


CASE 1962: Appl. of CONTINENTAL  
FOR A WATERFLOOD PROJECT, LEA  
COUNTY, NEW MEXICO. 

CASE No.

5062

Application,

Transcripts,

Small Exhibits

ETC.

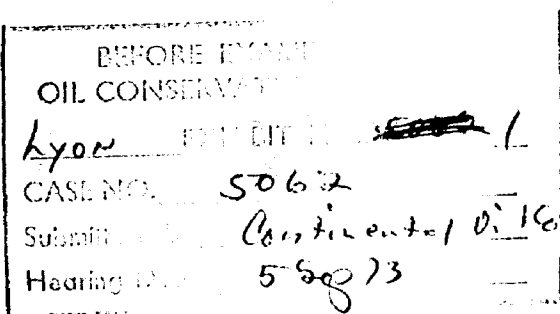
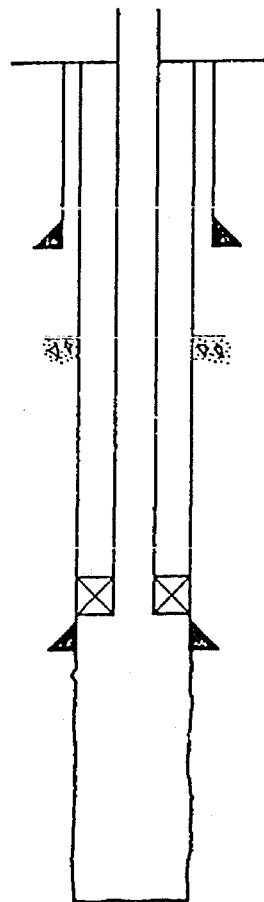


EXHIBIT 1

GRACE MITCHELL "B" LEASE  
WELL NO. 2  
660' FSL & 660' FEL  
SEC. 5-17-32  
LEA COUNTY, NEW MEXICO  
ELEV. 4098' DF



8 5/8" @ 883 W/325 SX

TOC @ 2100'

CEMENT LINED TUBING W/PACKER SET AT 3960'  
4 1/2" @ 4025 W/250 SX

PBD 4110'

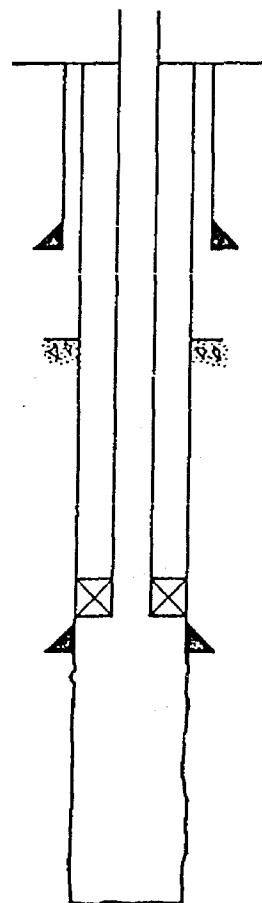
T. D. 5650'

PROCEDURE:

LOAD WELL WITH TREATED PRODUCED WATER. PULL RODS AND PUMP AND TUBING.  
CLEAN OUT FILL TO T.D. RUN CEMENT LINED TUBING WITH PACKER TO BE SET  
AT 3960'

BEFORE EXAMINER USE	
OIL CONSERVATION COMMISSION	
Hyon	EXHIBIT NO. 2
CASE NO.	5062
Submitted by	Conoco
Hearing Date	5 Sep 73

GRACE MITCHELL "B" LEASE  
WELL NO. 6  
1980' FSL & EL  
SEC. 5-17-32  
LEA COUNTY, NEW MEXICO  
ELEV. 4103' DF

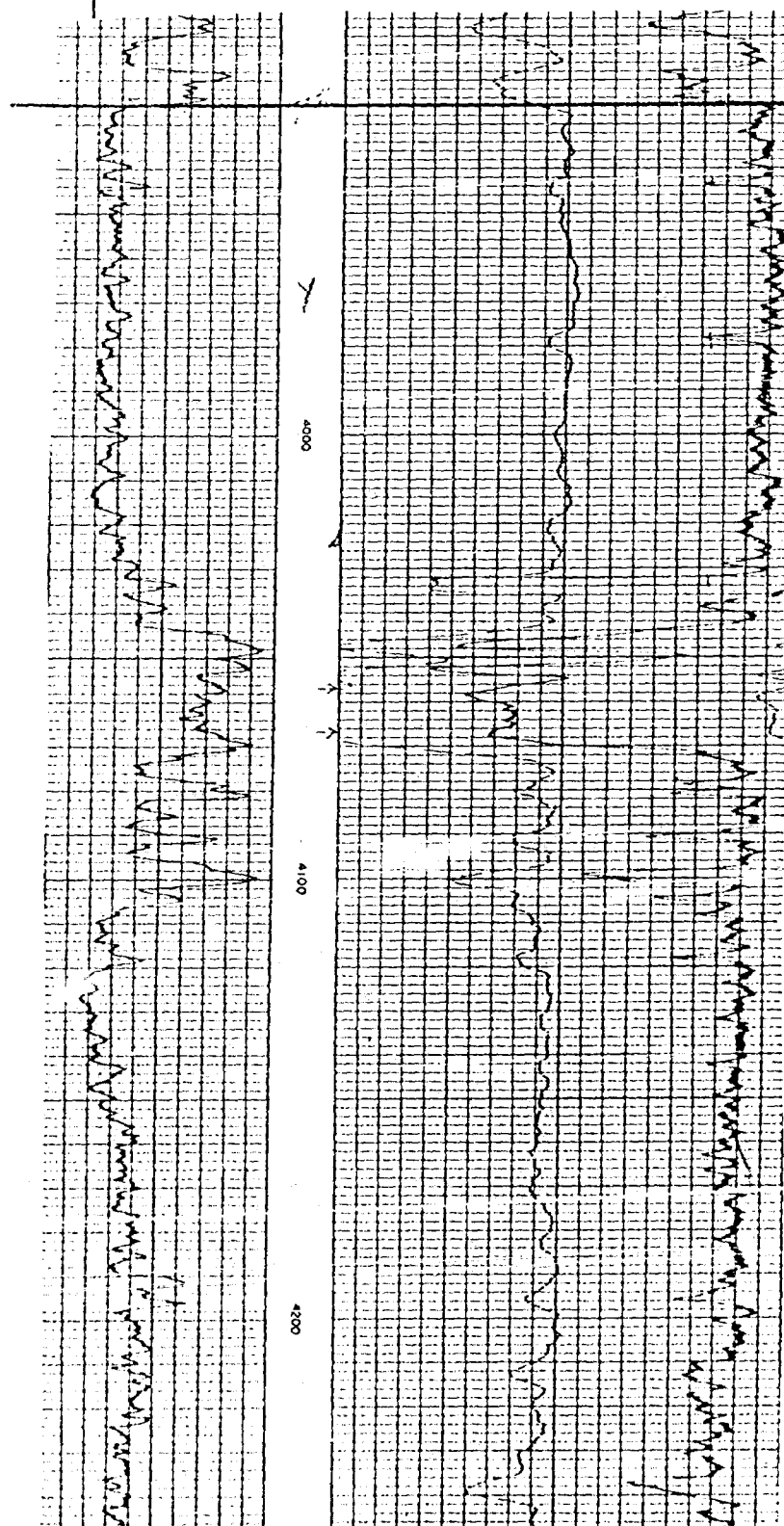


PROCEDURE:

LOAD WELL WITH TREATED PRODUCED WATER. PULL RODS AND PUMP, TUBING AND PACKER. CLEAN OUT ANY FILL TO T.D. RUN CEMENT LINED TUBING WITH PACKER TO BE SET AT 3870'. HOOK UP FOR INJECTION.

BEFORE EXAMINATION	
OIL CONSERVATION COMMISSION	
by	EXHIBIT NO. 3
CASE NO.	5062
Submitted by	Conoco
Hearing Date	5-8-73

PGAC Acoustic Gamma Log																												
FILE NO.	COMPANY CONTINENTAL OIL COMPANY																											
	WELL GUACE MITCHELL "B" NO. 2																											
	FIELD MALJANAR PADDOCK																											
	COUNTY LIA STATE NEW MEXICO																											
	LOCATION 660' FSL, 660' FEL																											
	SEC 5 TWP 17-S RGE 30-E																											
Permanent Datum	U.S. H. S. Elev. 4088																											
Log Measured from	11' Ft. Above Permanent Datum																											
Drilling Measured from	U.S. H. S. Elev. 4088																											
Date	1-13-62																											
Run No.	CNE																											
Total Depth, Gd.	5650																											
Total Depth, Log	5647																											
Casing Depth	893																											
Casing Log																												
Log Log																												
Mud Type	SALT BASE MUD																											
Density, 1 Yr.	10.2																											
Max. Temp. 1 Yr.	75.6																											
Direction	UP																											
Rec. To Rec. Spacing																												
Trans. To Rec. Sp.																												
Logging Instrument	ABAZ-62-21																											
Equip. No.	22-5951																											
Recorded By	W. A. BROWN																											
Witnessed By	M. L. BOYLAN																											
<table border="1"> <thead> <tr> <th colspan="3">BORE HOLE RECORD</th> <th colspan="3">CASING RECORD</th> </tr> <tr> <th>Bit Size</th> <th>From</th> <th>To</th> <th>Csg. Size</th> <th>Csg. Wt.</th> <th>From</th> <th>To</th> </tr> </thead> <tbody> <tr> <td>11</td> <td>SURF.</td> <td>893</td> <td>8 5/8</td> <td>-</td> <td>SURF.</td> <td>893</td> </tr> <tr> <td>7 7/8</td> <td>893</td> <td>5650</td> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table>		BORE HOLE RECORD			CASING RECORD			Bit Size	From	To	Csg. Size	Csg. Wt.	From	To	11	SURF.	893	8 5/8	-	SURF.	893	7 7/8	893	5650				
BORE HOLE RECORD			CASING RECORD																									
Bit Size	From	To	Csg. Size	Csg. Wt.	From	To																						
11	SURF.	893	8 5/8	-	SURF.	893																						
7 7/8	893	5650																										



3925' TOP OF  
SAN ANDRES

BEFORE EVALUATION UNIT	
OIL COMMISSION COMMISSION	
By	WARRANT NO. 4
CASE NO.	5062
Submitted by	Conoco
Receiving Date	5-8-67

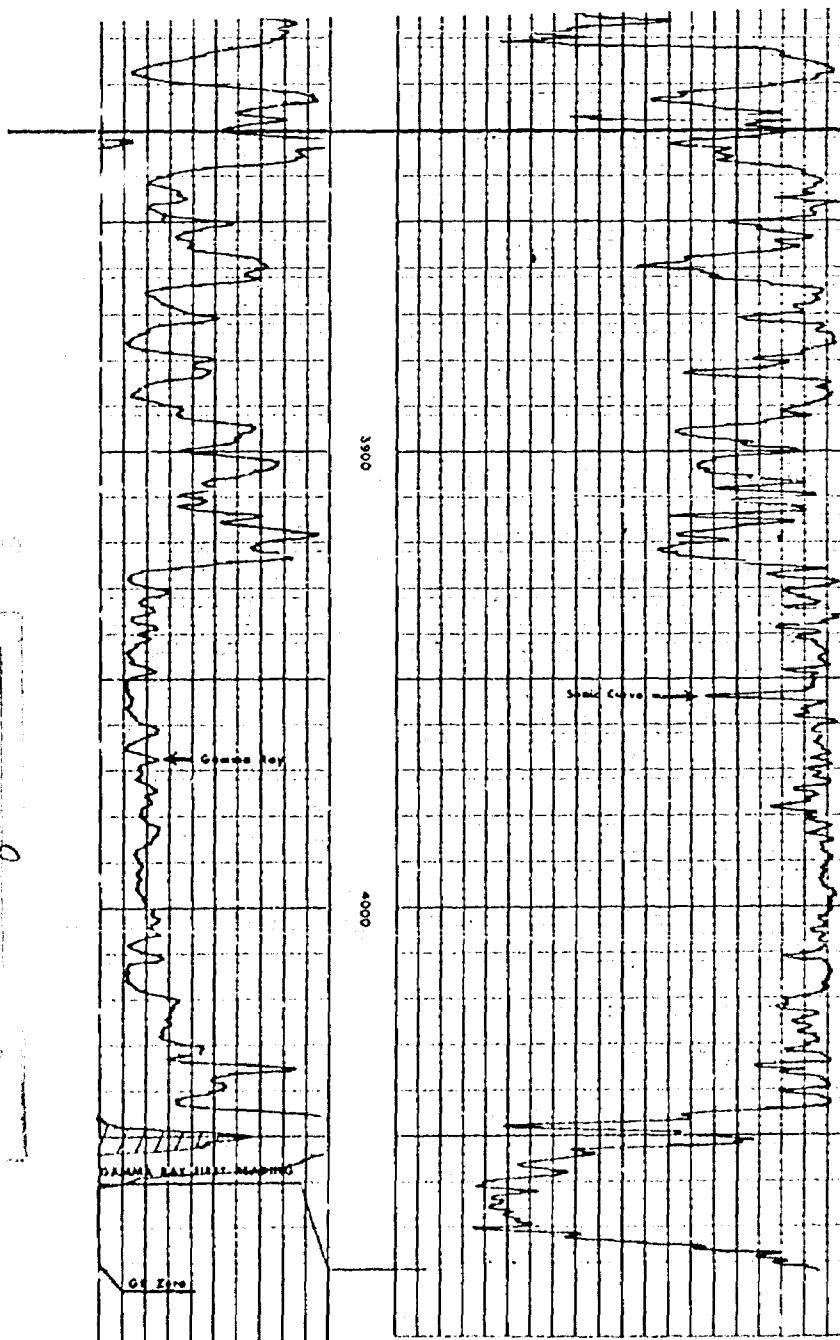
SCHLUMBERGER		SONIC LOG	
SCHLUMBERGER WELL SURVEYING CORPORATION			
COUNTY FIELD or LOCATION WELL COMPANY	COMPANY	CONTINENTAL OIL	
	COMPANY		
	WELL	GRACE RUTHERFORD	
	R	S	
	FIELD	MAE JAMAR	
	LOCATION	SEC. 5-12S-32E	
	COUNTY	LEA	
	STATE	NEW MEXICO	
Log Depths Measured From		ft. above 5/8" HIF	
BUN No.	2772		
Date	7-7-72		
First Reading	1020		
Last Reading	50		
Feet Measured	1070		
Cig. Schlum.	5/8" - 350'		
Cig. Driller	J. G. S.		
Depth Reached	1070		
Bottom Driller	J. G. S.		
Mud No.	S-81		
Dens. / Visc.	16.2 / 25		
Mud Resist.	2.0 @ 10' F		
Res. BHI	0 @ 10' F		
W. Loss	0 @ CC 30' F		
Bit Size	5" 11.0 12.2 14" 10 10		
Spacing	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50		
Op. Rig Time	1.00 HOURS		
Truck No.	2536-HOERS		
Recorded By	WILLSON		
Witness	GLOEP		

Reproduced By  
West Texas Electrical Log Service  
Dallas 9, Texas

REFERENCE W274H4



BEFORE EXAMINER UTZ  
OIL CONSERVATION COMMISSION  
Lyon SIGHT NO. 5  
CASE NO. 5062  
SOUNDING COROCO  
RECORD 5 Sep 73



3925' TOP OF SAN ANDRE

DOCKET: EXAMINER HEARING - WEDNESDAY - SEPTEMBER 5, 1973

9 A.M. - OIL CONSERVATION COMMISSION CONFERENCE ROOM,  
STATE LAND OFFICE BUILDING - SANTA FE, NEW MEXICO

The following cases will be heard before Elvis A. Utz, Examiner, or Richard L. Stamets, Alternate Examiner:

- ALLOWABLE: (1) Consideration of the allowable production of gas for October, 1973, from seventeen prorated pools in Lea, Eddy, Roosevelt and Chaves Counties, New Mexico;
- (2) Consideration of the allowable production of gas from nine prorated pools in San Juan, Rio Arriba, and Sandoval Counties, New Mexico, for October, 1973.

CASE 5055: Application of Merrion & Bayless for downhole commingling, Rio Arriba County, New Mexico. Applicant, in the above-styled cause, seeks approval for the downhole commingling of Gallup and Dakota oil and gas production within the wellbore of the Canada Mesa Well No. 3 located in Unit A of Section 14, Township 24 North, Range 6 West, Basin-Dakota and Devils Fork-Gallup Pools, Rio Arriba County, New Mexico.

CASE 5056: Application of Depco, Inc. for an unorthodox location, Chaves County, New Mexico. Applicant, in the above-styled cause, seeks authority to drill a proposed gas well at an unorthodox location 990 feet from the North line and 1980 feet from the East line of Section 24, Township 15 South, Range 27 East, Buffalo Valley-Pennsylvanian Gas Pool, Chaves County, New Mexico.

CASE 5057: Application of Coquina Oil Corporation for an unorthodox location, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks authority to drill a proposed gas well at an unorthodox location 660 feet from the South and East lines of Section 12, Township 18 South, Range 25 East, West Atoka-Morrow Gas Pool, Eddy County, New Mexico, the S/2 of Section 12 to be dedicated to the well.

CASE 5058: Application of Corinne Grace for a dual completion and unorthodox location, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks approval for the dual completion (conventional) of her Gradonoco Well No. 1 located in Section 2, Township 23 South, Range 26 East, Eddy County, New Mexico, in such a manner as to produce gas from an undesignated Wolfcamp pool and from the South Carlsbad-Morrow Gas Pool through tubing and the tubing-casing annulus, respectively, by a means of a cross-over assembly. Applicant further seeks approval of the unorthodox location of said well in the Wolfcamp formation at a point 2500 feet from the North line and 330 feet from the East line of said Section 2, which location has previously been approved for the Morrow formation.



CASE 5059: Application of Cities Service Oil Company for compulsory pooling, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks an order pooling all mineral interests from the surface of the ground down to and including the Devonian formation underlying the S/2 of Section 14, Township 20 South, Range 28 East, Eddy County, New Mexico, to be dedicated to a well to be drilled at a standard gas well location in Unit K of said Section 14. Also to be considered will be the cost of drilling and completing said well and the allocation of such costs, as well as actual operating costs and charges for supervision. Also to be considered is the designation of applicant as operator of the well and a charge for risk involved in drilling said well.

CASE 5060: Application of Continental Oil Company for a unit agreement and for a waterflood expansion, Lea County, New Mexico. Applicant, in the above-styled cause, seeks approval for the North El Mar Unit Area comprising 2361 acres, more or less, of State and Federal lands in Township 26 South, Ranges 32 and 33 East, Lea County, New Mexico. Applicant further seeks authority to expand its El Mar Payne waterflood project within said unit area previously authorized by Order No. R-3540.

CASE 5061: Application of Continental Oil Company for a waterflood project, Lea County, New Mexico. Applicant, in the above-styled cause, seeks authority to institute a waterflood project by the injection of water into the Grayburg formation in its Elliott A-15 Well No. 1 located in Unit P of Section 15, Township 22 South, Range 37 East, Penrose-Skelly Pool, Lea County, New Mexico.

CASE 5062: Application of Continental Oil Company for a waterflood project, Lea County, New Mexico. Applicant, in the above-styled cause, seeks authority to institute a waterflood project by the injection of water into the Grayburg-San Andres formation in its Mitchell Wells Nos. 2 and 6 located in Units P and J, respectively, of Section 5, Township 17 South, Range 32 East, Maljamar Pool, Lea County, New Mexico.

Grace Mitchell<sup>B</sup> no. 2  
Tubing 3960 ft. 2  $\frac{3}{8}$  tubing,

no 6 well  
3870 ft 2  $\frac{3}{8}$  tubing

Case 5062  
 Lead 9-5-73  
 Rec. 9-10-73

Grant Contentent at a waterflood  
 projects approval of 2 injection  
 wells to be converted by tubing  
 through well w/  $\frac{3}{4}$ " tubing (cement  
 lined) setting a packer in the casing  
 & injecting in open hole of the  
 San Andres of the Matamoros  
 Pool.

Well Data:		Casing	Packer	Setting
Spec. Mitchell B # 2	<del>17-32</del>	<del>8 1/2"</del>	39.50	396.00
L 5	17-32	8 1/2"	39.50	405.00
L 1	B # 6	8 1/2"	38.00	387.00
J 5-17-32.				792.00

Annulus to be filled w/ inert.  
 fluid w/ provisions at surface to  
 detect leaks into Annulus.

*The O. W.*

BEFORE THE OIL CONSERVATION COMMISSION  
OF THE STATE OF NEW MEXICO

IN THE MATTER OF THE HEARING  
CALLED BY THE OIL CONSERVATION  
COMMISSION OF NEW MEXICO FOR  
THE PURPOSE OF CONSIDERING:

CASE NO. 5062  
Order No. R-4633

APPLICATION OF CONTINENTAL OIL  
COMPANY FOR A WATERFLOOD PROJECT,  
LEA COUNTY, NEW MEXICO.

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9 a.m. on September 5, 1973, at Santa Fe, New Mexico, before Examiner Elvis A. Utz.

NOW, on this 26th day of September, 1973, the Commission, a quorum being present, having considered the testimony, the record, and the recommendations of the Examiner, and being fully advised in the premises,

FINDS:

(1) That due public notice having been given as required by law, the Commission has jurisdiction of this cause and the subject matter thereof.

(2) That the applicant, Continental Oil Company, seeks authority to institute a waterflood project on its Mitchell Lease, Maljamar Pool, by the injection of water into the Grayburg-San Andres formation through two injection wells in Section 5, Township 17 South, Range 32 East, NMPM, Lea County, New Mexico.

(3) That the wells in the project area are in an advanced state of depletion and should properly be classified as "stripper" wells.

(4) That the proposed waterflood project should result in the recovery of otherwise unrecoverable oil, thereby preventing waste.

(5) That the operator should take all steps necessary to ensure that the injected water enters only the proposed injection interval and is not permitted to escape to other formations or onto the surface from injection, production, or plugged and abandoned wells.

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Case No. 5062  
Order No. R-4633

(6) That the subject application should be approved and the project should be governed by the provisions of Rules 701, 702, and 703 of the Commission Rules and Regulations.

IT IS THEREFORE ORDERED:

(1) That the applicant, Continental Oil Company, is hereby authorized to institute a waterflood project on its Mitchell Lease, Maljamar Pool, by the injection of water into the Grayburg-San Andres formation in the open-hole interval in the following-described wells in Township 17 South, Range 32 East, NMPM, Lea County, New Mexico:

Mitchell Well No. 2	Unit P	Section 5
Mitchell Well No. 6	Unit J	Section 5

(2) That the subject waterflood project is hereby designated the Continental Maljamar Mitchell Waterflood Project and shall be governed by the provisions of Rules 701, 702, and 703 of the Commission Rules and Regulations.

(3) That injection into each of the aforesaid two wells shall be through internally cement-lined tubing set in a packer as close as is practicable to the casing shoe, and the casing-tubing annulus shall be loaded with an inert fluid and equipped with a pressure gauge or other leak-sensing device in order to detect any leakage in the tubing, casing, or packer.

(4) That the operator shall immediately notify the supervisor of the Commission's Hobbs district office of the failure of the casing, tubing, or packer in any of said injection wells, the leakage of water or oil from around any producing well, or the leakage of water or oil from any plugged and abandoned well within the project area and shall take such timely steps as may be necessary or required to correct such failure or leakage.

(5) That monthly progress reports of the waterflood project herein authorized shall be submitted to the Commission in accordance with Rules 704 and 1120 of the Commission Rules and Regulations.

(6) That jurisdiction of this cause is retained for the entry of such further orders as the Commission may deem necessary.

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Case No. 5062  
Order No. R-4633

DONE at Santa Fe, New Mexico, on the day and year herein-  
above designated.

STATE OF NEW MEXICO  
OIL CONSERVATION COMMISSION



*I. R. Trujillo*  
I. R. TRUJILLO, Chairman

*Alex J. Armijo*  
ALEX J. ARMIJO, Member

*A. L. Porter, Jr.*  
A. L. PORTER, Jr., Member & Secretary

S E A L

dr/



## OIL CONSERVATION COMMISSION

STATE OF NEW MEXICO  
P. O. BOX 2088 - SANTA FE  
87501

I. R. TRUJILLO  
CHAIRMAN  
LAND COMMISSIONER  
ALEX J. ARMIJO  
MEMBER  
STATE GEOLOGIST  
A. L. PORTER, JR.  
SECRETARY - DIRECTOR

September 26, 1973

Mr. Tom Kellahin  
Kellahin & Fox  
Attorneys at Law  
Post Office Box 1769  
Santa Fe, New Mexico

Re: CASE NO. 5062  
ORDER NO. R-4633  
Applicant:  
Continental Oil Company

Dear Sir:

Enclosed herewith are two copies of the above-referenced  
Commission order recently entered in the subject case.

Very truly yours,

A. L. PORTER, Jr.  
Secretary-Director

ALP/ir

Copy of order also sent to:

Hobbs OCC X  
Artesia OCC         
Aztec OCC       

Other State Engineer Office

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



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

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.

- 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,  
25

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

1 part of the San Andres formation.

2 Q And the Grayburg is not involved?

3 A Right.

4 Q As stated in the advertisement?

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

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

9 (No response.)

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

12 (No response.)

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

14  
15 -oOo-  
16  
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21  
22  
23  
24  
25

1 STATE OF NEW MEXICO )  
2 ) SS  
3 COUNTY OF BERNALILLO )

4 I, JOHN DE LA ROSA, a Court Reporter, in and for the  
5 County of Bernalillo, State of New Mexico, do hereby certify  
6 that the foregoing and attached Transcript of Hearing before  
7 the New Mexico Oil Conservation Commission was reported by  
8 me; and that the same is a true and correct record of the  
9 said proceedings to the best of my knowledge, skill and  
10 ability.

11   
12 COURT REPORTER  
13  
14  
15  
16  
17  
18  
19  
20  
21

22 I do hereby certify that the foregoing is  
23 a complete record of the proceedings in  
24 the Examiner hearing of Case No. 5062,  
25 heard by me on 9-5-73.  
Examiner  
New Mexico Oil Conservation Commission



BEFORE THE OIL CONSERVATION  
COMMISSION OF THE STATE OF NEW MEXICO

IN THE MATTER OF THE APPLICATION OF  
CONTINENTAL OIL COMPANY FOR AUTHOR-  
ITY TO CONDUCT A WATERFLOOD ON ITS  
GRACE MITCHELL LEASE BY INJECTING  
WATER INTO THE GRAYBURG-SAN ANDRES  
FORMATION OF THE MALJAMAR POOL IN  
WELLS NOS. 2 AND 6 LOCATED IN UNITS  
"P" AND "J", RESPECTFULLY, IN SEC-  
TION 5, TOWNSHIP 17 SOUTH, RANGE 32  
EAST, LEA COUNTY, NEW MEXICO.

*Case 5062*

APPLICATION

Applicant, Continental Oil Company, respectfully requests  
authority to conduct a waterflood operation on its Grace Mitchell lease  
by injecting water into the Grayburg-San Andres Formation of the Maljamar  
Pool in Wells No. 2 and 6 located in Units "P" and "J", respectfully, in  
Section 5, Township 17 South, Range 32 East, Lea County, New Mexico and  
in support thereof which show:

1. Applicant is the owner and operator of the Grace Mitchell  
lease consisting of the E/2, E/2 NW/4 and NE/4 SW/4 Section  
5, Township 17 South, Range 32 East, Lea County, New Mexico.
2. In cooperation with offset operators, applicant proposes to  
inject water into Well No. 2, located 660' from the south and  
east lines, and Well No. 6, located 1980' from the south and  
east lines, of said Section 5.
3. The attached plat shows the lease and wells described above,  
and an area two miles in radius surrounding said Section 5.

The attached schematic diagram shows the manner in which the  
wells will be completed for injection and the attached logs  
show the intervals into which water will be injected.

4. The granting of this application will result in the recovery of oil which otherwise would not be recovered and consequently is in the interest of preventing waste and will not impair correlative rights.

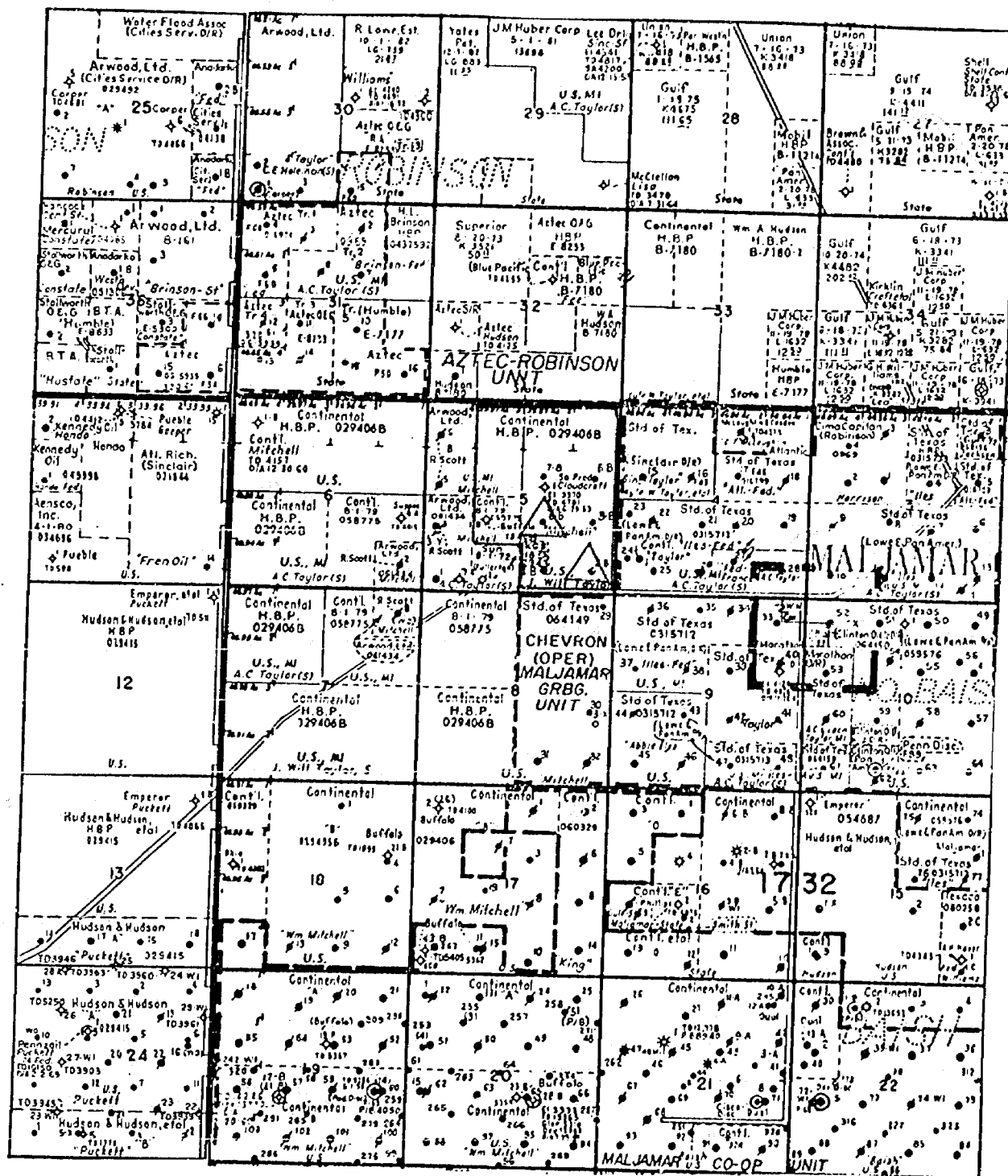
Wherefore, applicant respectfully requests this matter be set for hearing before the Commission's duly appointed examiner and upon hearing, an order be entered authorizing the injection of water into the wells described above.

Respectfully submitted,

CONTINENTAL OIL COMPANY



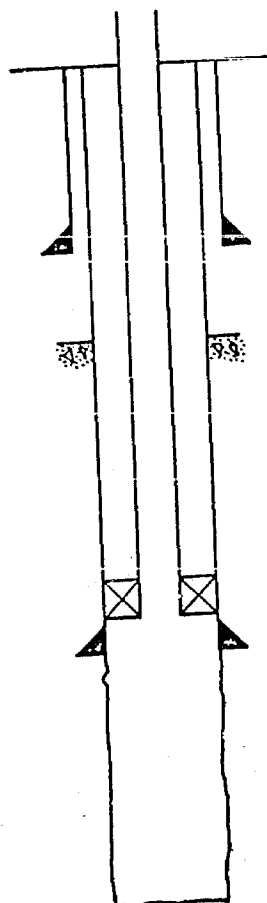
L. P. Thompson  
Division Manager of Production



CONTINENTAL OIL COMPANY

GRACE MITCHELL "B" LEASE

GRACE MITCHELL "B" LEASE  
WELL NO. 2  
660' FSL & 660' FEL  
SEC. 5-17-32  
LEA COUNTY, NEW MEXICO  
ELEV. 4098' DF



8 5/8" @ 883 W/325 SX

TOC @ 2100'

CEMENT LINED TUBING W/PACKER SET AT 3960'  
4 1/2" @ 4025 W/250 SX

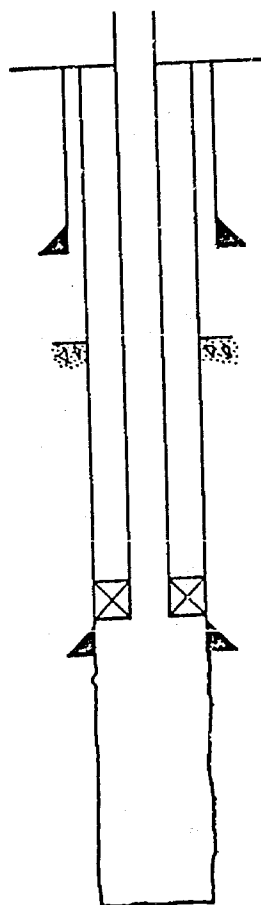
PRD 4110'

T. D. 5650'

PROCEDURE:

LOAD WELL WITH TREATED PRODUCED WATER. PULL RODS AND PUMP AND TUBING.  
CLEAN OUT FILL TO T.D. RUN CEMENT LINED TUBING WITH PACKER TO BE SET  
AT 3960'

GRACE MTICHELL "B" LEASE  
WELL NO. 6  
1980' FSL & EL  
SEC. 5-17-32  
LEA COUNTY, NEW MEXICO  
ELEV. 4103' DF



7 5/8" @ 950 W/475 SX

TOC BY TEMP. SURVEY @ 1900'

CEMENT LINED TUBING WITH PACKER SET AT 3870'

4 1/2" @ 3927' WITH 225 SX CEMENT.

T. D. 4085'

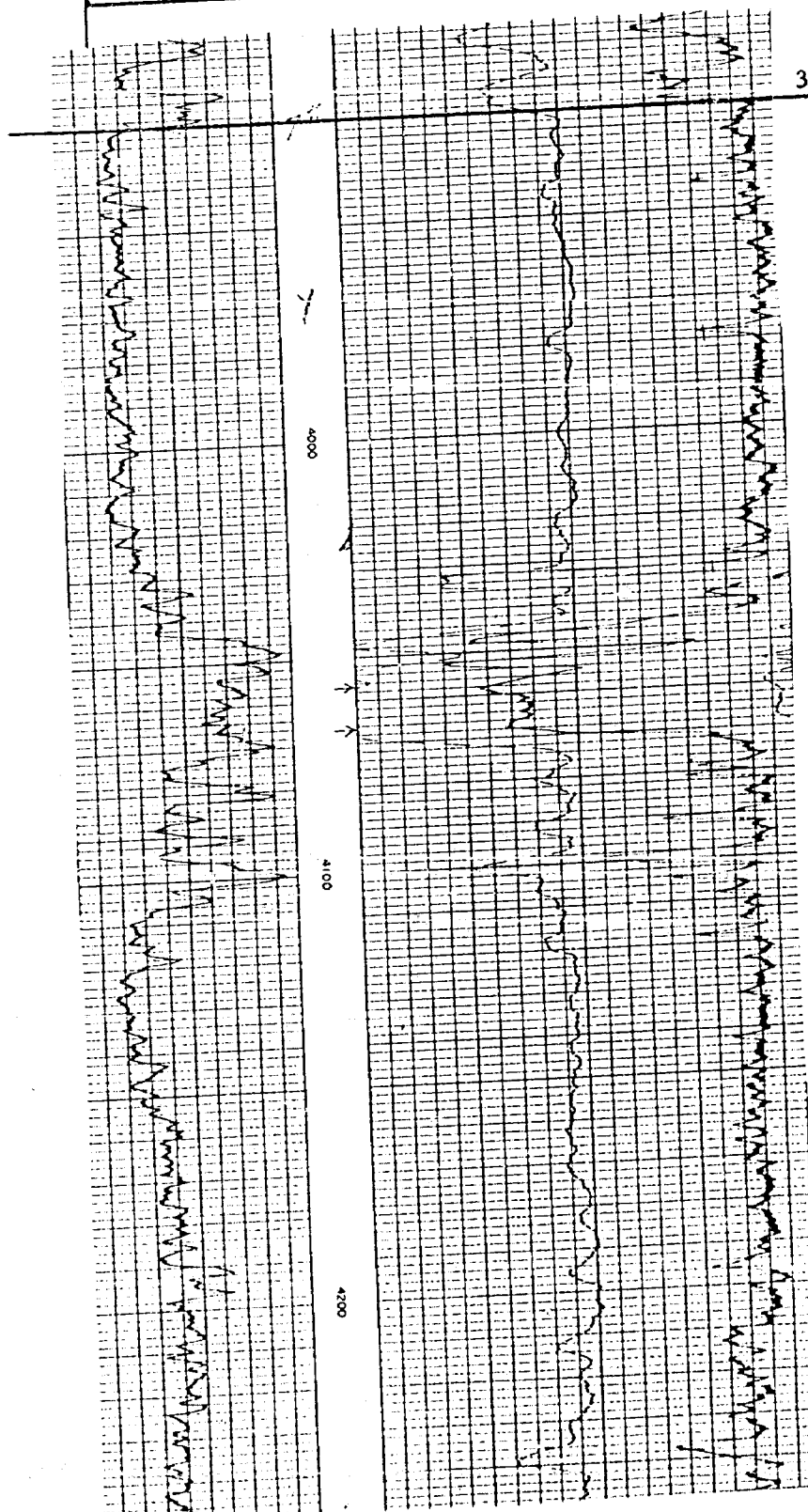
PROCEDURE:

LOAD WELL WITH TREATED PRODUCED WATER. PULL RODS AND PUMP, TUBING AND PACKER. CLEAN OUT ANY FILL TO T.D. RUN CEMENT LINED TUBING WITH PACKER TO BE SET AT 3870'. HOOK UP FOR INJECTION.

**P G A C**  
*Acoustic-Gravimetry Log*

FILE NO.	COMPANY CONTINENTAL OIL COMPANY	
WELL	GRACE MITCHELL "B" NO. 2	
FIELD	MALJANAR PADDOCK	
COUNTY	LEA	STATE NEW MEXICO
LOCATION	660' FSL, 660' FEL	Other Services HLL GR/LL-3
SEC	5	TWP 17-S RGE 32-E
Permanent Datum	U. S. F.	Elev. 4088
Log Measured from	As B	11 ft. Above Permanent Datum
Drilling Measured from	As B	
Date	1-13-62	
Run No.	CNE	
Total Depth Driller	5650	
Total Depth Logger	5647	
Casing Driller	883	
Casing Logger	7547	
Footage Logged	5647	
Mud Type	WATER BASE	
Density	10.2	Visc. 35
Max. Temp. (°F)	95	
Direction	UP	
Rec. To Rec. Spacing	1'	
Trans. To Rec. Spig.	4'	
Logging Instrument	ABN-62-27 / 2-5931	
Equip. No.	EL-25	
Recorded By	EARLY-BROWN	
Witnessed By	MR. BOYLAN	

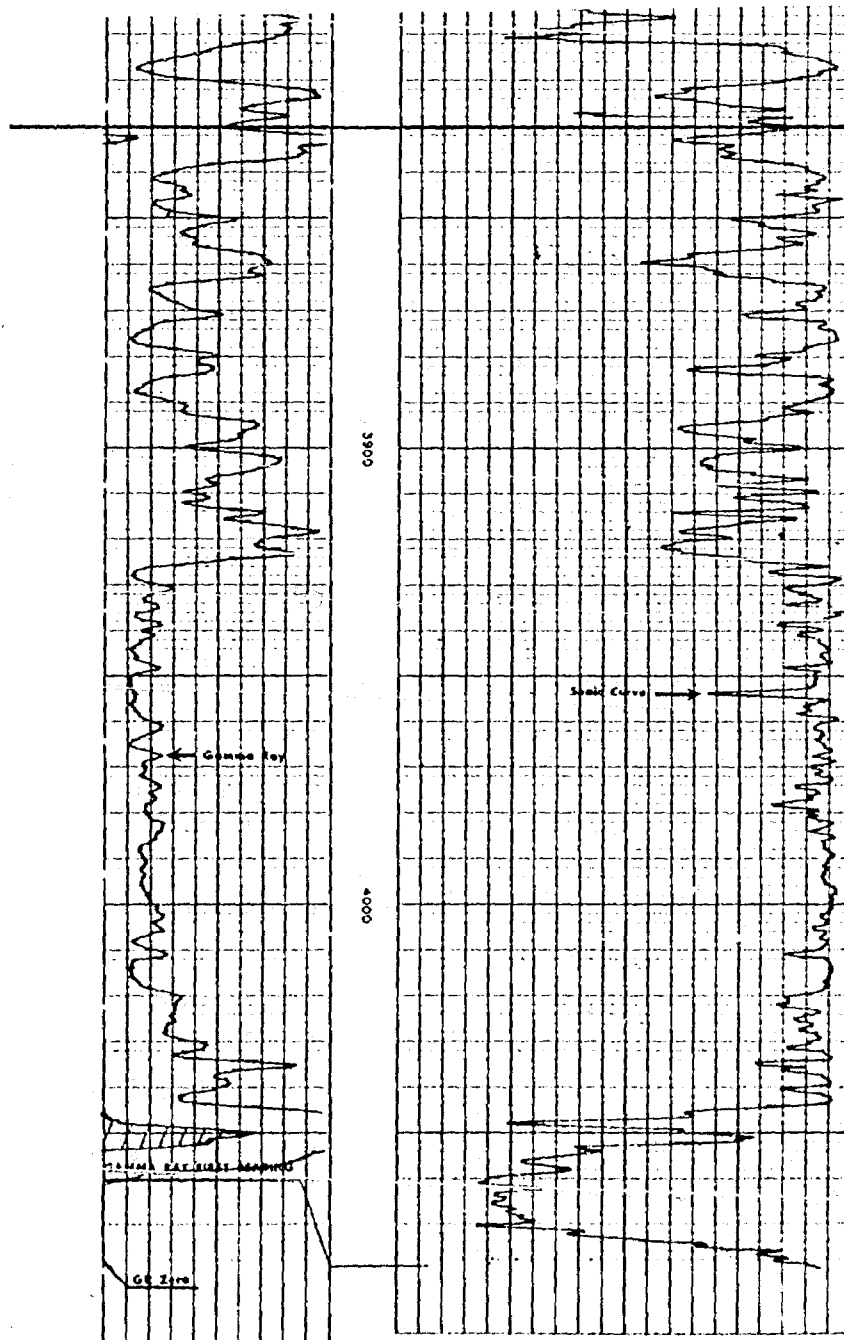
BORE HOLE RECORD				CASING RECORD			
Bit Size	From	To	Csg. Size	Csg. Wt.	From	To	
11	SURF.	883	8 5/8		SURF.	883	
7 7/8	883	5650					



SCHLUMBERGER		SONIC LOG	
SCHLUMBERGER WELL SURVEYING CORPORATION			
COUNTY <u>LEA</u> FIELD <u>GRACE MITCHELL</u> WELL <u>R-6</u> COMPANY <u>CONTINENTAL OIL</u>	COMPANY	Other Surveys	
	WELL	Location of Well	
	FIELD	1980' FROM S/L	
	LOCATION	1980' FROM E/L	
	COUNTY	Elevation: K.B.: <u>4100</u>	
STATE	NEW MEXICO	D.F.: <u>4039</u>	
Log Depths Measured From <u>PG 12</u> Ft. above <u>5/8" C&amp;F</u>			
RUN No.	ONE		
Date	7-27-52		
First Reading	1.020		
Last Reading	5.0		
Feet Measured	4.670		
Csg. Schlum.			
Csg. Driller	578-256		
Depth Reached	1.020		
Bottom Driller	578-256		
Mud Not.	25.2		
Dens. I. Visc.	10.2 @ 25		
Mud Resist.	0.0 @ 10		
Res. BHT	0 @ 10		
pH	6 @ 10		
Wtr. Loss	0 CC 30 min		
Rmf	0 @ 10		
Bit Size	5" 10 12 14 16 18 20		
Spacing			
I. R. L. R.	2100 To 10	To	To
I. R. L. R.	950 To 2100	To	To
Op. Rig Time	3.5 HOURS		
Truck No.	2245 HOURS		
Recorded By	WILSON		
Witness	CLIVER		

Reproduced By  
*West Texas Electrical Log Service*  
 Dallas 2, Texas

REFERENCE W27484



3925' TOP OF SAN ANDRES

DRAFT

dr/

BEFORE THE OIL CONSERVATION COMMISSION  
OF THE STATE OF NEW MEXICO

IN THE MATTER OF THE HEARING  
CALLED BY THE OIL CONSERVATION  
COMMISSION OF NEW MEXICO FOR  
THE PURPOSE OF CONSIDERING:

CASE NO. 5062

APPLICATION OF CONTINENTAL OIL  
COMPANY FOR A WATERFLOOD PROJECT,  
LEA COUNTY, NEW MEXICO.

Order No. R- 4633

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9 a.m. on September 5, 1973,  
at Santa Fe, New Mexico, before Examiner Elvis A. Utz.

NOW, on this        day of September, 1973, the Commission,  
a quorum being present, having considered the testimony, the record,  
and the recommendations of the Examiner, and being fully advised  
in the premises,

FINDS:

(1) That due public notice having been given as required by  
law, the Commission has jurisdiction of this cause and the subject  
matter thereof.

(2) That the applicant, Continental Oil Company, seeks  
authority to institute a waterflood project <sup>on its Mitchell Lease,</sup> in the         
       Unit Area, Maljamar Pool, by the injection  
of water into the Grayburg-San Andres formation through two  
injection wells in Section 5, Township 17 South, Range 32 East,  
NMPM, Lea County, New Mexico.



(3) That the wells in the project area are in an advanced state of depletion and should properly be classified as "stripper" wells.

(4) That the proposed waterflood project should result in the recovery of otherwise unrecoverable oil, thereby preventing waste.

(5) That the operator should take all steps necessary to ensure that the injected water enters only the proposed injection interval and is not permitted to escape to other formations or onto the surface from injection, production, or plugged and abandoned wells.

(6) That the subject application should be approved and the project should be governed by the provisions of Rules 701, 702, and 703 of the Commission Rules and Regulations.

IT IS THEREFORE ORDERED:

(1) That the applicant, Continental Oil Company, is hereby authorized to institute a waterflood project <sup>on its Mitchell Lease</sup> in the ~~Unit Area~~ Maljamar Pool, by the injection of water into the Grayburg-San Andres formation <sup>in the open hole interval</sup> ~~through the~~ following-described wells in Township 17 South, Range 32 East, NMPM, Lea County, New Mexico:

Mitchell Well No. 2, Unit P, Section 5

Mitchell Well No. 6, Unit J, Section 5

(2) That the subject waterflood project is hereby designated the Continental Maljamar Mitchell Waterflood Project and shall be governed by the provisions of Rules 701, 702, and 703 of the Commission Rules and Regulations.

<sup>into each of the aforesaid two wells</sup>  
(3) That injection shall be through externally cement-lined tubing set in a packer as close as ~~possible~~ <sup>is</sup> practicable to the <sup>casing shoe</sup> ~~case~~ <sup>shoe</sup> and the annulus shall be <sup>loaded with an inert fluid and</sup> equipped with a pressure gauge or other leak-sensing device in order to detect any leakage in the tubing, casing or ~~annulus~~ <sup>packer</sup>.

-3-

Case No. 5062

Order No. R-

(5) That montly progress reports of the waterflood project herein authorized shall be submitted to the Commission in accordance with Rules 704 and 1120 of the Commission Rules and Regulations.

(6) That jurisdiction of this cause is retained for the entry of such further orders as the Commission may deem necessary.

DONE at Santa Fe, New Mexico, on the day and year herein-  
above designated.