

GRARIDGE CORPORATION

IBEX BUILDING

POST OFFICE BOX 752

BRECKENRIDGE, TEXAS

November 1, 1960

WEX - 63

Artesia Flood  
No. 2, Eddy Co.

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

Re: Application for Administrative  
Approval to Convert One Well  
To Water Injection Well in  
Artesia Flood No. 2, Eddy  
County, New Mexico

Gentlemen:

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

<u>LEASE</u>	<u>WELL NO.</u>	<u>LOCATION</u>
Resler Yates State	31	Unit Letter F, S21, T18S, R28E

The following data pertinent to the proposed expansion are given.

(1) The proposed injection well is 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. 1 indicates all offset operators and injection wells in Artesia Flood No. 2. A copy of this application and a waiver form is being sent to Mr. Leonard Nichols and Western Yates Company as they are the offset operators to the proposed expansion. These waivers will be forwarded to you as soon as they are received.

(3) 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 on injection as early as responses warrant in order to maintain a flood balance.

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

Oil Conservation Commission  
November 1, 1960  
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The subject well has been completed in the following manner:

The hole was cleaned out to a TD of 2170', logged and plugged back to 2110' with hydromite. 4-1/2" 9.5# casing was set at 2068' and cemented with 100 sacks. The cement was drilled and the hole was cleaned out to 2110'. Before placing the well on injection, a string of 2-3/8" cement lined tubing will be run with a tension type packer set at a depth well below the cement outside the 4-1/2 casing, with injection down the tubing into the First Grayburg.

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

BGH/vl  
attachments (4)

cc: Oil Conservation Commission, Artesia  
Mr. Frank Irby  
Graham Office

NEW MEXICO OIL CONSERVATION COMMISSION

GAS-OIL RATIO REPORT

OPERATOR Graridge Corporation POOL Artesia  
ADDRESS Box 752, Breckenridge, Texas MONTH OF October, 1960  
SCHEDULED TEST X 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	
<u>BEFORE WATER FLOOD RESPONSE</u>										
McNutt State	7	8-29	Pump	---	24	20	2	3	TSTM	---
<u>AFTER WATER FLOOD RESPONSE</u>										
McNutt State	7	10-24	Pump	---	24	20	1	7	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.

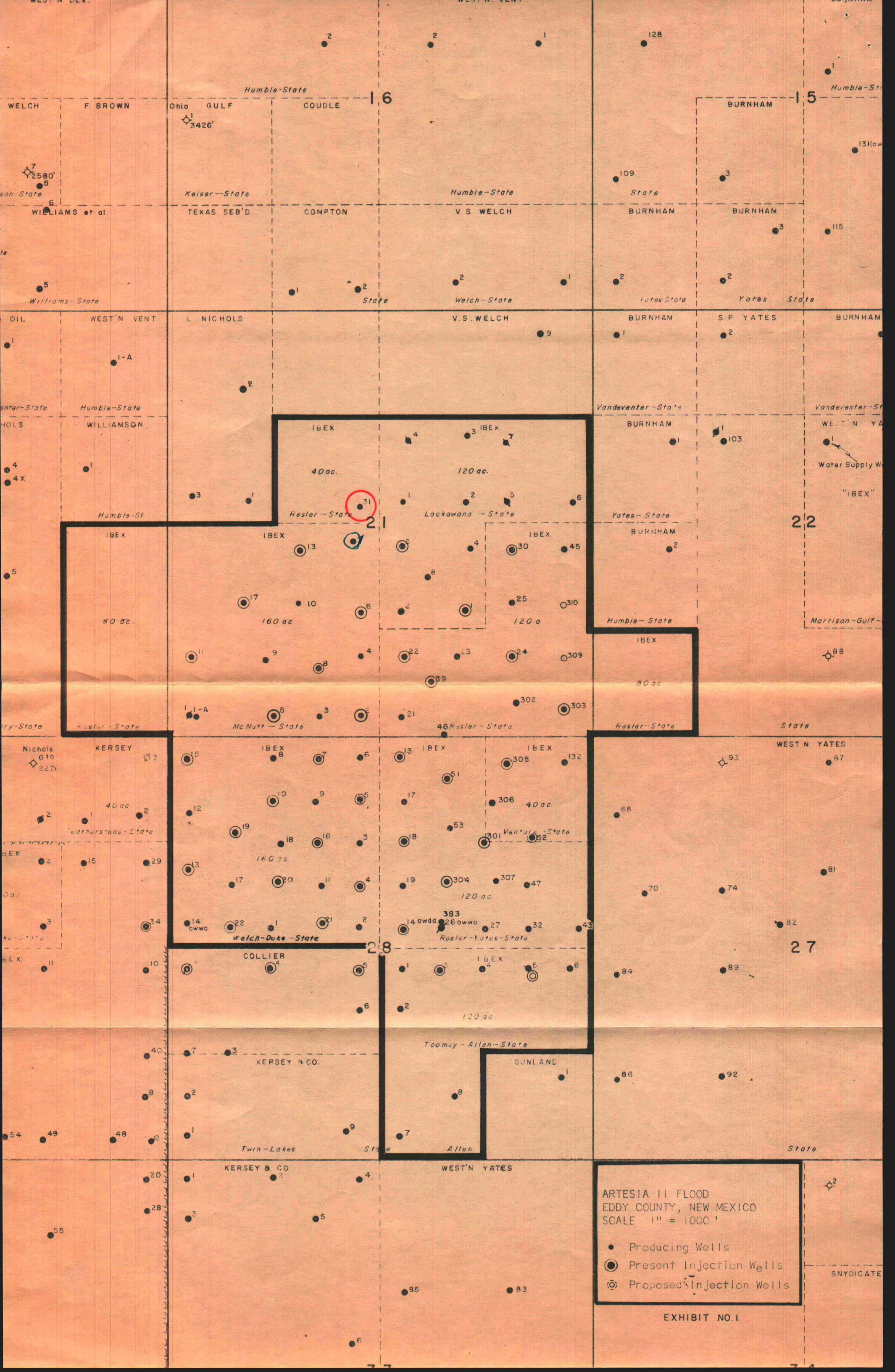
(I certify that the information given is true and complete to the best of my knowledge.)

Date November 1, 1960

Graridge Corporation

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





ARTESIA II FLOOD  
EDDY COUNTY, NEW MEXICO  
SCALE 1" = 1000'

- Producing Wells
- Present Injection Wells
- ⊗ Proposed Injection Wells

EXHIBIT NO. 1



## GRARIDGE CORPORATION

## MONTHLY WATER FLOOD REPORT

Page 11.

## Injection Well Data

Project: Artesia Flood #2Month: September, 1960

Lease & Well No.	Total Water Input		Injection Pressure	Cumulative Input
	Month	Avg./Day		
Toomey Allen 3	3,205	110*	970	15,523
Lackawanna "A" 1	4,410	142	970	38,909
3	4,225	141	960	48,969
McNutt State 2	5,702	190	980	253,081
5	4,963	165	980	76,130
6	3,305	118**	985	108,064
8	5,351	214***	930	165,859
11	4,311	144	985	51,365
13	1,815	61	980	23,984
17	6,762	226	985	52,980
Restler Yates State 13	3,809	127	990	201,222
14	1,355	45	990	17,707
18	3,494	117	990	216,811
22	4,084	136	985	127,094
24	2,153	72	995	39,817
30	4,007	143**	950	5,550
39	3,351	112	985	63,622
51	4,420	147	990	165,586
301	2,420	86**	1000	76,736
303	3,446	115	995	16,904

\*- 29 days

\*\*-28 days

\*\*\*- 25 days

## GRARIDGE CORPORATION

## MONTHLY WATER FLOOD REPORT

Page 11.

(2)

## Injection Well Data

Project: Artesia Flood #2Month: September, 1960

Lease & Well No.	Total Water Input		Injection Pressure	Cumulative Input
	Month	Avg./Day		
Resler Yates State 304	4,921	164	990	50,146
Ventures St. 52	5,365	179	980	45,812
305	11	1*	990	49,260
Welch Duke State 4	2,639	88	980	104,732
5	5,317	197**	980	241,509
7	5,886	196	955	280,200
10	549	69*	1030	121,624
13	3,613	120	980	38,528
15	4,133	153**	950	85,202
16	6,126	204	825	114,970
19	4,217	141	980	53,983
20	5,022	167	980	61,306
21	725	362***	980	50,373
22	7,695	257	960	51,141
Total (34)	132,807	4,909	975 (avg)	3,114,699

\* - 8 days  
 \*\* - 27 days  
 \*\*\* - 2 days



K&E

10 YEARS BY MONTHS  
X 3 CYCLES  
KEUFFEL & ESSER CO.

359-205L  
MADE IN U.S.A.



INJECTION PRESSURE, PSIG.

WATER INJECTION, BBLS/DAY  
AVG. WATER PROD. BBLS/DAY

OIL PRODUCTION, BBLS/MO.



COOL COUNTY, NEW MEXICO  
PERFORMANCE CURVES

# GRARIDGE CORPORATION

IBEX BUILDING

POST OFFICE BOX 752

BRECKENRIDGE, TEXAS

Date Received NOV 4 1960

ROUTE TO		ROUTE TO	
	DATE CHECKED		DATE CHECKED
LC		RL	
CL		CRA	
WAF		WJL	
TFD		BCE	
WFB		VSW	
BGH		JWC	
Mail To:		FILE:	
Graham		Velma	

November 1, 1960

1960 NOV 13 AM

Mr. Leonard Nichols  
Mercantile Securities  
Dallas, Texas

Dear Sir:

It is the desire of Graridge Corporation to expand the water injection program in the Artesia No. 2 Flood in Eddy County, New Mexico. The expansion is to include the following well.

<u>Lease</u>	<u>Well No.</u>	<u>Location</u>
Rosler Yates State	31	Unit Letter F, S21, T18S, R28E

A fifteen day waiting period is set up by the Commission unless waivers are obtained from all offset operators.

In order to expedite matters, please sign and return one copy of this letter to this office if you have no objection to the proposed expansion.

Yours very truly,

GRARIDGE CORPORATION

*B. G. Harrison*

B. G. Harrison  
Manager of Secondary Recovery

SIGNED BY: *Leonard Nichols*

FOR: \_\_\_\_\_

SHL/BGH:vl

cc: Graham Office





STATE OF NEW MEXICO

STATE ENGINEER OFFICE

SANTA FE

S. E. REYNOLDS  
STATE ENGINEER

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

November 4, 1960

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

Dear Mr. Porter:

Reference is made to the application of the Graridge Corporation dated November 1, 1960 which seeks administrative approval to convert one well to water injection well in Artesia Flood No. 2. The specific well is designated as Resler Yates State, Well No. 31, Unit Letter F, Section 21, Township 18 South, Range 28 East.

In view of the statement that injection will be through 2 3/8" cement lined tubing with tension type packer set at a depth well below the cement outside the 4 1/2" casing, with injection down the tubing, it appears there will be no threat of contamination to the fresh waters which may exist in the area. Therefore, this office offers no objection to the granting of this application.

Very truly yours,

S. E. Reynolds  
State Engineer

By:

*Frank E. Irby*  
Frank E. Irby  
Chief

Water Rights Division

ma  
cc-Graridge Corp.  
F. H. Hennighausen