

CASE 3592: Application of ANNE
BURNETT WINDFOHR, dba WINDFOHR
OIL CO. for waterflood project.

1st on back

11-22-02

CASE No.
3592

Application,
TRANSCRIPTS,
SMALL Exhibits
ETC.

OIL CONSERVATION COMMISSION
P. O. BOX 2088
SANTA FE, NEW MEXICO

August 21, 1967

C Mr. Ralph L. Gray
Post Office Box 198
Artesia, New Mexico

Dear Mr. Gray:

O
P
Reference is made to your letter of June 28, 1967, concerning the Windfohr Oil Company Grayburg-Jackson Waterflood Project which was approved by Order No. R-3257, and also to subsequent telephone conversations between you and Mr. Dan Nutter of this office, particularly in reference to your request to defer running the liners in the injection wells for a period of time during which you would inject down the casing in order to achieve partial reservoir fill-up. This would permit obtaining injectivity profiles and should also cut down on cement loss while cementing the liners.

Y This letter, which is an amendment to our letter of June 13, 1967, regarding this project, provides written confirmation of Windfohr's authority to proceed in the manner outlined above for a maximum of six months.

Please advise this office in the event fill-up has not been obtained or if the liners have not been run by January 1, 1968.

Very truly yours,

A. L. PORTER, Jr.
Secretary-Director

ALP/DSN/ir

cc: Oil Conservation Commission - Artesia, New Mexico
U. S. Geological Survey - Artesia, New Mexico
Mr. Frank Irby, State Engineer Office - Santa Fe, New Mexico
Case File 3592

OIL CONSERVATION COMMISSION

P. O. BOX 2088

SANTA FE, NEW MEXICO

June 13, 1967

C
O
P
Y
Mr. Fred Watson
Watson & Watson
Attorneys at Law
Carper Building
Artesia, New Mexico

Dear Sir:

P
Reference is made to Commission Order No. R-3257, recently entered in Case No. 3592, approving the Windfohr Grayburg-Jackson Waterflood Project.

Y
Initial injection shall be through the eight authorized injection wells, all but one of which are to be converted producers. Injection into these seven wells shall be through plastic coated tubing set in packers, which shall be set in the upper portion of the 4 $\frac{1}{2}$ -inch liner to be inserted in each well. The casing-annulus shall be loaded with an inert fluid. Injection into the eighth well, which is to be drilled, shall be down tubing.

As to allowable, our calculations indicate that when all of the authorized injection wells have been placed on active injection, the maximum allowable which this project will be eligible to receive under the provisions of Rule 701-E-3 is 1134 barrels per day when the Southeast New Mexico normal unit allowable is 42 barrels or less.

Please report any error in this calculated maximum allowable immediately, both to the Santa Fe office of the Commission and the appropriate district proration office.

OIL CONSERVATION COMMISSION
P. O. BOX 2088
SANTA FE, NEW MEXICO

-2-

Mr. Fred Watson
Watson & Watson
Attorneys at Law
Artesia, New Mexico

C
O
P
Y
In order that the allowable assigned to the project may be kept current, and in order that the operator may fully benefit from the allowable provisions of Rule 701, it behooves him to promptly notify both of the aforementioned Commission offices by letter of any change in the status of wells in the project area, i.e., when active injection commences, when additional injection or producing wells are drilled, when additional wells are acquired through purchase or unitization, when wells have received a response to water injection, etc.

Your cooperation in keeping the Commission so informed as to the status of the project and the wells therein will be appreciated.

Very truly yours,

A. L. PORTER, Jr.
Secretary-Director

ALP/DSM/ir

cc: Mr. Frank Irby
State Engineer Office
Santa Fe, New Mexico

Oil Conservation Commission
Drawer DD
Artesia, New Mexico

U. S. Geological Survey
Artesia, New Mexico

RALPH L. GRAY
PETROLEUM ENGINEERING - PRODUCTION
CONSULTANT
P. O. BOX 198
ARTESIA, NEW MEXICO

June 28, 1967

MAIN OFFICE 010

'67 JUN 29 AM 8 12

New Mexico Oil Conservation Commission
P. O. Box #2088
Santa Fe, New Mexico 87501

Attention: Mr. A. L. Porter, Jr., Secretary

Dear Sir:

A short time ago Windfohr Oil Company filed an application with the New Mexico Oil Conservation Commission for injecting water into wells in their Grayburg-Jackson-San Andres Unit located in the Grayburg-Jackson Pool. This water injection project was approved by your Order No. R-3257. As stated in our testimony, the program for converting seven producing wells to water injection wells included cleaning out, running Gamma Ray-Sonic surveys and injectivity profile surveys, and then cementing $4\frac{1}{2}$ " liners through the open hole, perforating pay zones and setting packers in the upper portion of the $4\frac{1}{2}$ " liners.

Because of recent experience in conducting this conversion program, we wish permission to deviate slightly from the program as outlined at the hearing. As explained in our telephone conversation to you on June 27, 1967, we have found that these wells take a large amount of water in trying to conduct surveys and we have found it practically impossible to conduct a satisfactory injectivity profile survey because of the low pressures involved. Also because of the high degree of permeability and lack of formation pressure, we anticipate that considerable difficulty will probably be experienced in cementing liners through the open hole because of the loss of cement into the permeable intervals.

We would like to amend our conversion program to provide that after running Gamma Ray-Sonic and caliper surveys, we will load the casing with water and continue filling the hole with water until the water level in the casing stands at approximately the surface. Essentially what we will do is to pressure up the formation in the vicinity of the well bore so that satisfactory profile surveys can be conducted, and we believe this will also aid us in getting a good cement job when cementing the liners.

The United States Geological Survey has approved this revised program and we are attaching copies of Sundry Notices which are being filed with the U.S.G.S.

Your approval of this revision in our conversion program will be appreciated.

Yours very truly,


REGISTERED PETROLEUM ENGINEER.

RLG:lw

Encls.

cc: New Mexico Oil Conservation Commission, Artesia
Mr. Rush Vann, Windfohr Oil Company
Mr. E. R. McPhaul

Form 9-331
(May 1963)

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

SUBMIT IN TRIPPLICATE*
(Other instructions on re-
verse side)

Form approved.
Budget Bureau No. 42-R1424.

SUNDRY NOTICES AND REPORTS ON WELLS

(Do not use this form for proposals to drill or to deepen or plug back to a different reservoir.
Use "APPLICATION FOR PERMIT—" for such proposals.)

1. OIL WELL <input type="checkbox"/> GAS WELL <input type="checkbox"/> OTHER <input checked="" type="checkbox"/> Convert to Water Injection	5. LEASE DESIGNATION AND SERIAL NO. LC-030570 (a)
2. NAME OF OPERATOR WINDFOHR OIL COMPANY	6. INDIAN, ALLOTTEE OR TRIBE NAME
3. ADDRESS OF OPERATOR 1202 First National Bank Building, Fort Worth, Texas 76102	7. UNIT AGREEMENT NAME
4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.* See also space 17 below.) At surface 660' from West and 1980' from South lines of Sec. 13-17S-30E.	8. FARM OR LEASE NAME Stevens "A"
	9. WELL NO. 2
	10. FIELD AND POOL, OR WILDCAT Grayburg-Jackson, GB, SA
	11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA Sec. 13-17S-30E
14. PERMIT NO.	12. COUNTY OR PARISH Eddy
15. ELEVATIONS (Show whether DF, RT, GR, etc.)	13. STATE New Mexico

16. Check Appropriate Box To Indicate Nature of Notice, Report, or Other Data

NOTICE OF INTENTION TO:		SUBSEQUENT REPORT OF:	
TEST WATER SHUT-OFF <input type="checkbox"/>	PULL OR ALTER CASING <input type="checkbox"/>	WATER SHUT-OFF <input type="checkbox"/>	REPAIRING WELL <input type="checkbox"/>
FRACTURE TREAT <input type="checkbox"/>	MULTIPLE COMPLETE <input type="checkbox"/>	FRACTURE TREATMENT <input type="checkbox"/>	ALTERING CASING <input type="checkbox"/>
SHOOT OR ACIDIZE <input type="checkbox"/>	ABANDON* <input type="checkbox"/>	SHOOTING OR ACIDIZING <input type="checkbox"/>	ABANDONMENT* <input type="checkbox"/>
REPAIR WELL <input type="checkbox"/>	CHANGE PLANS <input type="checkbox"/>	(Other) <input type="checkbox"/>	
(Other) <input checked="" type="checkbox"/> Convert to Water Injection	<input checked="" type="checkbox"/> X	(Note: Report results of multiple completion on Well Completion or Recompletion Report and Log form.)	

17. DESCRIBE PROPOSED OR COMPLETED OPERATIONS (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)*

It is proposed to convert this well to a water injection well by the following work:

1. Clean hole by lowering tubing to bottom and pump 50 barrels of hot water down casing. Remove water by pumping well dry.
2. Pull rods and tubing. Run caliper survey.
- 2-A. Set umbrella bridge at about 3560'. Dump 10' of gravel and approximately 6' of cement on top of bridge.
3. Load casing with water, and continue filling hole with water until water level in casing stands at approximately the surface.
4. Run injectivity profile survey to locate zones taking water.
5. Cement 4½" O.D. J-55, 9.5# liner from bottom of hole to approximately 50' above 7" casing shoe. Test top of liner with 1800 psi. pressure for shut-off.
6. Perforate 4½" liner in San Andres, using sand jet.
7. Acidize perforations with small quantities.
8. Run tubing internally coated with plastic and set tension packer in upper portion of 4½" liner. Inject water down tubing.

18. I hereby certify that the foregoing is true and correct

SIGNED Ralph L. Gray TITLE Consulting Engineer. DATE June 27, 1967

(This space for Federal or State office use)

APPROVED BY _____ TITLE _____ DATE _____

CONDITIONS OF APPROVAL, IF ANY:

'67 JUN 29 AM 8 12

Form 9-331
(May 1963)

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

SUBMIT IN TRIPPLICATE*
(Other instructions on re-
verse side)

Form approved.
Budget Bureau No. 42-R1424.

SUNDRY NOTICES AND REPORTS ON WELLS

(Do not use this form for proposals to drill or to deepen or plug back to a different reservoir.
Use "APPLICATION FOR PERMIT—" for such proposals.)

1. <input type="checkbox"/> OIL WELL <input type="checkbox"/> GAS WELL <input type="checkbox"/> OTHER Convert to Water Injection	5. LEASE DESIGNATION AND SERIAL NO. LC-030570 (a)
2. NAME OF OPERATOR WINDFORD OIL COMPANY	6. IF INDIAN, ALLOTTEE OR TRIBE NAME
3. ADDRESS OF OPERATOR 1202 First National Bank Bldg., Fort Worth, Texas 76102	7. UNIT AGREEMENT NAME
4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.* See also space 17 below.) At surface 1980' from North and West lines of Sec. 13-17S-30E.	8. FARM OR LEASE NAME Stevens "A"
	9. WELL NO. 3
	10. FIELD AND POOL, OR WILDCAT Grayburg-Jackson, GB, SA
	11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA Sec. 13-17S-30E
14. PERMIT NO.	12. COUNTY OR PARISH Eddy
15. ELEVATIONS (Show whether DF, RT, GR, etc.)	13. STATE New Mexico

16. Check Appropriate Box To Indicate Nature of Notice, Report, or Other Data

NOTICE OF INTENTION TO:		SUBSEQUENT REPORT OF:	
TEST WATER SHUT-OFF <input type="checkbox"/>	PULL OR ALTER CASING <input type="checkbox"/>	WATER SHUT-OFF <input type="checkbox"/>	REPAIRING WELL <input type="checkbox"/>
FRACTURE TREAT <input type="checkbox"/>	MULTIPLE COMPLETE <input type="checkbox"/>	FRACTURE TREATMENT <input type="checkbox"/>	ALTERING CASING <input type="checkbox"/>
SHOOT OR ACIDIZE <input type="checkbox"/>	ABANDON* <input type="checkbox"/>	SHOOTING OR ACIDIZING <input type="checkbox"/>	ABANDONMENT* <input type="checkbox"/>
REPAIR WELL <input type="checkbox"/>	CHANGE PLANS <input type="checkbox"/>	(Other) <input type="checkbox"/>	
(Other) Convert to Water Injection	X		

(NOTE: Report results of multiple completion on Well Completion or Recompletion Report and Log form.)

17. DESCRIBE PROPOSED OR COMPLETED OPERATIONS (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)*

This form is submitted to replace program submitted June 8, 1967, for converting this producing well to a water injection well.

1. Clean hole by lowering tubing to bottom and pump 50 barrels of hot water down casing. Remove water by pumping well dry.
2. Pull rods and tubing, run Gamma Ray-Sonic and caliper logs.
3. Load casing with water, and continue filling hole with water until water level in casing stands at approximately the surface.
4. Run injectivity profile survey to locate zones taking water.
5. Cement 4½" O.D. J-55, 9.5# liner from bottom of hole to approximately 50' above 7" casing shoe. Test top of liner with 1800 psi. pressure for shut-off.
6. Perforate 4½" liner in San Andres, using sand jet.
7. Acidize perforations with small quantities.
8. Run tubing internally coated with plastic and set tension packer in upper portion of 4½" liner. Inject water down tubing.

18. I hereby certify that the foregoing is true and correct

SIGNED Ralph L. Gray TITLE Consulting Engineer. DATE June 27, 1967

(This space for Federal or State office use)

APPROVED BY _____ TITLE _____ DATE _____
CONDITIONS OF APPROVAL, IF ANY:

*See Instructions on Reverse Side

67 JUN 29 AM 8 12

Instructions

General: This form is designed for submitting proposals to perform certain well operations, and reports of such operations when completed, as indicated, on Federal and Indian lands pursuant to applicable Federal law and regulations, and, if approved or accepted by any State, on all lands in such State, pursuant to applicable State law and regulations. Any necessary special instructions concerning the use of this form and the number of copies to be submitted, particularly with regard to local, area, or regional procedures and practices, either are shown below or will be issued by, or may be obtained from, the local Federal and/or State office.

Item 4: If there are no applicable State requirements, locations on Federal or Indian land should be described in accordance with Federal requirements. Consult local State or Federal office for specific instructions.

Item 17: Proposals to abandon a well and subsequent reports of abandonment should include such special information as is required by local Federal and/or State offices. In addition, such proposals and reports should include reasons for the abandonment; data on any former or present productive zones, or other zones with present significant fluid contents not sealed off by cement or otherwise; depths (top and bottom) and method of placement of cement plugs; mud or other material placed below, between and above plugs; amount, size, method of parting of any casing, liner or tubing pulled and the depth to top of any left in the hole; method of closing top of well; and date well site conditioned for final inspection looking to approval of the abandonment.

U.S. GOVERNMENT PRINTING OFFICE: 1963-O-685229

201472 CETERA
RECEIVED
JAN 10 1964
U.S. DEPT. OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

201472 CETERA
RECEIVED
JAN 10 1964
U.S. DEPT. OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

[Handwritten signature]
[Illegible handwritten text]

Form 9-331
(May 1963)

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

SUBMIT IN TRIPLICATE*
(Other instructions on re-
verse side)

Form approved.
Budget Bureau No. 42-R1424.

SUNDRY NOTICES AND REPORTS ON WELLS

(Do not use this form for proposals to drill or to deepen or plug back to a different reservoir.
Use "APPLICATION FOR PERMIT—" for such proposals.)

1. <input type="checkbox"/> OIL WELL <input type="checkbox"/> GAS WELL <input type="checkbox"/> OTHER Convert to Water Injection	5. LEASE DESIGNATION AND SERIAL NO. LC-030570 (a)
2. NAME OF OPERATOR WINDEFOR OIL COMPANY	6. IF INDIAN, ALLOTTEE OR TRIBE NAME
3. ADDRESS OF OPERATOR 1202 First National Bank Bldg., Fort Worth, Texas 76102	7. UNIT AGREEMENT NAME
4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements. See also space 17 below.) At surface 660' from South and 1980' from West lines of Sec. 13-178-30E.	8. FARM OR LEASE NAME Stevens "A"
	9. WELL NO. 5
	10. FIELD AND POOL, OR WILDCAT Grayburg-Jackson, GB, SA
	11. SEC., T., R., M., OR BLE. AND SURVEY OR AREA Sec. 13-178-30E
14. PERMIT NO.	12. COUNTY OR PARISH Eddy
15. ELEVATIONS (Show whether DF, RT, GR, etc.)	13. STATE New Mexico

16. Check Appropriate Box To Indicate Nature of Notice, Report, or Other Data

NOTICE OF INTENTION TO:		SUBSEQUENT REPORT OF:	
TEST WATER SHUT-OFF <input type="checkbox"/>	PULL OR ALTER CASING <input type="checkbox"/>	WATER SHUT-OFF <input type="checkbox"/>	REPAIRING WELL <input type="checkbox"/>
FRACTURE TREAT <input type="checkbox"/>	MULTIPLE COMPLETE <input type="checkbox"/>	FRACTURE TREATMENT <input type="checkbox"/>	ALTERING CASING <input type="checkbox"/>
SHOOT OR ACIDIZE <input type="checkbox"/>	ABANDON* <input type="checkbox"/>	SHOOTING OR ACIDIZING <input type="checkbox"/>	ABANDONMENT* <input type="checkbox"/>
REPAIR WELL <input type="checkbox"/>	CHANGE PLANS <input type="checkbox"/>	(Other) <input type="checkbox"/>	
(Other) Convert to Water Injection <input checked="" type="checkbox"/>		(NOTE: Report results of multiple completion on Well Completion or Recompletion Report and Log form.)	

17. DESCRIBE PROPOSED OR COMPLETED OPERATIONS (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)

It is proposed to convert this well to a water injection well by the following work:

1. Clean hole by lowering tubing to bottom and pump 50 barrels of hot water down casing. Remove water by pumping well dry.
2. Pull rods and tubing, run Gamma Ray-Sonic and caliper logs.
3. Load casing with water, and continue filling hole with water until water level in casing stands at approximately the surface.
4. Run injectivity profile survey to locate zones taking water.
5. Cement 4½" O.D. J-55, 9.3# liner from bottom of hole to approximately 50' above 7" casing shoe. Test top of liner with 1800 psi. pressure for shut-off.
6. Perforate 4½" liner in San Andres, using sand jet.
7. Acidize perforations with small quantities.
8. Run tubing internally coated with plastic and set tension packer in upper portion of 4½" liner. Inject water down tubing.

18. I hereby certify that the foregoing is true and correct

SIGNED Ralph L. Gray TITLE Consulting Engineer. DATE June 27, 1967

(This space for Federal or State office use)

APPROVED BY _____ TITLE _____ DATE 267 JUN 29 AM 8 12
CONDITIONS OF APPROVAL, IF ANY:

*See Instructions on Reverse Side

Form 9-331
(May 1963)

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

SUBMIT IN TRIPLICATE*
(Other instructions on re-
verse side)

Form approved.
Budget Bureau No. 42-R1424.

5. LEASE DESIGNATION AND SERIAL NO.

LC-029338 (a)

6. IF INDIAN, ALLOTTEE OR TRIBE NAME

7. UNIT AGREEMENT NAME

8. FARM OR LEASE NAME

Glasler "A"

9. WELL NO.

9

10. FIELD AND POOL, OR WILDCAT

Grayburg-Jackson, GB, SA

11. SEC., T., R., M., OR BLK. AND
SURVEY OR AREA

Sec. 14-178-30E

12. COUNTY OR PARISH

13. STATE

New Eddy

New Mexico

SUNDRY NOTICES AND REPORTS ON WELLS
(Do not use this form for proposals to drill or to deepen or plug back to a different reservoir.
Use "APPLICATION FOR PERMIT—" for such proposals.)

1. OIL WELL ☐ GAS WELL ☐ OTHER ☒ Convert to Water Injection

2. NAME OF OPERATOR

WINDFOHR OIL COMPANY

3. ADDRESS OF OPERATOR

1202 First National Bank Bldg., Fort Worth, Texas 76102

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.*
See also space 17 below.)

At surface 660' from East and 1980' from North lines of
Section 14, 17S-30E.

14. PERMIT NO.

15. ELEVATIONS (Show whether DF, RT, GS, etc.)

16. Check Appropriate Box To Indicate Nature of Notice, Report, or Other Data

NOTICE OF INTENTION TO:

TEST WATER SHUT-OFF ☐

FRACTURE TREAT ☐

SHOOT OR ACIDIZE ☐

REPAIR WELL ☐

(Other) ☒

PULL OR ALTER CASING ☐

MULTIPLE COMPLETE ☐

ABANDON* ☐

CHANGE PLANS ☐

Convert to Water Injection ☒

SUBSEQUENT REPORT OF:

WATER SHUT-OFF ☐

FRACTURE TREATMENT ☐

SHOOTING OR ACIDIZING ☐

(Other) ☐

REPAIRING WELL ☐

ALTERING CASING ☐

ABANDONMENT* ☐

(NOTE: Report results of multiple completion on Well
Completion or Recompletion Report and Log form.)

17. DESCRIBE PROPOSED OR COMPLETED OPERATIONS (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)*

It is proposed to convert this well to a water injection well by the following work:

1. Clean hole by lowering tubing to bottom and pump 50 barrels of hot water down casing. Remove water by pumping well dry.
2. Pull rods and tubing, run Gamma Ray-Sonic and caliper logs.
3. Load casing with water, and continue filling hole with water until water level in casing stands at approximately the surface.
4. Run injectivity profile survey to locate zones taking water.
5. Cement 4½" O.D. J-55, 9.5# liner from a selected point in the San Andres to a point approximately 50' above 7" casing shoe. Test top of liner with 1800 psi. pressure for shut-off.
6. Perforate 4½" liner in San Andres, using sand jet.
7. Acidize perforations with small quantities.
8. Run tubing internally coated with plastic and set tension packer in upper portion of 4½" liner. Inject water down tubing.

18. I hereby certify that the foregoing is true and correct

SIGNED

Ralph L. Gray

TITLE

Consulting Engineer,

DATE: June 27, 1967

(This space for Federal or State office use)

APPROVED BY

TITLE

CONDITIONS OF APPROVAL, IF ANY:

267 JUN 29 AM 8 12

*See Instructions on Reverse Side

Form 5-331
(May 1963)

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

SUBMIT IN TRIPPLICATE*
(Other instructions on re-
verse side)

Form approved.
Budget Bureau No. 42-R1424.

SUNDRY NOTICES AND REPORTS ON WELLS

(Do not use this form for proposals to drill or to deepen or plug back to a different reservoir.
Use "APPLICATION FOR PERMIT—" for such proposals.)

1. OIL WELL <input type="checkbox"/> GAS WELL <input type="checkbox"/> OTHER <input checked="" type="checkbox"/> Convert to Water Injection	5. LEASE DESIGNATION AND SERIAL NO. LC-025339 (a)
2. NAME OF OPERATOR WINDFOHR OIL COMPANY	6. IF INDIAN, ALLOTTEE OR TRIBE NAME
3. ADDRESS OF OPERATOR 1202 First National Bank Bldg., Fort Worth, Texas 76102	7. UNIT AGREEMENT NAME
4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.* See also space 17 below.) At surface 2000' from East and 1980' from South lines of Sec. 13-17S-30E.	8. FARM OR LEASE NAME Jackson "A"
14. PERMIT NO.	9. WELL NO. 3-X
15. ELEVATIONS (Show whether DF, RT, GR, etc.)	10. FIELD AND POOL, OR WILDCAT Grayburg-Jackson, GB, SA
	11. SEC., T., R., M., OR BLK. AND SURVEY OR ARMA Sec. 13-17S-30E
	12. COUNTY OR PARISH Eddy
	13. STATE New Mexico

16. Check Appropriate Box To Indicate Nature of Notice, Report, or Other Data

NOTICE OF INTENTION TO:		SUBSEQUENT REPORT OF:	
TEST WATER SHUT-OFF <input type="checkbox"/>	PULL OR ALTER CASING <input type="checkbox"/>	WATER SHUT-OFF <input type="checkbox"/>	REPAIRING WELL <input type="checkbox"/>
FRACTURE TREAT <input type="checkbox"/>	MULTIPLE COMPLETE <input type="checkbox"/>	FRACTURE TREATMENT <input type="checkbox"/>	ALTERING CASING <input type="checkbox"/>
SHOOT OR ACIDIZE <input type="checkbox"/>	ABANDON* <input type="checkbox"/>	SHOOTING OR ACIDIZING <input type="checkbox"/>	ABANDONMENT* <input type="checkbox"/>
REPAIR WELL <input type="checkbox"/>	CHANGE PLANS <input type="checkbox"/>	(Other) <input type="checkbox"/>	(Other) <input type="checkbox"/>
(Other) Convert to Water Injection <input checked="" type="checkbox"/>		(Note: Report results of multiple completion on Well Completion or Recompletion Report and Log form.)	

17. DESCRIBE PROPOSED OR COMPLETED OPERATIONS (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)

It is proposed to convert this well to a water injection well by the following work:

1. Clean hole by lowering tubing to bottom and pump 50 barrels of hot water down casing. Remove water by pumping well dry.
2. Pull rods and tubing, run Gamma Ray-Sonic and caliper logs.
- 2-A. After reviewing logs, well will be deepened 30 to 40' if it appears desirable.
3. Load casing with water, and continue filling hole with water until water level in casing stands at approximately the surface.
4. Run injectivity profile survey to locate zones taking water.
5. Cement 4½" O.D. J-55, 9.5# liner from bottom of hole to approximately 50' above 7" casing shoe. Test top of liner with 1800 psi. pressure for shut-off.
6. Perforate 4½" liner in San Andres, using sand jet.
7. Acidize perforations with small quantities.
8. Run tubing internally coated with plastic and set tension packer in upper portion of 4½" liner. Inject water down tubing.

18. I hereby certify that the foregoing is true and correct

SIGNED Ralph L. Gray TITLE Consulting Engineer. DATE June 27, 1967

(This space for Federal or State office use)

APPROVED BY _____ TITLE _____ DATE _____
CONDITIONS OF APPROVAL, IF ANY:

'67 JUN 29 AM 8 12

*See Instructions on Reverse Side

Form 9-331
(May 1963)

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

SUBMIT IN TRIPLICATE*
(Other instructions on re-
verse side)

Form approved.
Budget Bureau No. 42-R1424.

5. LEASE DESIGNATION AND SERIAL NO.

LC-029338 (a)

6. IF INDIAN, ALLOTTEE OR TRIBE NAME

7. UNIT AGREEMENT NAME

8. FARM OR LEASE NAME

Giesler "A"

9. WELL NO.

4

10. FIELD AND POOL, OR WILDCAT

Grayburg-Jackson, GB, SA

11. SEC., T., R., M., OR BLK. AND
SURVEY OR AREA

Sec. 14-17S-30E

12. COUNTY OR PARISH

Eddy

New Mexico

SUNDRY NOTICES AND REPORTS ON WELLS

(Do not use this form for proposals to drill or to deepen or plug back to a different reservoir.
Use "APPLICATION FOR PERMIT" for such proposals.)

1. OIL WELL ☐ GAS WELL ☐ OTHER ☒ Convert to Water Injection

2. NAME OF OPERATOR

WINDFORD OIL COMPANY

3. ADDRESS OF OPERATOR

1202 First National Bank Bldg., Fort Worth, Texas 76102

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.*
See also space 17 below.)
At surface

660' from South and East lines of Sec. 14-17S-30E.

14. PERMIT NO.

15. ELEVATIONS (Show whether DF, RT, CR, etc.)

16.

Check Appropriate Box To Indicate Nature of Notice, Report, or Other Data

NOTICE OF INTENTION TO:

TEST WATER SHUT-OFF

FRACTURE TREAT

SHOOT OR ACIDIZE

REPAIR WELL

(Other)

PULL OR ALTER CASING

MULTIPLE COMPLETE

ABANDON*

CHANGE PLANS

Convert to Water Injection

X

SUBSEQUENT REPORT OF:

WATER SHUT-OFF

FRACTURE TREATMENT

SHOOTING OR ACIDIZING

(Other)

REPAIRING WELL

ALTERING CASING

ABANDONMENT*

(NOTE: Report results of multiple completion on Well
Completion or Recompletion Report and Log form.)

17. DESCRIBE PROPOSED OR COMPLETED OPERATIONS (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)*

It is proposed to convert this well to a water injection well by the following work:

1. Clean hole by lowering tubing to bottom and pump 50 barrels of hot water down casing. Remove water by pumping well dry.
2. Pull rods and tubing, run Gamma Ray-Sonic and caliper logs.
3. Load casing with water, and continue filling hole with water until water level in casing stands at approximately the surface.
4. Run injectivity profile survey to locate zones taking water.
5. Cement 4½" O.D. J-55, 9.5# liner from bottom of hole to approximately 50' above 7" casing shoe. Test top of liner with 1800 psi. pressure for shut-off.
6. Perforate 4½" liner in San Andres, using sand jet.
7. Acidize perforations with small quantities.
8. Run tubing internally coated with plastic and set tension packer in upper portion of 4½" liner. Inject water down tubing.

18. I hereby certify that the foregoing is true and correct

SIGNED

Ralph L. Gray

TITLE

Consulting Engineer.

DATE June 27, 1967

(This space for Federal or State office use)

APPROVED BY

CONDITIONS OF APPROVAL, IF ANY:

TITLE

DATE

MAIN OFFICE

*See Instructions on Reverse Side

67 JUN 29 AM

Form 9-331
(May 1963)

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

SUBMIT IN TRIPPLICATE*
(Other instructions on re-
verse side)

Form approved.
Budget Bureau No. 42-R1424.

3. LEASE DESIGNATION AND SERIAL NO.

NM-074939

6. IF INDIAN, ALLOTTEE OR TRIBE NAME

SUNDRY NOTICES AND REPORTS ON WELLS

(Do not use this form for proposals to drill or to deepen or plug back to a different reservoir.
Use "APPLICATION FOR PERMIT—" for such proposals.)

1.

OIL WELL ☐ GAS WELL ☐ OTHER

Convert to Water Injection Well

2. NAME OF OPERATOR

WINDFOHR OIL COMPANY

3. ADDRESS OF OPERATOR

1202 First National Bank Building, Fort Worth, Texas 76102

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.*

See also space 17 below.)

At surface

660' from North and West lines of Sec. 24-17S-30E.

7. UNIT AGREEMENT NAME

8. FARM OR LEASE NAME

Gissler "B"

9. WELL NO.

2

10. FIELD AND POOL, OR WILDCAT

Grayburg-Jackson, Gbg, SA

11. SEC., T., R., M., OR BLK. AND
SURVEY OR AREA

Sec. 24-17S-30E

14. PERMIT NO.

15. ELEVATIONS (Show whether DF, RT, GR, etc.)

12. COUNTY OR PARISH

13. STATE

Eddy

New Mexico

16.

Check Appropriate Box To Indicate Nature of Notice, Report, or Other Data

NOTICE OF INTENTION TO:

TEST WATER SHUT-OFF

FRACTURE TREAT

SHOOT OR ACIDIZE

REPAIR WELL

(Other)

PULL OR ALTER CASING

MULTIPLE COMPLETE

ABANDON*

CHANGE PLANS

Convert to Water Injection

X

SUBSEQUENT REPORT OF:

WATER SHUT-OFF

FRACTURE TREATMENT

SHOOTING OR ACIDIZING

(Other)

REPAIRING WELL

ALTERING CASING

ABANDONMENT*

(NOTE: Report results of multiple completion on Well
Completion or Recompletion Report and Log form.)

17. DESCRIBE PROPOSED OR COMPLETED OPERATIONS (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)*

This form is submitted to replace program submitted June 8, 1967, for converting this producing well to a water injection well.

1. Clean hole by lowering tubing to bottom and pump 50 barrels of hot water down casing. Remove water by pumping well dry.
2. Pull rods and tubing, run Gamma Ray-Sonic and caliper logs.
- 2-A. After reviewing logs, well will be deepened 40 to 50 feet if it appears desirable.
3. Load casing with water, and continue filling hole with water until water level in casing stands at approximately the surface.
4. Run injectivity profile survey to locate zones taking water.
5. Cement 4½" O.D. J-55, 9.5# liner from top of shot hole (approximately 3375') to 50' above 7" casing shoe. Test top of liner with 1800 psi. pressure for shut-off. Drill out to bottom of hole.
6. Run tubing internally coated with plastic and set tension packer in upper portion of 4½" liner. Inject water down tubing.

18. I hereby certify that the foregoing is true and correct

SIGNED

Ralph L Gray

TITLE

Consulting Engineer.

DATE

June 27, 1967

(This space for Federal or State office use)

APPROVED BY

CONDITIONS OF APPROVAL, IF ANY:

TITLE

DATE

*See Instructions on Reverse Side

'67 JUN 29 AM 8

WINDFOHR OIL COMPANY
1202 FIRST NATIONAL BANK BUILDING
FORT WORTH, TEXAS 76102

June 30, 1967

EDISON 2-5108

SM

*File
Case 3572*

MAIN OFFICE

'67 JUL 5 AM 8 13

New Mexico Oil Conservation Commission
P. O. Box 2088
Santa Fe, New Mexico 87501

Attention: Mr. A. L. Porter, Jr., Secretary

Dear Sir:

On June 6, 1967 Windfohr Oil Company filed an application with the New Mexico Oil Conservation Commission for injecting water into wells in our Grayburg Jackson (San-Andres) Unit located in the Grayburg-Jackson Pool. This application was approved by your Order No. R-3257. During the course of the hearing, it was requested that Windfohr Oil Company furnish the Conservation Commission with copies of the USGS approval letters when they were received. In compliance with this request, attached is a copy of the Certification--Determination and the transmittal letter received today from the United States Department of the Interior, Geological Survey. As will be seen, this Unit is effective July 1, 1967.

Yours very truly,

WINDFOHR OIL COMPANY

John Rush Vann
John Rush Vann

JRV/mf
Attachments

cc: Mr. Fred Watson



UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
WASHINGTON, D.C. 20242

JUN 26 1967

Windfohr Oil Company
1202 First National Bank Bldg.
Fort Worth, Texas 76102

Gentlemen:

On June 22, 1967, Robert H. Lyddan, Acting Director of the Geological Survey, approved the Grayburg-Jackson (San Andres) unit agreement, Eddy County, New Mexico, filed by your company as unit operator. This agreement has been designated No. 14-08-0001-8867, and is effective as of July 1, 1967.

Enclosed is one copy of the approved unit agreement for your records. We request that you furnish all interested principals with whatever evidence of this approval is deemed appropriate.

Sincerely yours,

Russell L. Wayland
For the Director

Enclosure

RECEIVED

'67 JUL 5 AM 8 13

State of New Mexico
Oil Conservation Commission



STATE GEOLOGIST
A. L. PORTER, JR.
SECRETARY - DIRECTOR

June 8, 1967

Re: Case No. 3592
Order No. R-3257
Applicant:

Dear Sir:

Very truly yours,

A. L. PORTER, Jr.
Secretary-Director

ALP/ir

Carbon copy of order also sent to:

Hobbs OCC x
 Artesia OCC x
 Aztec OCC _____
 State Engineer x

Other _____

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. 3592
Order No. R-3257

APPLICATION OF ANNE BURNETT WINDFOHR,
DBA WINDFOHR OIL COMPANY FOR A WATER-
FLOOD PROJECT, EDDY COUNTY, NEW MEXICO.

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9 a.m. on June 6, 1967,
at Santa Fe, New Mexico, before Examiner Daniel S. Nutter.

NOW, on this 8th day of June, 1967, 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, Anne Burnett Windfohr, dba Windfohr
Oil Company, seeks permission to institute a waterflood project
in the Grayburg-Jackson Pool by the injection of water into the
San Andres formation through eight injection wells in Sections 13,
14, and 24, Township 17 South, Range 30 East, NMPM, Eddy County,
New Mexico.

(3) That the applicant further seeks an administrative
procedure whereby said project could be expanded to include
additional lands and injection wells in the area of the said
project as may be necessary in order to complete an efficient
injection pattern; that said administrative procedure should
provide for administrative approval for conversion to water

-2-

CASE No. 3592

Order No. R-3257

injection in exception to the well response requirements of Rule 701 E-5 of the Commission Rules and Regulations.

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

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

(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; provided, however, that the showing of well response as required by Rule 701 E-5 shall not be necessary before obtaining administrative approval for the conversion of additional wells to water injection.

IT IS THEREFORE ORDERED:

(1) That the applicant, Anne Burnett Windfohr, dba Windfohr Oil Company, is hereby authorized to institute a waterflood project in the Grayburg-Jackson Pool by the injection of water into the San Andres formation through the following-described wells in Township 17 South, Range 30 East, NMPM, Eddy County, New Mexico:

Lease and Well No.

Location

Wells to be converted to injection wells:

Jackson A Lease	-	Well No. 3X	-	NW/4 SE/4 of Section 13
Stevens A Lease	-	Well No. 2	-	NW/4 SW/4 of Section 13
Stevens A Lease	-	Well No. 3	-	SE/4 NW/4 of Section 13
Stevens A Lease	-	Well No. 5	-	SE/4 SW/4 of Section 13
Gissler A Lease	-	Well No. 4	-	SE/4 SE/4 of Section 14
Gissler A Lease	-	Well No. 9	-	SE/4 NE/4 of Section 14
Gissler B Lease	-	Well No. 2	-	NW/4 NW/4 of Section 24

New injection well to be drilled:

Stevens B Lease - Well No. 3 - NW/4 NW/4 of Section 13

(2) That the subject waterflood project is hereby designated the Windfohr Grayburg-Jackson Waterflood Project and shall be

-3-

CASE No. 3592

Order No. R-3257

governed by the provisions of Rules 701, 702, and 703 of the Commission Rules and Regulations;

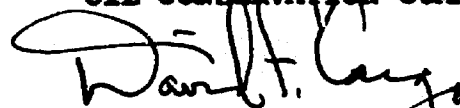
PROVIDED HOWEVER, that the Secretary-Director of the Commission may approve expansion of the Windfohr Grayburg-Jackson Waterflood Project to include such additional lands and injection wells in the area of said project as may be necessary to complete an efficient water injection pattern; that the showing of well response as required by Rule 701 E-5 shall not be necessary before obtaining administrative approval for the conversion of additional wells to water injection.

(3) 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.

(4) 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



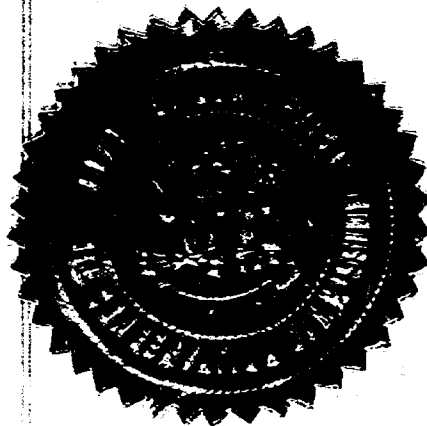
DAVID F. CARGO, Chairman



GUYTON B. HAYS, Member



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



esr/

BEFORE THE NEW MEXICO OIL CONSERVATION COMMISSION

SANTA FE, NEW MEXICO

IN RE: APPLICATION OF ANNE BURNETT WINDFOHR,)
d/b/as WINDFOHR OIL COMPANY, FOR AUTHORITY)
TO INSTITUTE A WATER FLOOD PROJECT BY IN-)
JECTING WATER INTO THE SAN ANDRES FORMATION)
IN APPLICANT'S WELLS LOCATED IN SECTIONS 11,)
12, 13, 14, 23 and 24, TOWNSHIP 17 SOUTH,)
RANGE 30 EAST, N.M.P.M., EDDY COUNTY, NEW)
MEXICO.)

Case No. 3592

A P P L I C A T I O N

COMES NOW Anne Burnett Windfohr, an individual, d/b/as Windfohr Oil Company, and hereby makes application for authority to institute a water flood project in Sections 11, 12, 13, 14, 23 and 24, Township 17 South, Range 30 East, N.M.P.M., by injection of fresh water in the San Andres Formation under said lands, and, in support of this application, states:

1. The lands involved in this application in Sections 11, 12, 13, 14, 23 and 24, Township 17 South, Range 30 East, N.M.P.M., Eddy County, New Mexico, are Federal lands, and, as shown by the attached Exhibit "1", applicant owns Federal oil and gas leases covering said lands. Applicant seeks an Order for authority to institute a water flood project, which will be a secondary recovery project because the wells on applicant's leases have been essentially depleted by primary means since the average oil production per well, per day, in the project area, is 3 barrels.

2. That applicant seeks immediate authority for the injection of water into the San Andres Formation through 8 wells, shown in red on Exhibit "1" attached hereto, as follows:

PILOT STAGE: (All located in T17S-R30E)

Wells to be converted to injection wells:

1000
Gissler A Lease - No. 4 well - SE $\frac{1}{4}$ SE $\frac{1}{4}$ Section 14 ✓
Gissler A Lease - No. 9 well - SE $\frac{1}{4}$ NE $\frac{1}{4}$ Section 14 ✓
Gissler B Lease - No. 2 well - NW $\frac{1}{4}$ NW $\frac{1}{4}$ Section 24 ✓
Jackson A Lease - No. 3X well - NW $\frac{1}{4}$ SE $\frac{1}{4}$ Section 13 ✓
Stevens A Lease - No. 2 well - NW $\frac{1}{4}$ SW $\frac{1}{4}$ Section 13 ✓
Stevens A Lease - No. 3 well - SE $\frac{1}{4}$ NW $\frac{1}{4}$ Section 13 ✓
Stevens A Lease - No. 5 well - SE $\frac{1}{4}$ SW $\frac{1}{4}$ Section 13 ✓

New injection well to be drilled:

Stevens B Lease - No. 3 well - NW $\frac{1}{4}$ NW $\frac{1}{4}$ Section 13 ✓

Applicant also seeks authority in the future to expand said water flood project, by administrative approval, by injection of water into the San Andres Formation through 17 additional wells shown in blue in Exhibit "1" attached hereto as follows:

EXPANSION STAGE: (All located in T17S-R30E)

Wells to be converted to injection wells:

1000
Gissler A Lease - No. 2 well - SE $\frac{1}{4}$ SW $\frac{1}{4}$ Section 12
Gissler A Lease - No. 3 well - SE $\frac{1}{4}$ SW $\frac{1}{4}$ Section 14
Gissler A Lease - No. 8 well - NW $\frac{1}{4}$ NE $\frac{1}{4}$ Section 23
Gissler A Lease - No. 10 well - NW $\frac{1}{4}$ SE $\frac{1}{4}$ Section 14
Gissler A Lease - No. 11 well - SW $\frac{1}{4}$ NE $\frac{1}{4}$ Section 14
Gissler B Lease - No. 1 well - NW $\frac{1}{4}$ SW $\frac{1}{4}$ Section 14
Jackson A Lease - No. 2 well - Center NE $\frac{1}{4}$ Section 13
Jackson A Lease - No. 8 well - SE $\frac{1}{4}$ SE $\frac{1}{4}$ Section 13
Jackson A Lease - No. 9 well - NW $\frac{1}{4}$ NE $\frac{1}{4}$ Section 24
Jackson A Lease - No. 11 well - SE $\frac{1}{4}$ NE $\frac{1}{4}$ Section 13
Jackson A Lease - No. 12 well - SE $\frac{1}{4}$ SE $\frac{1}{4}$ Section 12
Jackson A Lease - No. 15 well - NW $\frac{1}{4}$ SE $\frac{1}{4}$ Section 12
Jackson B Lease - No. 2 well - SE $\frac{1}{4}$ NE $\frac{1}{4}$ Section 24

New injection wells to be drilled (Name and/or No. to be designated in future):

1000
Gissler A Lease - NE $\frac{1}{4}$ NE $\frac{1}{4}$ Section 23
Gissler A Lease - SE $\frac{1}{4}$ SE $\frac{1}{4}$ Section 11
Jackson A Lease - SE $\frac{1}{4}$ NE $\frac{1}{4}$ Section 12
Jackson B Lease - SE $\frac{1}{4}$ NW $\frac{1}{4}$ Section 24

3. That the formation to be flooded is the San Andres Formation found at an approximate depth of from 3000 feet beneath

Page No. 3

the surface to an approximate depth of 3400 feet beneath the surface under the project lands.

4. That there are attached hereto and made a part hereof the following Exhibits, to wit:

Exhibit "1" is a plat showing the locations of the proposed injection wells, with the injection wells in the Pilot Stage being marked in red and the injection wells in the proposed Expansion Stage being marked in blue, the locations including both wells to be converted and wells to be drilled as injection wells. Said wells have been producing from the San Andres Formation.

Exhibit "2" is an ownership map showing all other wells within a radius of 2 miles from the proposed water flood project.

Exhibit "3" is a diagrammatic sketch of the proposed injection wells.

Logs of the proposed injection wells are not available.

5. The kind of fluid to be injected will be fresh water purchased from Yucca Water Company, and the anticipated volume to be injected is 500 barrels per injection well, per day.

6. That a complete copy of this application, together with all of the Exhibits, has been forwarded to the office of the State Engineer, Capitol Building, Santa Fe, New Mexico, as is shown by the certificate attached hereto.

7. That applicant's lands, for which authority is sought for the water flood project, are being unitized as the "Grayburg-Jackson (San Andres) Unit", by appropriate application to, and proceedings through, the United States Geological Survey, and, accordingly, a Water Flood Unit Allowable is requested.

8. That applicant is filing this application in accordance with the provisions of Rule 701, and applicant requests an allowable to be assigned, as provided in said Rule 701.

WHEREFORE, applicant requests a hearing before an Examiner, and requests authority for said water flood project, under Rule 701.

ANNE BURNETT WINDFOHR, d/b/as
WINDFOHR OIL COMPANY

by
WATSON AND WATSON

Fred A. Watson
Attorneys for Applicant,
P. O. Drawer E,
Artesia, New Mexico.

CERTIFICATE

I do hereby certify that, on the 3rd day of May, 1967, I mailed a true and complete copy of this Application, together with all exhibits, to the Office of the State Engineer, Capitol Building, Santa Fe, New Mexico, and that I delivered two true and complete copies, together with all exhibits, to the United States Geological Survey Office, in Artesia, New Mexico.

Fred A. Watson

Docket No. 17-67

DOCKET: EXAMINER HEARING - TUESDAY - JUNE 6, 1967

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

The following cases will be heard before Daniel S. Nutter, Examiner, or Elvis A. Utz, Alternate Examiner:

CASE 3592: Application of Anne Burnett Windfohr, dba Windfohr Oil Company, for a waterflood project, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks authority to institute a waterflood project by the injection of water into the San Andres formation through eight wells in Sections 13, 14 and 24, Township 17 South, Range 30 East, Grayburg-Jackson Pool, Eddy County, New Mexico. Applicant further seeks an administrative procedure for future expansion of said project.

CASE 3584: (Continued and Readvertised)

Application of Gulf Oil Corporation for an unorthodox gas well location, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks authority to drill its Eddy "BD" State Well No. 1 at an unorthodox location 660 feet from the South line and 990 feet from the East line of Section 32, Township 20 South, Range 30 East, in an undesignated Strawn gas pool, Eddy County, New Mexico.

CASE 3578: (Continued and Readvertised)

Application of Texas Pacific Oil Company for several non-standard gas proration units, Lea County, New Mexico. Applicant, in the above-styled cause, seeks the dedication and rededication of certain acreage and the establishment of the following non-standard gas proration units in Township 22 South, Range 36 East, Jalmat Gas Pool, Lea County, New Mexico.

A 120-acre non-standard gas proration unit comprising the N/2 NE/4 and the SE/4 NE/4 of Section 7, to be dedicated to the State "A" A/c-2 Well No. 5, located in Unit A of said Section 7, and also to the State "A" A/c-2 Well No. 6 located in Unit B of said Section 7;

A 160-acre non-standard gas proration unit comprising the W/2 W/2 of Section 5, to be dedicated to the State "A" A/c-2 Well No. 41, located in Unit M of said Section 5;

An 80-acre non-standard gas proration unit comprising the E/2 NW/4 of Section 5, to be dedicated to the State "A" A/c-2 Well No. 44, located in Unit F of said Section 5;

A 160-acre non-standard gas proration unit comprising the N/2 SE/4 and the E/2 SW/4 Section 5, to be dedicated to the State "A" A/c-2 Well No. 28, located in Unit I of said Section 5;

Case 3578 continued

An 80-acre non-standard gas proration unit comprising the S/2 SE/4 of Section 5, to be dedicated to the State "A" A/c-2 Well No. 27, located in Unit P of said Section 5;

A 160-acre non-standard gas proration unit comprising the W/2 SW/4, SE/4 SW/4, and SW/4 SE/4 Section 8, to be dedicated to the State "A" A/c-2 Well No. 54, located in Unit O of said Section 8;

A 160-acre non-standard gas proration unit comprising the S/2 NW/4, NE/4 SW/4, and NW/4 SE/4 Section 8, to be dedicated to the State "A" A/c-2 Well No. 56, located in Unit J of said Section 8;

An 80-acre non-standard gas proration unit comprising the S/2 NE/4 Section 8, to be dedicated to the State "A" A/c-2 Well No. 43, located in Unit H of said Section 8;

An 80-acre non-standard gas proration unit comprising the N/2 NW/4 Section 8, to be dedicated to the State "A" A/c-2 Well No. 49, located in Unit C of said Section 8;

A 240-acre non-standard gas proration unit comprising the NE/4 and E/2 NW/4 Section 9, to be dedicated to the State "A" A/c-2 Well No. 40, located in Unit A of said Section 9;

A 240-acre non-standard gas proration unit comprising the E/2 SE/4 Section 8, and the SW/4 Section 9, to be dedicated to the State "A" A/c-2 Well No. 38, located in Unit K of said Section 9;

A 160-acre non-standard gas proration unit comprising the N/2 NE/4 Section 8, and the W/2 NW/4 Section 9, to be dedicated to the State "A" A/c-2 Well No. 29, located in Unit D of said Section 9.

CASE 3579: (Continued from the May 24th Examiner Hearing)

Application of Texas Pacific Oil Company for three dual completions, Lea County, New Mexico. Applicant, in the above-styled cause, seeks authority to dually complete its State "A" A/c-2 Wells Nos. 28, 54, and 29, located in Unit I of Section 5, Unit O of Section 8, and Unit D of Section 9, respectively, Township 22 South, Range 36 East, Lea County, New Mexico, in such a manner as to produce gas from the Jalmat Gas Pool and oil from the South Eunice Oil Pool.

CASE 3593: Application of Amerada Petroleum Corporation for downhole commingling, Lea County, New Mexico. Applicant, in the above-styled cause, seeks authority to commingle production from the Monument Paddock and Monument Blinbry Oil Pools in the wellbore of its L. M. Lambert Well No. 8 located in Unit G of Section 6, Township 20 South, Range 37 East, Lea County, New Mexico, with the assignment of a single allowable to said commingled production.

CASE 3594: Application of Amerada Petroleum Corporation for an Ogallala oil proration unit, special rules for said unit and authority for fresh water disposal, Lea County, New Mexico. Applicant, in the above-styled cause, seeks the establishment of the SE/4 NW/4 of Section 30, Township 18 South, Range 38 East, Lea County, New Mexico, as a 40-acre proration unit for production of oil from the Ogallala formation. Applicant also seeks the establishment of special rules governing said 40-acre tract including a maximum density of one well per 0.625-acre with a provision that wells should be drilled no nearer than 82.5 to the outer boundary of the unit and no nearer than 165 feet to another well producing from the same formation, provided that an exception should be made for existing wells on said 40-acre tract which are not located in conformance with said spacing rules. Applicant also seeks a temporary exception to Rule 307 for each well to permit utilization of a vacuum-type drilling unit during the drilling and completion operations. Applicant also seeks authority to produce the wells at capacity even though the aggregate production from said wells exceeds the 40-acre normal unit allowable. Applicant further seeks authority to dispose of fresh water produced with the oil back into the Ogallala formation through an injection well or wells located no nearer than 330 feet to the outer boundaries of the 40-acre tract.

CASE 3595: Application of Ernest A. Hanson for acreage rededication, Lea County, New Mexico. Applicant, in the above-styled cause, seeks the rededication of the SE/4 NW/4 of Section 19, Township 22 South, Range 38 East for the production of oil from the Blinebry Oil Pool, said 40-acre unit to be dedicated to applicant's Gutman Well No. 4, formerly the Gulf Oil Corporation's Max Gutman Well No. 3. This acreage is presently dedicated as a part of a 160-acre standard gas proration unit in the Blinebry Gas Pool to Gulf Oil Corporation's Max Gutman Well No. 2 located in Unit C of said Section 19.

CASE 3350: (Reopened)

In the matter of Case No. 3350 being reopened pursuant to the provisions of Orders Nos. R-3021 and R-3021-A, which orders established 80-acre spacing units for the Young-Wolfcamp Pool and the Young-Bone Spring Pool, Lea County, New Mexico, respectively, for a period of one year. All interested parties may appear and show cause why said pools should not be developed on 40-acre spacing units.

CASE 3596: Application of Tenneco Oil Company for an unorthodox location, Rio Arriba County, New Mexico. Applicant, in the above-styled cause, seeks approval of an unorthodox gas well location for its Jicarilla "B" Well No. 8 at a point 790 feet from the North line and 2510 feet from the East line of Section 15, Township 26 North, Range 5 West, Blanco-Mesaverde Gas Pool, Rio Arriba County, New Mexico.

-4- Examiner Hearing - June 6, 1967

Docket No. 17-67

CASE 3574: (Continued from May 24th Examiner Hearing)

Application of Cima Capitan, Inc. 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 formations through one well located in Unit C of Section 3, Township 17 South, Range 32 East, Maljamar Pool, Lea County, New Mexico.

NEIL B. WATSON
FRED A. WATSON

LAW OFFICES
WATSON & WATSON
CARPER BUILDING - P. O. DRAWER E
ARTESIA, NEW MEXICO
88210

AREA CODE 505
746-4151 • 746-2201

May 3, 1967.

Cw 35-92

The Oil Conservation Commission
of New Mexico,
Santa Fe, New Mexico.

Gentlemen:

Re: Application of Anne Burnett Windfohr, d/b/a
Windfohr Oil Company, for authority to institute
a waterflood project by injection into the San
Andres Formation as to wells located in Sections
11, 12, 13, 14, 23 and 24, Township 17 South,
Range 30 East, N.M.P.M., Eddy County, New Mexico.

I herewith enclose in triplicate the captioned Application,
complete with Exhibits attached to each copy and complete
with certificate showing that copies have been furnished to
the State Engineer and to the United States Geological Survey.

In talking to Mr. Nutter today, it is my impression that this
case may be heard at the hearing on June 6, 1967, and I sin-
cerely hope that it can be placed on that docket. Thanking
you in advance for your consideration, I remain,

Yours very truly,

Fred A. Watson
Fred A. Watson

FAW:drm
Encs.

*Place first on
docket*

DOCKET MAILED

Date 5-25-67

W

MAIN OFFICE

'67 MAY 22 AM 8 18

May 19, 1967

Mr. Ralph L. Gray
Consultant
Box 198
Artesia, New Mexico

Dear Mr. Gray:

Your letter of May 9, 1967 referring to my comments on the Windfohr Oil Company application seeking Oil Conservation Commission authorization for a waterflood project is gratefully acknowledged.

FBI/ma
cc-Mr. Neil Watson
Mr. A. L. Porter, Jr.
Mr. F. H. Hennighausen

Yours truly,

S. E. Reynolds
State Engineer

By:
Frank E. Irby
Chief
Water Rights Div.

RALPH L. GRAY
PETROLEUM ENGINEERING - PRODUCTION
CONSULTANT
302 CARPER BUILDING
ARTESIA, NEW MEXICO
May 9, 1967

67 MAY 10 PM 1 27

State Engineer Office
Santa Fe, New Mexico

Case 3592

Attention: Mr. Frank E. Irby

Dear Mr. Irby:

This refers to your letter of May 5, 1967, regarding the application of Windfohr Oil Company for authorization to conduct a waterflood project on their proposed Grayburg Jackson San Andres Unit, Eddy County, New Mexico. Your letter made certain comments in regard to information submitted in our application. We would like to explain these questions as follows:

1. In drafting the diagrammatic sketch shown as Exhibit #3, the amount of cement used on the oil strings was omitted through an oversight. In each case, 100 sacks of cement were used in cementing the 7" oil strings.
2. The estimated top of cement is based on 100 sacks of cement.
3. No depths were shown for the packer point inside the 4½" casing. The depth of the packer will not be determined until such time as the packer is actually run and we consider that for the purpose of the diagrammatic sketch, that the packer being shown set in the 4½" liner is adequate. The installation of the 4½" liner will be a normal condition and we would estimate that the top of the liner will be within the range of 50 to 150 feet above the 7" casing point.
4. Mr. Irby states that no indication is given as to how the new wells will be constructed or equipped. It was planned to bring this out in the hearing in our testimony but in order to furnish you information at this time, it is planned to cement new casing to the bottom of the hole and pay zones will be perforated. It is doubtful that we will use a packer in the new wells.

Yours very truly,

Ralph L. Gray
REGISTERED PETROLEUM ENGINEER.

RLG:lw

cc: Mr. Neil Watson
Mr. A. L. Porter, Jr.
Mr. F. H. Hennighausen



STATE OF NEW MEXICO

STATE ENGINEER OFFICE

SANTA FE

S. E. REYNOLDS
STATE ENGINEER

May 5, 1967

ADDRESS CORRESPONDENCE TO:
STATE CAPITOL
SANTA FE, NEW MEXICO 87501

Case 3592

Mr. A. L. Porter, Jr.
Secretary-Director
Oil Conservation Commission
Santa Fe, New Mexico

Dear Mr. Porter:

Reference is made to the application of Windfohr Oil Company which seeks authorization for a waterflood project in Sections 11, 12, 13, 14, 23 and 24, Township 17 South, Range 30 East.

For your convenience, I respectfully offer the following four comments regarding this application:

1. No cement quantities are given for the oil string.
2. In view of #1, there seems to be no basis for estimating the top of the cement surrounding the oil string.
3. No setting depth, with relation to the cement top, is given for packers which are to be installed.
4. No indication is given as to how the new wells will be constructed and equipped.

FBI/ma
cc-Watson & Watson
F. H. Hennighausen

Yours truly,

S. E. Reynolds
State Engineer

By: *Frank E. Irby*
Frank E. Irby
Chief
Water Rights Div.

dearnley-meier reporting service, inc.

SPECIALIZING IN: DEPOSITIONS, HEARINGS, STATEMENTS, EXPERT TESTIMONY, DAILY COPY, CONVENTIONS

1120 SIMAS BLDG. • P. O. BOX 1092 • PHONE 243-6691 • ALBUQUERQUE, NEW MEXICO

BEFORE THE
NEW MEXICO OIL CONSERVATION COMMISSION
Santa Fe, New Mexico
June 6, 1967

EXAMINER HEARING

IN THE MATTER OF:

Application of Anne Burnett Windfohr,
doing business as Windfohr Oil Company,
for a waterflood project, Eddy County,
New Mexico.

Case 3592

BEFORE: Daniel S. Nutter, Examiner

TRANSCRIPT OF HEARING

NEW MEXICO OIL CONSERVATION COMMISSION
EXAMINER HEARING

SANTA FE, NEW MEXICO

REGISTER

HEARING DATE JUNE 6, 1967 TIME: 9 A.M.

NAME:	REPRESENTING:	LOCATION:
Fred P. Watson - Watson & Watson	Windtche Oil Company	Artesia, New Mexico
Ralph L. Gray	" " "	" " "
John R. L. Vann	" " "	Port Worth, Texas
John J. Russell	Texas Pacific	Rosewell
Fred Hughes	Zapata Pacific Oil Co.	Midland, Texas
Jerry I. Moritz	Texas Pacific	Midland, Texas
Richard L. Hacker	Amerasia Pet. Corp.	Tulsa, Okla.
Thomas W. Lynch	" " "	" "
Jason W. Kellah	Kellah & Fox	Santa Fe
Victor T. Lyon	Continental Oil Co.	Hobbs
J. H. Hosh	Gulf Oil Corp.	Roswell N.M.
J. F. Benson	✓	✓
W. H. Kaster	✓	✓
L. B. D. Wachs	Texas	Durango, Colo.
L. H. Storer	Union Texas Pet.	Midland, Tex.
Cyde E. Ford	✓ ✓ ✓	Houston, Texas
Hal Porter	Union Texas Pet.	Artesia N.M.
Samuel	Union Texas Pet.	Santa Fe.

dearnley-meier

SPECIALIZING IN: DEPOSITIONS, HEARINGS, STATEMENTS, EXPERT TESTIMONY, DAILY COPY, CONVENTIONS
1120 SIMMS BLDG. • P.O. BOX 1092 • PHONE 243-6691 • ALBUQUERQUE, NEW MEXICO 87101
1400 FIRST NATIONAL BANK EAST • PHONE 256-1294 • ALBUQUERQUE, NEW MEXICO 87108

PAGE 2

MR. NUTTER: Case 3592.

MR. HATCH: Case 3592, application of Ann Burnett Windfohr, doing business as Windfohr Oil Company for a water-flood project, Eddy County, New Mexico.

MR. WATSON: Good morning. I am Fred Watson, Watson and Watson, Artesia, New Mexico, attorneys for the Applicant and we have present, representing the Applicant, Mr. Ralph L. Gray, Consulting Engineer, Artesia, New Mexico, and also present, but not anticipating testifying, is Mr. John Rush Vann of the Fort Worth, Texas office of Windfohr Oil Company.

(Witness sworn.)

MR. WATSON: At the outset, on behalf of the Applicant, I would like to make a statement as to the unit which is being formed. The application, if granted, also would include a request for a unit allowable. The status of the unit is that the U. S. Geological Survey, which has jurisdiction over all these federal leases, has approved the designation of the unit area, has given tentative approval to the Unit Agreement. All interested parties have signed the Unit Agreement and the final form of the Unit Agreement has been submitted to Washington for final approval.

Mr. Ralph Gray has testified on a number of occasions before this Commission. Is the Commission satisfied

with his qualifications?

MR. NUTTER: Yes, sir, go ahead.

(Whereupon, Applicant's Exhibit Number 1 was marked for identification.)

RALPH L. GRAY, called as a witness on behalf of the Applicant, first having been duly sworn, was examined and testified as follows:

DIRECT EXAMINATION

BY MR. WATSON:

Q Mr. Gray, referring to what has been marked as Applicant's Exhibit 1, will you please identify that, sir.

A Exhibit Number 1 is a map of the area showing the surrounding sections. The purpose of this exhibit is just to show ownership within a two mile radius of the proposed water injection project. Most of the projects would be located in Section 13, 17, 30 so this map shows all of the surrounding leases.

(Whereupon, Applicant's Exhibit Number 2 was marked for identification.)

Q And, you also prepared Exhibit Number 2?

A Yes, sir, Exhibit Number 2 is also a map. This shows the boundary of the proposed San Andres unit by the cross-hatched lines. Initially, it is a proposed to inject water into eight injection wells, which we will refer to as a pilot program. These injection wells are indicated by the

red circles on the map, and the expanded project is indicated by the blue circles which show the injection wells at some time later when the project will be expanded.

You will note that we will convert some of the old producing wells to water injection wells, so the pattern for injection will be an eighty acre five spot plan.

Q In the initial program, you will convert how many wells?

A Actually, seven wells that are now producing will be converted to water injection wells and then, in addition, we will drill a new well, which will be located in the Northwest Quarter of the Northwest Quarter of Section 13, and this well will be called the Stevens "B" Well Number 3.

(Whereupon, Applicant's Exhibit Number 3 was marked for identification.)

Q Will you describe your Exhibit Number 3, please?

A Exhibit Number 3 is a structural map, the contours are drawn on top of the red sand, or Queen formation. Actually, the Queen formation is somewhat higher than the formation which we propose to flood, which is the San Andres, but the structures of the two formations are very similar and this map will serve to show what the general structural conditions are. Structurally, this is a plunging anticline. There is a moderate dip in an easterly direction and then, in

A few of the wells were shot, but most of them are acidized.

(Whereupon, Applicant's Exhibit Number 5 was marked for identification.)

Q Referring to what has been marked Exhibit Number 5, will you describe that one, please, sir?

A Exhibit Number 5 is a west-east cross-section through the proposed unit area. This exhibit has been prepared mainly to show the various formations that are present in this area. The top of the Queen formation is shown on the logs, the top of the Grayburg, the top of the Premier zone, which is the basal portion of the Grayburg, the top of the San Andres and top of the Lovington Sand.

Very few of the wells in this area have actually been logged. The Stevens "A" 2 log is shown on this cross-section and then, the well on the furthest right portion of this cross-section is over on the Sinclair acreage, which is east of the proposed flood unit.

(Whereupon, Applicant's Exhibit Number 6 was marked for identification.)

Q And, you have prepared an injection well diagram marked Exhibit 6?

A Yes, Exhibit 6 is a diagrammatic sketch of the proposed injection wells that will be converted. This diagram indicates that we will set four and one half liners

a southerly direction, the structure drops off very rapidly. We have shown a cross-hatched line through the northern part of Sections 23 and 24, which we consider as the approximate oil-water contact in the San Andres formation, and everything that we flood, of course, will be above this contact.

(Whereupon, Applicant's Exhibit Number 4 was marked for identification.)

Q And, you have prepared a well log, have you?

A Yes.

Q Marked Exhibit Number 4?

A Yes, Exhibit Number 4 is a rather typical log of this area. This is a gamma ray neutron survey of a portion of the Stevens "A" Number 2 Well. The proposed unit will unitize the formation from the top of the San Andres formation down to a depth of 550 feet below the top of the San Andres and, this interval is indicated on this log by the cross-hatched lines. This interval represents the limits that will be unitized. Most of the pay that is encountered is in the lower portion of the unitized area and, on this particular log, for instance, from about 3270 down to about 3430, would represent the main pay portion. Most of the, in fact all of the old producing wells, the pipe was set above the top of the San Andres, some of the Grayburg formation is open, and these wells have several hundred feet of open-hole present.

dearnley-meier

SPECIALIZING IN: DEPOSITIONS, HEARINGS, STATEMENTS, EXPERT TESTIMONY, DAILY COPY, CONVENTIONS

1120 SIMMS BLDG. • P.O. BOX 1092 • PHONE 243-6691 • ALBUQUERQUE, NEW MEXICO 87101

1400 FIRST NATIONAL BANK EAST • PHONE 256-1294 • ALBUQUERQUE, NEW MEXICO 87108

throughout the open hole in these wells. The wells will be logged and then we will perforate the zones of porosity and then tubing will be run with a packer which will be set in the upper portion of the four and a half inch liner, and this is for the purpose of protecting the old casing string. Injection will be down the tubing and below the packer.

This diagramatic sketch applies to the seven producers that will be converted. Individual, specific depths are indicated on this diagram. In the case of the new well that will be drilled, the Stevens "B" Number 3 Well, we propose to set the casing to total depth, pays will be perforated, four and a half inch new J-55 pipe will be used and we probably will not use a packer in the new well. We will run tubing, injection will be down the tubing but without a packer, probably.

(Whereupon, Applicant's Exhibit Number 7 was marked for identification.)

Q Will you describe your Exhibit Number 7?

A Exhibit Number 7 shows the average daily oil and water production for each of the present producing wells in the proposed unit for the month of February, 1967. You will note that very few of these wells produce water at the present time, and, only in small quantities. The average oil production per well, per day, is only three barrels, so you can readily

dearnley-meier

SPECIALIZING IN: DEPOSITIONS, HEARINGS, STATEMENTS, EXPERT TESTIMONY, DAILY COPY, CONVENTIONS
1120 SIMMS BLDG. • P.O. BOX 1092 • PHONE 243-4691 • ALBUQUERQUE, NEW MEXICO 87101
1400 FIRST NATIONAL BANK EAST • PHONE 256-1294 • ALBUQUERQUE, NEW MEXICO 87109

see that these wells are in a stripper stage of depletion.

(Whereupon, Applicant's Exhibit Number 8 was marked for identification.)

Q Your Exhibit Number 8 is --

A Exhibit Number 8 is a tabulation showing the ultimate primary oil production for various segments of the proposed unit. Usually, these breakdowns are by batteries, that is the way these have been tabulated and the total estimated ultimate primary oil production for the entire unit area is 6,506,310 barrels of oil.

Q If the application is granted, what will be the source of water for the injection purposes?

A Water will be purchased from Yucca Water Company. The source of their water is the Ogallala formation. It will be fresh water.

Q What will be your estimated volumes to be injected?

A We estimate that these volumes will average four to five hundred barrels per well per day.

Q In your opinion, from the study you have made and exhibits you have prepared and the information thereon, will the requested program permit the recovery of oil which would not otherwise be recovered?

A Yes, sir, it will.

Q Were the exhibits Numbers 1 through 8 prepared

dearnley-meier

SPECIALIZING IN: DEPOSITIONS, HEARINGS, STATEMENTS, EXPERT TESTIMONY, DAILY COPY, CONVENTIONS
1120 SIMMS BLDG. • P.O. BOX 1092 • PHONE 243-6691 • ALBUQUERQUE, NEW MEXICO 87101
1400 FIRST NATIONAL BANK EAST • PHONE 36-1294 • ALBUQUERQUE, NEW MEXICO 87108

directly by you or under your supervision?

A Yes, sir.

Q Information compiled by you?

A Yes.

MR. WATSON: The Applicant moves the introduction and admission into the record of Exhibits Numbers 1 through 8.

MR. NUTTER: Applicant's Exhibits 1 through 8 will be admitted in evidence.

(Whereupon, Applicant's Exhibits 1 through 8 were admitted in evidence.)

Q (By Mr. Watson) Now, under this project, the Applicant seeks immediate authority or authority as soon as possible to inject into eight wells, one to be drilled and seven to be converted as shown in red on your exhibit?

A Yes.

Q And, also seeks authority for expansion by administrative approval?

A Yes, sir.

Q As to the remainder of the wells shown in blue on the exhibit?

A Yes.

MR. WATSON: The Applicant rests.

MR. NUTTER: Are there any questions of the witness?

CROSS EXAMINATION

BY MR. NUTTER:

Q Mr. Gray, referring here to your Exhibit Number 6, you show the oil string on each of these wells which has been drilled to be seven inch pipe, correct?

A That's correct, yes, sir.

Q And, this casing in each one of these wells has been set between twenty nine hundred and three thousand feet?

A Yes, sir.

Q Then, you have got several hundred feet of open hole below that --

A Yes, sir.

Q -- and the normal means of completion in this area?

A Yes, sir.

Q So, you are going to have to run a four and a half inch liner in there. How far back up into the seven inch pipe will that four and a half inch liner come, Mr. Gray?

A Oh, ordinarily, we will run about fifty feet above the base of the seven inch.

Q At least fifty feet?

A Well, close to, that if it was a few feet less than that, why we will --

Q About fifty feet. In other words, about a joint or

a little over --

A About a joint and a half to two joints, usually.

Q Now, you show a packer being installed in the four and a half. Will the packer in each case be installed down in the four and a half inch liner between the top of the liner and casing shoe of the seven inch?

A Yes, sir.

Q In the overlapping area?

A Yes, sir.

Q Is it your proposal to treat this tubing in any manner before running it?

A Yes, we will coat the inside of the tubing with plastic.

Q Plastic coat it? Now, why won't you be running a packer in the new well which will be drilled?

A Well, we consider that the new four and a half casing has a minimum yield rating sufficiently strong to inject water without setting the packer. We will have a safety factor of approximately two.

Q The main reason for using the packer in these older wells is to keep the pressure off of that seven inch?

A Yes, sir.

Q What would you do with the annulus of the older wells, would you fill that annulus with inert fluid, or just

dearnley-meier

SPECIALIZING IN: DEPOSITIONS, HEARINGS, STATEMENTS, EXPERT TESTIMONY, DAILY COPY, CONVENTIONS

1120 SIMMS BLDG. • P.O. BOX 1092 • PHONE 243-6691 • ALBUQUERQUE, NEW MEXICO 87101
1400 FIRST NATIONAL BANK EAST • PHONE 256-1294 • ALBUQUERQUE, NEW MEXICO 87108

water.

A It will be filled with water, fresh water.

Q Are all of these leases at the present time, owned by Windfohr Oil Company, all the leases that are going into the unit?

A All of the leases are operated by the Windfohr Oil Company. There are other interests included.

Q I see. Now, this is a Federal Unit Agreement and not subject to a hearing by the Oil Conservation Commission. How will we know when this has been approved by the U.S.G.S., so that a unit allowable could be assigned?

A Well, I'm sure that the operator will be willing to advise you at such time as the Unit Agreement has been approved.

Q A copy of the letter approving the Unit Agreement, or designation by the U.S.G.S. of approval will be furnished to the Commission?

A Yes, sir.

MR. WATSON: Yes, sir.

Q (By Mr. ~~Watson~~er) Now, Mr. Gray, I notice that Mr. Irby, of the State Engineer's office on May the 5th wrote you a letter, noting several items and on May 9th you replied to him. Insofar as you know, has the State Engineer been satisfied as to the questions that they had?

A We presume that they are satisfied, because we

haven't had any further correspondence from them.

MR. NUTTER: Are there any further questions of this witness? He may be excused.

(Witness excused.)

MR. WATSON: May I --

MR. NUTTER: Yes, sir, go ahead.

MR. WATSON: We do have a letter acknowledging, a copy of a letter acknowledging Mr. Gray's answer to the State Engineer and I think perhaps Mr. Porter received one.

MR. NUTTER: He acknowledges receipt of the letter without further comment.

MR. WATSON: It says, "Gratefully acknowledged, Yours very Truly," so, I think Mr. Porter also has one of those.

MR. NUTTER: We have a copy of that letter, yes, sir. Do you have anything further, Mr. Watson?

MR. WATSON: No, sir.

MR. NUTTER: Does anyone have anything they wish to offer in Case 3592. We will take the case under advisement.

MR. NUTTER: We will now re-open Case 3592.

MR. FORD: My name is Clyde Ford. I represent Union Texas Petroleum. We own approximately thirty-one percent of the Grayburg-Jackson unit, San Andres unit, and we would like to support the Applicant in both the program and the agreement which he proposes.

MR. NUTTER: Thank you, Mr. Ford. We will close Case 3592 and resume with Case 3593.

dearnley-meier

SPECIALIZING IN: DEPOSITIONS, HEARINGS, STATEMENTS, EXPERT TESTIMONY, DAILY COPY, CONVENTIONS

1126 SIMMS BLDG. • P.O. BOX 1092 • PHONE 243-4691 • ALBUQUERQUE, NEW MEXICO 87101
1400 FIRST NATIONAL BANK EAST • PHONE 256-1294 • ALBUQUERQUE, NEW MEXICO 87108

dearnley-meier

SPECIALIZING IN: DEPOSITIONS, HEARINGS, STATEMENTS, EXPERT TESTIMONY, DAILY COPY, CONVENTIONS.

1120 SIMMS BLDG. • P.O. BOX 1092 • PHONE 243-6691 • ALBUQUERQUE, NEW MEXICO 87101
1400 FIRST NATIONAL BANK EAST • PHONE 256-1294 • ALBUQUERQUE, NEW MEXICO 87108

PAGE 15

STATE OF NEW MEXICO)
COUNTY OF BERNALILLO) SS.

I, JERRY POTTS, Court Reporter, do hereby certify that the foregoing and attached transcript of proceedings before the New Mexico Oil Conservation Commission Examiner at Santa Fe, New Mexico, is a true and correct record to the best of my knowledge, skill and ability.

IN WITNESS WHEREOF I have affixed my hand and notarial seal this 30th day of June, 1967.

Jerry Potts
Notary Public - Court Reporter

My Commission Expires:

7-10-70

I do hereby certify that the foregoing is

6/6 3592
67
New Mexico Oil Conservation Commission

WINDFOHR OIL COMPANY

DAILY OIL & WATER PRODUCTION FOR FEBRUARY 1967

	<u>OIL</u>	<u>WATER</u>
Gissler "A" #2	2	
#3	1	0
#4	3	0
#5	2	0
#6	2	0
#7	2	0
#8	2	0
#9	2	0
#10	1	0
#11	1	0
Lease Total	<u>18</u>	<u>0</u>
Gissler "B" #1	2	
#2	1	0
Lease Total	<u>3</u>	<u>0</u>
Jackson "A" #2	3	
#3	9	0
#4	1	0
#5	3	0
#6	3	0
#7	8	0
#8	3	0
#9	2	0
#10	2	0
#11	1	3
#12	2	0
#13	2	0
#14	2	0
#15	6	0
Lease Total	<u>53</u>	<u>3</u>
Jackson "B" #1	5	
#2	10	0
#3	5	3
Lease Total	<u>20</u>	<u>3</u>
Stevens "A" #1	3	
#2	5	0
#3	2	2
#4	5	0
#5	3	0
Lease Total	<u>18</u>	<u>2</u>
Stevens "B" #1		0
#2		0
Lease Total	<u>1</u>	<u>0</u>

Average Oil Production per day per well - - - - - 3 Bbls.

BEFORE EXAMINER NUTTER
OIL CONSERVATION COMMISSION
Windfohr EXHIBIT NO. 7
CASE NO. 3592

WINDFOHR OIL COMPANY

<u>LEASE & WELL NOS.</u>	<u>NO. OF WELLS</u>	<u>ULTIMATE PRIMARY OIL</u>
Gissler "A" #2 - 11	10	1,262,433 bbls.
Gissler "B" #1 & #2	2	201,382
Jackson "A" #3 & #7	2	621,194
Jackson "A" #2 - 15	12	2,169,778
Jackson "B" #1, 2, 3, & 21	4	509,504
Stevens "A" #1 & #5	2	973,861
Stevens "A" #2 & #4	2	472,872
Stevens "A" #3	1	187,844
Stevens "B" #1 & #2	2	107,442
Total Ultimate Primary - - - - -		6,506,310 bbls.

BEFORE EXAMINER NUTTER
OIL CONSERVATION COMMISSION
Windfohr EXHIBIT NO. 8
CASE NO. 3592

Exhibit #8.