

NEW MEXICO OIL CONSERVATION COMMISSION

EXAMINER HEARINGSANTA FE, NEW MEXICOHearing Date MARCH 5, 1986Time: 8:15 A.M.

NAME	REPRESENTING	LOCATION
W. I. Kellorhin 1 Sol Cooter	Kellorhin & Kellorhin 1 Sol Kellorhin	Santa Fe
Leon Hampton Bruce Berthel Ernie Busch	Daiport Oil BISON PET. CORP. NMOC	Dallas TX Amarillo, TX date
William L. Paul	Tampbell and Paul	Santa Fe
Dan Dutton Louis Mazzucco Bill Anderson	Cons Engz NEARBURG PROXIM CO. Wolfcamp-1985 Venture (Manzano)	Santa Fe MIDLAND. Roswell
Paul Lynch	BUREAU ROYALTY CO	W. FALLS, TX
Tracy Licoe DARRELL McRAVE	Byram CHAVEROO OPERATING	SF HOUSTON, TX

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I N D E X

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STATEMENT BY MR. COOTER

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FRED LYNCH

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Direct Examination by Mr. Cooter

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Cross Examination by Mr. Stogner

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Cross Examination by Mr. Taylor

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LEON LAMPERT

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Direct Examination by Mr. Cooter

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Cross Examination by Mr. Stogner

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E X H I B I T S

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Burk Exhibit Seven, Application

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Burk Exhibit Eight, Document

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Burk Exhibit Nine, Plat

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Burk Exhibit Ten, Water Sample

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Burk Exhibit Eleven, Return Receipts

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MR. STOGNER: Call next Case

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Number 8840.

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MR. TAYLOR: The application of

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Burk Royalty Company for a waterflood project, Chaves Coun-

6

ty, New Mexico.

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MR. STOGNER: Call for appear-

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ances.

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MR. COOTER: Paul Cooter, with

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the Rodey Law Firm in Santa Fe, appearing on behalf of the

11

applicant, Burk Royalty Company.

12

I have two witnesses, Fred

13

Lynch and Leon Lampert.

14

MR. STOGNER: Are there any

15

other appearances in this matter?

16

Will the witnesses please

17

stand?

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(Witnesses sworn.)

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MR. COOTER: Mr. Examiner, this

22

is a continuation of the hearing that commenced on January

23

22. Subsequent to that hearing the Commission entered its

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order in Order No. R-8140 on the application to form or ap-

25

proved the South Lucky Lake Queen Unit, in which Burk Royal-

1 ty Company was the operator.

2 If you'll recall at that time
3 there was one unleased Federal tract and since that time
4 Federal Lease NM-65397, covering the east half of the
5 northeast quarter of Section 28 in 15 South, 29 East, which
6 was Tract 9, was issued to Dalport Oil Corporation.

7 The BLM, of course, had ap-
8 proved the unit and that was part of the prior Exhibit Two.
9 That approval was on November 21 of last year.

10 The Exhibits Number One through
11 Six were offered and received at that prior hearing, so with
12 the approval of the Examiner we have marked our first exhi-
13 bit for this hearing as Exhibit Number Seven, which is the
14 -- entitled Application of Waterflood.

15 MR. STOGNER: Thank you, Mr.
16 Cooter. For the record, I'll take administrative notice of
17 Case No. 8808, which was the case for the unit heard January
18 22nd, 1986, and Order No. R-8140 was subsequently issued for
19 that particular case.

20

21

FRED LYNCH,

22 being called as a witness and being duly sworn upon his
23 oath, testified as follows, to-wit:

24

25

DIRECT EXAMINATION

1
2 BY MR. COOTER:

3 Q Would you state your name for the record,
4 please, sir?

5 A Fred Lynch.

6 Q And by whom are you employed?

7 A Burk Royalty Company, Wichita Falls,
8 Texas.

9 Q And your position with the company?

10 A I'm in charge of the secondary operations
11 of the company.

12 Q Were you sworn and testified as a witness
13 at that January 22, 1986, hearing?

14 A I was.

15 Q What does Burk Royalty Company seek by
16 this supplemental application?

17 A We wish to seek permission to waterflood
18 the South Lucky Lake Queen Unit.

19 Q In your prior testimony did you testify
20 as to the cost of the flood?

21 A Yes, I did.

22 Q And the economic justification for the
23 flood?

24 A Yes, I did.

25 Q Your testimony was based on what price

1 oil?

2 A \$27.00.

3 Q That, of course, has changed in the in-
4 terim.

5 A Yes.

6 Q Let me direct your attention to the fol-
7 der which has been marked as Exhibit Number Seven.

8 What is the first document in that exhi-
9 bit?

10 A The first document shows the injection
11 wells that we wish to put on injection. It has the well da-
12 ta and schematic drawings of each well.

13 Q Refer, if you would, to the map of the
14 unit, which I believe was Exhibit A to what was marked as
15 Exhibit Four at the last hearing.

16 That is a map of the unit, is it not?

17 A That is correct.

18 Q And the injection wells are marked on
19 that exhibit?

20 A That is correct.

21 Q How are they marked?

22 A They're marked with a circle around the
23 dot of the well.

24 Q All right, using that as -- to discuss
25 each well, then go back to your injection well data sheets,

1 which are attached to the Form C-108, and identify those
2 wells, please, sir.

3 A Okay. There's -- the first well is the
4 Jones Federal No. 1.

5 Q Is that in Tract 2?

6 A Tract 2, Well No. 1.

7 The second well is the Jones Federal No.
8 4, which could be identified as Tract 2, Well No. 4.

9 The Yates Petroleum Federal "DH" No. 1,
10 which would be designated as Tract 1, Well No. 1.

11 Harris State 16, which is a Read and Ste-
12 vens Well, Well No. 1, which would be designated by Tract 7
13 No. 1.

14 The Dalport Oil Corporation Todhunter
15 Federal No. 1, which would be designated as Tract 3, Well
16 No. 1.

17 Bison Petroleum's Owen Federal Lease Well
18 No. 1, which would be identified as Tract 4, Well No. 1.

19 Read and Stevens South Lucky Lake Federal
20 Well No. 1, which would be designated as Tract 5 Well No. 1.

21 Q There are seven proposed injection wells,
22 are there not?

23 A That is correct.

24 Q And for each one of those you've prepared
25 a separate injection well data sheet on -- using the Commis-

1 sion's form.

2 A That is correct.

3 Q Following those data sheets, what's the
4 next part of this exhibit?

5 A Is that your map?

6 Q Yeah, that's your map.

7 A A map which shows the wells and leases
8 within two miles of any proposed injection well, with a one-
9 half mile radius circle drawn around each proposed injection
10 well, and that circle identifies the wells area of review.

11 Q All right, now have you -- it's before
12 that, I think, before you come to -- just right after --
13 yeah.

14 A All right.

15 Q Is -- is that the next page in this exhi-
16 bit?

17 A That is correct.

18 Q The 2-mile parameter is shown --

19 A That is correct.

20 Q -- as well as the circles around the -- a
21 half mile around each of your proposed injection wells.

22 A That's right. That is called the area of
23 review.

24 Q All right, turn to the next two pages, if
25 you would, and what is shown by those?

1 A This is a tabulation of all wells that
2 fall in the area of review, showing location, completion,
3 casing zones, perfs, frac, potentials, and current status
4 of each well. Two pages of that.

5 Q Following that there appear some
6 schematics. What are -- are those?

7 A These schematics are drawings of the
8 plugged wells which fall within the area of review, and
9 there are seven such wells.

10 At a prior meeting with the examiner we
11 did not have the Hall Carper Well, which we obtained from
12 the Bureau of -- from the Federal people in Roswell.

13 That well is plugged properly.

14 Q That's on the second of the two pages of
15 your schematics.

16 A That's right. That's the Hall Carper
17 Federal No. 1.

18 Q And have you included all plugged wells
19 within that area of review?

20 A Yes, sir.

21 Q Let me ask you to skip the next few pages
22 and go over to your proposed operation for this waterflood.
23 We're going to come back to some of those omitted pages in a
24 minute, but let's turn to that proposed operation and ask
25 you to explain that.

1 A Okay, the proposed operation of the
2 flood, the average injection rate we would like, would be
3 300 barrels per day with a maximum daily rate of 600 barrels
4 per day.

5 The system will be closed injection sys-
6 tem.

7 We would like to have an average injec-
8 tion pressure to be reached of 850 psig with a maximum of
9 1100 psig.

10 Of course, when you start the flood slow-
11 ly, you have lower pressures and they will eventually work
12 to these pressures.

13 Q Let me stop you right there. That --
14 that -- you're -- what you seek in the -- in the way of in-
15 jection pressure would exceed the OCD guideline standard of

16 A Yes, it would.

17 Q Using that standard, what would be your
18 injection pressure?

19 A The injection pressure using that stand-
20 ard would be .2 psi per foot of depth, which would be .2 of
21 1800, which would be 360 pounds.

22 Q Why do you seek a variance?

23 A We feel that the wells, especially the
24 tighter wells that we are putting on injection, will not
25 take water at this pressure.

1 Q Let me ask you to go back to the map of
2 your area of review earlier in the exhibit. Are there other
3 Queen waterfloods in this area?

4 A Yes, there are.

5 Q Can you show -- show where they are on
6 that map?

7 A Yes. Just to the east of this proposed
8 flood, approximately a mile and a half lies Jack McClellan's
9 Sulimar Queen Unit, which has been under flood for
10 some time, and a few miles to the -- two or three miles to
11 the north and east lies the Double-L Queen Unit, which is
12 operated by Burk Royalty Company, and which has been under
13 flood since March of 1979.

14 Q Are those floods of the same Queen forma-
15 tion as what you seek to waterflood in this instance?

16 A They are the same formation. The Sulimar
17 Queen and the Double-L lie a little bit deeper than this
18 proposed unit, but geologically they are very similar reser-
19 voirs.

20 Q Do you have any information about the in-
21 jection pressures used in those two floods?

22 A Yes, sir, I do.

23 Q Let's start with the Sulimar. Do you
24 have anything on it?

25 A All right. This is under remarks; I have

1 a remarks column.

2 Jack McClellan of Roswell operates this
3 flood and it is operating at a wellhead pressure of 1000
4 psig.

5 Q Were there -- do you have any information
6 on any step rate tests that were --

7 A I have one step rate test, which is the
8 following page, that was run on the Sulimar Queen Tract 1
9 Well No. 11, and this step rate test indicates that the frac
10 pressure of the reservoir is 1340 pounds. That is shown in
11 the columns presented and also following that, the graph,
12 which shows the step rate test and then at the point where
13 it reaches 1340 pounds it just becomes a level line.

14 May I say something about the frac pres-
15 sures, wells, or do you want to go ahead?

16 Q In the Double-L Queen?

17 A No, in this South Lucky Lake.

18 Q Let's go into the Double-L Queen first
19 and --

20 A All right.

21 Q -- and then we'll get back to that.

22 Do you have any information about the in-
23 jection pressures that have been used in the Double-L Queen?

24 A All right, the Double-L Queen Unit, which
25 is operated by Burk Royalty Company, has a wellhead pressure

1 of 900 psig.

2 Q What about -- let me ask you to turn to
3 the page following your Sulimar step rate test --

4 A All right.

5 Q -- and ask you to identify that.

6 A This is an engineering report that is
7 prepared each month on this particular flood by myself, and
8 it shows the water injection report for January of '86. As
9 one can see, the well numbers are identified to the left.
10 There are twenty wells.

11 The injection rate is the second, the
12 third column over.

13 The average pressures for the month is
14 the fourth column, and as one can see, those pressures vary
15 but do go up to, I believe, a maximum there of 905 pounds on
16 one well.

17 Q In addition -- let me strike that.

18 Is there fresh water in this immediate
19 waterflood area?

20 A No, sir, not in the immediate area.

21 Q In addition to your experience that
22 you've had or can see in the two adjacent waterfloods to
23 support your application for a variance in the injection
24 pressure, let me go back to the injection well data sheets
25 for the seven wells and ask you to point out to the examiner

1 the cementing program that was applied to each one of those
2 wells.

3 A All right. On the schematic drawings,
4 and also in the written tabular data, the top of the cement
5 is indicated in each of those injection wells. They vary
6 from 600 feet to 1263 feet, indicating that these wells have
7 been well cemented and the location should be well pro-
8 tected.

9 Q In all instances in those injection wells
10 is the top of the cement for the production casing well
11 above the -- the top of the formation to be flooded?

12 A That is correct.

13 Q Was there any other additional reason
14 that supports your request for a variance?

15 A All right. Under remarks again, where I
16 showed the floods and the pressures that these two floods
17 operated under, these floods have experienced no problems
18 with respect to water injection, no channeling or loss of
19 water up or down the hole has occurred.

20 Q What about the fracs on the wells in the
21 -- in the South Lucky Lake?

22 A Okay. Back under the tabulation of data
23 for all wells within a half mile of an injection well, we
24 show the frac instantaneous shutdown pressure, or shut-in
25 pressure, and these vary from 2150 pounds down to 1100

1 pounds, so taking the lowest instantaneous shut-in pres-
2 sures, which is 1100 pounds, that is the pressure, the maxi-
3 mum pressure that is asked for this flood, and we feel like
4 the instantaneous shutdown pressure after frac of a well is
5 the frac pressure, frac gradient of that well.

6 Q Next let me ask you to turn to the water
7 analysis reports contained in the exhibit. What is the
8 source of the water that's proposed to be used?

9 A The waters to be used to flood this pro-
10 perty will be purchased from the City of Carlsbad and it is
11 fresh water and there is a water analysis report shown on
12 this particular water.

13 The other source of water to flood will
14 be produced water. These waters will be commingled. There
15 is also a water analysis report on the produced water from
16 these wells at present. There is an other water analysis
17 report of a mixture of these two waters, which is composed
18 of 60 percent fresh water and 40 percent produced water, as
19 shown in this report, also .

20 And there is no indication of noncompat-
21 ibility or any problems with these waters as a mixture. The
22 Sulimar flood and the Delaware are both using the same
23 water.

24 Q Describe, if you would, your stimulation
25 program.

1 A The stimulation program, the -- we will
2 simply take the injection wells, pull tubing and rods,
3 clean them out, acidize, set packers and tubing, and put
4 them on injection.

5 May I say one thing more about the cas-
6 ing?

7 Q Yes, sir.

8 A All surface casing has been cemented to
9 the surface.

10 Q The last page of the exhibit is a sheet
11 setting forth the various working interest owners, leasehold
12 operators, surface owners . Were they all mailed copies of
13 the From C-108 with the attachments?

14 A Yes, they were and they also, the surface
15 owner, and we received the certified copies back from each
16 one.

17 MR. COOTER: We didn't plan to
18 offer the return receipts, although we do have them if the
19 --

20 A I have them if you need them.

21 MR. STOGNER: I think it would
22 be a good thing to put those in the record, so --

23 MR. COOTER: All right. Again,
24 I'm slow. I really ought to move, I guess, for consolida-
25 tion of 8808 and 8840 for evidence.

1 MR. STOGNER: Cases 8808 -- we
2 took administrative notice of Case 8808, I believe that
3 should be sufficient.

4 MR. COOTER: Okay.

5 MR. STOGNER: We'll take that
6 record into account.

7 MR. COOTER: That's all the
8 questions I have for Mr. Lynch.

9

10 CROSS EXAMINATION

11 BY MR. STOGNER:

12 Q Mr. Lynch.

13 A Yes, sir.

14 Q We've got all this computer readout, tab-
15 ulation of data, all wells within a half mile of an injec-
16 tion well?

17 A Yes, sir.

18 Q Over there on the third column before the
19 end, frac ISDP pounds. You referred to that as being
20 instantaneous shutdown pressure?

21 A Yes, sir.

22 Q Could you please expound on that a little
23 bit? What exactly does that mean and how is it measured?

24 A All right. As you can see, just nearly
25 all of the wells in this unit were originally fraced, and as

1 you frac the well you pump your oil and your sand into the
2 well, and when you discontinue your pumping, you shut the
3 pumps down and at that instant you record the pressure. You
4 may be fracing, say, a 2500 pound, and when you shut the
5 pumps down, instantaneous you read, and they read these
6 pressures.

7 Q Thank you, sir. In looking at the cement
8 used behind the production casing, that's over there on the
9 seventh column to the end, one in particular one stands out,
10 that's the Hall Carper Federal Well No. 1, and I believe you
11 have a schematic on that well.

12 You show that it was plugged with 50 --
13 or it was cemented with 50 sacks of cement. Do you know
14 what the top of the cement behind that casing is? Or would
15 be?

16 A No, sir, I don't.

17 Q You show a page with several schematics
18 of plugged wells within the area of review and in quite a
19 few of them the -- especially around the footage of about
20 1750 feet, 1700 feet to 1750 feet, you show that at -- it
21 was plugged with heavy mud at that particular point.

22 With the higher injection pressures do
23 you see any adverse effect in migration of this fluid with
24 the higher injection pressures into this heavy mud?

25 A No, sir, I believe that the plugs in the

1 wells covered the Queen section and I do not believe it
2 would continue over unless it was out of zone.

3 Q Okay, let's take a look at that Helms, et
4 al, Stevens Well No. 1. That's the schematic of the middle
5 well on the lower portion of the page, Section 22, Township
6 15 South, Range 29 East. You show that there's mud down to
7 1900 feet, is that correct?

8 A That's correct.

9 Q All right, now that's -- that has a mud
10 layer within the Queen, is that right?

11 A Well, I feel like a 10-sack plug -- well,
12 let's see, wait just a minute -- the --no, it has a -- that
13 is below the Queen.

14 There are two 10-sack plugs from 1900 to
15 1760, which should cover the Queen.

16 That was a -- that was a deeper well,
17 that's right.

18 Q Mr. Lynch, have you reviewed these plugged
19 wells with the Supervisor of the Artesia District Office,
20 Mr. Les Clements?

21 A No, sir.

22 Q Concerning the higher pressure and what
23 you're seeking, Mr. Lynch, when you began your injection
24 process in this particular pool, in this particular unit, I
25 should say, what pressures do you plan to increase at that

1 time and is there a slow, gradual increase in injection
2 pressure?

3 A That is correct. We will probably start
4 up with something like 100 psig and observe the wells and if
5 necessary, increase the pressure for the tight wells to take
6 water, or if some of the wells take a lot of water, we would
7 have to choke them back.

8 But it will be a very slow process,
9 that's correct.

10 Q But at no time do you seek -- the maximum
11 pressure at this time which you seek is 1100 psig --

12 A Yes, sir.

13 Q -- for any of the wells.

14 A Unless some of the tighter wells will not
15 take water. We will have to go to a pressure in which they
16 will take water, which I don't know, you know, exactly what
17 that might be.

18 Q But at this particular time the maximum
19 injection pressure which you're proposing is right at 1100
20 psig.

21 A That's correct.

22 MR. STOGNER: Mr. Cooter, do
23 you -- does your next witness plan to go into the water --

24 MR. COOTER: Yes, sir.

25 Q Some of your injection wells in there,

1 Mr. Lynch, when were they drilled, roughly?

2 A Let's see, do you know the date? Let's
3 see.

4 Q Fifties? Sixties? Seventies?

5 A Let's see, drilled in the seventies, is
6 that right?

7 MR. COOTER: Yeah.

8 A In the seventies.

9 Q Okay. Will these wells be tested before
10 the -- will the casing be tested in these wells before
11 injection?

12 A I -- we normally do and I think, do you
13 not have a requirement that we have to?

14 Q I'm sure there will probably be a
15 requirement in there. I just want to be sure.

16 A Yes, sir, they will.

17 Q Thank you, sir.

18 A Okay.

19 MR. STOGNER: I have no further
20 questions of Mr. Lynch at this time.

21 Are there any other questions
22 of this witness?

23 Q Mr. Lynch, I'm sorry, one more question
24 here.

25 I don't have that particular case file

1 from Case Number 8808. Do you remember offhand the unit
2 boundaries with this unit?

3 A Yes.

4 (No further oral response was heard by
5 the reporter.)

6

7

CROSS EXAMINATION

8 BY MR. TAYLOR:

9 Q Mr. Lynch, looking over your notification
10 to other operators and the surface owners, there's a couple
11 that I -- it looks generally like you've got everybody but
12 there's a couple that I'm not sure on.

13 In the northwest quarter of Section 21, I
14 don't know if you've notified them. Will you look at that
15 and see who the -- either the owner of the property is or
16 the lessee?

17 A Northwest of 21? Federal government.

18 Q Yeah, they're the owner but who is the
19 lessee -- the operator there? Have you notified them or is
20 it unleased?

21 A That's Jack McClellan, isn't it? It's
22 possibly Jack McClellan.

23 Q Yeah, I just couldn't tell what that is.

24 A Jack McClellan --

25 Q Has got the northwest there? So that is

1 Jack McClellan?

2 A Yes, sir.

3 Q Okay, and --

4 A He was sent a notice.

5 Q Yeah, okay. I just couldn't tell who the
6 operator was there.

7 A Yeah.

8 Q And the other one I have a question on is
9 the northwest of the southeast -- no, the northwest of the
10 northeast of 22. I just can't tell who that is, who the
11 operator is.

12 A Armstrong.

13 Q Okay, and you've notified them.

14 A Armstrong.

15 MR. COOTER: Armstrong.

16 Q And on Section 16 the State is the owner
17 of that property and I don't believe you've notified them,
18 but you do have an injection well on that property, do you
19 not?

20 A That's correct.

21 Q Could you send them a copy of your applica-
22 tion, unless you already have. Maybe you --

23 A I have sent them that. I don't know why
24 it isn't on here.

25 Q -- have in the last case, right?

1 A Commissioner of Public Lands, I believe
2 it was.

3 Q Okay.

4 MR. STOGNER: And in that par-
5 ticular notice at that time you notified them that you were
6 planning a waterflood, is that correct?

7 A That's correct. The application was sent
8 to them.

9 Q Okay, thank you. I just wanted to
10 clarify --

11 A Yes, that's correct.

12 Q -- the record.

13 MR. STOGNER: I have no further
14 questions of Mr. Lynch.

15 Are there any other questions
16 of this witness?

17 If not, he may be excused.

18 MR. COOTER: The next witness
19 we'll call is Leon Lampert.

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LEON LAMPERT,

22 being called as a witness and being duly sworn upon his
23 oath, testified as follows, to-wit:

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DIRECT EXAMINATION

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BY MR. COOTER:

Q State your name for the record, please, sir.

A Leon Lampert.

Q And by whom are you employed, Mr. Lampert?

A Dalport Oil Corporation out of Dallas.

Q And what's your position with the company?

A I'm a geologist and vice president.

Q Were you sworn and did you testify at the hearing in Case Number 8808 on January 22 of this year?

A Yes, sir.

Q Let me direct your attention, if I could, very briefly, back to one of the exhibits that was offered and that was Exhibit Five, which I guess you -- let's go back to that Exhibit Number Five for just a minute and ask you to -- to briefly explain that.

A Exhibit Five is a north/south cross section from the center of the field northward across one of the producing wells up to a dry hole, the No. 216 Harris, which is -- which made water. And the cross section simply shows the gas/oil contact, which is on the far left, shown on the far left in the Dalport Bison No. 1 Owen, and as you

1 move down dip toward the Bison 2 Owen, you see in the log
2 there the oil column with a little bit of gas on top of it,
3 and further north, in the third one from the left, the Reed
4 Lucky Lake, which shows most of the oil column, and then the
5 fourth one, the far right log, is the one that went into
6 water.

7 And it just shows the, basically, the
8 thickness of the sand does not change at all, very, very
9 much, and shows the water contact on the far right, and the
10 oil/gas contact on the far left.

11 Q What are the formations which overlay and
12 underlie the proposed water -- formation to be waterflooded?

13 A Underlying it is the Queen. It's still
14 Queen. It's tight anhydrites and red shales, tight red
15 sands.

16 About 200 feet below this Queen that you
17 see on the cross section is the top of the Penrose which has
18 never produced in the area. It's a tight red sand we've re-
19 corded in other wells.

20 Below the Penrose about another 200 feet,
21 which would be 400 feet below the Queen, is the top of the
22 Grayburg, which is very tight, has never produced in this
23 vicinity.

24 Basically, then, between 4 and 500 feet
25 below the Queen there is nothing that's productive, or has

1 been productive in about a 100 square mile area, more than
2 100 square mile; probably a 200 square mile area.

3 Above the Queen is the Seven Rivers for-
4 mation, again salts, red shales, red sands. They extend
5 from about a depth of 1700 feet up to a depth of 1200 feet.
6 The Seven Rivers has never produced, either.

7 Above the Seven Rivers is the Yates, red
8 shaly sands. It has never produced in the area, and the
9 Yates comes in at about 12 -- 11 or 1200 feet and 100 feet
10 thick.

11 So there -- 500 feet above and 500 feet
12 below there are no producing sands. There are no water
13 sands; no fresh water sands or productive sands in the area.

14 Q Let me next direct your attention to the
15 three exhibits which have been marked as Eight, Nine, and
16 Ten, and ask you to explain those to Mr. Stogner.

17 A Exhibit Eight was originally -- the
18 information was originally derived several years, many years
19 ago, ten or fifteen years ago when we would come to the Com-
20 mission for pit exceptions, and I talked to the ranchers out
21 in that area and discussed where the fresh water was, and I
22 found this map and I read the Bureau of Mines, New Mexico
23 Bureau of Mines publication on Eddy County, and the Bureau
24 of Mines publication indicated that the water in this area
25 all travels southward. The gradient is from north toward

1 the south, toward Artesia and Carlsbad, in all the water
2 sands.

3 The rancher that I spoke to discussed
4 each -- and he was with the, oh, the Turkey Track Ranch, he
5 was the general manager, Millard Derrick, I believe his name
6 is, discussed the water in great detail and said it's very
7 hard to find. You have to drill wells in many places and
8 the ones you see there on this exhibit are the only ones
9 that are producing water from the subsurface.

10 The nearest well to the waterflood is 2-
11 1/2 miles to the north in Section 3, called the Little Lucky
12 Lake -- Little Lucky Well. It's a depth of 160 feet. It is
13 good water. We feel that since that well is north of us and
14 that the well -- direction of water flow is from -- to the
15 south, that if there's ever any water that is produced out
16 of zone in the flood, which I doubt will happen, the water
17 will head south and in the south direction from the water-
18 flood there aren't any other water wells.

19 There are some way off to the west about
20 five miles west, so we feel that there is no danger of any
21 contamination of fresh water in the area whatsoever.

22 As we mentioned a week or so ago with a
23 -- in a preliminary hearing here in Santa Fe, the Double-L
24 and Sulimar Fields have been checked for fresh water leaks.
25 There are been no problems in those other two fields, and so

1 we do not anticipate any fresh water leakages in this field,
2 either.

3 So, water, basically, water is hard to
4 find and is two and a half miles to the north of our flood,
5 and any water that we might have spilled would head south,
6 away from that water well.

7 Q Before you leave that Lucky -- Little
8 Lucky water well, let me direct your attention to Exhibit
9 Number Ten and ask you to identify that.

10 A Exhibit Ten is a sample of water taken
11 from the Little Lucky Well back in, well, February 15th, and
12 it just shows it's good fresh water, very low chlorides, 658
13 parts per million chlorides. It's a good well, there's no
14 question about it.

15 Q And now let's go to Exhibit Number Nine,
16 if you would.

17 A Exhibit Nine is just a plat of the area
18 and where you see in yellow, where it says "no water" on
19 various wells, these were cable tool wells drilled in the
20 field. I think it's every cable -- almost every cable tool
21 well drilled, and -- that we have records on, and they show
22 no water in that entire hole from zero all the way down to
23 the Queen, which backs up what I said about the lack of
24 fresh water in the area, in the flood area.

25 Q Mr. Lampert, in your opinion would the

1 granting of this application be in the best interest of
2 conservation?

3 A Yes, sir.

4 Q And are the correlative rights of the
5 various parties concerned protected?

6 A Yes.

7 MR. COOTER: That concludes our
8 direct testimony.

9
10 CROSS EXAMINATION

11 BY MR. STOGNER:

12 Q Mr. Lampert, you show here on Exhibit
13 Number Eight the direction of the water being generally in a
14 southern direction but bearing to the west somewhat.

15 What is the closest water well to the --
16 to the south of your unit?

17 A It would be to the left there on that
18 map, the Butler Springs Basin Well, in 15 South, 28; the
19 sections are not marked on this map but it would be approxi-
20 mately Section 26 of 15 South, 28, the Butler Springs Basin
21 Well. It should be marked in blue.

22 Q Okay. That's more of a westerly direc-
23 tion there.

24 A It's west. It is west. There's nothing
25 due south for miles, miles and miles. There's -- in fact,

1 there's nothing due south. It would all be to the south-
2 west. The two ones in blue, it looks like there's a Self
3 (sic) well in Eddy County in 28 East, which is just, gosh,
4 that's ten miles away; ten miles southwest of the proposed
5 flood.

6 Q Well, in looking at Exhibit Number Nine
7 there, and Exhibit Number Eight, the closest well to the
8 north, being the Little Lucky Well up there in Section 3,
9 and then you show by Exhibit Number Nine that no water was
10 encountered when those wells were cable tooled, and what --
11 what seems to be the barrier between the two?

12 A Well, this is what the rancher was dis-
13 cussing. These little sand bodies are very lenticular and
14 don't go very far. 160 feet would put it right about in the
15 first Rustler, top of the first Rustler anhydrite area, and
16 from what the rancher told me, it's just -- they're very
17 lenticular and all the wells they've tried to drill have
18 failed, and water is just hard to come by in that area, and
19 so therefore in the flood area, it just bears out what this
20 rancher was saying, that we had no water, even though 2-1/2
21 miles to the north there was some water, but the answer is
22 it's just lenticular sand bodies that don't go very far.

23 Q Okay. Mr. Lynch, in his testimony pre-
24 vious to yours, mentioned that the surface casing in all the
25 wells had been cemented back to surface. Is that your

1 understanding?

2 A Yes, sir, that's correct.

3 Q And how about the producing wells in this
4 particular area?

5 A Yes, sir, everything there, that was a
6 state requirement, everything has been circulated to surface
7 on -- the surface casing has been circulated to surface.

8 Q Do you know if any of those wells encoun-
9 tered water?

10 A They have not, as far as I know, they
11 have not.

12 MR. STOGNER: I have no further
13 questions of Mr. Lampert.

14 Is there any other questions of
15 this witness?

16 I'll take administrative notice
17 also of the Exhibit Number Five in Case Number 8808. That
18 was the cross section on which you elaborated earlier in
19 your testimony this morning.

20 If there is no questions of
21 this witness, he may be excused.

22 MR. COOTER: Mr. Examiner, we
23 would offer Exhibits Seven through Ten, I believe. They
24 have been marked, and request permission to file the return
25 receipts as Exhibit Number Eleven.

1 MR. STOGNER: Thank you, Mr.
2 Cooter.

3 Exhibits Number Seven through
4 Ten, plus Exhibit Number Eleven, which is the return re-
5 ceipts copies, will be admitted into evidence at this time.

6 MR. COOTER: We now have the
7 Exhibit Number Eleven.

8 MR. STOGNER: Is there anything
9 further in Case Number 8840?

10 MR. COOTER: That concludes our
11 presentation.

12 MR. STOGNER: Case Number 8840
13 will be taken under advisement at this time.

14

15 (Hearing concluded.)

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C E R T I F I C A T E

I, SALLY W. BOYD, C.S.R., DO HEREBY
CERTIFY that the foregoing Transcript of Hearing before the
Oil Conservation Division (Commission) was reported by me;
that the said transcript is a full, true, and correct record
of the hearing, prepared by me to the best of my ability.

Sally W. Boyd CSR

I do hereby certify that the foregoing is
a complete record of the proceedings in
the Examiner hearing of Case No. 8840
heard by me on 5 March 1986.

Michael E. Stegner, Examiner
Oil Conservation Division