

NEW MEXICO OIL CONSERVATION DIVISION

STATE OF NEW MEXICO

CONSOLIDATED CASES 10329 & 10518

IN THE MATTER OF CASE NO. 10329:

Being reopened pursuant to the
provisions of Division Order No.
R-9554, which order promulgated
temporary special rules and regulations
for the Cedar Lake-Strawn Pool in
Eddy County, New Mexico.

IN THE MATTER OF CASE NO. 10518:

Application of Mewbourne Oil Company
for the amendment of Division Order
No. R-9554, Eddy County, New Mexico.

BEFORE:

MICHAEL E. STOGNER

Hearing Examiner

State Land Office Building

August 6, 1992

REPORTED BY:

DEBBIE VESTAL
Certified Shorthand Reporter
for the State of New Mexico

COPY

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A P P E A R A N C E S

FOR THE APPLICANT:

HINKLE, COX, EATON, COFFIELD & HENSLEY
Post Office Box 2068
Santa Fe, New Mexico 87504-2068
BY: JAMES BRUCE, ESQ.

I N D E X

Page Number

Appearances

2

WITNESSES FOR THE APPLICANT:

1. PAUL HADEN

Examination by Mr. Bruce

6

Examination by Examiner Stogner

8

2. ROBIN VASICEK

Examination by Mr. Bruce

10

Examination by Examiner Stogner

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Certificate of Reporter

22

E X H I B I T S

Page Identified

1		
2		
3		
4	Exhibit No. 1	7
5	Exhibit No. 2	8
6	Exhibit No. 3	12
7	Exhibit No. 4	12
8	Exhibit No. 5	13
9	Exhibit No. 6	13
10	Exhibit No. 7	13
11	Exhibit No. 8	13
12	Exhibit No. 9	13
13	Exhibit No. 10	14
14	Exhibit No. 11	14
15	Exhibit No. 12	15
16	Exhibit No. 13	15
17	Exhibit No. 14	15
18	Exhibit No. 15	16

19
20
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1 EXAMINER STOGNER: Call next Case No.
2 **10329**, which is in the matter of said case being
3 reopened pursuant to the provisions of Division
4 Order No. R-9554, which promulgated special rules
5 and regulations for the Cedar Lake-Strawn Pool in
6 Eddy County, New Mexico. This case is being
7 reopened at this time to consider making these
8 special rules permanent.

9 Call for appearances.

10 MR. BRUCE: Mr. Examiner, my name is
11 Jim Bruce, from the Hinkle law firm in Santa Fe,
12 representing Mewbourne Oil Company. I have two
13 witnesses to be sworn. And I would also ask that
14 this case be consolidated for hearing with the
15 next case, **10518**, which involves the same pool.

16 EXAMINER STOGNER: At this time, if
17 there are no objections, I'll call Case No.
18 10518, which is the application of Mewbourne Oil
19 Company for the amendment of Division Order No.
20 R-9554 in Eddy County, New Mexico.

21 At this time I'll again call for
22 appearances other than Mewbourne. Okay.

23 How many witnesses do you have in these
24 consolidated cases?

25 MR. BRUCE: Two, Mr. Examiner.

1 EXAMINER STOGNER: Will both witnesses,
2 please, stand to be sworn.

3 [The witnesses were duly sworn.]

4 EXAMINER STOGNER: Mr. Bruce.

5 PAUL HADEN

6 Having been duly sworn upon his oath, was
7 examined and testified as follows:

8 EXAMINATION

9 BY MR. BRUCE:

10 Q. Will you, please, state your name for
11 the record?

12 A. My name is Paul Haden.

13 Q. And where do you reside?

14 A. I live in Midland, Texas.

15 Q. Where are you employed by and in what
16 capacity?

17 A. I am employed as a petroleum landman by
18 Mewbourne Oil Company.

19 Q. And have you previously testified
20 before the Division as a landman?

21 A. Yes, I have.

22 Q. And are you familiar with the land
23 matters involved in this case?

24 A. Yes, I am.

25 MR. BRUCE: Mr. Examiner, is the

1 witness considered qualified?

2 EXAMINER STOGNER: He is.

3 Q. (BY MR. BRUCE) Mr. Haden, what is
4 Mewbourne's position in both of these cases?

5 A. Mewbourne is the operator of the west
6 half Section 2 of Township 18 South, Range 30
7 East in Eddy County. We previously went to
8 hearing in July 91 to establish 80-acre spacing
9 for the Strawn. This was in Case No. 10329.

10 We are currently asking that that be
11 increased to 160 acres for the Cedar Lake-Strawn
12 Oil Pool.

13 Q. And will the engineer further discuss
14 the technical aspects of the case?

15 A. Yes, he will.

16 Q. Will you, please, refer to Exhibits 1
17 and 1-A and describe what they show for the
18 Examiner?

19 A. Exhibit No. 1 is a land plat which
20 shows our west half of Section 2, which is
21 outlined in red. The is the current Cedar
22 Lake-Strawn Pool. It also has tracts numbered 1
23 through 12. These tracts are described in
24 Exhibit 1-A. It has the owners of those tracts
25 which were notified of this hearing.

1 Q. And is Exhibit 2 a copy of your notice
2 letter and of the certified return receipts of
3 the mailings to the Exhibit 1-A people?

4 A. Yes, that's correct.

5 Q. And that also contains your affidavit
6 of notice; is that correct?

7 A. Right.

8 Q. And were Exhibits 1, 1-A, and 2
9 prepared by you or under your direction?

10 A. Yes, they were.

11 MR. BRUCE: Mr. Examiner, at this time
12 I move the admission of Exhibits 1, 1-A, and 2.

13 EXAMINER STOGNER: Exhibits 1, 1-A, and
14 2 will be admitted into evidence at this time.

15 EXAMINATION

16 BY EXAMINER STOGNER:

17 Q. This looks like quite an extensive
18 search.

19 A. Yes, quite a few owners to notify.

20 Q. Okay. Now, 1-A, when I look at tract
21 No. 1, I've got 22 parties that you have
22 contacted just alone in that particular tract.

23 A. Right.

24 Q. Are these royalty interest owners,
25 working interest owners, and overriding royalty

1 interest owners?

2 A. Combination of all three.

3 Q. Combination of all three. And the same
4 is also in Tract 2 --

5 A. Right.

6 Q. -- Tract 3, Tract 4, Tract 5, Tract
7 6 --

8 A. That's correct.

9 Q. -- 7, 8, 9, 10, 11, and 12. And these
10 parties, it's your understanding, that would be
11 affected of any pool rule changes because they
12 would be affected by the one-mile rule; is that
13 correct?

14 A. One mile rule, that's correct. That's
15 one mile from the pool boundaries, which the pool
16 consists currently of the west half of Section 2.

17 Q. And when you sent them notification,
18 what actually was sent to those parties?

19 A. My letter dated July 15 with a copy of
20 our application.

21 Q. And you have included that on -- I
22 mean, on your exhibit you've included that in
23 Exhibit 2; is that correct?

24 A. That's right. Uh-huh.

25 Q. You received no objections?

1 A. No objections whatsoever.

2 EXAMINER STOGNER: Okay. I have no
3 other questions of this witness, Mr. Bruce.

4 MR. BRUCE: I have no further
5 questions. I call Mr. Vasicek to the stand.

6 EXAMINER STOGNER: You may be excused.

7 MR. HADEN: Thank you.

8 ROBIN VASICEK

9 Having been duly sworn upon his oath, was
10 examined and testified as follows:

11 EXAMINATION

12 BY MR. BRUCE:

13 Q. Would you, please, state your name and
14 city of residence?

15 A. My name is Robin Vasicek, and I reside
16 in Midland, Texas.

17 Q. And who are you employed by?

18 A. I am a petroleum engineer with
19 Mewbourne Oil Company.

20 Q. Have you previously testified before
21 the Division as a petroleum engineer?

22 A. No, I have not.

23 Q. Would you, please, outline your
24 educational and work background?

25 A. I have BS in petroleum engineering from

1 the University of Texas at Austin, graduated in
2 1979. I was employed by Mobil Producing, Texas
3 and New Mexico, for two years as a production
4 engineer. And in May of 1981 I was employed by
5 Mewbourne Oil Company. And I've had continuous
6 employment as a drilling, production, and
7 reservoir engineer.

8 Q. And are you familiar with the
9 engineering matters related to the Cedar
10 Lake-Strawn Pool?

11 A. Yes, I am.

12 MR. BRUCE: Mr. Examiner, I tender the
13 witness as an expert petroleum engineer.

14 EXAMINER STOGNER: He is so qualified.

15 Q. (BY MR. BRUCE) Mr. Vasicek, will you,
16 please, summarize what Mewbourne requests in
17 these hearings?

18 A. Yes. When Mewbourne Oil Company
19 originally requested 80-acre spacing, it had
20 limited production data, which suggested that
21 proper spacing for the pool would eventually be
22 160 acres. This data was presented at the prior
23 hearing.

24 And since that hearing the additional
25 data that Mewbourne has from its wells proves

1 ~~that~~ 160-acre spacing is proper. In addition,
2 the additional data shows that an increased GOR
3 of 4,000-to-1 is proper.

4 Finally, Mewbourne Oil requests that
5 well locations be no closer than 660 to the outer
6 boundary of a unit nor nearer than 330 feet to a
7 quarter-quarter section line. And these location
8 rules are standard for 160-acre gas wells.

9 In addition, we request that no well in
10 the pool be allowed to be closer than 320 --
11 excuse me, 1320 feet to the nearest producing or
12 drilling well in order to prove undue drainage.

13 Q. Okay. Would you first, please, refer
14 to Exhibits No. 3 and 4, the geological exhibits,
15 and just identify them for the Examiner?

16 A. Yes. Exhibits 3 and 4 were submitted
17 in Case No. 10329, and they are resubmitted here
18 for your information. The only new production to
19 the pool is the State CE No. 1 well in the
20 northwest quarter of Section 2. This was
21 previously shown as a possible Strawn producer
22 and has since been recompleted from the Morrow to
23 the Strawn. And the Strawn continues to cross
24 the west half of Section 2.

25 Q. Okay. Would you, please, then identify

1 and describe Exhibit 5 for the Examiner?

2 A. Exhibit 5 is an AFE for a Strawn
3 completion giving a fair cost estimate. And
4 we'll use this figure later.

5 Q. Okay. Let's get into the production
6 data a little bit from this pool. Would you
7 refer to Exhibits 6 and 7 and discuss production
8 from the wells in this pool?

9 A. Exhibit 6 is a production history of
10 Loco Hills State No. 1, and Exhibit 7 is the same
11 for the State CE No. 1.

12 Q. Okay. And the State CE well was
13 completed a month or two after the last hearing
14 in this matter?

15 A. Yes. Yes, it was.

16 Q. Would you then refer to Exhibits 8 and
17 9 and identify them and describe what you believe
18 to be ultimate production from these wells?

19 A. Exhibit 8 and Exhibit 9 are decline
20 curve analyses for the two wells in the pool. I
21 projected to an economic limit of three barrels a
22 day. The curves are used in volumetric
23 calculations. And the estimates are that the
24 Loco Hills State will produce 72,000 barrels of
25 oil and that the State CE will produce 184,000

1 barrels of oil.

2 Q. Now, looking at Exhibit 8, the 72,000
3 barrels, is that approximately what was estimated
4 in the hearing a year ago in this well?

5 A. Yes, I believe that was estimated at
6 68,000 barrels. And our production data, we have
7 more production data, which estimates the decline
8 to show a slightly flatter curve.

9 Q. Okay. Would you then refer to Exhibits
10 10 and 11 and discuss the drainage area of these
11 two wells?

12 A. Exhibits 10 and 11 are volumetric
13 calculations. The data comes from well logs and
14 the decline curves. And we took the recovery
15 factor from a study on the Lusk Field.

16 What this shows is that the Loco Hills
17 State No. 1 should drain approximately 167 acres
18 and the State CE should drain approximately 196
19 acres.

20 Q. And based on this you believe 160-acre
21 drainage is proper?

22 A. Yes, I do.

23 Q. I should say 160-acre spacing. Excuse
24 me.

25 Okay. Why don't you move on to Exhibit

1 12 now and discuss it for the Examiner.

2 A. Exhibit 12 is estimated recoverable
3 reserves for what would be an average Strawn
4 well. We looked at the Loco Hills State No. 1
5 and the State CE No. 1 and noted that both wells
6 have similar characteristics as far as porosity
7 and water saturation go. The only difference is
8 the pay thickness.

9 And from our geological maps we assume
10 that an average between the State CE and the Loco
11 Hills State, one shows five foot of height, the
12 other shows ten foot of height, that the age is
13 the only figure there that would change in that
14 formula, and we assume seven-and-a-half foot of
15 height.

16 And then this goes on to calculate what
17 the recoverable reserves would be for 160-acre
18 spacing, 80-acre spacing, and 40-acre spacing.
19 On the right side of this chart here, we have a
20 return on investment, which is a summary exhibit
21 of what will be Exhibits 13 and 14.

22 And they show that on 160-acre spacing,
23 an average well would give approximately 2 to 1
24 return on investment, and 80-acre spacing would
25 be less -- well, you wouldn't get your money

1 back.

2 Q. Let's move on then to the economic
3 exhibits, Exhibit 13 and 14. Discuss them for
4 the Examiner. And as an introductory matter, the
5 well cost figures used in these are the Exhibit 5
6 AFE that you previously introduced?

7 A. Yes, they are. Exhibits 13 and 14 are
8 cash flow analyses based on 160-acre spacing on
9 Exhibit 13 and 80-acre spacing on Exhibit 14. Of
10 primary note here, down at the bottom right-hand
11 corner, is the income to investment ratio showing
12 1.93 to 1 on 160-acre spacing and .88 to 1 on
13 80-acre spacing.

14 Q. And as to the gas oil ratio request, I
15 refer you to Exhibit No. 15, and discuss the
16 reason for your request.

17 A. Exhibit 15 is the list of other Strawn
18 oil pools showing established spacing and GOR
19 limits. Our current GOR is above 2,000 to 1.
20 The other pools have had increasing GORs. And we
21 think that 4,000 to 1 is necessary to provide for
22 flexibility and prevent future problems.

23 This pool is a solution gas drive
24 reservoir. And it's common for GORs to increase
25 as the pool is depleted. We've studied other

1 Strawn oil pools and have not seen any evidence
2 of reservoir damage with the higher GORs. For
3 instance, the Lusk Pool has wells that have
4 produced over 300,000 barrels of oil and it has
5 4,000 to 1 GOR without having any -- showing any
6 problems.

7 Some of these wells, as in the Lusk
8 Field, have come on with higher rates and with
9 excess of gas and with high GORs. And with
10 future development of this oil pool, this would
11 facilitate production without problems should we
12 come across a better pay thickness.

13 Q. Do you request that the 160-acre
14 spacing be temporary or permanent?

15 A. We feel that there's evidence and
16 there's enough production data to show that these
17 rules should be permanent.

18 Q. In your opinion is the granting of your
19 160-acre spacing request, along with the other
20 pool rules you've requested, in the interests of
21 conservation and the prevention of waste?

22 A. Yes, they are.

23 Q. Were Exhibits 5 through 15 prepared by
24 you or under your direction?

25 A. Yes, they were.

1 Q. And Exhibits 3 and 4, as you said, just
2 came from the prior hearing; is that correct?

3 A. Yes, they did.

4 MR. BRUCE: At this time, Mr. Examiner,
5 I move the admission of Exhibits 3 through 15.

6 EXAMINER STOGNER: Exhibits 3 through
7 15 will be admitted into evidence at this time.

8 EXAMINATION

9 BY EXAMINER STOGNER:

10 Q. You referred in Exhibit No. 15 to the
11 Lusk-Strawn. Where is the Lusk-Strawn located
12 with respect to this well?

13 A. It's 11 miles to the southeast.

14 Q. How about the Burton Flat-Upper Strawn?

15 A. The Burton Flat-Upper Strawn is 13
16 miles to the southwest of this field.

17 Q. How about the Parkway-Strawn?

18 A. The Parkway-Strawn is approximately 16
19 miles to the southwest.

20 Q. Now, you referred to the GOR limits
21 which you showed to be higher than 2,000 to 1 in
22 those pools. Do you have any other engineering/
23 geological data which makes me believe or
24 determine that this Strawn Pool is the same as
25 these that are 11, 12, and 16 miles away?

1 A. Our production rates look similar --
2 the decline curves look similar to what they do
3 in the Lusk Field. We performed our model on the
4 Lusk Field. And I don't have any exhibits of the
5 Lusk Field, but that was where our model came
6 from.

7 We also reviewed the production history
8 of the Burton Flat Field and the Parkway-Strawn,
9 and we seem to be similar to what they're
10 producing also.

11 Q. Now, what are those two pools -- how
12 are they being developed at this time?

13 A. They are, as it's shown in Exhibit 15,
14 they're both on 160-acre spacing and 4,000 GOR
15 and 3,000 GOR.

16 MR. BRUCE: Mr. Examiner, I know from
17 experience that the Burton Flat-Upper Strawn, I
18 believe, is a one-well pool.

19 EXAMINER STOGNER: Okay.

20 THE WITNESS: The Parkway-Strawn is a
21 -- I believe, it's a two-well pool.

22 EXAMINER STOGNER: I show that I was
23 the Hearing Examiner in Case No. 10329 when this
24 case originally came up for 80-acre spacing and
25 hearing. Off the top of my head I don't remember

1 any geological engineering data, but I will make
2 that record a part of this at this time.

3 MR. BRUCE: We did have a geologist
4 testify at that hearing, Mr. Examiner.

5 Q. (BY EXAMINER STOGNER) You said this is
6 a solution gas drive reservoir. I'm assuming the
7 other pools that you're referring to are also
8 solution gas drive reservoirs?

9 A. I believe the Parkway and the Burton
10 Flat are, and I believe the Lusk is too.

11 Q. And the figures used in Exhibit No. 10
12 and 11 for your volumetric data --

13 A. Yes.

14 Q. -- now, this is from this particular
15 pool, these particular figures --

16 A. Yes.

17 Q. -- for gas saturation?

18 A. Both of these were submitted from the
19 previous -- excuse me. The Loco Hills State No.
20 1 was data that was previously submitted in the
21 previous case or the previous hearing. The logs
22 on the State CE, everything comes from the log
23 analysis as far as the water saturation and the
24 porosity and the height.

25 The B_0 and the recovery factor come

1 from a study of the Lusk Field that's performed
2 by Dewey Thornton and Agaston [phonetic]. And
3 they wrote a paper, and it was published in the
4 Oil & Gas Journal.

5 Q. What new data do you have?

6 A. Basically the new data is the data on
7 the State CE No. 1. All of the exhibits on State
8 CE No. 1. And the decline curves have been
9 re-drawn to show our updated production and
10 projected out according to that production.

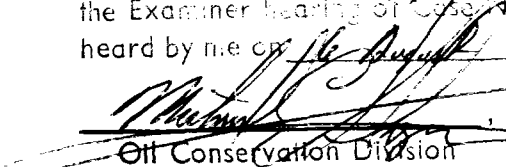
11 EXAMINER STOGNER: I have no other
12 questions of this witness, Mr. Bruce, do you?

13 MR. BRUCE: I have nothing further.

14 EXAMINER STOGNER: Does anybody else
15 have anything further in the consolidated Cases
16 10329 and 10518? If not, then these two cases
17 will be taken under advisement.

18 [And the proceedings were concluded.]
19
20

21 I do hereby certify that the foregoing is
22 a complete report of the proceedings in
23 the Examiner hearing of Case No. 10329 and Case No. 10518
24 heard by me on 16 August 1992.

25  , Examiner
Oil Conservation Division

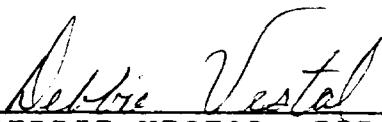
CERTIFICATE OF REPORTER

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

I, Debbie Vestal, Certified Shorthand Reporter and Notary Public, HEREBY CERTIFY that the foregoing transcript of proceedings before the Oil Conservation Division was reported by me; that I caused my notes to be transcribed under my personal supervision; 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 AUGUST 15,
1992.



DEBBIE VESTAL, RPR
NEW MEXICO CSR NO. 3