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BEFORE THE  
NEW MEXICO OIL CONSERVATION COMMISSION  
STATE LAND OFFICE BUILDING  
SANTA FE, NEW MEXICO  
September 5, 1973

EXAMINER HEARING

IN THE MATTER OF: ) Case No. 5061  
)  
The Application of Continental Oil )  
Company for a waterflood project, )  
Lea County, New Mexico )  
)  
)

BEFORE: ELVIS A. UTZ, Examiner

TRANSCRIPT OF HEARING

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1 MR. UTZ: Call Case 5061.

2 MR. CARR: Case 5061, Application of Continental  
3 Oil Company for a waterflood project, Lea County, New Mexico.

4 MR. KELLAHIN: Tom Kellahin of Kellahin & Fox,  
5 Santa Fe, New Mexico, appearing on behalf of the Applicant  
6 Continental Oil Company, and I have one witness who has been  
7 previously sworn.

8 MR. UTZ: Let the record show that this witness has  
9 been sworn in the previous case.

10 MR. KELLAHIN: May the record also reflect that he  
11 has been previously qualified as an expert, Mr. Examiner?

12 MR. UTZ: It will so show. You may proceed.

13 VICTOR T. LYON,  
14 was called as a witness and after being duly sworn, testified  
15 as follows:

16 DIRECT EXAMINATION

17 BY MR. KELLAHIN:

18 Q Mr. Lyon, will you please state briefly what the  
19 applicant seeks by this Application in Case 5061?

20 A Case 5061 is the Application of Continental Oil Company  
21 for authority to conduct a waterflood operation in the  
22 Penrose-Skelly Pool on its Elliott A-15 lease located  
23 in Section 15, Township 22 South, Ranch 37 East, Lea  
24 County, New Mexico.

25 Q Will you please refer to what has been marked as

1 Applicant's Exhibit No. 1, identify it, and explain  
2 what information it contains?

3 A Exhibit No. 1 is a plat showing the location of the  
4 Elliott A-15 lease outlined in red, and consisting of  
5 the south half of the southeast quarter, Section 15,  
6 and showing the location of the properties and the wells  
7 located thereon in an area at least two miles in each  
8 direction from our lease.

9 You will note the dashed line to the south and  
10 also to the east of the Elliott A-15 lease, which is the  
11 boundary of the Anadarko-operated Langlie Mattix Penrose  
12 sand unit. There is a waterflood project presently under-  
13 way in that unit, and this waterflood project, our  
14 Application, is intended to supplement and compliment  
15 the waterflood in that unit.

16 Q Who operates the waterflood in that unit?

17 A Anadarko Production Company.

18 Q Are there any other waterfloods in the area?

19 A There is a pilot waterflood in the south Penrose-Skelly  
20 unit to the north, but this project has been abandoned  
21 and there is consideration of terminating that unit.

22 Q Please refer to what has been marked as Applicant's  
23 Exhibit No. 2, identify it, and explain what information  
24 it contains.

25 A Exhibit No. 2 is a schematic diagram showing the manner

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1 in which the Elliott A-15 No. 1, which incidentally is  
2 marked by a red triangle on Exhibit 1, will be equipped  
3 for injection. We show the size, setting depth, and  
4 the amount of cement used in setting the various strings  
5 of casing. I see they didn't show the tubing. It does  
6 have a remark on here that the 2 and 7/8-inch tubing  
7 will be set at 3682.

8 Q Will the annular space between the tubing and casing be  
9 filled with an inert fluid?

10 A Yes, it will.

11 Q And will the surface connection on the surface be so  
12 arranged that the pressure at the surface will be  
13 readily detectable?

14 A Yes.

15 Q And where will you set -- I see the cement-lined tubing  
16 will be set on a packer?

17 A Yes, the packer will be set above the liner providing that  
18 the liner is not pulled. You will note that there is a  
19 5 and 1/2-inch liner set from 3370 to 3556. It is not  
20 cemented, and our current plans, according to our production  
21 engineering supervisor, just before I left the office,  
22 was that they would set the packer above that liner.  
23 The tubing will be cement-lined and then, of course, we  
24 will fill the annular space with an inert fluid.  
25 So their plans at that time were not to pull that liner.

1 MR. UTZ: You don't think he's changed his mind?

2 THE WITNESS: I never know.

3 Q (By Mr. Kellahin) What's the producing interval in this  
4 well?

5 A The producing interval in the Penrose-Skelly Pool is the  
6 Grayburg formation, and you will note that the area to  
7 the south is not Penrose-Skelly, it's Langlie Mattix.  
8 This lease is located on the boundary of the Penrose-  
9 Skelly Pool and the structure is rising to the north.  
10 There is probably an overlap of zones. You see, the  
11 Langlie Mattix produces from the Queen and Lower Seven  
12 Rivers. There is probably some overlap across this  
13 boundary.

14 We have checked our logs on twin wells to this well.  
15 There is no log on our proposed injection well. We have  
16 correlated logs across this boundary and we find that the  
17 injection intervals and producing intervals are the same.  
18 We have similar differences of opinion between Anadarko  
19 and Continental as to where the top of the Grayburg is.  
20 It isn't really that distinct. But, in essence, these  
21 wells have been produced for some 30 years, and all we  
22 are doing is waterflooding the zones which have been  
23 produced for those here.

24 Q Your lease has two Penrose-Skelly wells on it, is that  
25 correct?

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1 A Yes.

2 Q And they are Wells Nos. 1 and 2?

3 A Yes, 1 and 2.

4 Q And the injection well will be No. 1?

5 A Yes, sir.

6 Q What's the total production for those two wells?

7 A Between the two of them, they have produced 178,115  
8 barrels.

9 Q What do you anticipate in the way of secondary recovery  
10 through your efforts by waterflooding?

11 A Well, we expect to recover 60 percent of primary production  
12 in our secondary operation. The reason that this figure  
13 is so low is that there will be no back-up to the north  
14 to this waterflood project. The wells to the north are  
15 in gas cap, and so we have a three-way push on our  
16 producing well, which is No. 2. Therefore, we feel that  
17 60 percent is a good estimate of the additional oil to  
18 be recovered by secondary operations.

19 Q Will you state again for me the source of the water to  
20 be injected?

21 A The water will be furnished by Anadarko from their  
22 injection program.

23 Q What volume of water do you intend to inject?

24 A We hope to inject initially up to 500 barrels a day.

25 Q Will this injection be under pressure?

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1 A It will be under pressure, probably not initially, but  
2 it eventually will be pressured with a maximum of  
3 2000 pounds pressure.

4 Q What's your estimated life of your secondary recovery?

5 A Approximately seven to eight years.

6 Q In your opinion, has production from this lease declined  
7 to such a point that you would recommend instituting  
8 secondary recovery by waterflooding?

9 A Yes, sir, both of these wells have been shut-in for some  
10 time.

11 Q And, in your opinion, can this area be successfully and  
12 economically waterflooded?

13 A Yes.

14 Q Will this program result in the recovery of oil that  
15 would otherwise not be recovered, thereby preventing  
16 waste?

17 A Yes, it will.

18 Q And will the proposed waterflooding adversely affect the  
19 correlative rights of others?

20 A We believe that correlative rights are being protected  
21 under this program.

22 Q Do you have anything else you would like to add to your  
23 testimony?

24 A I believe not.

25 MR. KELLAHIN: Mr. Examiner, we move for the

1 introduction of Applicant's Exhibits 1 and 2.

2 MR. UTZ: Without objection, Exhibits 1 and 2 will  
3 be entered into the record of this case.

4 CROSS-EXAMINATION

5 BY MR. UTZ:

6 Q I notice in Exhibit 2 it shows openhole shot 3500 and  
7 3556; that's in the liner?

8 A Yes, that's the reason that the liner was placed in the  
9 well.

10 MR. UTZ: Are there other questions of the witness?

11 (No response.)

12 MR. UTZ: He may be excused. Are there statements  
13 in the case?

14 (No response.)

15 MR. UTZ: The case will be taken under advisement.

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