

STATE OF NEW MEXICO  
ENERGY AND MINERALS DEPARTMENT  
OIL CONSERVATION DIVISION  
STATE LAND OFFICE BLDG.  
SANTA FE, NEW MEXICO  
23 November 1982

EXAMINER HEARING

IN THE MATTER OF:

Application of Petro-Lewis Corpor-  
ation for downhole commingling, Lea  
County, New Mexico.

CASE  
7737

BEFORE: Richard L. Stamets, Examiner

TRANSCRIPT OF HEARING

A P P E A R A N C E S

For the Oil Conservation  
Division:

W. Perry Pearce, Esq.  
Legal Counsel to the Division  
State Land Office Bldg.  
Santa Fe, New Mexico 87501

For the Applicant:

Joel M. Carson, Esq.  
LOSEE, CARSON, & DICKERSON P.A.  
P. O. Drawer 239  
Artesia, New Mexico 88210

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I N D E X

STEVEN KING

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MR. STAMETS: We'll call next Case 7737.

MR. PEARCE: That is on the application of Petro-Lewis Corporation for downhole commingling, Lea County, New Mexico.

MR. CARSON: Mr. Examiner, my name is Joel Carson, Losee, Carson, and Dickerson, P. A., Artesia, New Mexico. I'm here on behalf of the applicant, and I have one witness who needs to be sworn.

(Witness sworn.)

STEVEN KING

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

DIRECT EXAMINATION

BY MR. CARSON:

Q. Will you state your name, please?

A. Steven King.

Q. Mr. King, by whom are you employed?

A. Petro-Lewis Corporation.

Q. In what capacity?

A. As a petroleum engineer.

1  
2 Q Would you tell the Commission a little bit  
3 about your educational background and experience?

4 A Graduated from the University of Missouri  
5 at Rolla in May of 1982 with a BS in petroleum engineering.

6 I started work with Petro-Lewis June 1st of  
7 1982, and have been so employed since then.

8 Q Have you been employed fulltime by Petro-  
9 Lewis since graduation as a petroleum engineer, is that cor-  
10 rect?

11 A Yes, sir.

12 MR. CARSON: Are the witness' qual-  
13 ifications acceptable?

14 MR. STAMETS: They are.

15 Q Mr. King, would you state the purpose of  
16 this application?

17 A The purpose of this application is Petro-  
18 Lewis seeks approval for the downhole commingling of the Abo,  
19 Drinkard, and Blinebry production in the wellbore of its Art  
20 Yeager Well No. 1, located in Unit J, Section 25, Township 21  
21 South, Range 37 East.

22 Q Mr. King, this well, this Art Yeager Well  
23 offsets the Gulf Sarkeys Well No. 2, which has been the sub-  
24 ject of a downhole commingling order No. R-6696, is that not  
25 true?

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2 A. Yes, sir.

3 Q. And the characteristics of these two wells  
4 are somewhat similar, aren't they?

5 A. Yes, sir.

6 Q. And so from time to time we will compare the  
7 characteristics of the Sarkeys No. 2 and the -- this well.

8 A. Yes, sir.

9 Q. And in Order No. R-6696 the Commission, or  
10 the Division, I guess I should say, placed a restriction in  
11 that order, stating that if the Sarkeys Well was shut-in for  
12 more than seven consecutive days, that you would notify the  
13 OCD in Hobbs and would then file a plan for remedial action.

14 A. Yes, sir.

15 Q. And you would -- it would be satisfactory to  
16 you to have such a requirement in this order as well, (inaudible)  
17 to do so.

18 A. Yes, sir.

19 Q. I'm going to refer you to Applicant's Exhibit  
20 Number One, and ask you to identify that exhibit.21 A. This is an application as originally filed  
22 by myself to the Oil Conservation Commission for the downhole  
23 commingling.24 Q. And was that exhibit prepared by you or under  
25 your supervision?

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A. Yes, sir.

Q. Would you in general terms explain that to the Examiner and I think you need to make a correction or two on it, so explain those corrections.

A. The application was filed under Rule 303-C and it was prepared originally for your administrative approval but it had to come in here. And the correction that needs to be made is in Section F of the original application.

Q. There was a gauge pressure that was added to the downhole pressure on the Abo and Drinkard that shouldn't have been included in that -- that pressure. The pressure should be 235 psi.

Q. Is that exhibit prepared from information in the files of the company?

A. Yes, sir.

Q. And is it true and correct to the best of your knowledge?

A. Yes, sir.

Q. I'm going to refer you next to Applicant's Exhibit Number Two and ask you to identify that exhibit, if you will.

A. This is a corrected wellbore schematic. There was a -- lower perforations on the Abo left out on the original application, and they are included on this schematic.

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Q I refer you to Applicant's Exhibit Number Three and ask you to identify that, please.

A These were the -- these are the decline curves on the Art Yeager No. 1 for the Drinkard and Abo formations.

Q Was there -- was that exhibit also prepared by you or under your supervision?

A Yes, sir.

Q I want to refer you to Applicant's Exhibit Number Four, which is not a part of the original package submitted to the Commission, and ask you to identify that.

A It's a current 24-hour test on the Blinebry formation in the Art Yeager No. 1.

Q I hand you what's been marked as Applicant's Exhibit Number Five, which is actually three pages, two of which apply to the Art Yeager No. 1 and the third of which, I believe, is a test results from the Gulf Sarkeys No. 2, which is part of the record in the Commission's , is that not true?

A Yes, sir.

Q Okay, would you explain what those show for the Hearing Officer?

A The first two, the first one itself is the water analysis on the Blinebry formation and it was conducted on July 16th, 1982.

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2 The second is an older water analysis that  
3 was conducted on the Drinkard formation, back 9-9 of '70. We  
4 do not have a water analysis for the Abo formation.

5 The third page is the water analysis which  
6 was conducted on the Gulf Sarkeys No. 2, which offsets the  
7 Art Yeager No. 1 approximately 1830 feet to the northwest.  
8 It is in -- it is currently triple commingled in the same  
9 zones that we are applying for triple commingling in, and this  
10 is a water analysis that was conducted on 11-22 of '82 and it  
11 is -- and it is a water analysis of all three zones that have  
12 been commingled.

13 Q. Is there any reason to expect that the ana-  
14 lysis in the Sarkeys would be different than the analysis --  
15 in general terms, than the analysis in the Art Yeager?

16 A. No, sir, we would expect it to be almost the  
17 same.

18 Q. And I'd like to hand you what I've marked  
19 as Applicant's Exhibit Number Six and ask you to identify that.

20 A. This is a production allocation. It was  
21 prepared as an expansion of the production allocation that was  
22 included in the original application.

23 The Order No. DH3-73 was the original down-  
24 hole commingling of the Wantz-Abo and Drinkard, and it has the  
25 breakdown that was used for that downhole commingling applica-

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2 tion, the Wantz-Abo having 90 percent and the Drinkard, 10  
3 percent of that dual commingling.

4 And our last -- last Wantz-Abo and Drinkard  
5 24-hour test showed 5 barrels of oil per day produced by the  
6 Wantz-Abo and Drinkard and our current Blinebry showed a pro-  
7 duction of 6 barrels of oil per day.

8 That allocation of the production is as fol-  
9 lows in the calculations, with the Wantz-Abo having 40.9 per-  
10 cent; the Drinkard having 4.5 percent; and the Blinebry having  
11 54.6 percent.

12 The gas/oil ratios of the three zones are  
13 all about the same. We feel that the gas allocation should  
14 be the same as the oil allocation, as well.

15 MR. CARSON: I'd like to move the  
16 introduction of Applicant's Exhibits One through Six.

17 MR. STAMETS: These exhibits will  
18 be admitted.

19 Q Mr. King, one other question about the fluid  
20 as shown by your Exhibit Five, I believe. Are those fluids  
21 compatible or incompatible in the wellbore?

22 A They are very compatible. There is only a  
23 slight scaling tendency of calcium carbonate at 120 degrees,  
24 and calcium sulphate at 70 degrees, but in our production of  
25 the Gulf Sarkeys No. 2 since July of 1981 when it was triple

1  
2 commingled, we have seen no scale at all on any of our equip-  
3 ment that we've pulled from the wellbore.

4 Q. These wells are to be -- I mean these zones  
5 are to be produced by artificial means, are they not?

6 A. Yes, sir.

7 Q. And is it your professional opinion that so  
8 long as they're -- the pump is going that there will be no  
9 problem of contamination of any other zones?

10 A. No, there won't. The -- we will produce  
11 it so that the fluid level in the wellbore will be below the  
12 bottom perf of the bottom zone.

13 Q. And the purpose of the restriction in the  
14 Gulf Sarkeys No. 2, which you suggest is satisfactory in this  
15 case, is to take care of a situation in -- when the well is  
16 shut in?

17 A. Yes, sir.

18 Q. Mr. King, in your professional opinion,  
19 would the granting of this application help prevent waste and  
20 protect correlative rights, and otherwise be in accordance  
21 with sound engineering practices?

22 A. Yes, sir.

23 MR. CARSON: I will have no further  
24 questions.

25

## CROSS EXAMINATION

BY MR. STAMETS:

Q. Mr. King, have you plotted anywhere the decline curve on the Blinebry?

A. We have -- have more production than what you show in the original application, with only -- we have production for August and September, as well as June and July, and for four months there will be no need to plot it. You really wouldn't have any -- you wouldn't really know anything from that.

What we base our -- we think that the Blinebry has reached stable production because on the original application the 24-hour test of the Blinebry formation showed 6 barrels of oil produced with 7 waters of -- 7-barrels of water, and the current test shows the same production of oil and same production of water.

Q. What date was the first test?

A. 9-23 of '82. The second one is 11-16 of '82.

Q. Okay. So on that basis you feel you have achieved stable production.

A. Yes, sir.

Q. I take it the original application did not

1  
2 have an allocation of gas to the individual zones, is that  
3 correct? You've just allocated oil here but not the gas to  
4 each zone.

5 A. The original -- the original dual completion  
6 of the Art Yeager No. 1?

7 Q. The original downhole commingling of the  
8 Abo and Drinkard.

9 A. It was not in the original order that was  
10 issued by the Commission.

11 Q. Okay, I wish you'd take a look at that sub-  
12 sequent to the hearing and -- and advise the Examiner if you  
13 feel that allocation of the gas at some differing rate than  
14 you've proposed here would be appropriate, based on your ex-  
15 amination of production, and so on.

16 MR. STOGNER: Also, Mr. Examiner,  
17 on the Gulf Sarkeys No. 2, what's the location on that well?

18 A. It is 1980 feet from the west line and 2030  
19 feet from the north line.

20 MR. STOGNER: Section?

21 A. It's the same section, township, and range.  
22 It's in Unit F.

23 Q. Mr. King, is the ownership of these zones  
24 common throughout?

25 A. Yes, sir.

1  
2 MR. STAMETS: Any other questions of  
3 the witness?

4 MR. CARSON: I forgot one question,  
5 Mr. Examiner, and that is you have checked with all the off-  
6 setting operators and they have signed in writing that they  
7 have no objection to this application.

8 A. Yes, sir. The original plot shows two leases  
9 that we were not able to determine the ownership of, but there  
10 are no producing wells on those two locations.

11 MR. STAMETS: The Division has re-  
12 ceived a copy of a waiver from Amoco Production Company rela-  
13 tive to this downhole commingling.

14 Any other questions? The witness may be ex-  
15 cused.

16 Anything further?

17 The case will be taken under advisement.

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19 (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 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. 7732, heard by me on 11-23 1982

Richard L. Stain, Examiner  
Oil Conservation Division.