

# GRARIDGE CORPORATION

IBEX BUILDING POST OFFICE BOX 782

BRECKENRIDGE, TEXAS

SEP 14 11 31 29  
September 9, 1959

Oil Conservation Commission  
State of New Mexico  
State Capitol Building  
Santa Fe, New Mexico

Re: Application For Administrative  
Approval To Convert Three Wells  
To Water Injection Wells In  
Artesia Flood No. 2, Eddy  
County, New Mexico

Gentlemen:

In accordance with Commission Order No. R-966-E, Graridge Corporation respectively request administrative approval to convert the following wells to water injection wells.

<u>Lease</u>	<u>Well No.</u>	<u>Location</u>
Resler Yates State	24	Unit Letter P, Sec. 21, T-18S, R-28E
McNutt State	12	Unit Letter L, Sec. 21, T-18S, R-28E
McNutt State	11	Unit Letter M, Sec. 21, T-18S, R-28E

McNutt State Well No. 11 at this date is not drilled, but our Form C-101 dated March 6, 1959, has been approved by your office and the well will be drilled in the immediate future. Upon completion of McNutt State No. 11, with your approval, it will be made an injection well and water injection begun.

The following data pertinent to the proposed expansion are given:

1. The proposed injection wells are directly offset by a producing well which has shown response to the waterflood project. See attached Form C-116 and Exhibit No. 1.

2. Exhibit No. 2 indicates present injection well data. It is evident that some of the injection wells are not as receptive to water injection as others, thus, it is desirable to place wells

September 9, 1959

on injection as early as responses warrant in order to maintain balance.

3. Exhibit No. 3 gives performance curves for the overall waterflood project.

Attached Exhibit No. 1 indicates all offset operators and injection wells in the area adjacent to the proposed expansion. Since Exhibit No. 1 shows Graridge Corporation as the offset operator, no waivers from offset operators are enclosed.

Any consideration by the Commission in expediting this matter will be greatly appreciated.

Yours very truly,

GRARIDGE CORPORATION



B. G. Harrison  
Manager of Secondary Recovery

SHL;BGH:gl

Attachments

cc: Graham office  
State Engineer Office  
Attn: Mr. Frank Irby  
Mr. Cliff Chapman  
Mr. Paul Darnell

NEW MEXICO OIL CONSERVATION COMMISSION

MAIN OFFICE OCC

GAS-OIL RATIO REPORT

1959 SEP 11 AM 8:26

OPERATOR Granidge Corporation POOL Artesia  
 ADDRESS Box 752, Breckenridge, Texas MONTH OF September, 19 59  
 SCHEDULED TEST  COMPLETION TEST \_\_\_\_\_ SPECIAL TEST \_\_\_\_\_ (Check One)  
 (See Instructions on Reverse Side)

Lease	Well No.	Date of Test	Producing Method	Choke Size	Test Hours	Daily Allowable Bbls.	Production During Test			GOR Cu. Ft. Per Bbl.
							Water Bbls.	Oil Bbls.	Gas MCF	
Resler Yates State	23	8-29	Pump	--	24	5	0	6.1	TSTM	

No well will be assigned an allowable greater than the amount of oil produced on the official test.

During gas-oil ratio test, each well shall be produced at a rate not exceeding the top unit allowable for the pool in which well is located by more than 25 percent. Operator is encouraged to take advantage of this 25 percent tolerance in order that well can be assigned increased allowables when authorized by the Commission.

Gas volumes must be reported in MCF measured at a pressure base of 15.025 psia and a temperature of 60 degrees F. Specific gravity base will be 0.60.

Mail original and one copy of this report to the district office of the New Mexico Oil Conservation Commission. In accordance with Rule 301 and Appropriate Pool Rules.

(I certify that the information given is true and complete to the best of my knowledge.)

Date September 9, 1959

Granidge Corporation  
 By S.H. Lindley, Jr. S.H. Lindley, Jr.  
 Engineer  
 Title

NEW MEXICO OIL CONSERVATION COMMISSION

GAS-OIL RATIO REPORT

OPERATOR Graridge Corporation POOL Artesia  
 ADDRESS Breckenridge, Texas MONTH OF September, 1959  
 SCHEDULED TEST  COMPLETION TEST \_\_\_\_\_ SPECIAL TEST \_\_\_\_\_ (Check One)  
 (See Instructions on Reverse Side)

Lease	Well No.	Date of Test	Producing Method	Choke Size	Test Hours	Daily Allowable Bbls.	Production During Test			GOR Cu. Ft. Per Bbl.
							Water Bbls.	Oil Bbls.	Gas MCF	
McNutt State	9	8-29	Pump	--	24	24	0	10.5	TSTM	

No well will be assigned an allowable greater than the amount of oil produced on the official test.

During gas-oil ratio test, each well shall be produced at a rate not exceeding the top unit allowable for the pool in which well is located by more than 25 percent. Operator is encouraged to take advantage of this 25 percent tolerance in order that well can be assigned increased allowables when authorized by the Commission.

Gas volumes must be reported in MCF measured at a pressure base of 15.025 psia and a temperature of 60 degrees F. Specific gravity base will be 0.60.

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(I certify that the information given is true and complete to the best of my knowledge.)

Date September 9, 1959

Graridge Corporation  
 Company  
 By S. H. Lindley, Jr.  
 Engineer  
 Title

State  
John Mershon

Graridge Corp.

Graridge Corp.

Graridge Corp.

1

4

3

7

31

1

2

5

6

State

Resler-Yates State

Lackawana State

Lackawana State

Graridge Corp.

Graridge Corp.

Graridge Corp.

7

3

4

30

45

13

8

12

10

6

25

2

1

Lackawana State "A"

11

9

8

4

22

23

24

1A

5

3

2

21

39

46

McNutt State

T  
10  
S

Graridge Corp.

Graridge Corp.

Graridge Corp.

15

8

7

6

13

305

132

12

10

9

5

17

51

306

19

18

16

3

18

53

Ventures State

52

13

17

20

11

4

19

304

307

308

14

22

1

21

2

14

26

27

32

43

Welch Duke State

Resler-Yates State

28

Kersey and Company

Graridge Corp.

8

4

5

1

3

4

5

6

6

2

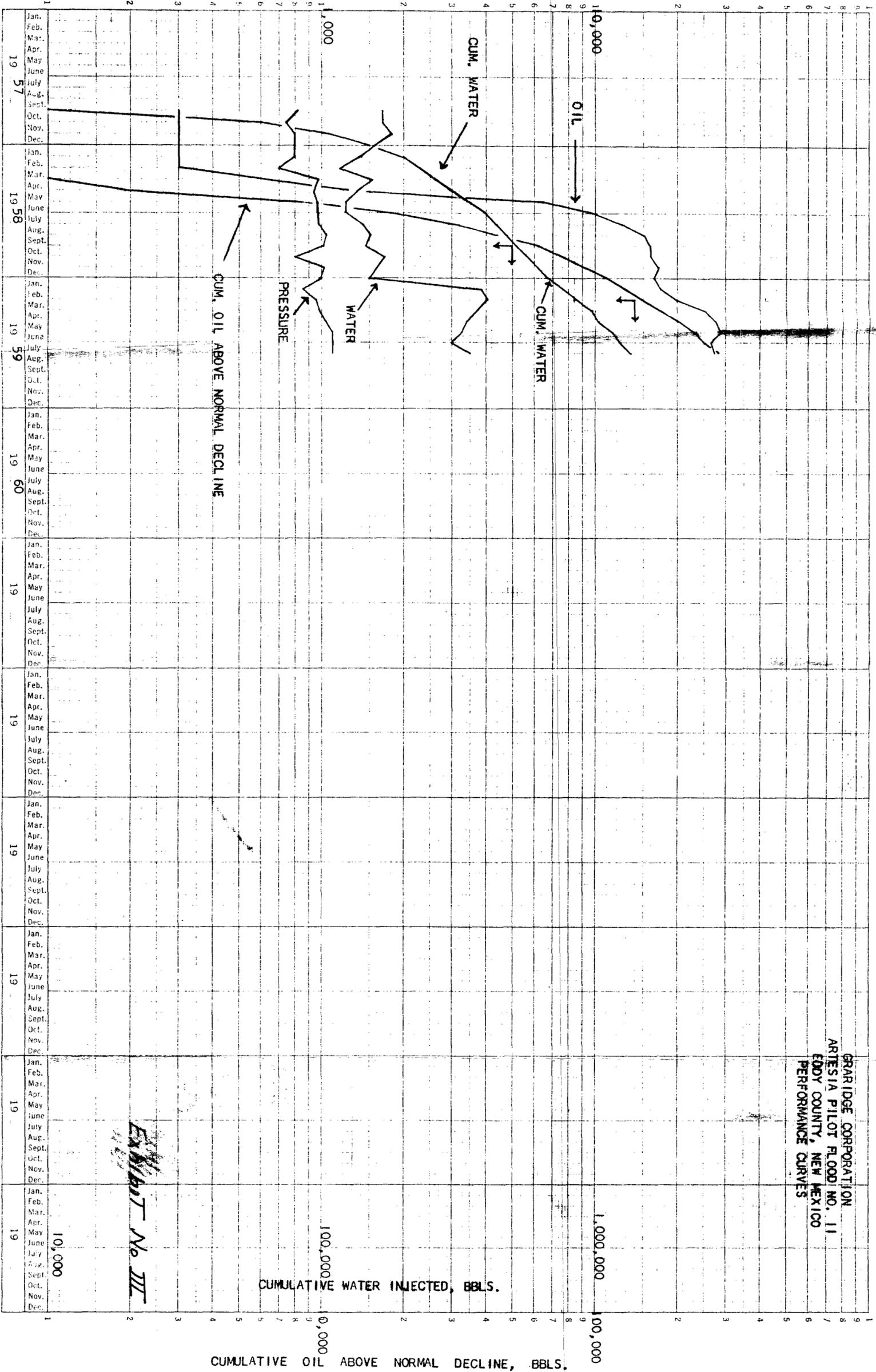
Exhibit No I

Brown  
Sakin Est.

INJECTION PRESSURE, PSIG.

WATER INJECTION, BBL/DAY

OIL PRODUCTION, BBL/MO.



GRARIDGE CORPORATION  
 ARTESIA PILOT FLOOD NO. 11  
 EDDY COUNTY, NEW MEXICO  
 PERFORMANCE CURVES

EXHIBIT No III

Monthly Water Flood Report

Injection Well Data OFFICE 000

Project: Artesia Pilot Flood No. 2

1959 SEP 11 AM

Month: July, 1959

Field: Artesia

Formation: 1st Grayburg

Lease & Well No.	Effective Acre-Feet		Total Water		Input B/D/ Ac-Ft.	IBEX* Net Input	Injection Pressure	Total Bbls.	Cumulative Ibox * Net Bbls.	Input Net B/ Net AF
	Total	Ibox	Mo.	Avg/ Day						
Nutt 2			6,711	216			1,140		167,702	
5			3,549	115			1,100		30,939	
6			5,276	182			1,040		51,805	
8			11,409	369			940		76,101	
Walter Yates #13			4,491	145			1,135		146,138	
18			6,703	216			1,110		155,367	
22			7,875	254			1,100		58,083	
39			2,551	83			1,090		27,695	
51			3,198	118			1,130		120,109	
301			5,555	179			910		13,264	
** 304			1,337	149			820		1,337	

Remarks: (continued on next page)

Exhibit No II

## Monthly Water Flood Report

(2)

## Injection Well Data

Project: Artesia Flood No. 2Month: July, 1959Field: ArtesiaFormation: 1st Grayburg

Lease & Well No.	Effective Acre-Feet		Total Water		Input B/D/ Ac-Ft.	IBEX* Net Input	Inject- ion Pressure	Total Bbls.	Cumulative Ibex * Net Bbls.	Input Net B/ Net AF
	Total	Ibex	Mo.	Avg/ Day						
Ventures St. 305			1,189	132			1,010		1,189	
Welch Duke St. 4			5,626	181			1,020		43,018	
5			7,848	253			1,100		158,114	
7			8,057	260			940		186,307	
10			8,580	277			920		67,663	
16			5,263	170			420		44,495	
** 21			432	48			1,135		432	
15			5,278	170			890		19,089	
Totals (19)			100,938	3517			996 (avg)		1,368,847	

Remarks: \*\* Injection commenced in the following new wells on July 23, 1959:

Resler Yates St. 304  
Ventures St. 305  
Welch Duke St. 2i

GRAND OIL CORPORATION

IREX BUILDING

POST OFFICE BOX 752

BRECKENRIDGE, TEXAS

OCT 3 1959  
AM 10:30

State Engineer Office  
Capitol Building  
Santa Fe, New Mexico

ATTENTION: Mr. Frank Irby

Dear Mr. Irby:

Copies of the attached Application for Administrative Approval to convert three wells to water injection wells in Artesia Pilot Flood No. 2 in Eddy County, New Mexico were sent to the Oil Conservation Commission earlier this month. We delayed sending your copy to you pending decision on well completion methods to be used on the two new wells, McNutt State Nos. 11 and 12.

We plan to set and cement surface pipe in the two new wells at some depth which will comply with Oil Conservation Commission rules and which will, in our estimate, protect and shut off the fresh water sands. This depth will not necessarily be as deep as the approximately 685' which the State Engineer Office believes to be necessary. However, to insure the protection of the fresh water, we plan to run and cement 4½" OD casing through the First Grayburg at approximately 1950' then run tubing and packer inside the 4½" casing. The packer is to be set at a depth below the top of the cement outside the 4½" casing or to an approximate depth of 1900'.

In the old well, Resler Yates State No. 24, the driller's log does not indicate any fresh water sands and reports salt rock from 420' to 507' and salt from 507' to 575'. The surface pipe is 8½" set to 870' with the amount of cement not indicated.

To complete the well for water injection, we will run 4½" OD casing and set and cement at approximate 2165' which is

October 3, 1959

the top of the First Grayburg. We will then run tubing and packer and set the packer below the top of the cement outside the 4½" casing or to a depth of approximately 2150'.

We believe that this method of completing these injection wells meets the requirements which were set out in our telephone conversations. If this is not the full amount of information required, please notify us.

Yours very truly,

GRARIDGE CORPORATION

B. G. Harrison  
Manager of Secondary Recovery

BGH:gl

Attachment

cc: ✓ Oil Conservation Commission, Santa Fe  
Oil Conservation Commission, Artesia

Mr. Cliff Chapman  
Graham



STATE OF NEW MEXICO

STATE ENGINEER OFFICE

SANTA FE

October 8, 1959

ADDRESS CORRESPONDENCE TO:  
P. O. BOX 1079  
SANTA FE, N. M.

S. E. REYNOLDS  
STATE ENGINEER

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

Dear Mr. Porter:

Reference is made to the application of Graridge Corporation to convert three wells to water injection wells in the Artesia Flood No. 2, Eddy County, New Mexico.

The wells involved are Resler Yates State No. 24, McNutt State No. 12 and McNutt State No. 11. I have examined the application with your engineer Mr. Jim Katina and have reached the conclusion that the casing program combined with the proposed plan of injection should provide adequate protection for the fresh waters which may be encountered below the earth's surface. Therefore, this office offers no objection to the granting of this application.

Yours truly,

S. E. Reynolds  
State Engineer

By:

*Frank E. Irby*  
Frank E. Irby

Chief  
Water Rights Division

FEI/ma  
cc-Graridge Corporation  
F. H. Hennighausen