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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. 5062
)	
The Application of Continental Oil)	
Company for a waterflood project,)	
Lea County, New Mexico)	
)	
)	

BEFORE: ELVIS A. UTZ, Examiner

TRANSCRIPT OF HEARING

dearnley, meier & associates

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1 MR. CARR: Case 5062, Application of Continental
2 Oil Company for a waterflood project, Lea County, New Mexico.

3 MR. KELLAHIN: Tom Kellahin, Kellahin & Fox, Santa
4 Fe, New Mexico, appearing on behalf of the applicant Continental
5 Oil Company. May the record please reflect that my witness is
6 the same as in the previous two cases, that Mr. Lyon has been
7 accepted as an expert witness.

8 MR. UTZ: Let the record so show.

9 VICTOR T. LYON,

10 was called as a witness and after being duly sworn, testified
11 as follows:

12 DIRECT EXAMINATION

13 BY MR. KELLAHIN:

14 Q Mr. Lyon, will you please state briefly what the
15 applicant is seeking by this Application?

16 A Case No. 5062 is the Application of Continental Oil
17 Company for authority to institute a waterflood project
18 Maljamar Grayburg-San Andres Pool on its Grace Mitchell
19 lease by injecting water into two wells; its Grace
20 Mitchell Wells Nos. 2 and 6 located in Section 5,
21 Township 17 South, Range 32 East, Lea County, New Mexico.

22 Q Please refer to what has been marked as Exhibit No. 1,
23 identify it, and explain what information it contains.

24 A Exhibit No. 1 is a location plat showing the Grace Mitchell
25 lease outlined in red, and I think that the girl made a

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1 mistake in outlining it, and it shows the location,
2 the ownership of the offsetting leases, and the wells
3 located on them, to the best of our knowledge and belief.

4 The proposed injection wells, which are Wells Nos.
5 2 and 6, are shown with red circles inscribed about them.
6 The Grace Mitchell lease actually consists of the east
7 half, the east half of the northwest quarter, and the
8 northeast quarter of the southwest quarter of Section 5,
9 the outlined area. The map that I am looking at isn't
10 marked that way, so if it includes the northeast of the
11 southwest, then your map is correct.

12 We propose to inject water into Well No. 2, which
13 is located 660 feet from the south and east lines of the
14 Section 5; and No. 6, which is 1980 feet from the south and
15 east lines of Section 5.

16 Q Would you please refer to what has been marked as
17 Applicant's Exhibit No. 2 and identify it?

18 A Exhibit No. 2 is a schematic diagram showing how Well
19 No. 2 will be equipped for injection. It shows the size,
20 depth, and amount of the cement used in setting the casing.
21 It shows the cement-lined tubing to be set on a packer
22 at 3960. The well is a completed open hole and injection
23 well. Now, the well has been plugged back to 4110, so
24 the injection will be between the seat of the four and
25 1/2 tubing at 4025 to the plugged-back depth of 4110.

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1 Q This is for the Grace Mitchell B Lease Well No. 2, is
2 that correct?

3 A Right.

4 Q All right. Would you please refer to Exhibit 3?

5 A Exhibit 3 is a schematic diagram showing the same
6 information for Well No. 6.

7 Q What is the zone of injection here?

8 A This is the San Andres, actually the Lovington sand, which
9 we commonly refer to as the 8th zone in the Maljamar Pool.

10 Q Is the completion of these two wells as shown in Exhibits
11 2 and 3 consistent with sound engineering practices?

12 A I might add that the annular space above the packer will
13 be filled with inert fluid, and the surface connections
14 will be so arranged that any presence of pressure will be
15 readily detectable.

16 Q That's with regards to both wells?

17 A Both wells.

18 Q Please refer to Exhibit 4 and identify it.

19 A Exhibit 4 is the copy of the a acoustic gamma ray log
20 for the Grace Mitchell B No. 2. We have shown, by a line
21 at 3925, the top of the San Andres.

22 Q Will you please refer to Exhibit 5 and identify it?

23 A Exhibit No. 5 is the sonic log on Grace Mitchell B No. 6,
24 and here again we have shown the top of the San Andres
25 by the horizontal line at 3925.

1 Q How many producing wells do you have on this lease,
2 Mr. Lyon?

3 A It says 3925, but it doesn't look like 3925 to me. I
4 believe that should be 3828. That's where that line
5 is located.

6 MR. UTZ: It would be 38 something?

7 THE WITNESS: Yes, 38 something. 3828.

8 Q (By Mr. Kellahin) Do you have six producing wells on
9 this lease, Mr. Lyon?

10 A Yes, that's true.

11 Q What's your total production?

12 A The lease has produced a total of 254,839 barrels as of
13 January 1, 1973, and the production on the lease at this
14 time is negligible. This is probably very close to the
15 cumulative production at this time.

16 Q What is your estimate of the additional oil to be
17 recovered by the secondary recovery?

18 A Our engineers estimate that we will recover an additional
19 amount of oil representing approximately 31 percent of the
20 primary production or about 80,000 barrels.

21 Q What's to be the source of your injection water?

22 A When this project was first under consideration, we had
23 been promised injection water from the Chevron-operated
24 Maljamar Grayburg unit over here to the east and the south,

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1 which we have a cooperative agreement building, and
2 since that time they have indicated they will not be
3 able to furnish us water; so it appears that we will
4 need to transport water from our NCA unit injection
5 station up to this property. And, if we do this, it
6 will be necessary to return the produced water back to
7 that station for reinjection. Our alternative is to
8 build a water injection station on that lease. We have
9 not decided which of those two courses of action we
10 will take.

11 Q What is your estimate of the volume of produced water?

12 A I really don't have a very good feeling on that. Fluid
13 production right now is virtually negligible, and, of
14 course, the water production will increase as the flood
15 progresses.

16 Q It's your intention to reinject produced water?

17 A Yes, it will be reinjected here or in -- well, either on
18 this property, if we build the injection station on the
19 lease, or it will be returned to the injection station
20 in the NCA unit and just placed into that system and
21 be reinjected wherever it goes in that system.

22 Q What do you anticipate to be the volume of injected
23 water?

24 A We will expect to inject about 300 barrels per day at
25 no pressure initially; but we expect maximum injection

1 pressure of about 2500 pounds.

2 Q Is this 300 barrels per day?

3 A Per well.

4 Q Will this proposed waterflood result in the recovery
5 of oil that would otherwise not be recovered, thereby
6 preventing waste?

7 A Yes, it would.

8 Q What, if any, effect, will this have on the correlative
9 rights of others?

10 A We believe that correlative rights are adequately
11 protected in that the injection is balanced across the
12 lease line and we are cooperating with the offset
13 waterflood project.

14 Q Do you have anything else you would like to add, Mr.
15 Lyon?

16 A I don't believe so.

17 MR. KELLAHIN: Mr. Examiner, we move the introduction
18 of Applicant's Exhibits 1 through 5.

19 MR. UTZ: Exhibits 1 through 5 will be entered into
20 the record of this case.

21 MR. KELLAHIN: We have nothing further.

22 CROSS-EXAMINATION

23 BY MR. UTZ:

24 Q What is the injection zone of this project?

25 A The injection zone is the Lovington sand, which is a

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part of the San Andres formation.

Q And the Grayburg is not involved?

A Right.

Q As stated in the advertisement?

A Well, this is the name of the pool, essentially, and I use that because of that. To my knowledge, we don't have any intention of injecting into the Grayburg.

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

(No response.)

MR. UTZ: You may be excused. Are there statements in the case?

(No response.)

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

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