

W. CASE 6038: W. RIDLEY WHEELER ESTATE  
FOR A WATERFLOOD PROJECT, LEA COUNTY,  
NEW MEXICO

Case Number

6038

Application

Transcripts.

Small Exhibits

ETC.

BEFORE THE  
NEW MEXICO OIL CONSERVATION COMMISSION  
Santa Fe, New Mexico  
28 September, 1977

EXAMINER HEARING

IN THE MATTER OF:

Application of W. Ridley Wheeler Estate ) CASE  
for a waterflood project, Lea County, New ) 6038  
Mexico. )

BEFORE: Daniel S. Nutter

TRANSCRIPT OF HEARING

A P P E A R A N C E S

For the New Mexico Oil Conservation Commission: Lynn Teschendorf, Esq.  
Legal Counsel for the Commission  
State Land Office Building  
Santa Fe, New Mexico

For the Applicant: William F. Carr, Esq.  
CATRON, CATRON & SAWTELL  
52 Old Santa Fe Trail  
Santa Fe, New Mexico 87501

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General Court Reporting Service  
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I N D E X

1		
2	The Witness, George Jackson	
3	Direct Examination by Mr. Carr	3
4	Cross Examination by Mr. Nutter	10
5	Redirect Examination by Mr. Carr	16

E X H I B I T S

6		
7		
8		
9		
10		
11		
12		
13		
14	Exhibit 1, plat	10
15	Exhibit 2, Wellbore sketch	10
16	Exhibit 3, Diagram	10

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1 MR. NUTTER: We'll call next Case Number 6038.

2 MS. TESCHENDORF: Case 6038. Application of W.  
3 Ridley Wheeler Estate for a waterflood project, Lea County,  
4 New Mexico.

5 MR. CARR: May it please the Examiner, I'm William  
6 F. Carr, Catron, Catron and Sawtell, I have one witness who  
7 needs to be sworn.

8 (Witness sworn.)

9  
10 GEORGE JACKSON  
11 being called as a witness and being duly sworn upon his oath,  
12 testified as follows, to-wit:

13  
14 DIRECT EXAMINATION

15 BY MR. CARR:

16 Q Will you state your name and place of residence,  
17 please?

18 A My name is George Jackson. I live in Ft. Worth,  
19 Texas.

20 Q Mr. Jackson, by whom are you employed and in what  
21 capacity?

22 A I work for the W. Ridley Wheeler Estate in Ft. Worth,  
23 Texas, as a petroleum engineer.

24 Q Have you previously testified before the Oil Com-  
25 mission and had your credentials accepted and made a matter

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1 of record?

2 A. No, I haven't.

3 Q. Will you please summarize for the Examiner your edu-  
4 cational background and work experience?

5 A. I was graduated in 1970 from Texas Tech University  
6 with a degree in petroleum engineering.

7 Q. Since that time by whom have you been employed?

8 A. I worked for Amoco Production Company and Great  
9 Western Drilling Company as a secondary recovery engineer.

10 Q. And then more recently you have been employed by --

11 A. W. Ridley Wheeler Estate.

12 Q. Are you familiar with the application filed in this  
13 case?

14 A. Yes, I am.

15 MR. CARR: Are the witness' credentials acceptable?

16 MR. NUTTER: Yes, they are.

17 Q. (Mr. Carr continuing.) Mr. Jackson, will you please  
18 state briefly what W. Ridley Wheeler Estate seeks with this  
19 application?

20 A. We seek to drill a lease line injection well in  
21 Section 28, Township 9 South, 35 East to evaluate economics  
22 for secondary recovery in the depleted San Andres Reservoir.

23 Q. Have you prepared or has there been prepared under  
24 your direction and supervision certain exhibits for intro-  
25 duction in this case?

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1 A Yes.

2 Q Will you please refer to what has been marked for  
 3 identification as Exhibit Number 1 and explain to the Examiner  
 4 what it is and what it shows?

5 A This exhibit indicates with the red line the leases  
 6 that we own in this area, and in the center, in Section 28  
 7 and 27, shows the three wells that we plan to drill and use  
 8 for this secondary recovery pilot project.

9 Q Does this plat also show all wells drilled within  
 10 two miles of the proposed injection well?

11 A Yes, it does.

12 Q And does it show or reflect the leases in the gen-  
 13 eral area?

14 A Yes.

15 Q Does this plat indicate what formations these wells  
 16 are completed in?

17 A Yes, it does.

18 Q Mr. Jackson, are there other waterflood projects  
 19 in the immediate area?

20 A No. There's not a waterflood project within five  
 21 miles of this area.

22 Q Would you refer to what has been marked for identi-  
 23 fication as Exhibit Number 2 and explain to the Examiner what  
 24 it is and what it shows?

25 A This is a diagrammatic wellbore sketch of the State

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1 CZ Well Number 1. This is a well that we have applied and  
2 been permitted to re-enter in the San Andres Formation. This  
3 shows the casing and cementing programs and the proposed in-  
4 terval that we'll re-establish production from.

5 Q Are you presently reworking this well?

6 A Yes.

7 Q And have you filed the proper forms with the Hobbs  
8 office of the Oil Commission?

9 A Yes.

10 Q Mr. Jackson, after you rework this CZ Well Number 1,  
11 what are your plans for the development of this waterflood  
12 project?

13 A At the time that we successfully re-establish pro-  
14 duction from the State CZ Well Number 1, then we will drill  
15 the Markham Number 1, 1980 feet from the south line of Sec-  
16 tion 28 and 660 from the east line, and set pipe on top of  
17 the San Andres zone and core this interval to determine the  
18 physical characteristics and at that time determine if we  
19 will proceed with this waterflood pilot.

20 Q Have you filed the form C-101 and C-102 concerning  
21 this well with the Hobbs office of the Oil Commission?

22 A Yes, I have.

23 Q Have those forms been approved by the Hobbs office?

24 A Yes.

25 Q Mr. Jackson, please refer to what has been marked



1 as Exhibit Number 3, identify it, and explain to the Examiner  
2 what it shows.

3 A This is our proposed completion on the Markham Num-  
4 ber 2. This will be the lease line injection well that we  
5 request showing the casing and cementing programs.

6 Q Now, where is this well to be drilled?

7 A This well will be 1980 feet from the south line and  
8 25 feet from the east line of Section 28.

9 Q And do you plan to inject through perforation or  
10 into the open hole?

11 A This well will be an open hole completion in the  
12 top of the San Andres porosity at approximately 4800 to 4870  
13 feet.

14 Q And you will inject through tubing set in the packer

15 A Yes.

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

18 A Yes, it will.

19 Q And what will that be?

20 A This will be inhibited fresh water to protect the  
21 tube there.

22 Q Will the surface connection be so arranged that the  
23 pressure at the surface can be easily monitored?

24 A Yes, it will.

25 Q And how do you propose to do that?

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1 A. With a pressure gauge on a casing tubing annulus.

2 Q. And it is your intention to use this well only for  
3 injection purposes?

4 A. Yes.

5 Q. And into what formation do you plan to inject?

6 A. The San Andres.

7 Q. And what is the source of the water you plan to  
8 inject?

9 A. This well will use San Andres produced water from  
10 the Amoco State CZ and the Markham Number 1.

11 Q. Now what volumes do you plan to inject?

12 A. 75 to 150 barrels per day.

13 Q. Okay. Mr. Jackson, are there any other plugged  
14 and abandoned wells within one-half mile of the injection well  
15 which have penetrated the injection zone?

16 A. No, there are not.

17 Q. And are there any wells other than Pan Am CX State  
18 Number 1 within one-half mile of the injection well, which  
19 penetrate the injection zone?

20 A. Not at this time.

21 Q. I believe on Exhibit Number 3 you have indicated  
22 certain volumes of water you plan to inject. Can you inject  
23 this amount if you comply with the provisions of Oil Com-  
24 mission Memorandum 3-77, which limits the injection to .2 psi  
25 per foot of depth to the top of the injection zone?

1 A. Our experience has shown that we cannot conduct an  
2 economic waterflood in this reservoir, or our experience in  
3 this area has shown that we cannot do that, at .2 psi per foot  
4 of depth.

5 Q What pressure do you initially plan to inject?

6 A. We'll initially inject at .2 psi per foot of depth.

7 Q And will you need an administrative procedure where-  
8 by you can increase this pressure?

9 A. Yes.

10 Q And how will you determine whether or not the in-  
11 jection interval has a fracture gradient which can support  
12 a higher pressure?

13 A. We'll run step rate tests and injection profile  
14 surveys to determine that the injection is being confined to  
15 the desired interval.

16 Q What is the total production you anticipate from the  
17 two producing wells in this waterflood?

18 A. Ten barrels a day.

19 Q And what, in your opinion, is the estimated life  
20 of this waterflood project?

21 A. Twenty-five years.

22 Q. Mr. Jackson, in your opinion, without secondary re-  
23 covery efforts, could this area produce hydrocarbons from the  
24 San Andres in commercial quantities?

25 A. It has been demonstrated that it will not.

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1 Q In your opinion, can this area be successfully and  
2 economically waterflooded?

3 A That's the purpose of this pilot waterflood, to  
4 determine if it can be economically waterflooded.

5 Q In your opinion will this secondary recovery pro-  
6 ject result in the recovery of oil that would otherwise not  
7 be recovered, thereby preventing waste?

8 A Yes.

9 Q Will the proposed waterflood adversely affect the  
10 correlative rights of other operators in the area?

11 A No, it will not.

12 Q Do you have anything further to add to the testimony  
13 at this time?

14 A No.

15 MR. CARR: May it please the Examiner, at this time  
16 I would offer Applicant's Exhibits 1 through 3.

17 MR. NUTTER: Applicant's Exhibits 1 through 3 will  
18 be admitted in evidence.

19 MR. CARR: I have nothing further at this time.

20

21 CROSS EXAMINATION

22 BY MR. NUTTER:

23 Q Mr. Jackson, you're not going to be having any  
24 source of water other than the produced water in the two wells  
25 here, --

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1 A. This Amoco State CZ was initially completed for  
2 20 barrels of oil and 20 barrels of water per day, and one  
3 month later it produced 3 barrels of oil and 20 barrels of  
4 water, and the producing interval was fracture stimulated and  
5 subsequently produced for twelve days, according to the re-  
6 cords that I have, in excess of 100 barrels of water per day.

7 What we propose to do now, or intend to do, is re-  
8 establish production from this interval and install high lift  
9 equipment to adequately pump this well down, and we feel like  
10 that that would certainly supply enough water to be used for  
11 this pilot.

12 Q What's the total cumulative production on that CZ  
13 1 in this San Andres zone?

14 A The production from this well, as I stated, I don't  
15 know the exact figures, but it was potential for 20 barrels  
16 a day and one month later it produced 3 barrels a day and  
17 fracture stimulated and did not produce any oil after that.

18 Q So a few hundred barrels is the total sum of the  
19 production?

20 A Yes. Yes, sir. I would estimate about 250 barrels.

21 Q Well, you won't be adding any pressure to the re-  
22 servoir because you're not going to be adding any water from  
23 any other source; you'll just be taking water out of one well  
24 and putting it another and moving the water.

25 A Well, this water is from the underlying aquifer

1 rather than the oil interval, the proposed production inter-  
2 val.

3 According to the information that we have on this  
4 Exhibit 1, the Lone Star King State was drilled in 1952 and  
5 as a San Andres gas well from this reservoir.

6 Q Where is that well?

7 A It's in -- it's north of Section 21 as outlined  
8 there. It's a plugged San Andres gas well. It produced ap-  
9 proximately 2.8 billion cubic feet of gas.

10 In 1964, in Section 29, the J. I. O'Neill well was  
11 drilled and produced cumulative production of about 6600  
12 barrels of oil and was abandoned making six barrels of oil a  
13 day, and in Section 21, the Markham-Glenn well produced ap-  
14 proximately that amount of oil. It was abandoned -- or cumu-  
15 lative -- it was abandoned making approximately that amount of  
16 oil and was not considered to be economic.

17 From the drill stem tests conducted chronologically,  
18 we can see that this King State gas well did deplete that re-  
19 servoir and later development was not economic in that -- in  
20 that time.

21 What we propose to do is to redrill this considering  
22 that the primary production rather than being produced at the  
23 surface has been produced into that gas-cap. These wells,  
24 from the King State to the Markham-Glenn to the J. I. O'Neill,  
25 and the Amoco CZ, are producing from the correlative interval

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1 and a very nice San Andres porosity.

2 We estimate that approximately 4 million barrels of  
3 primary oil was produced into the gas-cap and we are proposing  
4 to redrill, or to drill this oil producing interval for second-  
5 dary reserves.

6 Q So you have your eye on this entire area that  
7 you've got your leases on.

8 A Yes, sir, we've outlined approximately 4200 acres.  
9 The original gas-oil contact is illustrated there as a north-  
10 east-southwest trend from the Lone Star King State to the  
11 Markham-Glenn. The wells shown in Section 20 are pinched out  
12 in the porous interval that we're interested in and so we  
13 have a reservoir trap, stratigraphic trap on the -- to the  
14 northwest and then in Section 32 we have the same zone that  
15 was drill stem tested and did produce oil on the drill stem  
16 test in the northwest corner of Section 32. It is a correla-  
17 tive zone there.

18 In the State CZ Well Number 1, the oil-water con-  
19 tact was penetrated and drill stem tested and we feel that  
20 that is the interval that will produce the water, or that  
21 was fracture stimulated, and so we feel like this reservoir  
22 was originally an oil ring underlying this reservoir that  
23 was produced twelve years prior to the first well being --  
24 penetrating the oil zone.

25 Q So now, as I understand it, on this Amoco State CZ

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1 Well, you feel that there's two zones in there; one is oil-  
2 bearing and water-bearing, and that you will be producing the  
3 water out of the water zone and taking it over to the Number 2  
4 well, injecting it into this oil zone and then producing the  
5 oil zone from the Markham Number 1 and the State CZ Number 1?

6 A Yes, sir, we feel like we can install lift equip-  
7 ment sufficient to lower the fluid level in this well and re-  
8 establish the 3 to 5 barrels a day production that well had  
9 declined to, and also produce water to be injected into a  
10 properly completed injection well on the lease line, and also  
11 to afford response at the Markham Number 1.

12 And our proposal here is that this conforms these  
13 wells -- actually it says undesignated, but later, after  
14 talking to the Hobbs office, this will fall into the Jenkins-  
15 San Andres Field and subsequent development would comply with  
16 those field rules as originally established for these aban-  
17 doned producers. This short-spaced well will require approx-  
18 imately one-fourth of the water to obtain response and eval-  
19 uate this project as a well drilled on 40-acre spacing.

20 Q It's not going to take much water to fill up the  
21 voids that production created in the Amoco CZ Well, anyway.

22 A No, but we don't contend that that was the production.  
23 We think that the production as indicated here is the oil  
24 that is expended in the gas-cap from production from the  
25 Lone Star King.



1 Q How many Mcf did you say that well had made?

2 A About 2.8 billion.

3 Q I think I heard that this Ridley Wheeler Estate  
4 was going to conduct some kind of an experimental waterflood  
5 project right over on the state line, also, is that right?

6 A Yes, sir.

7 Q Have you had success with this type of an operation  
8 where you've gone in and just drilled one well in between an  
9 old producing well and another well you might be drilling and  
10 producing in that manner?

11 A We have had in Hockley County, Texas, a nice San  
12 Andres waterflood project there that was originally not econ-  
13 omic when it was drilled in 1970. Of course, we've had a  
14 price increase since then, but we do have experience with  
15 San Andres waterfloods that have been successful with not --  
16 not this low indicated production, of course, but we feel  
17 like this project has merit from the standpoint of the re-  
18 servoir volume of potential production by depletion of this  
19 gas-cap.

20 MR. NUTTER: Are there any further questions of Mr.  
21 Jackson? He may be excused.

22 Do you have anything further, Mr. Carr?

23 MR. CARR: I have one question.

24

25

REDIRECT EXAMINATION

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1 BY MR. CARR:

2 Q You indicated you're presently reworking the Pan-Am  
3 CZ State Number 1?

4 A Yes.

5 Q When do you anticipate you would be ready to com-  
6 mence drilling on the Markham Number 1?

7 A At any time after re-establishing production from  
8 the CZ Well, State CZ; we would like to have this expedited  
9 as a matter of scheduling so that we can move on the Markham  
10 Number 1 if we don't successfully re-enter the State CZ,  
11 which we're in that operation now, merely on junk casing, but  
12 if we can't successfully complete that, then we'll have to  
13 amend this application, relocate this pilot in the leased  
14 area, but if we do, we'd like to move in and drill the Mark-  
15 ham Number 1.

16 MR. NUTTER: I see.

17 MR. CARR: I have nothing further.

18 MR. NUTTER: Does anyone have anything they'd like  
19 to offer in Case Number 6038?

20 We'll take the case under advisement.

21 (Hearing concluded.)  
22  
23  
24  
25

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REPORTER'S CERTIFICATE

I, SALLY WALTON BOYD, a Certified Shorthand Reporter,  
DO HEREBY CERTIFY that the foregoing and attached Transcript  
of Hearing before the New Mexico Oil Conservation Commission  
was reported by me, and the same is a true and correct record  
of the said proceedings to the best of my knowledge, skill,  
and ability.

Sally Walton Boyd  
Sally Walton Boyd, C. S. R.

I do hereby certify that the foregoing is  
a true and correct copy of the transcript in  
the hearing of the New Mexico Oil Conservation Commission.  
9/28 6038  
19 77

[Signature] Examiner  
New Mexico Oil Conservation Commission

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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. 6038  
Order No. R-5547

APPLICATION OF W. RIDLEY WHEELER  
ESTATE 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 28, 1977, at Santa Fe, New Mexico, before Examiner Daniel S. Nutter.

NOW, on this 25th day of October, 1977, 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, W. Ridley Wheeler Estate, seeks authority to institute a waterflood project on its Markham Lease, in an undesignated San Andres Pool, by the injection of water into the San Andres formation through its Markham Well No. 2 to be drilled 1980 feet from the South line and 25 feet from the East line of Section 28, Township 9 South, Range 35 East, NMPM, Lea County, New Mexico, through the open-hole interval from approximately 4800 feet to 4870 feet.

(3) That the producing well in the project area is in an advanced state of depletion and should properly be classified as a "stripper" well.

(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, W. Ridley Wheeler Estate, is hereby authorized to institute a waterflood project on its Markham Lease, in an undesignated San Andres Pool, by the injection of water into the San Andres formation through its Markham Well No. 2 to be drilled 1980 feet from the South line and 25 feet from the East line of Section 28, Township 9 South, Range 35 East, NMPM, Lea County, New Mexico, through the open-hole interval from 4800 feet to 4870 feet.

(2) That injection into said well shall be through internally coated tubing, set in a packer which shall be located as near as practicable to the uppermost perforation; that the casing-tubing annulus of each injection well shall be loaded with an inert fluid and equipped with an approved pressure gauge or attention-attracting leak detection device.

(3) That the operator shall immediately notify the supervisor of the Commission's Hobbs district office of the failure of the tubing or packer in said injection well, 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.

(4) That the injection well or injection system should be equipped with a pop-off valve or other suitable device which will limit the wellhead pressure on the injection well to no more than 960 psi.

(5) That the operator should notify the Supervisor of the Hobbs district office of the Commission of the date and time of installation of the injection equipment so that the same may be inspected prior to being placed in operation.

(6) That the operator shall 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.

-3-

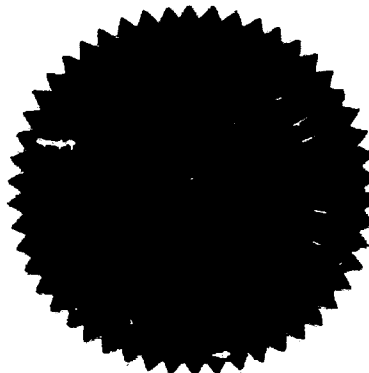
Case No. 6038  
Order No. R-5547

(7) That the subject waterflood project is hereby designated the Wheeler Estate Markham Waterflood Project and shall be governed by the provisions of Rules 701, 702, and 703 of the Commission Rules and Regulations.

(8) 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.

(9) 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 hereinabove designated.



STATE OF NEW MEXICO  
OIL CONSERVATION COMMISSION

*Phil R. Lucero*  
PHIL R. LUCERO, Chairman

EMERY C. ARNOLD, Member

*Joe D. Ramsey*  
JOE D. RAMSEY, Member & Secretary

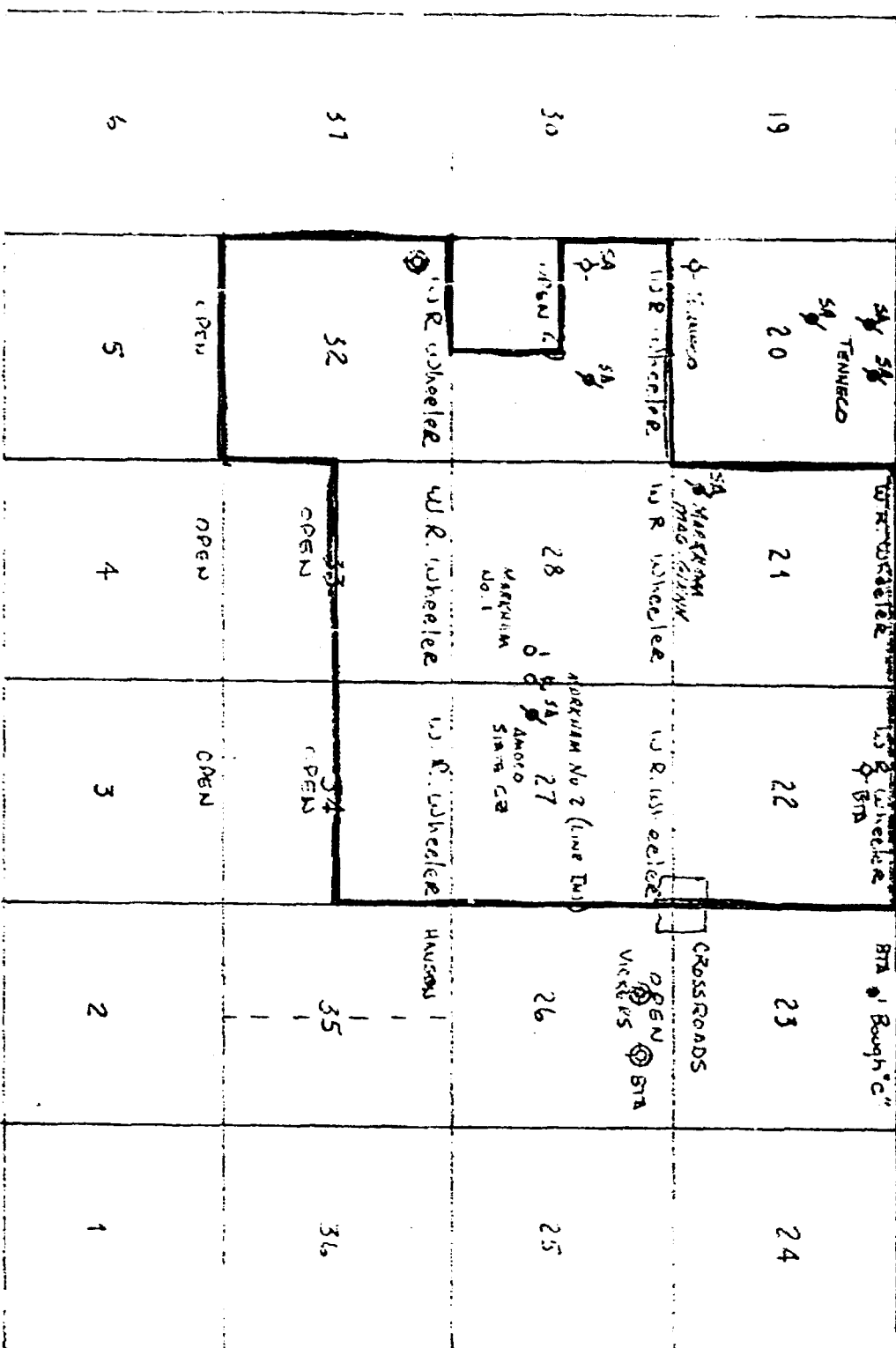
S E A L

dr/

SA 5 W. Kingdon

SA \* Lone Star King State

with 15-150 BPD from March 1951  
W. Kingdon



EX. #1  
W.R. Wheeler Estate  
CROSSROADS, New Mexico  
SECONDARY RECOVERY PROJECT  
TWP 9S  
RGE 35E  
LEA COUNTY, New Mexico  
SCALE 1" = 4000'

OFF 1-2X  
OFF 1-2X

NORTH

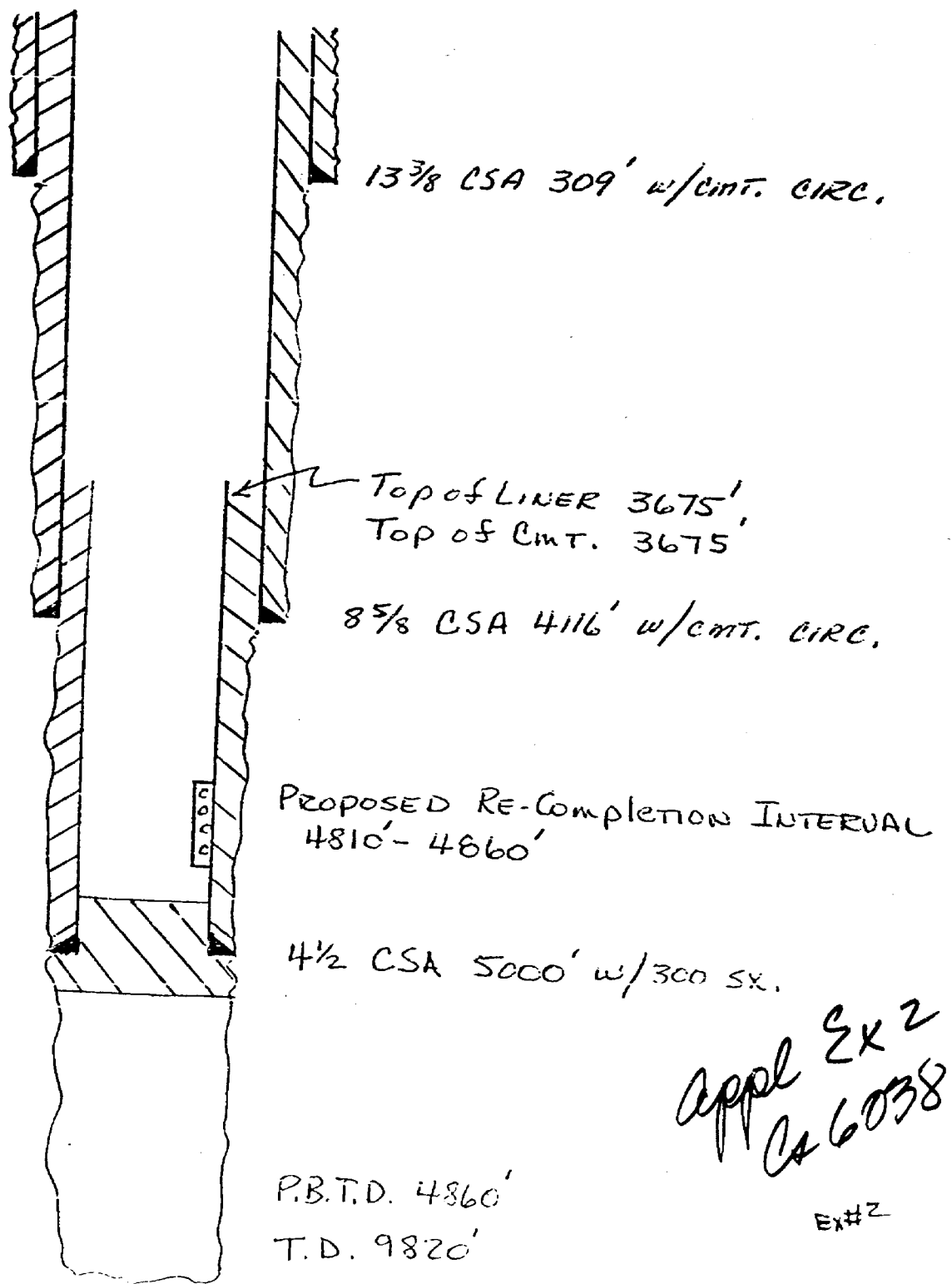


W. R. WHEELER ESTATE

DIAGRAMMATIC WELLBORE SKETCH

STATE CZ No. 1

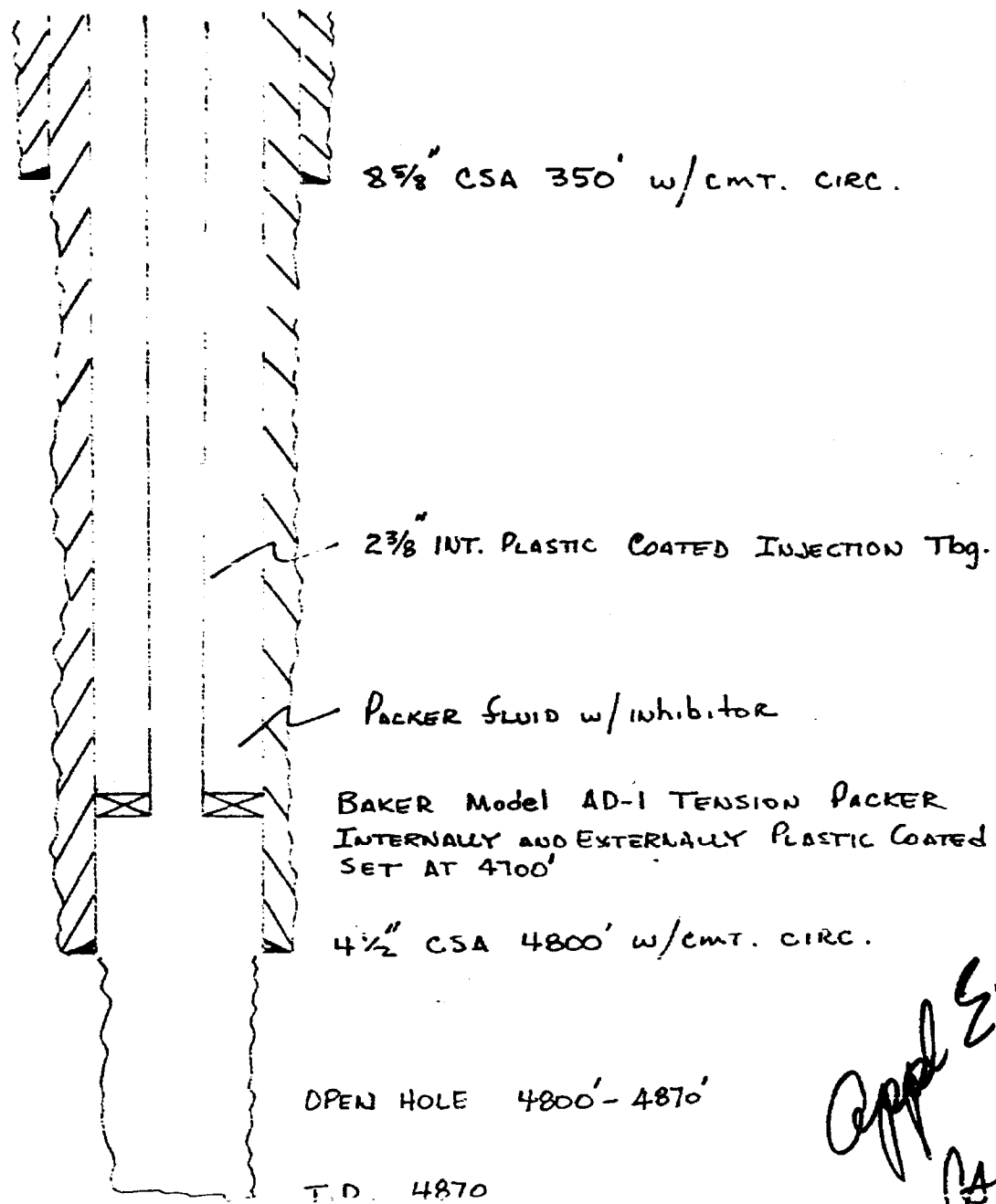
LOCATION: 1980 FSL AND 660 FWL, TWP 9S, RGE 35E,  
SEC. 27, LEA CO., NEW MEXICO



W.R. Wheeler ESTATE

WATER INJECTION WELL DIAGRAMMATIC WELLBORE SKETCH  
MARKHAM No. 2

LOCATION: 1980 FSLAND 25 FEL, TWP. 9S, R6E.35E, Sec. 28  
LEA CO., New Mexico



WTR. INJECTION INTO SAN ANDRES FORMATION 4800' - 4870'

ANTICIPATED VOLUME - 75 TO 150 BARRELS PER DAY AT 2000 PSL SURFACE.

SOURCE - SAN ANDRES PRODUCED WATER FROM W.R. WHEELER ESTATE  
STATE CZ No. 1 AND MARKHAM No. 1.

EX#3

- CASE 6038: Application of W. Ridley Wheeler Estate for a waterflood project, Lea County, New Mexico. Applicant, in the above-styled cause, seeks authority to institute a waterflood project in an undesignated San Andres reservoir by the injection of water into the San Andres formation thru the open-hole interval from 4800 feet to 4870 feet in its Markham Well No. 2, to be drilled 1980 feet from the South line and 25 feet from the East line of Section 28, Township 9 South, Range 35 East, Lea County, New Mexico.
- CASE 6039: Application of Gulf Oil Corporation for directional drilling, Lea County, New Mexico. Applicant, in the above-styled cause, seeks approval for the directional drilling of three Drinkard Pool wells on its Central Drinkard Unit in Township 21 South, Range 37 East, Lea County, New Mexico, as follows:
- Well No. 419, surface location 1631 feet from the South line and 260 feet from the West line of Section 28, to be bottomed approximately 1335 feet from South line and 15 feet from East line of Section 29; Well No. 421, surface location 1465 feet from North line and 1056 feet from East line of Section 32, to be bottomed approximately 1305 feet from North and East lines of Section 32; and Well No. 422, surface location 1155 feet from North line and 1000 feet from West line of Section 33, to be bottomed approximately 1305 feet from North line and 1335 feet from West line of Section 33.
- CASE 6040: Application of Gulf Oil Corporation for pool reclassification and a special GOR limit, Lea County, New Mexico. Applicant, in the above-styled cause, seeks the reclassification of the North Teague-Devonian Gas Pool in Sections 22 and 27, Township 23 South, Range 37 East, Lea County, New Mexico, as an oil pool and the consolidation of said pool with the Teague-Devonian Oil Pool in Sections 27, 34, and 35 of said Township. Applicant further requests a special gas-oil ratio limit for said Teague-Devonian Oil Pool of not more than 5000 to one.
- CASE 6041: Application of Gulf Oil Corporation for an unorthodox location and simultaneous dedication, Lea County, New Mexico. Applicant, in the above-styled cause, seeks approval for the unorthodox location of its Harry Leonard Well No. 12 located in Unit P of Section 22, Township 21 South, Range 36 East, Eumont Gas Pool, Lea County, New Mexico, to be simultaneously dedicated to a previously approved 480-acre multiple well non-standard proration unit.
- CASE 6042: Application of Gulf Oil Corporation for a non-standard proration unit, simultaneous dedication, and unorthodox locations, Lea County, New Mexico. Applicant, in the above-styled cause, seeks approval for a 388.51-acre non-standard gas proration unit comprising the NW/4 and E/2 SW/4 of Section 6, and the NW/4 of Section 7, both in Township 22 South, Range 37 East, Eumont Gas Pool, Lea County, New Mexico, to be simultaneously dedicated to applicant's H. T. Mattern Wells Nos. 6 and 3, at unorthodox locations in Unit N of Section 6 and Unit F of Section 7, respectively.
- VASE 6043: Application of V-F Petroleum Inc., for an unorthodox oil well location, Roosevelt County, New Mexico. Applicant, in the above-styled cause, seeks approval for an unorthodox oil well location 330 feet from the South line and 2310 feet from the East line of Section 29, Township 8 South, Range 38 East, North Sawyer-Devonian Pool, Roosevelt County, New Mexico.
- CASE 6044: Application of Orla Petco for compulsory pooling, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks an order pooling all mineral interests down to 3500 feet underlying the NE/4 NE/4 of Section 1, Township 23 South, Range 27 East, and also the NW/4 NE/4 of said Section, Eddy County, New Mexico, to form two 40-acre units, each to be dedicated to a well to be drilled at a standard location thereon. Also to be considered will be the cost of drilling and completing said wells and the allocation of the costs thereof, as well as actual operating costs and charges for supervision. Also to be considered will be the designation of applicant as operator of the wells and a charge for risk involved in drilling said wells.
- CASE 6045: Application of Burleson & Huff for compulsory pooling, Lea County, New Mexico. Applicant, in the above-styled cause, seeks an order pooling all mineral interests underlying the NW/4 of Section 12, Township 21 South, Range 36 East, Eumont Gas Pool, Lea County, New Mexico, to be dedicated to a well to be drilled at a standard location thereon. Also to be considered will be the cost of drilling and completing said well and the allocation of the cost thereof, as well as actual operating costs and charges for supervision. Also to be considered will be the designation of applicant as operator of the well and a charge for risk involved in drilling said well.
- CASE 6046: Application of Belco Petroleum Corporation for compulsory pooling, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks an order pooling all mineral interests in the Morrow formation underlying all of Section 3, Township 22 South, Range 25 East, Catclaw Draw-Morrow Gas Pool, Eddy County, New Mexico, to be dedicated to a well to be drilled at a standard location thereon. Also to be considered will be the cost of drilling and completing said well and the allocation of the cost thereof, as well as actual operating costs and charges for supervision. Also to be considered will be the designation of applicant as operator of the well and a charge for risk involved in drilling said well.

CATRON, CATRON & SAWTELL

ATTORNEYS AND COUNSELORS AT LAW

THE PLAZA

SANTA FE, NEW MEXICO 87501

THOMAS B. CATRON, 1840-1921  
FLETCHER A. CATRON, 1890-1964

THOMAS B. CATRON, III  
JOHN S. CATRON  
WILLIAM A. SAWTELL, JR.  
FLETCHER R. CATRON

WILLIAM F. CARR  
W. ANTHONY SAWTELL

POST OFFICE BOX 788  
TELEPHONE 982-1947  
AREA CODE 505

September 16, 1977

Oil Conservation Commission  
State of New Mexico  
Post Office Box 2088  
Santa Fe, New Mexico 87501

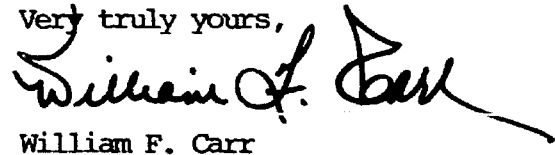
HAND DELIVERED

Attention: Mr. Joe D. Ramey  
State Petroleum Engineer

Gentlemen:

Enclosed herewith, in triplicate, is the Application of W. Ridley Wheeler Estate for approval of a waterflood project, Lea County, New Mexico. W. Ridley Wheeler Estate requests that this matter be set for the Examiner's hearing to be held on September 28, 1977.

Very truly yours,



William F. Carr

WFC/ss

enclosure

cc: Mr. George Jackson  
W. Ridley Wheeler Estate  
2010 Fort Worth National Bank Building  
Fort Worth, Texas 76002

BEFORE THE  
OIL CONSERVATION COMMISSION OF NEW MEXICO

SEP 16 1977  
OIL CONSERVATION COMMISSION  
SANTA FE

IN THE MATTER OF THE APPLICATION  
OF W. RIDLEY WHEELER ESTATE FOR  
APPROVAL OF A WATERFLOOD PROJECT,  
LEA COUNTY, NEW MEXICO.

Case No. 6038

APPLICATION

Comes now W. Ridley Wheeler Estate, by its undersigned attorneys, and hereby makes application for an order authorizing it to install and operate a waterflood project, Lea County, New Mexico, by drilling an injection well and a well for production of hydrocarbons and by reworking an additional well for production of hydrocarbons, and in support of this application would show the Commission:

1. Applicant is the operator of the San Andres Formation underlying Sections 27 and 28, Township 9 South, Range 35 East, N.M.P.M., Lea County, New Mexico, and seeks permission to institute a waterflood project by injecting water into the San Andres Formation in its Markham Well No. 2 which it proposes to drill at a point 1,980 feet from the South line and 25 feet from the East line of said Section 28.

2. Subsequent to drilling this well applicant will re-enter and rework the Pan Am State CZ Well No. 1 located 660 feet from the West line and 1,980 feet from the South line in said Section 27, and drill its Markham Well No. 1, at a point 660 feet from the East Line and 1,980 feet from the South line of said Section 28 for the production of hydrocarbons.

3. Applicant plans to inject produced water from the San Andres Formation into its Markham Well No. 2 achieving sufficient response to recover commercial quantities of hydrocarbons from the other two wells

referred to hereinabove.

4. Applicant will have a rig available on or about October 1, 1977, and therefore, time is of the essence in obtaining Commission approval of this Application.

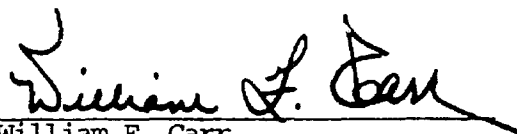
5. Approval of this application will result in the recovery of otherwise unrecoverable oil and is, therefore, in the interest of conservation and the prevention of waste. Correlative rights of offset operators will not be impaired by approval of this application.

6. Applicant requests that administrative procedures be authorized whereby modification or expansion of the waterflood project including the drilling of additional injection wells and/or producing wells, and the conversion of existing wells to injection wells at both orthodox and un-orthodox locations may be approved without further notice and hearing.

7. Applicant further requests that an administrative procedure be authorized whereby the surface injection pressure in its injection well or wells in this waterflood project may be increased to a pressure greater than 0.2 psi per foot of depth to the top of the injection zone on making a showing to the Director that the strata confining the injection fluid has a fracture gradient which will support a higher pressure.

WHEREFORE applicant prays that this matter be set for hearing before a duly appointed examiner of the Oil Conservation Commission on September 28, 1977, that notice be given as required by law and the rules of the Commission, and that the application be approved.

Respectfully submitted,  
CATRON, CATRON & SAWTELL

By   
William F. Carr  
P. O. Box 788  
Santa Fe, New Mexico 87501  
Attorneys for Applicant

DRAFT

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. 6038

Order No. R- 5547

APPLICATION OF W. RIDLEY WHEELER  
ESTATE 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 28,  
19 77, at Santa Fe, New Mexico, before Examiner Daniel S. Nutter.

NOW, on this        day of October, 19 77, 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, W. Ridley Wheeler Estate, seeks  
authority to institute a waterflood project on its Markham  
Lease, <sup>in an</sup> undesigned San Andres Pool, by the injection of water into the  
San Andres formation through its Markham Well No. 2 to be drilled  
1980 feet from the South line and 25 feet from the East line of  
Section 28, Township 9 South, Range 35 East, NMPM, Lea County,  
New Mexico, through the open-hole interval from <sup>approximately</sup> 4800 feet to 4870  
feet.

-2-  
Case No. 6038  
Order No. R-

(3) That the <sup>producing</sup> well in the project area <sup>is</sup> in an advanced state of depletion and should properly be classified as a "stripper" well.

(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, W. Ridley Wheeler Estate, is hereby authorized to institute a waterflood project on its Markham Lease, in an undesignated San Andres Pool, by the injection of water into the San Andres formation through its Markham Well No. 2 to be drilled 1980 feet from the South line and 25 feet from the East line of Section 28, Township 9 South, Range 35 East, NMPM, Lea County, New Mexico, through the open-hole interval from 4800 feet to 4870 feet.

(2) That injection into ~~xx~~ said well shall be through internally coated tubing, set in a packer which shall be located as near as practicable to the uppermost perforation; that the casing-tubing annulus of each injection well shall be loaded with an inert fluid and equipped with an approved pressure gauge or attention-attracting leak detection device.



(3) That the operator shall immediately notify the supervisor of the Commission's Hobbs district office of the failure of the tubing or packer in said injection well, 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.

(4) That the subject waterflood project is hereby designated the Wheeler Estate Markham Waterflood Project and shall be governed by the provisions of Rules 701, 702, and 703 of the Commission Rules and Regulations.

(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.

DONE at Santa Fe, New Mexico, on the day and year hereinabove designated.

(4) That the injection well or injection system should be equipped with a pop-off valve or other suitable device which will limit the well head pressure on the injection well to no more than 960 psi.

(5) That the operator should notify the Supervisor of the Hobbs district office of the Commission of the date and time of installation of the injection equipment so that the same may be inspected prior to being placed in operation.

(6) That the operator shall 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.

982-1947

Application of W. Ridley Wheeler Estate  
for a water flood project, Lea  
County, New Mexico.

Applicant, in the above styled cause,  
seeks authority to institute a water  
flood project in an undesignated  
San Andres reservoir by the injection  
of water into the San Andres formation  
thru the open-hole interval from 4800 feet  
to 4870 feet in its Markham Well No. 2,  
to be drilled 1980 feet from the South  
line and 25 feet from the East line  
of Section 28, Township 9 South, Range  
35 East, Lea County, New Mexico.

Called in by Bill Carr 9/7/77

Written appl w/ attachments to follow  
Jen