

NEW MEXICO OIL CONSERVATION COMMISSION

EXAMINER HEARINGSANTA FE, NEW MEXICOHearing Date JANUARY 22, 1986 Time: 8:15 A.M.

NAME	REPRESENTING	LOCATION
Dionisio	B+E INC.	Edgy Co
Karen Duboy	Kellam Kellchen	Santa Fe
Paul Huber	Byram	Santa Fe
WAYNE T. LEMOI	BURK ROYALTY CO.	WICHITA FALLS, TX
AL NORRIS	BURK ROYALTY Co	WICHITA FALLS, TX
Paul Coater	Kader Lee	Santa Fe
William J. Sam	Goughell and Jack P.A.	Santa Fe
LEON Lampert	Dalport Oil Corp	Corpus Christi,
FRED LYNETT	BURK Royalty Co	W. Falls, TX
Chad Wilson	Dickson, Fish & Vandiver	Artesian, NM
Randy Tate	TXO production	Midland TX
W. G. Mc Coy	Springer	Midland, TX
Joe Lemay	TXO	Midland
Guest State	S.L.O.	Santa Fe
Mark Harberg	Nearberg Prod. Co.	Rollas, TX

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NAME	REPRESENTING	LOCATION
W. T. Kellohim Dan Miller	Kellohim & Kellohim Cons. Engrs	Santa Fe Santa Fe

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FRED LYNCH

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LEON LAMPERT

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MR. STOGNER: Call next Case
Number 8808.

MR. TAYLOR: Application of
Burk Royalty Company for a unit agreement, Chaves County,
New Mexico.

We'll now call for appearances
in this matter.

MR. COOTER: Paul Cooter, with
the Rodey Law Firm in Santa Fe, appearing on behalf of the
applicant.

We have three witnesses, Al
Norris, Fred Lynch, and Leon Lampert.

MR. STOGNER: Are there any
other appearances?

Will all the witnesses please
stand at this time and be sworn?

(Witnesses sworn.)

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

1 DIRECT EXAMINATION

2 BY MR. COOTER:

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

5 A Al Norris.

6 Q By whom are you employed, Mr. Norris?

7 A Burk Royalty Company.

8 Q What is your present position with Burk
9 Royalty Company?

10 A Land Manager.

11 Q Briefly relate for the record your pro-
12 fessional experience.13 A I've been Land Manager for Burk Royalty
14 Company for the past seven and a half years.

15 Q And where were you before that?

16 A I was in business for myself.

17 Q For how long, Mr. Norris?

18 A Ten years.

19 Q What does the applicant, Burk Royalty
20 Company seek by this application?21 A The unitization of the Queen Sand,
22 approximately 1700 to 1800, in the South Lucky Lake Field.

23 Q And where is that field?

24 A Chaves County.

25 Q The proposed unit is one for secondary

1 recovery?

2 A Yes, sir.

3 Q How many acres are included in it?

4 A 880.

5 Q Are all those lands covered by either
6 Federal or State leases, or are they Federal or State lands?

7 A Yes, they're Federal and State lands.

8 Q Let me direct your attention to what has
9 been marked as Exhibit Number One. That is the unit agree-
10 ment, is it not?

11 A Yes, sir.

12 Q Let me turn -- direct your attention to
13 the exhibits to that.

14 First, Exhibit A, at the back. That is a
15 map of the proposed unit area?

16 A Yes, sir.

17 Q Is it not?

18 A Yes, it is.

19 Q And Exhibit B, what is that?

20 A Exhibit B gives the description of the
21 lands, the acres, the lease numbers, the royalty owners and
22 percentages, the lessee of record, the overriding percent-
23 ages, and the working interest percentages.

24 Q And --

25 A In each tract.

1 Q And Exhibit C?

2 A Exhibit C is a schedule of the tract par-
3 ticipation.

4 Q Has that unit agreement been signed by
5 all working interest owners and owners of overriding royalty
6 interest?

7 A Yes, it has.

8 Q Has it been approved by the BLM for ___

9 A Yes, sir.

10 Q -- the Federal acreage?

11 A Yes, sir.

12 Q Let me direct your attention, if I may,
13 to the folder which has been marked as Exhibit Two. The
14 first letter in Exhibit Two is the letter of transmittal
15 with that approval, is it not?

16 A That is correct, sir.

17 Q Dated November 21, 1985?

18 A Yes, sir.

19 Q And that is followed by the certification
20 and determination.

21 A Yes, sir.

22 Q You hesitated when I said it's covered by
23 all of the -- all of the lands are covered by either Federal
24 or State leases. What was the reason for the pause there?

25 A (Not clearly understood).

1 Q Yes.

2 A There is 80 acres, if you will look back
3 at the schedule A, that shows as Tract 9, unleased.

4 Q You're referring to the map, Exhibit A to
5 the unit agreement?

6 A Yes, sir.

7 Q All right.

8 A And that lease is unleased at this mo-
9 ment. It will put up for sale today, and it is subject to
10 the South Luck Lake Queen Unit. Prior to issuance of the
11 lease the successful bidder must join the unit agreement and
12 it gives the numbers.

13 MR. COOTER: The second docu-
14 ment in Exhibit Two, Mr. Examiner, is the copy of the notice
15 of the competitive lease sale to be held this morning, and
16 --

17 A This tract is covered on page four.

18 Q Yeah.

19 A Second item.

20 Q Parcel 26, and then the page with that
21 particular parcel description follows, which is page 7 of
22 the Notice. It is Parcel Number 26.

23 The unit agreement, let me direct your
24 attention to, I think it's Section 23, yes, commencing on
25 page -- at the bottom of page 19 of the unit agreement. It

1 has a provision about the effective date. What is that?

2 A The effective date was November 1, and
3 authorized by the agreement, we have letters signed by all
4 the working interest owners, requesting that it be extended
5 until sixty days -- or six months from November 1.

6 Q That's pursuant to the second paragraph
7 of Section 23 of the unit agreement.

8 A That is right, sir.

9 Q And the letters evidencing that request
10 for extension or approval of the extension are also in Exhi-
11 bit Two.

12 MR. COOTER: They are the let-
13 ters, Mr. Examiner, that are at the back of that particular
14 --

15 A The black one.

16 MR. COOTER: Exhibit Two, at
17 the back of that are the letters from the operator.

18 Q Has the unit agreement and the applica-
19 tion being heard here today been submitted to Ray Graham
20 with the Commissioner's office?

21 A Yes, it has.

22 Q In fact you met with Mr. Graham and his
23 staff yesterday afternoon?

24 A That's correct.

25 Q And this morning they have been furnished

1 copies of all of the exhibits that are being offered here.

2 A That is correct.

3 Q Let me ask you to identify Exhibit Three,
4 if you would. What is Exhibit Three?

5 A It's the unit operating agreement.

6 Q Has it also been signed by all owners of
7 the working interest?

8 A Yes, it has.

9 Q All working interest owners. And Burk
10 Royalty Company will be the operator.

11 A Yes, sir.

12 MR. COOTER: That concludes our
13 direct testimony from this witness.

14

15 CROSS EXAMINATION

16 BY MR. STOGNER:

17 Q Mr. Norris, how many total acres are sub-
18 ject to this unit?

19 A 880.

20 Q How many of those 880 acres are Federal
21 or do you have a breakdown in that?

22 A Yes, sir, it's broke down in Exhibit B of
23 the unit agreement. The schedule is -- the State leases are
24 Tracts 6, 7, 7-A, and 8, covering 160 acres.

25

1 The Federal leases, Tracts 1, 2, 3, 4, 5,
2 and 9, a total of 720.

3 Q And you just propose to unitize the Queen
4 formation, is that correct?

5 A That is correct, sir.

6 Q Is the Queen formation in a designated
7 pool by the Oil Conservation Division, or do you know?

8 A I do not know, sir.

9 Q You refer in here to the Dalport Oil
10 Corporation, that's Dalport, D-A-L-P-O-R-T, Oil
11 Corporation's Jones Federal No. 2 Well, and its subsequent
12 gamma neutron log. Is that on file in our offices in
13 Artesia, or here in Santa Fe?

14 A I do not know, sir, but it is available.

15 Q From?

16 A Mr. Lampert, who will testify later in
17 the morning.

18 Q Okay.

19 MR. COOTER: It's on file. It
20 is on file, Mr. Examiner.

21 MR. STOGNER: Thank you, sir.

22 Okay, I have no further
23 questions of Mr. Norris.

24 Are there any other questions
25 for this witness? If not, he may be excused.

1 MR. COOTER: Call next Mr. Fred
2 Lynch.

3
4 FRED LYNCH,
5 being called as a witness and being duly sworn upon his
6 oath, testified as follows, to-wit:

7
8 DIRECT EXAMINATION

9 BY MR. COOTER?

10 Q Would you state your name for the record,
11 please, sir?

12 A My name is Fred Lynch, L-Y-N-C-H.

13 Q And by whom are you employed?

14 A Burk Royalty Company of Wichita Falls,
15 Texas.

16 Q What is your present position with Burk
17 Royalty?

18 A I'm in charge of the secondary recovery
19 operations for Burk Royalty Company.

20 Q Would you briefly relate for the examiner
21 your professional experience commencing with your college

22 --

23 A Okay, I have a --

24 Q -- degree?

25 A -- BS degree from the University of

1 Texas, 1950, and I've spent the last thirty-three years with
2 Burk Royalty Company.

3 Prior to that I was with another indepen-
4 dent company, working mostly on secondary recovery, also.

5 Q What have been your positions with Burk
6 Royalty over those -- that period of some thirty-three
7 years?

8 A Well, I was a production superintendent
9 or engineer in charge of a larger waterflood in Ward and
10 Pecos County, Texas, called the Peyton Waterflood Unit.
11 That's -- I was hired at that time.

12 This, incidentally, was the first unit-
13 ized waterflood in Texas, and from there I was moved to
14 Gainesville, Texas, as a superintendent and engineer there
15 on a lot of waterfloods we had there, and then brought into
16 the main office as a secondary recovery engineer.

17 Q And when was that?

18 A 1975.

19 Q Have you previously testified before this
20 Oil Conservation Division?

21 A No, I haven't.

22 MR. COOTER: Mr. Examiner, are
23 the witness' qualifications acceptable to you, sir?

24 MR. STOGNER: Mr. Lynch, what
25 did you get your BS degree in?

1 A Petroleum engineering.

2 MR. STOGNER: Thank you, Mr.
3 Lynch.

4 This witness is so qualified.

5 Q You have been in the room and heard the
6 testimony of Al Norris, have you not?

7 A Yes, sir.

8 Q And his testimony as to what Burk Royalty
9 seeks by this application?

10 A Yes, sir.

11 Q Let me direct your attention to Exhibit
12 Number Four and ask you to identify that.

13 A Exhibit Number Four is a proposed engine-
14 ering study for the South Lucky Lake Queen Field Unit, which
15 I guess you want me to go further, though.

16 Q All right, let me change your answer just
17 a little bit, it's the your engineering study for the pro-
18 posed unit.

19 A Yes, sir.

20 Q All right, let me direct your attention,
21 if I may, let's start with page three of that, which is your
22 summary and conclusions.

23 A All right, on the summary and conclu-
24 sions, the field has recovered, as of the time this was
25 written, approximately 182,000 barrels of primary oil and we

1 feel that we will recover at least oil on a one-to-one ratio
2 by secondary recovery, so that would be 182,000 barrels. We
3 feel like this is a very conservative estimate.

4 The life of the flood would extend over
5 approximately 15 years. A profit of 3,025,438 before Feder-
6 al income taxes would be gathered over the life of the
7 flood, and on that statement, let me clarify that as to how
8 oil prices are going right now. That would change the fi-
9 gures, but that is based on our present price, and we have
10 made an effort to unitize with the operators where we have
11 it signed, and a formula has been accepted, the parameters
12 being one-third net acre feet of pay, one-third cumulative
13 oil production from the tracts, and one-third present oil
14 production.

15 Q While we're talking about that, let me
16 ask you to go to the back of that study on the -- no, pre-
17 cedng that while we're talking about the parameters, next
18 page. It is two pages before the map on Exhibit A. Yes,
19 that's it.

20 Is that the computation of colculations
21 of the parameter formula?

22 A Yes, it is.

23 Q Explain that a little bit, if you would.

24 A Well, I think to explain it we should
25 firstly go back to, as you've already seen, the Exhibit A,

1 which is the unit map, the unitized area. And this, as he
2 said, contains 880 acres, of which 370.7 we feel are produc-
3 tive acres.

4 Q Exhibit A to your study is the same as
5 Exhibit A to the unit agreement, is it not?

6 A That is correct, I think.

7 Q Yes.

8 A Yeah. Okay, then the next page shows an
9 Isopach map of the area in which net feet of pay was chosen
10 from the various logs on the wells and this was mapped by
11 our geologist, Leon Lampert.

12 The next page shows the structure map,
13 which mainly indicates the field is dipping off to the east,
14 rising to the west, and entering into a gas cap area.

15 Q Now as part, or in conjunction with those
16 two exhibits, as long as we've talked about them, Mr. Lam-
17 pert has prepared the cross section, which has been marked
18 as Exhibit Number Five, has he not?

19 A That's right.

20 Q Yeah. All right, with -- with reference
21 to the -- or having looked at the Isopach map and the struc-
22 ture map, which are Exhibits B and C to your study, let's go
23 back to the -- your calculation of the parameters for the
24 unitization, if you would.

25 A All right, sir.

1 Q Each lease is listed here under the
2 present ownership, like Dalport has the Jones Federal and
3 the Todhunter Federal, and there's Bison, Read & Stevens,
4 and Yates, that are all in this unit, and then, of course,
5 this unleased property, we do not know who the operator will
6 be.

7 The first column is the productive acres;
8 the second column is acre feet. The acre feet was calcu-
9 lated off the Isopach map drawn by the geologist and plani-
10 metered to the best of our ability to secure the proper acre
11 feet for each tract in this unit. It totals 1727.30 acre
12 feet.

13 The next column would be the percent par-
14 ticipation using that data, the acre feet, for each tract
15 through the unit.

16 The next column is the cumulative oil
17 production for each tract, which was taken from the New Mex-
18 ico Oil and Gas Committee book, I believe, that we receive,
19 that we take.

20 The next column shows the percentage of
21 participation if you were using those figures.

22 Then the present production was taken for
23 the last three months, which was through August of '85.

24 The next column shows the percentage par-
25 ticipation if we used those figures.

1 So now you can compare the three para-
2 meters by working across there on the percentage participa-
3 tion.

4 The next column shows the lease percent-
5 age participation as calculated by the formula, and that
6 would be to add these figures together and divide by three,
7 so that each one would have one-third value, and those are
8 then totaled and come out to the 100 percent.

9 Now the final column is the actual parti-
10 cipation that was agreed upon at the meetings of the opera-
11 tors in which, for example, Bison was given a little more
12 percentage because at the meeting it appeared that they had
13 more present production and cumulative production, and they
14 should be given a little more. So all operators agreed to
15 these percentages.

16 Now if you'll take the case of the State
17 leases, you'll see that they come out just almost the same.
18 Under Read & Stevens, that's the Harris and the Lucky Lake
19 leases.

20 Q But everyone was in accord that the for-
21 mula notwithstanding, to -- to make the changes as
22 evidenced and set forth in your last column.

23 A Uh-huh.

24 Q And that is the agreed participation on a
25 tract by tract basis.

1 A That is correct.

2 Q Let me go back to page eight of your
3 study, eight, and perhaps you can then refer to Exhibit A,
4 and identify the proposed injection wells.

5 A All right. Under waterflood availability
6 and flood pattern we have selected the following wells to be
7 converted to water injection wells, and they're namely Tract
8 1-1, 2-1, 2-4, 3-1, 4-1, 5-1, and 7-1, and if we'll go back
9 to this map you will see the wells that are to be converted
10 are circled.

11 Now I could go through each of these and
12 state why we chose these wells. Of course, we chose them in
13 order to recover what we think is the most efficient recov-
14 ery of oil.

15 Up on Tract 7, Well No. 1, we chose it be-
16 cause of ample pay section and the well should take water
17 amply. Someone might say you want to take Tract 7 No. 2
18 there to the west, but we feel like with a small amount of
19 footage you have, it may not take water as well as the other
20 wells, and of course, to waterflood, you've got to get the
21 water in.

22 The South Lucky Lake Federal No. 1, it's
23 a down dip well; it's a very, very light well. We'd prob-
24 ably -- it's producing now, it makes very little. We feel
25 like converting it is the best thing to do there, because we

1 don't feel it would ever come on as a producer.

2 Now, Bison's Tract 4, we have a gas well,
3 Well No. 1. Now, the reason we have converted that, or wish
4 to convert it, is that this oil is migrating up dip in this
5 reservoir to the west, moving toward that gas cap and we
6 feel like putting that well on injection, and we will put an
7 ample amount of water in it, that we will try to provide a
8 barrier for that oil to contain it back into the main reser-
9 voir, so it will not escape into the gas cap.

10 The wells on Tract 2 and 3 are just more
11 or less patterned and the Yates well to the south we feel
12 like is the best place to have an injection well there, hop-
13 ing that it will help this Kimes Tract, or this tract that
14 has not been leased as yet, and bring oil to that well, and
15 that well has not produced any oil to date.

16 Q While we're talking about that Kimes
17 Tract, Tract 9, being the unleased Federal tract, why is
18 that included in the unit?

19 A Firstly, the BLM insisted that that tract
20 be included in the unit when we had a meeting with them.

21 Secondly our Isopach map does show that
22 we do have some pay in the acreage working in the direction
23 of that well, and we hope that we can move the oil over to
24 that well by injecting water into the "DH" Federal Well.

25 Q The acre feet underlying that tract, the

1 acre feet of the Queen formation has been calculated and is
2 included in the parameters as set forth in the document you
3 previously --

4 A Yes, sir.

5 Q -- previously testified from.

6 A That's right. A total of 7.1 productive
7 acres was included and no production for oil.

8 Q Let me go back to page seven of your
9 study, under Economics. I think that you've probably
10 covered that already briefly. That is the calculation of --
11 of the ultimate recovery under the secondary --

12 A That is -- that is correct.

13 Q -- waterflood.

14 A That is correct. Using 182,000 barrels
15 of oil, which is a primary recovery in the field to date, we
16 feel like we can at least recover one to one on secondary.

17 Now I'd like to say a couple other things
18 here, that three -- three or four miles to the east of us
19 lies Jack McClellan's Sulimar Flood. It is the same Queen
20 zone. To date I don't have the actual production but it has
21 recovered over twice the primary production, so it's a very
22 successful waterflood.

23 I would also like to point out that we
24 operate the Double-L Queen Unit, which is six or seven miles
25 from this flood, and is a very successful flood, and I would

1 like to enter this as an exhibit, I guess you have it, of
2 our production on that particular flood.

3 Q Now you're referring to what's been mar-
4 ked as Exhibit Six.

5 A Exhibit Six. We brought the production
6 from about 50 barrels a day to over 500, and presently we're
7 still producing 380 barrels per day.

8 Primary recovery was 1.6-million. We're
9 up to 876,000, so we feel like we're going to recover prim-
10 ary easily there and profit, and this field, incidentally,
11 the Double-L Queen, is similar geographically, the geology,
12 I mean, just exactly like the little field that we propose
13 to flood in that it has a gas cap to the west, dips off to
14 the east, and the porosity and permeability diminish to the
15 east and it's just exactly the same except the South Lucky
16 Lake is a smaller area.

17 So we feel like it will waterflood real
18 well.

19 Q Let me direct your attention next to
20 pages nine and ten of your study, which is the geological
21 report. Now that part of the study was compiled by Mr. Lam-
22 pert.

23 A Yes, I would like to call him, if it's
24 all right with you, to describe it.

25 Q Well, that's all right, I'm just identi-

1 fying it.

2 A Yes, this is the geological report as
3 prepared by Leon Lampert of Dalport Oil Corporation for this
4 unit, for this field.

5 Q The geological report, together with the
6 cross section, were used to then calculate the net feet, net
7 acre feet of pay under each of the tracts?

8 A That is correct.

9 Q And that figure was then incorporated in
10 your calculations for the parameters.

11 A Yes, sir.

12 Q Mr. Lynch, in your opinion would this
13 unit, if approved by the Oil Conservation Division, and
14 placed in operation under the unit and unit operating agree-
15 ments, prevent waste and protect correlative rights?

16 A Yes, sir, it would.

17 MR. COOTER: Mr. Examiner, we
18 would offer at this time all of the exhibits, being One
19 through Six, and that concludes our examination of this wit-
20 ness.

21 MR. STOGNER: Exhibits One
22 through Six will be admitted into evidence.

23

24

25

1 CROSS EXAMINATION

2 BY MR. STOGNER:

3 Q Mr. Lynch, I assume today that you are
4 presenting this proposed waterflood program just for our in-
5 formation, since Case Number 8808 is beyond the scope of the
6 waterflood, is that correct, and you are not here seeking a
7 waterflood for this unit, is that correct?

8 A We are seeking permission, aren't we, to
9 flood it. We're seeking unitization.

10 Q You are seeking unitization. Your appli-
11 cation did not say anything about a waterflood. We're here
12 today just to be concerned with the unit agreement, is that
13 correct?

14 MR. COOTER: I think under
15 Paragraph Two of our application we seek that, Mr. Examiner.

16 MR. STOGNER: Okay, since we
17 are seeking a waterflood today, I'll have to readvertise
18 this application and that won't get on until the February
19 19th hearing.

20 Q Also, Mr. Lynch, did you follow the rules
21 and regulations of seeking a waterflood as laid out in NMOCD
22 Form C-108?

23 A What does that apply to?

24 Q Then, Mr. Lynch, I would suggest that you
25 obtain a copy of that form and follow the procedures in ob-

1 taining a waterflood; i.e., being notification of all people
2 within a half mile of the proposed injection wells; schem-
3 atics of your injection wells; schematics of any plugged and
4 abandoned wells within a half-mile radius; the production
5 within a two-mile radius of the area of review. It's all
6 laid out in there, and then the general rules and regula-
7 tions of the OCD, of Part 700.

8 MR. COOTER: If we're missing
9 that part, I'll assume responsibility for that, Mr. Exam-
10 iner.

11 Q Mr. Lynch, is this going to be a water-
12 flood or a pressure maintenance --

13 A This will be a waterflood, secondary re-
14 covery.

15 Q So all the wells that are presently pro-
16 ducing within this area are stripper wells.

17 A Yes, sir.

18 Q Do you have a maximum pressure on what
19 you're going to inject?

20 A We would like to have a maximum pressure
21 of about 1500 pounds.

22 Q 1500 pounds.

23 A Uh-huh.

24 Q Are you familiar with our .2 psi per foot
25 injection pressure as being a standard?

1 questions concerning the unit agreement.

2 Are there any other questions
3 of this witness?

4 MR. COOTER: No, sir.

5 MR. STOGNER: If not, he may be
6 excused.

7 Mr. Cooter?

8 MR. COOTER: Mr. Examiner, we
9 had planned to call Leon Lampert as a witness. His geologi-
10 cal report is incorporated in the engineering report pre-
11 pared by Mr. Lynch, and the cross section has already been
12 referred to and admitted into evidence.

13 We would call him and made him
14 available for your questions relating to the calculation of
15 the -- that part of the formula, net acre feet, if you de-
16 sire. If not, we think it's already in, probably.

17 MR. STOGNER: Mr. Cooter, let's
18 go ahead and call him as a witness since he did prepared
19 some of these exhibits.

20 MR. COOTER: Okay.

21 MR. STOGNER: Have him on re-
22 cord.

23 MR. COOTER: All right.

24

25

1 LEON LAMPERT,
2 being called as a witness and being duly sworn upon his
3 oath, testified as follows, to-wit:

4
5 DIRECT EXAMINATION

6 BY MR. COOTER:

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

9 A Leon Lampert.

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

12 A Dalport Oil Corporation.

13 Q And what is your present position with
14 Dalport?

15 A I'm a geologist and Vice-President of Ex-
16 ploration.

17 Q Relate your professional experience very
18 briefly for the Commission, if you would.

19 A I graduated from the University of Texas
20 with a Bachelor's and Master's in geology and worked for an
21 independent company for a couple years, and I've been with
22 Dalport as a geologist for close to twenty-eight years.

23 Q You've previously testified before --

24 A Yes, sir.

25 Q -- this Commission and made your qualifi-

1 cations a matter of record?

2 A Yes.

3 Q And you've been in the room and heard the
4 testimony of both Al Norris and Fred Lynch?

5 A Yes, I have.

6 Q Let me direct your attention to Exhibit
7 Number Five. Identify that, if you would, please.

8 A I prepared this cross section of the South
9 Lucky Lake Pool (not clearly understood) this north/south
10 cross section. The left side is the well that's furthest
11 south. That's the Dalport Owen No. 1, which is a gas well,
12 and then the cross section trends northwesterly and from gas
13 to oil, and the furthest north well, the well made water.

14 And it, this cross section shows the ori-
15 ginal gas/oil contact which was approximately +2085 datum
16 and on the far right it shows the original water, which was
17 approximately +2068, and this is to-wit Fred Lynch referred
18 to awhile ago saying there's a gas cap in the area and
19 there's also water down dip.

20 This, this type of field is similar, like
21 he said, to the Sulimar. It's almost identical to the Suli-
22 mar Field, which is three miles east, and identical to the
23 Double-L, which is about six miles to the northeast.

24 The reason I made the cross section, I
25 thought it would be beneficial for the Commission in that

1 they could see directly as to why there's a trap, an oil
2 trap, and why we propose to put some water into the gas cap.

3 Q Let me direct your attention to that part
4 of Exhibit Number Four commencing on page nine, the geologi-
5 cal report. Did you prepare that?

6 A Yes, sir.

7 Q Explain briefly to the Examiner what's on
8 it.

9 A Well, in this area of east -- southeast-
10 ern Chaves County, there are numerous Queen oil fields and
11 all of them have a porosity pinchout on the west side of the
12 field, where the sand -- the porosity exists east of the
13 pinchout and then porosity extends to the pinchout line and
14 west of the pinchout the sand is tight.

15 This field is just like the rest of them.
16 We've found four or five of these things, and over a fifteen
17 miles area east and west and a twenty-five mile north and
18 south.

19 To date only two of them have been water-
20 flooded; that is, the Sulimar Field, which the McClellan
21 found three miles east, and which has been very, very proli-
22 fic; the Double-L, which Dalport-Burk found in 1969, which
23 is a larger field than Sulimar and it also is very prolific.

24 We felt that this field here, the South
25 Lucky Lake, being concise, small in area and having a small-

1 er gas cap and an oil rim and then a gas, then a water leg
2 down dip, would also flood and be economical.

3 So I prepared this report, this very
4 short geological report, indicating it was -- the trap was
5 due to loss of porosity and permeability up dip to the west,
6 and I mentioned in this report that there is a gas cap and
7 there are some high GOR's in several wells, and I mentioned
8 the wells that had the original high GOR's, and I mention in
9 here where the original oil/water contact was, which was
10 +2066.

11 The water/oil contact seems to tilt
12 downward to the north, which is just exactly what happens in
13 the Double-L/Sulimar area. It's not a horizontal contact;
14 there is a little tilting effect there.

15 Then the last of the report mentions that
16 the sand is a gray/brown, fine-grained sand with good oil
17 shows, of course, and we had approximately 10 feet of pay,
18 which varies per well, and approximately an oil saturation
19 of 17-1/2 percent by core, and a permeability of average 102
20 millidarcies.

21 Q Let me direct your attention to the exhi-
22 bits in that report, the Ispach map and the structure map,
23 which I think they're on back here.

24 A Okay, well, the structure map would be --
25 well, there's no page numbers; near the back end of that

1 green folder.

2 Q From the Ispach map did you then compile
3 the net acre feet of pay under each tract as set forth in
4 the parameter sheet which precedes that?

5 A Yes, sir, we prepared an Isopach and
6 structure map, or I prepared it, and then we went to several
7 meetings with the operators to discuss the net Isopach map,
8 and at the meetings, of course, all the operators discussed
9 their own wells and as to how much pay they thought they had
10 and then over several sessions comprising maybe two years of
11 time, we ironed out what all the operators would agree to,
12 which is this exhibit of the net pay, but originally there
13 were some variances in the meetings that we held.

14 Q But everyone was in accord as the para-
15 meters were finally settled.

16 A Yes, everybody felt very satisfied after
17 all these meetings had been held.

18 So this map actually is a compilation.
19 It's not really my work. It's a compilation of everybody's
20 work, of all the oil operators involved in the field.

21 MR. COOTER: No further ques-
22 tions.

23 MR. STOGNER: I have no further
24 questions of this witness.

25 Are there any other questions

1 of Mr. Lampert?

2

If not, he may be excused.

3

Anything further in this case?

4

MR. COOTER: Nothing further,

5

sir.

6

MR. STOGNER: Does anybody else

7

have anything further in Case Number 8808?

8

If not, this case will be taken

9

under advisement.

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(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 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. 8808,
heard by me on 22 January 1986.

Michael P. [Signature], Examiner
Oil Conservation Division