, sir.

6 Q. Is it on the State of New Mexico-approved form
7 for unitization for waterflood purposes?

8 A. Yes, it is.

9 Q. It sets out the basis for the participation of
10 the interest owners in the unit area?

11 A. Yes, sir.

12 Q. Does it provide for the filing of periodic plans
13 of development?

14 A. Yes, sir.

15 Q. When plans are filed with the BLM and the State
16 Land Office, will they also be filed with the New Mexico
17 Oil Conservation Division?

18 A. Yes, sir.

19 Q. Have there been any changes to the text of the
20 unit agreement itself, since you commenced your efforts to
21 ratify?

22 A. No.

23 Q. Acreage has been added since the original unit
24 agreement was filled out and proposed?

25 A. Yes, an additional 80 acres, a state lease that

1 was acquired, as I mentioned earlier, that had terminated,
2 was bought by a company out of Houston, Texas, Southwestern
3 Energy Production Company. An assignment has been acquired
4 by --

5 Q. And so that acreage is back in?

6 A. Yes, sir.

7 Q. Have the ratifications that are contained in your
8 exhibit materials -- were those obtained after this
9 additional tract was included in the unit area?

10 A. No, they were not.

11 Q. So do we have to go back now and re-ratify the
12 unit to adjust for this acreage?

13 A. I believe so.

14 Q. Okay. Does the unit agreement that has been
15 marked as McQuadrangle Exhibit Number 3 contain a
16 typographical error?

17 A. Yes, sir.

18 Q. And would you just point that out for the
19 Examiner?

20 A. I believe it refers to the base of the San Andres
21 formation, but it should read the base of the Grayburg
22 formation.

23 Q. And this is on page 2 of the unit agreement where
24 it talks about unitized formations?

25 A. I believe so.

1 Q. And in that portion of the unit agreement it
2 talks about the lower limit of the unitized area being the
3 base of the San Andres formation. That should be the
4 Grayburg; is that right?

5 A. Yes, sir.

6 Q. All the footages set out in this description are
7 correct?

8 A. The footage is correct.

9 Q. And the log from which they're drawn is correctly
10 identified?

11 A. Yes, sir.

12 Q. When the unit agreement and the order are
13 submitted for re-ratification, this will be corrected; is
14 that correct?

15 A. Yes, sir.

16 Q. And that's the only change in the text of the
17 unit agreement?

18 A. Yes, sir.

19 Q. Could you identify what has been marked as
20 McQuadrangle Exhibit Number 4?

21 A. Is that the amended Exhibit "B"?

22 Q. Exhibit Number 4 is the amended Exhibit "B".

23 A. Yes, sir.

24 Q. And what does this show?

25 A. That is the schedule of ownership.

1 Q. If we go to the second page of this schedule and
2 we look at the last entry --

3 A. Yes, sir.

4 Q. -- it shows lessee of record, being Southwestern
5 Energy Production Company. It also reflects them as owning
6 overrides and the working interest --

7 A. Yes, sir.

8 Q. -- do you see that?

9 Is that the interest that has now been acquired
10 by assignment by McQuadrangle?

11 A. Yes, it is.

12 Q. This unit agreement provides for allocation of
13 production and participation in the unit area, based on a
14 straight acreage allocation -- that's Section 13 of the
15 agreement -- is that correct?

16 A. Yes, sir.

17 Q. Why was straight acreage used?

18 A. We tried the suggested formula, and it just
19 didn't seem to work. We --

20 Q. When you talk about that, you're saying the
21 sample formula proposed by the Land Office?

22 A. Yes, sir.

23 Q. Okay.

24 A. Then we attempted to do this on a production
25 basis, but there are some leases that just do not have

1 production. They are -- They have water-injection wells on
2 them, so we couldn't dedicate any production revenues to
3 those leases, so they wouldn't share in the -- So having
4 talked to the BLM and to the New Mexico State Land Office,
5 showing them the engineering report and the production on
6 the unit, it seemed that -- we came up with a straight
7 acreage formula, which seemed to work.

8 Q. And the Land Office is agreeable with that?

9 A. Yes, sir.

10 Q. And the BLM is agreeable with that?

11 A. Yes, sir.

12 Q. What percentage of the working interest owners
13 are in agreement with that?

14 A. A hundred percent.

15 Q. And of the overriding royalty interest owners,
16 what percent are in agreement?

17 A. Better than 75 percent.

18 Q. If, in fact, a straight acreage allocation is
19 used, it will mean that in the future payments are being
20 made based in the same fashion that they have been during
21 this interim period of time following termination of the
22 prior unit and prior to this new unitization --

23 A. Yes, sir.

24 Q. -- effort?

25 Will McQuadrangle call an engineering witness to

1 review the technical portions of the case?

2 A. Pardon me?

3 Q. Will McQuadrangle call an engineering witness?

4 A. They will.

5 Q. Could you identify what has been marked

6 Quadrangle Exhibit Number 5?

7 A. Yes, sir, that's the operating agreement.

8 Q. And would you just simply explain what this is
9 and review the key provisions?

10 A. Yes, sir. Again, this is a model form operating
11 agreement, 1989. It's been executed by all working
12 interest owners in the wells and leases.

13 Q. And it will govern how this unit is supervised
14 and managed between the interest owners committed thereto?

15 A. Yes, sir.

16 Q. Could you generally summarize for Mr. Catanach
17 the efforts that you made to obtain working interest owner
18 and royalty interest owner approval of the proposed unit?

19 A. Yes, sir. Of course letters were sent out to all
20 individuals, every interest owner that we could find,
21 consents and ratifications were sent out to every
22 overriding royalty interest owner, every royalty interest
23 owner, and all working interest owners.

24 Q. You had meetings with the BLM and the Land
25 Office?

1 A. Yes, sir.

2 Q. You followed up by telephone and otherwise with
3 the individual owners?

4 A. Yes, sir.

5 Q. What is McQuadrangle Exhibit Number 6?

6 A. It looks to be the consent and ratifications of
7 unitization.

8 Q. And these are basically consents and
9 ratifications to unitization from entities that hold
10 overriding royalty interest; is that right?

11 A. Record title owners, working interest owners,
12 royalty interest owners and overriding interest owners.

13 Q. How many working interest owners are there in the
14 unit area?

15 A. McQuadrangle actually has several partners, but
16 McQuadrangle and another entity by the name of Cullers
17 family -- that's C-u-l-l-e-r-s -- Cullers Family
18 Investments, I believe is a 33.33-percent working interest
19 owner; McQuadrangle owns the remaining interest.

20 Q. And so there are only two working interest
21 owners?

22 A. Yes, sir.

23 Q. Have both agreed to the proposed unitization?

24 A. Yes, sir.

25 Q. Would you identify what has been marked as

1 McQuadrangle Exhibit Number 7?

2 A. I believe that's a September 28th, 2004, letter
3 from the Bureau of Land Management.

4 Q. Does this letter designate the proposed unit area
5 as an area that can be logically developed pursuant to a
6 unit plan?

7 A. Yes, sir.

8 Q. The original designation of the unit area was
9 obtained approximately two years ago; is that correct?

10 A. Yes, sir.

11 Q. And has been extended by the BLM?

12 A. Yes, it has.

13 Q. And during that period of time you've been
14 negotiating with Southwest Energy and others to wrap up all
15 the land issues?

16 A. Yes, sir.

17 Q. What is Exhibit Number 8?

18 A. A May 17th, 2005, letter from the State of New
19 Mexico Commissioner of Public Lands.

20 Q. And this is their preliminary approval of the
21 unit area?

22 A. It is.

23 Q. When you obtain final approval from the Land
24 Office and the BLM, will 100 percent of the royalty
25 interest be committed to the unit?

1 A. Yes, sir.

2 Q. Would you identify McQuadrangle Exhibit Number 9?

3 A. I believe that's Exhibit "C" of the unit
4 agreement, "Schedule of Tract Participation".

5 Q. And what does this show?

6 A. Again, it's a schedule of tract participation for
7 the proposed unit on a straight acreage basis.

8 Q. And so we've got the percentage of the total unit
9 participation of production that will be allocated to each
10 of the tracts, and that is set out in the first column on
11 this exhibit?

12 A. Yes, sir.

13 Q. What is Exhibit Number 10?

14 A. That is a breakdown of the overriding royalty
15 interest, royalty interest and net revenue interests.

16 Q. And is it broken down by tract?

17 A. Yes, sir.

18 Q. And you can look at Exhibit Number 10, and you
19 can confirm by looking at that and the notice affidavit
20 that all interest owners have been notified of this
21 hearing?

22 A. Yes, sir.

23 Q. So we have 100 percent of the working interest
24 committed, correct?

25 A. Yes.

1 Q. We will have 100 percent of the royalty
2 committed?

3 A. Yes, sir.

4 Q. And once we obtain the re-ratification
5 necessitated by the adding of the Southwest Energy acreage,
6 we will have in excess of 75 percent of the overrides --
7 independently, and the overrides. They will have also
8 committed?

9 A. Correct.

10 Q. With 100 percent of the working interests
11 committed, there is no need for the assessment of any sort
12 of a risk penalty in this statutory unitization --

13 A. No, sir.

14 Q. Do you believe you've done all that you
15 reasonably can to obtain the voluntary commitment of all
16 interests to this unit plan?

17 A. Yes, sir.

18 Q. Is McQuadrangle Exhibit Number 11 an affidavit
19 confirming that notice of this Application has been
20 provided in accordance with the Rules of the Division?

21 A. It is.

22 Q. Was notice provided to all working interests and
23 all non-cost-bearing interest owners in the unit area?

24 A. It was.

25 Q. Were Exhibits 1 through 11 prepared by you or

1 compiled under your direction?

2 A. Yes, sir.

3 MR. CARR: May it please the Examiner, at this
4 time I would move the admission into evidence of
5 McQuadrangle Exhibits 1 through 11.

6 EXAMINER CATANACH: Exhibits 1 through 11 will be
7 admitted.

8 MR. CARR: And that concludes my direct
9 examination of Mr. Pierce.

10 EXAMINATION

11 BY EXAMINER CATANACH:

12 Q. Mr. Pierce, do you know who the original operator
13 who unitized this area was?

14 A. No, sir, I don't, I'm sorry. Back in 1965?

15 Q. Uh-huh.

16 A. I don't recall.

17 Q. Okay. As far as you know, from --

18 MR. JOY: That was Archie Spier, put that
19 together.

20 THE WITNESS: Archie Spiers, S-p-i-e-r-s.

21 Q. (By Examiner Catanach) As far as you know,
22 unitized operations were conducted from 1965 up until
23 approximately 1998?

24 A. Yes, sir.

25 Q. At which time the BLM terminated the unit?

1 A. Yes, sir.

2 Q. What happened in the period from 1998 to the
3 present time? Was there -- did all these leases just
4 revert back to -- who operated --

5 A. Again, the lawsuit was filed, Fifth Judicial
6 Court, Eddy County, by Delbert McDougal. Everything got
7 shut in. Again, the leases started lapsing.

8 McQuadrangle went to the OCD and to the Fifth
9 Judicial Court and got approval to begin producing the
10 leases so no -- the wells, so no more leases would lapse
11 and, again, acquired the wells and leases through a
12 judgment in the Fifth Judicial Court, Carlsbad. And it
13 began operations in 1999. I don't know the specific date.

14 Q. Sorry, what began in 1999?

15 A. When Delbert McDougal and McQuadrangle, the
16 company, actually took over -- accepted operations
17 formally, accepted operations was in 1999.

18 Q. Okay, so in 1999 McQuadrangle started producing
19 the wells again?

20 A. Yes, sir.

21 Q. And what about injection operations? Did they
22 commence injection?

23 A. Yes, sir.

24 Q. Okay. So McQuadrangle has several partners, but
25 they're they only -- they're listed as just McQuadrangle

1 under all those entities; is that right?

2 A. Yes, sir.

3 Q. And the other partner is -- I didn't catch the
4 name of the other working interest owner.

5 A. Cullers, it's C-u-l-l-e-r-s. And let me get the
6 exact name. Cullers Investments Trust. Cullers
7 Investments Family, Limited.

8 Q. Okay. And do you know what percentage of working
9 interest owners -- working interest they own?

10 A. Yes, Cullers has a 33.33 percent.

11 Q. In the entire unit?

12 A. Yes, sir.

13 Q. So the other 60.67 percent is owned by
14 McQuadrangle --

15 A. Yes, sir.

16 Q. -- and its partners?

17 Okay, the royalty interest in the unit is all
18 federal and state?

19 A. Yes, sir.

20 Q. And so once you secure BLM and State Land Office
21 approval, you'll have 100 percent of the royalty committed?

22 A. Yes, sir.

23 Q. But at this point you have preliminary approval
24 from both?

25 A. Yes.

1 Q. Do you know when they're going to -- when the
2 final approval will be from them?

3 A. I believe it will be immediately after this
4 hearing.

5 MR. CARR: One of the conditions of final
6 approval was a favorable order from the OCD. We're hoping
7 to have this going by the first of August, and we've talked
8 both with the BLM and Pete Martinez, and they're aware of
9 the time frame.

10 We're anxious to get this done, because once
11 that's done then all payments and everything are going to
12 be handled by Navajo, and we're going to have the whole
13 thing back in place and running. So that's our time frame
14 that we've targeted.

15 Q. (By Examiner Catanach) Okay, with regards to the
16 overriding royalty interest owners, how many are there?

17 A. Well over 70, approximately 77.

18 Q. Seventy-seven. Do you know how that many
19 interest owners materialized in a federal and state
20 situation like this?

21 A. These leases go way back. It's just been a
22 matter, like all title is these days. It gets worse every
23 year.

24 Q. So McQuadrangle kind of inherited this --

25 A. Yes, sir.

1 Q. -- all of these interest owners?

2 A. Yes, sir.

3 Q. Okay. Out of the 77, do you know how many are --
4 have ratified the unit?

5 A. Not exactly, but again it's well over 75 percent.

6 MR. CARR: And there ratifications, copies of all
7 those ratifications, are included in our Exhibit 6.

8 Q. (By Examiner Catanach) Do you have a -- you
9 don't have an exact number --

10 A. No, sir.

11 Q. -- for the percentage of who ratified?

12 Q. (By Mr. Carr) The problem with getting these
13 numbers is, the statute doesn't talk about royalty and
14 overrides; it talks about non-cost-bearing interest owners,
15 and it's fairly complicated. It reduced each burden to a
16 tract basis and then come forward when it's constantly
17 changing.

18 But we do have -- our estimates were yesterday
19 that no -- even if you count everything that you could
20 against ratification, based on what's in hand, we're well
21 in excess of 85 percent of the non-cost-bearing interest
22 owners.

23 THE WITNESS: And Mr. Catanach, let me retrace
24 myself. When I say the 77, in fact, I've talked to several
25 other royalty interest owners, and there's some trusts

1 being formed as we speak. And as soon as those get
2 recorded in the county, we'll have some different
3 ownership.

4 Q. (By Examiner Catanach) How do you handle that?
5 Do you offer -- I mean, do you give them the chance to
6 ratify?

7 A. Yes, sir, if it's recorded in the county by the
8 time we get this done, certainly, we'll do it accordingly.
9 If it's not, we can only go by what the county record
10 reflects.

11 MR. CARR: And if it happens following
12 unitization, it just requires an amended schedule to the
13 unit agreement, because by operation of statute and the
14 order they would be committed to the unit. And it just --
15 that's the way it's handled with any unit, as these changes
16 continue.

17 Q. (By Examiner Catanach) Your efforts to secure
18 the ratification of the overriding royalty interest owners
19 started when?

20 A. Actually last year.

21 Q. And you've -- what have you sent out? Just --
22 Have you talked to these people or --

23 A. Yes, sir, it started in July, sent out a mass
24 mailing to everyone, asking them to ratify a unit
25 agreement.

1 Q. With regards to the ones that have not ratified,
2 do you know any specific concerns they have or --

3 A. No, sir. It's funny, with -- some of the
4 correspondence I got back was -- said that they realized
5 that it was going to be done whether they approved --
6 ratified or not. I've got a good friend that's an attorney
7 in Austin, Texas, who told me they don't sign anything
8 until -- unless there's some money involved, and I told him
9 we weren't paying any bonuses for ratifications.

10 And like I said, it's been an ongoing process
11 since last July.

12 Q. Have any of the overriding royalty interest
13 owners expressed any concern over the allocation formula?

14 A. No, sir. Again, this was -- they were all
15 unitized before and appear to be eager to get it done
16 again.

17 Q. I'm just curious. Do you know the original
18 allocation formula? Was it the same, or was it based on
19 something different, or do you know?

20 A. In 1965, I'm not sure. I got the -- in 2000 I
21 got the complete division of interest from Navajo, broken
22 down on a royalty, overriding royalty and working interest
23 owner basis. And since then, the -- wells have been
24 plugged, leases have been lost, acreage has been carved
25 out.

1 There's royalty -- excuse me, overriding royalty
2 interest owners that were under leases that were on --
3 under wells that were plugged and abandoned, that no longer
4 exist. It went from about 1400 acres to, again, around
5 960, mostly due to the OCD compliance and non- -- well
6 noncompliance, initially, that they've had going for about
7 the last three years.

8 Q. Some of the leases that were originally in the
9 unit are now excluded?

10 A. Yes, sir, in the original unit, right.

11 Q. Have there been any concerns voiced from those
12 interest owners or operators over leaving them out?

13 A. No, sir.

14 Q. Are those different entities than are involved
15 here?

16 A. As far as overriding royalty interest owners
17 or --

18 Q. As far as working interest or anything else?

19 A. No, again, we've just got the two working
20 interest owners under the existing wells and leases.

21 Q. But the well -- the leases that are being
22 excluded, that weren't included from the original unit --

23 A. Uh-huh.

24 Q. -- who operates those leases? Do you know?

25 A. No, sir, I don't. Most of those are held by

1 other production in the township, in other sections.
2 There's multiple zones being produced on these leases. And
3 being state and federal leases, it includes other acreage
4 and other sections. And we're just unitizing the Grayburg
5 formation.

6 Q. San Andres and Grayburg?

7 A. No, sir, just the Grayburg.

8 MR. CARR: San Andres was the error that we --

9 Q. (By Examiner Catanach) Oh, we're just unitizing
10 the Grayburg formation?

11 A. Yes, sir.

12 MR. CARR: Yes, and see, that was the error
13 requiring that we re- -- we're going to re-ratify and be
14 sure that everything is in place. The footages are
15 correct, and they really only go to the base of the
16 Grayburg.

17 EXAMINER CATANACH: Mr. Carr, is your next
18 witness going to talk about the unit operations?

19 MR. CARR: Generally, yes. He's going to give a
20 well-status map and show the formation, and can respond to
21 those questions.

22 Q. (By Examiner Catanach) Now, your Exhibit Number
23 10 gives the breakdown of the ownership on a lease basis;
24 is that correct?

25 A. Yes, sir.

1 Q. Is there an exhibit that identifies the overrides
2 that have not ratified?

3 A. No, sir.

4 MR. CARR: We could provide you with a list and
5 just notify -- just indicate who has ratified and who has
6 not.

7 EXAMINER CATANACH: Yeah, I think that would be
8 helpful.

9 MR. CARR: Okay. Because the information is all
10 there but we can simply take that and organize it so you
11 have an alphabetical listing of the overrides, and indicate
12 those that have not agreed to participate.

13 EXAMINER CATANACH: Okay. Okay, I think that's
14 all I have. The witness may be excused.

15 MR. CARR: May it please the Examiner, at this
16 time we call Charles Joy.

17 CHARLES C. JOY,
18 the witness herein, after having been first duly sworn upon
19 his oath, was examined and testified as follows:

20 DIRECT EXAMINATION

21 BY MR. CARR:

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

23 A. Charles C. Joy.

24 Q. Mr. Joy, where do you reside?

25 A. In Artesia, New Mexico.

1 Q. By whom are you employed?

2 A. I'm a consulting engineer and working for Mr.
3 McDougal who operates McQuadrangle.

4 Q. Have you previously testified before the New
5 Mexico Oil Conservation Division?

6 A. Yes, since 1963.

7 Q. During these many years, have your credentials as
8 an expert in petroleum engineering been accepted and made a
9 matter of record?

10 A. Yes.

11 Q. Are you familiar with the Application filed in
12 this case on behalf of McQuadrangle, L.C.?

13 A. Yes.

14 Q. Have you made an engineering study of the portion
15 of the Red Lake-Queen-Grayburg-San Andres --

16 A. Yes, I --

17 Q. -- Pool?

18 A. -- did an extensive study several years back for
19 Mr. McDougal, both for secondary and primary reserves.

20 Q. Are you prepared to share the results of your
21 work with the Examiner?

22 A. Yes, I am.

23 MR. CARR: We tender Mr. Joy as an expert
24 petroleum engineer.

25 EXAMINER CATANACH: He is so qualified. And I'm

1 just curious as to -- if you recall who you appeared before
2 in 1963.

3 THE WITNESS: I know Porter was the head up here,
4 but I don't remember who the other -- I was representing
5 Fasken. I was in Midland then, and Clarence Hinkle was the
6 lawyer that repres- --

7 EXAMINER CATANACH: That even predates Mr. Carr.

8 THE WITNESS: Yeah. Well, I met -- when he first
9 started. I wasn't this -- back about twenty --

10 MR. CARR: It was a long time ago.

11 THE WITNESS: Yeah, it was a long time ago.

12 EXAMINER CATANACH: Okay. All right, you may
13 proceed.

14 Q. (By Mr. Carr) Mr. Joy, have you prepared
15 exhibits for presentation here today?

16 A. Yes, I have.

17 Q. Could you refer to the type log, McQuadrangle
18 Exhibit Number 12?

19 A. Okay, well that --

20 Q. Could you identify for Mr. Catanach the --

21 A. All right --

22 Q. -- formations that are the subject of the
23 hearing?

24 A. Well, it's the Grayburg, and they're found on the
25 Magruder Well Number 13 log. I've marked that. And the

1 upper Grayburg is found at 1430 feet.

2 And by the way, this -- a typographical error,
3 that's -- instead of San Andres, that's supposed to be the
4 Grayburg, which is found at 1762 feet.

5 And there's two sand zones in this Grayburg
6 formation, and one of them defined at 1720 to 1727 feet,
7 and 1755 to 1758 feet. And both of these zones run
8 continuous throughout the reservoir, so they are connected,
9 so we can flood them properly.

10 Q. And the portion of this reservoir that we're
11 proposing to unitize has been really fully defined by
12 development at this --

13 A. Yes --

14 Q. -- time?

15 A. -- it has. There've been some dry holes drilled
16 out to the outer peripheries.

17 Q. And the productive -- and it's reasonable to
18 anticipate that the entire unit area will contribute
19 production; is that fair to say?

20 A. Yes, it will.

21 Q. Could you generally describe the nature --

22 A. Well, it's a --

23 Q. -- of this Grayburg reservoir?

24 A. It's an anticline structure, and the pay
25 formation consists of two sand zones that are found

1 approximately 25 feet apart and are continuous throughout
2 the reservoir, and I already gave you on the logs at 1720
3 to 1727 feet, and 1755 to 1758 intervals.

4 Q. Let's go now to McQuadrangle Exhibit 13, the
5 structure map.

6 A. Okay.

7 Q. Can you review the information on this exhibit
8 for Mr. Catanach?

9 A. I filed this structure map when I was doing this
10 study, and the original maps were a little bit different
11 than mine because they didn't have the detailed logs in
12 there. Devon went in and drilled a number of Yeso wells,
13 and I was fortunate that they did log through and run the
14 resistivity logs and the gamma-ray, neutron and density
15 logs through this formation, so I was able to tie down this
16 map much better, the tops and all on it.

17 Q. Basically, what is the formation out here?

18 A. It's -- well, the pay zones are sands.

19 Q. Okay. In your opinion, is the entire unit area
20 in the Grayburg geologically suited for the proposed
21 secondary recovery --

22 A. Yes --

23 Q. -- project?

24 A. -- and that's been proven in the past, because
25 this flood has been working.

1 Q. Okay, let's go to the isopach map, Exhibit 14.
2 What does this show?

3 A. This shows the net pay from the two zones. I
4 added the two zones together to form -- to work up this --
5 to construct this isopach map. And it runs from zero foot
6 up to a little in excess of 15 feet on the eastern part of
7 the reservoir there.

8 Q. Obviously, since waterflood operations have been
9 going on out here for decades, this unit area can be
10 effectively operated under a unit plan and a waterflood
11 project; is that right?

12 A. Correct.

13 Q. All right. Let's talk a little bit about the
14 engineering aspect of this. You're familiar with the
15 Statutory Unitization Act, are you not?

16 A. Yes.

17 Q. Would you go to what has been marked as
18 McQuadrangle Exhibit Number 15, the well status map, and
19 explain to Mr. Catanach how you propose to continue the
20 waterflood operations in the unit area?

21 A. Let's see, I don't have that 15, this is the --
22 Okay. Well, on this map I will go into a little more
23 detail on here. I put in there both the producing wells,
24 injection wells, other wells, plugged and abandoned wells,
25 temporary abandoned wells and shut-in wells.

1 Now, when I was making this study, I encountered
2 -- found out that McQuadrangle owned the upper rights in
3 the San Andres and that this is productive. We completed
4 one successful well in there, and he's getting ready to
5 drill about nine more additional wells, and I put that down
6 on the bottom.

7 And that's another reason we'd like to get this
8 back put under secondary recovery, get it unitized, because
9 when I logged -- when I drill these wells I'm going to log
10 through, because there's a good possibility that we have
11 bypassed some oil in there, and I'll run the proper logging
12 program so we can calculate out. And if there's any oil in
13 there, then we'll have to probably go in and drill some
14 Grayburg wells or dually complete the San Andres with the
15 Grayburg, give us a better --

16 Q. Now, Mr. --

17 A. -- give us a better drive on how to set our
18 pattern up in those areas.

19 Q. Now, Mr. Joy, have you been able to estimate the
20 additional recovery, the secondary oil --

21 A. Yes, I --

22 Q. -- recovery that will be obtained in the future
23 from this waterflood --

24 A. I estimate --

25 Q. -- project?

1 A. -- about 62,000 barrels remaining, and the net
2 cash flow from that will be about \$915,000.

3 Q. When we look at this unit area and we look at the
4 -- at secondary-recovery production, what percent of the
5 production of the reserves were obtained through primary
6 production?

7 A. I think it was 15 -- I've counted about 15.7
8 under primary and about 15.1 under secondary at this time.

9 Q. Is this typical for a Grayburg reservoir of this
10 nature?

11 A. Yes, most Grayburgs are only going to recover
12 around 30, 31 or 32 percent of the oil in place.

13 Q. If we don't go forward with the waterflood
14 project, would these reserves, in fact, be wasted?

15 A. Yes.

16 Q. You heard Mr. Pierce talk about the participation
17 formula in the unit agreement being on a straight acreage?

18 A. Yes.

19 Q. Do you concur that that's the appropriate way to
20 allocate production at this life of this reservoir?

21 A. Yes.

22 Q. And all tracts in the reservoir will then be
23 sharing --

24 A. Right.

25 Q. -- in production from the unit and the waterflood

1 project?

2 A. That's correct.

3 Q. In your opinion, will using a straight acreage
4 allocation allocate production to the separately owned
5 tracts in the proposed unit on a fair, reasonable and
6 equitable basis?

7 A. Yes, because some of those people where we're not
8 producing any oil at the present time who've got injection
9 wells on their property will participate in oil recovery
10 there.

11 Q. Will the continued waterflood operations benefit
12 working interest owners, royalty and overriding royalty
13 interest owners in the area affected by the Application?

14 A. Yes.

15 Q. Is continued operation --

16 A. Yes.

17 Q. -- reasonably necessary --

18 A. Right.

19 Q. -- to affect the --

20 A. Right.

21 Q. -- recovery of the 62,000 --

22 A. Yes, because we may have to change some of those
23 patterns out there, here in the -- I'm going to have to
24 make another study, but we may want to change some of the
25 injection patterns.

1 Q. Will approval of this Application, continuation
2 of waterflood operations under the proposed unit prevent
3 waste, be in the best interests of conservation, and
4 protect the correlative rights of all interest owners in
5 the unit area?

6 A. Yes.

7 Q. Were Exhibits 12 through 15 prepared by you?

8 A. Yes.

9 MR. CARR: At this time, Mr. Catanach, I'd move
10 the admission of Exhibits 12 through 15.

11 EXAMINER CATANACH: Exhibits 12 through 15 will
12 be admitted.

13 MR. CARR: And that concludes my direct
14 examination of Mr. Joy.

15 EXAMINATION

16 BY EXAMINER CATANACH:

17 Q. Mr. Joy, is it my understanding that the only
18 thing that's been flooded out here is the Grayburg?

19 A. Correct, right in that area. Now, there's some
20 San Andres being waterflooded east of there, but this San
21 Andres is fairly tight.

22 And the reason I encountered it is, Devon had
23 drilled through there and I had their logs, and it was just
24 fortunate that they run those detailed logs, and I found
25 these zones for Mr. McQuadrangle [sic] in the upper San

1 Andres, and he has rights through there. And we completed
2 one well a little over a year ago, and it's already paid
3 out.

4 Q. So it's your opinion that it's not -- you don't
5 want to unitize the San Andres and --

6 A. Oh, no, the San Andres is not -- I don't think --
7 I'm not sure it would lend itself to waterflooding, as
8 tight as that San Andres is out there. Permeability is
9 pretty low.

10 Q. So McQuadrangle has San Andres rights, and they
11 will --

12 A. The upper San Andres.

13 Q. Upper San Andres.

14 A. Upper San Andres.

15 Q. They don't have lower San --

16 A. No, they don't have lower. Lower does produce
17 some oil. When I calculate it out, the lower will probably
18 make about 20,000, upper will probably make around 60,000,
19 recover about 60,000 barrels.

20 Q. So how do you do -- Do you dually complete these
21 wells where you complete the Grayburg and the San --

22 A. Well, what I said, when we drill these San Andres
23 wells and I run the logging program, it shows that we do
24 have oil in those Grayburg zones there.

25 Of course, if you've ever changed the

1 permeability and run it through mathematical models, you'll
2 see that you don't get a straight flood like you normally
3 calculate theoretically, flooding straight out. It takes a
4 circular pattern all around through a 40-acre tract. And
5 I've seen some of those run through these mathematical
6 model studies, and some of the old floods I've been in
7 charge of, we've gone in and drilled some infill wells and
8 picked up additional oil, which theoretically when we
9 calculated it out, it showed they were flooded out, but
10 they were not.

11 But since we're going to be drilling about nine
12 San Andres wells in there, I felt like this would add to it
13 and give us an extra reason why we needed to unitize the
14 Grayburg there. So if we decided to recomplete some wells
15 in there, if we do encounter some oil...

16 Q. So San Andres and Grayburg production is going to
17 be maintained separately --

18 A. Right, they'll --

19 Q. -- in those wellbores?

20 A. -- be separate, right.

21 Q. Now, these are all active injection wells that
22 you're showing on this map?

23 A. Right.

24 Q. And are all these produc- -- are all these
25 injecting into both of the Grayburg sands?

1 A. They're all Grayburgs, that I've got here, the --
2 and I've showed the code down below, the producing wells
3 are the Grayburg wells, and then the injection wells are
4 Grayburg wells, and the other wells I just used a plain
5 circle, and then plugged and abandoned wells, and then
6 temporary abandoned wells, and then the shut-ins there.

7 Q. What's the status of these shut-in wells? Are
8 they --

9 A. Well, I haven't -- I just started going back to
10 -- started working for him again now. I don't know what
11 he's done the last year. He just hired me to come up here
12 on this and be a witness.

13 Q. Do you know what plans he has? Are there going
14 to be any additional wells drilled -- Well, you said San
15 Andres wells?

16 A. Yeah, he's going to drill these -- he called me
17 and told me to get ready, that he wants me to look after
18 this drilling, put it together. And that's where I got the
19 locations. These are the locations that they've selected
20 to drill.

21 Q. And you said something about changing patterns,
22 so you may convert some additional wells to --

23 A. Yeah, we may have to con- -- change some of these
24 patterns around, after I make a study to determine if we
25 can increase the oil production by changing patterns around

1 and get a better drive change our waterflood front.

2 Q. At this point in time, do you know what kind of
3 capital costs you're going to incur in --

4 A. No, I haven't run that out. I know this last
5 well we drilled, it run about \$300,000, so I imagine it's
6 going to be looking at about -- better than a couple
7 million dollars, about -- close to \$3 million, to complete
8 the San Andres wells.

9 Q. And you've estimated recovery of 62,000 barrels?

10 A. Remaining, right, as of now, about 62,000
11 barrels.

12 Q. That's from the entire unit area?

13 A. Right.

14 Q. I guess these wells are producing at a very --

15 A. Yeah, they're clear down at about 50 barrels a
16 day, 40 to 50.

17 Q. Okay.

18 A. But with oil prices as high as it is now, they
19 can afford to go in there and recover this.

20 Q. Is there any potential for any tertiary?

21 A. I haven't talked to him about it. The only thing
22 I would think about if I was going to go to tertiary there
23 would be micellar flooding, probably, and I don't know
24 whether he wants to get involved in that, because that's
25 expensive.

1 I know I've encountered it before, one time when
2 I was running a -- I was going to try to put the Loco
3 Hills, because CO₂ wouldn't work because the critical
4 pressures -- CO₂ and my bottomhole pressures almost equal,
5 identical, and I was afraid it was going to flash off
6 because on the first displacement where I worked on that up
7 in -- for ARCO, and we did have flash-off because we
8 couldn't get it in, and we had to change to water, start
9 injecting water, slow down our propane and -- flashing off
10 and all --

11 Q. Okay.

12 A. -- and I just backed off on that.

13 But I may talk to him because micellar probably
14 would work. I don't think CO₂ would help any out there,
15 because I would say the critical pressure on CO₂ probably
16 at about that depth, probably going to be about -- probably
17 1000 pounds or something like that, and probably -- and I
18 don't know whether you could hold the pressure enough to
19 use CO₂ out there.

20 Q. Okay.

21 A. But I may talk to him about looking into the
22 aspects of initiating a micellar flood out there, I could
23 get with some of the chemical companies and get them to run
24 a -- through the -- I think he's got some cores that we
25 could probably check out and let them re-saturate and run

1 them through and then run a micellar flood through it and
2 see what kind of results we'd get.

3 Q. Yeah, if you go to a tertiary-type situation, you
4 might be able to qualify the thing for the EOR --

5 A. Yeah --

6 Q. -- tax credits and --

7 A. -- right.

8 EXAMINER CATANACH: Okay, I think that's all I
9 have of this witness.

10 Do you have anything further, Mr. Carr?

11 MR. CARR: No, that concludes our presentation.

12 We will get the overriding royalty interest list
13 to you indicating those who have ratified.

14 EXAMINER CATANACH: Okay, there being nothing
15 further, Case 13,489 will be taken under advisement.

16 MR. CARR: Thank you.

17 (Thereupon, these proceedings were concluded at
18 9:06 a.m.)

19 * * *

20
21 I do hereby certify that the foregoing is
22 a complete record of the proceedings in
23 the Examiner hearing of Case No. 13489,
24 heard by me on June 16, 2005
25 David R. Cattant, Examiner
Oil Conservation Division

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 June 17th, 2005.



STEVEN T. BRENNER
 CCR No. 7

My commission expires: October 16th, 2006