

BEFORE THE OIL CONSERVATION COMMISSION OF THE STATE OF NEW MEXICO

IN THE MATTER OF THE APPLICATION OF MAGNOLIA  
PETROLEUM COMPANY FOR AUTHORITY TO INSTITUTE  
A PILOT WATER FLOOD ON ITS STATE BRIDGES  
LEASE, VACUUM FIELD, LEA COUNTY, NEW MEXICO,  
AND FOR THE ADOPTION OF ADMINISTRATIVE  
PROCEDURES FOR THE SUBSEQUENT EXPANSION OF  
SAID WATER FLOOD AND THE ASSIGNMENT OF  
ALLOWABLES.

CASE NO. 1493

A P P L I C A T I O N

TO THE HONORABLE OIL CONSERVATION COMMISSION OF THE STATE OF NEW MEXICO:

COMES NOW Magnolia Petroleum Company, Applicant herein, and respectfully alleges and states as follows:

1. That it is the owner and operator of an oil and gas lease known as its State Bridges lease, which includes all or portions of Sections 3, 10, 11, 12, 13, 14, 15, 22, 23, 24, 25, 26 and 27, Township 17 South, Range 34 East, located in the Vacuum Field, Lea County, New Mexico.
2. That wells located upon this lease are producing from the Grayburg-San Andres formation found at an approximate depth of 4400 feet and are approaching depletion, some of which are now being considered for abandonment; and that applicant proposes to institute a pilot water flood on its State Bridges lease by injecting water into the Grayburg-San Andres formation.
3. That attached hereto and made a part hereof is a plat marked Exhibit "A", showing the location of the proposed intake wells and the location of all oil and gas wells, including drilling wells and dry holes and the names of lessees within one-half (1/2) mile of the intake wells, and each offset operator; and that the proposed intake wells shown thereon are applicant's State Bridges Nos. 2, 37, 56, 64, 66 and 71, all located in Section 14.
4. That attached hereto and made a part hereof is a data sheet marked Exhibit "B" which contains a description of the proposed intake and producing wells' casing program, production data and other information. The casing of the injection wells will be tested before use by setting a packer on tubing and applying pressure to the resulting tubing-casing annulus.
5. That water which is injected will be obtained from the shallow fresh water Ogallala sands found at an approximate depth of 200 feet. The injection rate will be from 1000 to 6000 barrels per day for the entire pilot project.
6. That attached hereto and made a part hereof are copies of radioactivity logs for two of the proposed injection wells, State Bridges No. 37, marked Exhibit "C", and State Bridges No. 71, marked Exhibit "D".
7. That this Commission should establish an administrative procedure for expansion of the proposed pilot water flood project to permit injection of water into the Grayburg-San Andres formation through other wells located on the State Bridges lease, without the necessity of additional hearings.

8. That this Commission should provide for an administrative procedure for the establishment of a project or lease allowable, without the necessity of additional hearings, in the event it should become necessary to produce any of the wells in the project as now proposed, or as it may be hereafter expanded, at a rate in excess of the top unit well allowable.

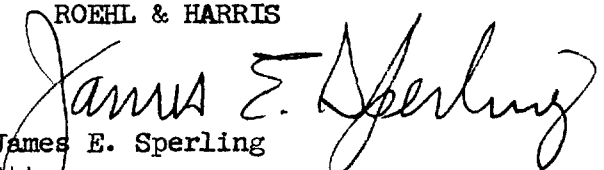
9. That the name of the operator of this project is Magnolia Petroleum Company, and its address is Post Office Box 900, Dallas 21, Texas.

WHEREFORE Applicant prays that this application be set for hearing, that notice be given as required by law, and that upon the evidence adduced at such hearing this Commission issue an order granting applicant permission to institute a pilot water flood project in the Grayburg-San Andres formation on its State Bridges lease and establishing administrative procedures for (1) expanding said pilot water flood project, and (2) setting such project or lease allowable as may be necessary for the proper operation of said water flood, and promulgating such other special rules and regulations as this Commission may deem proper and necessary for the prevention of waste and the protection of correlative rights.

Dated this 17th day of July, 1958.

MAGNOLIA PETROLEUM COMPANY

By MODRALL, SEYMOUR, SPERLING,  
ROEHL & HARRIS

By  James E. Sperling  
Attorney  
1200 Simms Building  
P. O. Box 466  
Albuquerque, New Mexico

**MAGNOLIA PETROLEUM COMPANY**

MAIN OFFICE OCC

*Case 1493  
file*

1958 AUG 18 AM 9:01

P. O. Box 2406  
Hobbs, New Mexico

August 14, 1958

State Engineers Office  
P. O. Box 510  
Roswell, New Mexico

Attn: Mr. Frank E. Irby

Gentlemen:

At the request of Mr. Frank E. Irby, during the hearing of Case No. 1493 before the New Mexico Oil Conservation Commission on August 13, 1958, this office has re-investigated the surface casing in the 6 injection wells of the proposed Vacuum Pilot Water Flood.

Enclosed is a plat showing these 6 wells and a data sheet of the same wells. In each case the cement on the surface casing was circulated. In all of the wells except State Bridges No. 2 the surface casing is definitely set below the base of all fresh water bearing sands. However, the surface casing seats of these wells (State Bridges No. 37, 56, 64, 66, 67) are possibly above the base of the Santa Rosa, a brackish water bearing sand in the area of the proposed pilot flood. State Bridges No. 2 has the intermediate casing set at 1853 feet which is 200' below the base of the Santa Rosa formation. It is not believed that contamination of any water bearing sands in this area will result due to the casing program in these wells.

It is Magnolia's intention to prevent waste and contamination of ground waters by fully testing the casing in these wells before injection is started. Spinner surveys are to be performed to insure that all injection water is entering the desired interval of the open hole section and not seeping past the casing shoe behind the casing.

MAGNOLIA PETROLEUM COMPANY

ORIGINAL SIGNED BY  
C. T. EVANS

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C. T. Evans  
District Petroleum Engineer

JMM:nrh

cc: New Mexico Oil Conservation Commission (1)

OIL CONSERVATION COMMISSION

P. O. BOX 871

SANTA FE, NEW MEXICO

September 19, 1958

Mr. James E. Sperling  
Modrall, Seymour, Sperling, Toehl & Harris  
P.O. Box 466  
Albuquerque, New Mexico

Dear Mr. Sperling:

On behalf of your client, Magnolia Petroleum Company, we enclose a copy of Order R-1244 issued September 17, 1958, by the Oil Conservation Commission in Case 1493, which was heard on August 13th.

Mr. C. T. Evans attended our hearing this week on the 17th and was given a copy of this order while he was here.

Very truly yours,

A. L. Porter, Jr.  
Secretary - Director

bp  
Encl.

*Duplicated Copies  
Mailed to:  
Rex Cabiness, Shell, Roswell  
Frank Drby, State Engineer, SF  
Tom Steele, Ohio Oil, Midland*





**MAGNOLIA PETROLEUM COMPANY**  
 PETROLEUM ENGINEERING DEPARTMENT  
 WEST TEXAS DIVISION



A PORTION OF THE  
**VACUUM FIELD**  
 LEA COUNTY, NEW MEXICO  
 PROPOSED PILOT WATER INJECTION PROJECT

SCALE

DATE

DRAWN J.V.N.

CHECKED

APPROVED

REVISED

Exhibit "A"

TABLE I  
DATA SHEET  
STATE BRIDGES LEASE  
PILOT WATER FLOOD AREA  
VACUUM FIELD  
LEA COUNTY, NEW MEXICO

Well No.	Proposed Disposition	T. D.	Casing Surface	Program Int.	Production	Completion Method	Cum. Prod. 1-1-58 W/Bbls.	Present Daily Pro
2	Injection Well	4715	16" 70# @ 60'	10 3/4" 40# @ 1853 w/490 sx.	7" 24# @ 4364 w/295 sx.	OH-Natural	174	4
37	"	4612	10 3/4" 36# @ 821' w/220 sx.	-----	7" 22# @ 4416 w/220 sx.	OH-Natural	116	6
56	"	4670	10 3/4" 35# @ 825' w/250 sx.	-----	7" 22# @ 4384 w/220 sx.	OH-350 qts.	71	2
64	"	4700	10 3/4" 36# @ 819' w/230 sx.	-----	5 1/2" 17# @ 4368' w/220 sx.	OH-370 qts.	144	5
66	"	4740	10 3/4" 36# @ 816' w/225 sx.	-----	5 1/2" 17# @ 4370' w/225 sx.	OH-300 qts.	95	4
71	"	4772	10 3/4" @ 823' w/250 sx.	-----	5 1/2" 17# @ 4375 w/210 sx.	OH-360 qts.	121	9
61	Center Prod. Well	4709	10 3/4" 36# @ 828' w/225 sx.	-----	7" 22# @ 4381' w/220 sx.	OH-300 qts.	103	4
65	"	4660	10 3/4" 36# @ 815' w/250 sx.	-----	7" 22# @ 4350' w/220 sx.	OH-300 qts.	78	3
1	Edge Prod. Well	4900	15 1/2" @ 319'	10" @ 1600'	8 1/4" @ 4380	OH-Natural	138	2
34	"	4650	10 3/4" 36# @ 811' w/250 sx.	-----	7" 24# @ 4413 w/240 sx.	OH-Natural	143	7
54	"	4660	10 3/4" 36# @ 828' w/250 sx.	-----	7" 22# @ 4367 w/220 sx.	OH-250 qts.	88	4
55	"	4666	10 3/4" 36# @ 825' w/250 sx.	-----	7" 22# @ 4348 w/220 sx.	OH-250 qts.	96	4
59	"	4670	10 3/4" 36# @ 822' w/250 sx.	-----	7" 22# @ 4370' w/220 sx.	OH-400 qts.	126	8
60	"	4660	10 3/4" 36# @ 821' w/250 sx.	-----	7" 22# @ 4398 w/210 sx.	OH-280 qts.	91	3
67	"	4738	10 3/4" 36# @ 823' w/250 sx.	-----	5 1/2" 17# @ 4404 w/220 sx.	OH-260 qts.	186	12
70	"	4740	10 3/4" 36# @ 830' w/250 sx.	-----	5 1/2" 17# @ 4387 w/210 sx.	OH-330 qts.	127	8
81	"	4735	8 5/8" 24# @ 1651 w/900 sx.	-----	5 1/2" 14# @ 4690 w/1800 sx.	OH-SF w/5000 gal.	7	7

Exhibit "B"  
Mar 14

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PILOT WATER FLOOD AREA  
VACUUM FIELD  
LEA COUNTY, NEW MEXICO

BEFORE THE  
OIL CONSERVATION COMMISSION  
SANTA FE, NEW MEXICO  
MAJOR EXHIBIT NO. 2  
CASE 1493

Well No.	Proposed Disposition	T. D.	Casing Surface	Program Int.	Production	Completion Method	Cum. Prod. 1-1-58 W/Bbls.	Present Daily Pr
2	Injection Well	4715	16" 70# @ 601	10 3/4" 40# @ 1853 w/490 sx.	7" 24# @ 4364 w/295 sx.	OH-Natural	174	4
37	"	4642	10 3/4" 36# @ 821' w/220 sx.	-----	7" 22# @ 4416 w/220 sx.	OH-Natural	116	6
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MAIN OFFICE OCC