

GRARIDGE CORPORATION

IBEX BUILDING

POST OFFICE BOX 752

BRECKENRIDGE, TEXAS

101123

PM 1 34

January 31, 1961

WFX - 76

Trinity Project

New Date Feb 17

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>
Lackawanna State	4	Unit Letter G, 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, Western Yates Company and V. S. Welch 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 water-flood project.

Oil Conservation Commission
January 31, 1961
Page 2

The subject well will be completed in the following manner:

The hole will be cleaned out to a total depth of 2404' and logged. 4½" 9.5# casing will be set at 2400' and cemented with 100 sacks. The casing will be perforated opposite the First Grayburg Formation. 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 top outside the 4½" casing. Water injection will be down the 2-3/8" tubing through casing perforations into the First Grayburg.

The hole presently has 10" set at 314', 8" set at 685' and 6-5/8" set at 2119'. Our records are incomplete; therefore, we are unable to determine if cement was used on any of the casing settings.

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.....January....., 1961
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 WATERFLOOD RESPONSE</u>										
Lackawanna State	1	10/11/60	Pump	--	24	3	0	2.2	TSTM	TSTM
<u>AFTER WATERFLOOD RESPONSE</u>										
Lackawanna State	1	1-10-61	Pump .	--	24	10	0	11	TSTM	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.....January 31, 1961.....

GRARIDGE CORPORATION
By.....*S. H. Lindley, Jr.*.....
S. H. Lindley, Jr.
Engineer
Title

GRARIDGE CORPORATION

MONTHLY WATER FLOOD REPORT

Page 11.

Injection Well Data

(2)

Project: Artesia Flood No. 2

Month: December, 1960

Lease & Well No.	Total Water Input		Injection Pressure	Cumulative Input
	Month	Avg./Day		
Resler Yates State 301	5,656	185*****	1060	92,384
303	2,921	94	1055	26,296
304	5,885	190	1060	67,738
Ventures St. 52	5,809	126***	1055	59,400
305	5,910	204****	1020	55,181
Welch Duke State 4	2,828	91	1030	114,462
5	6,077	196	1000	260,634
7	5,418	175	980	298,875
10	6,881	222	1055	137,456
13	4,459	154****	1040	51,772
15	6,193	200	1000	101,673
16	5,077	188***	920	131,955
19	3,877	129*****	1055	65,859
20	6,896	222	1050	80,307
21	4,773	154	1000	66,652
22	7,049	228	920	73,288
Totals (36)	166,337	5,730	1014 (avg)	3,603,275

GR AR I D G E C O R P O R A T I O N

MONTHLY WATER FLOOD REPORT

Page 11.

Injection Well Data

Project: Artesia Flood No. 2

Month: December, 1960

Lease & Well No.	Total Water Input		Injection Pressure	Cumulative Input
	Month	Avg./Day		
Toomey Allen 3	3,942	127	1055	28,818
Lackawanna State 2	5,644	182	820	12,871
Lackawanna State "A" 1	3,671	118	1040	50,940
3	4,799	155	1050	63,712
McNutt State 2	5,068	175****	1070	270,677
5	3,928	136****	1055	90,028
6	2,710	87	1045	117,140
8	6,588	213	1055	185,509
11	5,352	173	1050	70,343
13	1,861	60	1050	30,104
17	6,808	220	1055	75,281
Resler Yates State 13	3,720	120	1070	212,616
14	4,183	144*****	1045	26,308
18	2,607	90*****	1060	226,473
22	3,748	129	1060	138,881
24	1,456	58**	1050	45,721
30	1,853	60	1040	12,977
31	3,932	357*	980	3,932
39	3,729	120	1065	74,572
51	7,429	248*****	565	181,443

* Based on 11 Days

** Based on 25 Days

*** Based on 27 Days

**** Based on 29 Days

***** Based on 30 Days

EXHIBIT 2

K&E

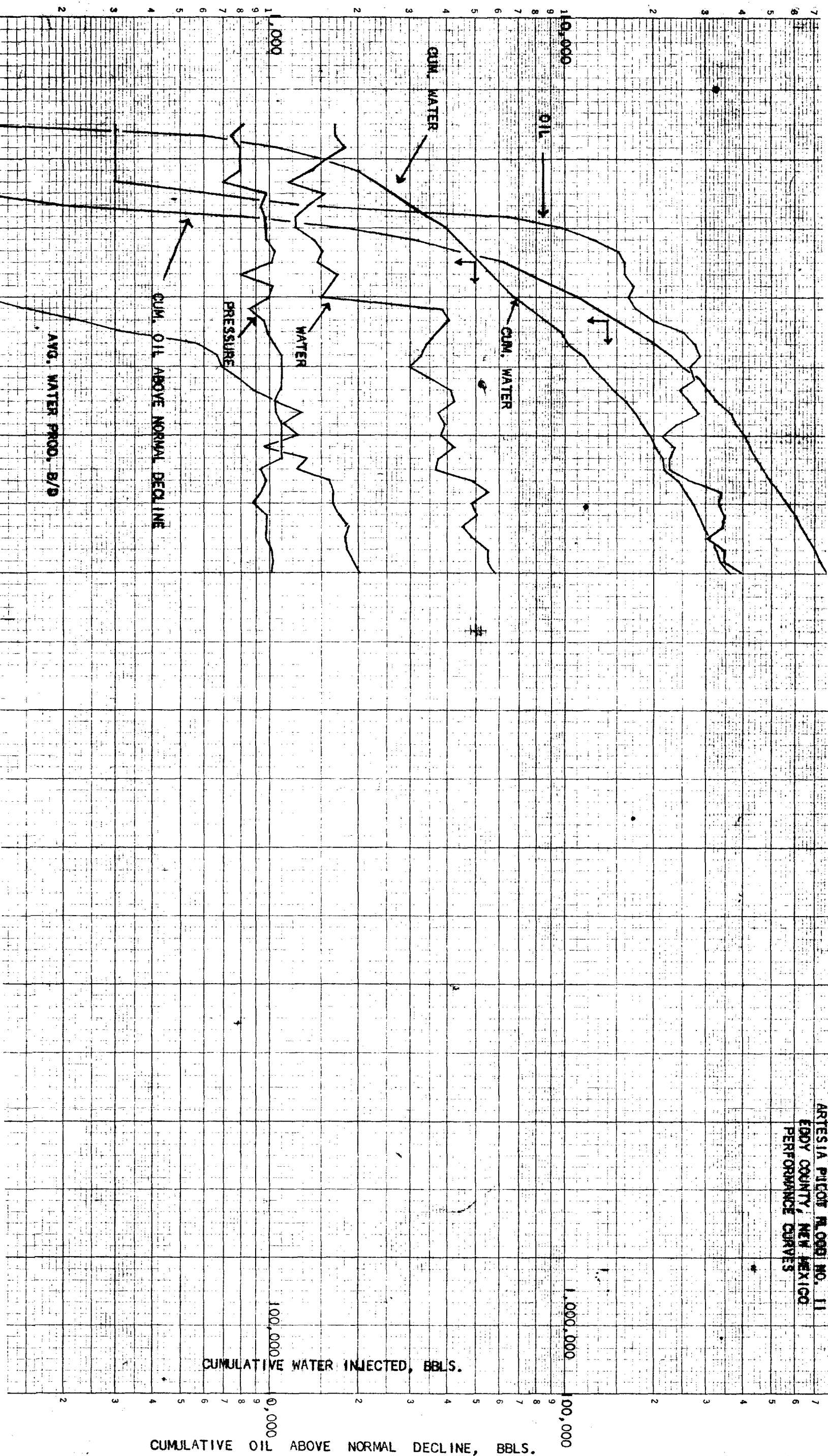
10 YEARS BY MONTHS
X 3 CYCLES
KEUFFEL & ESSER CO.

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

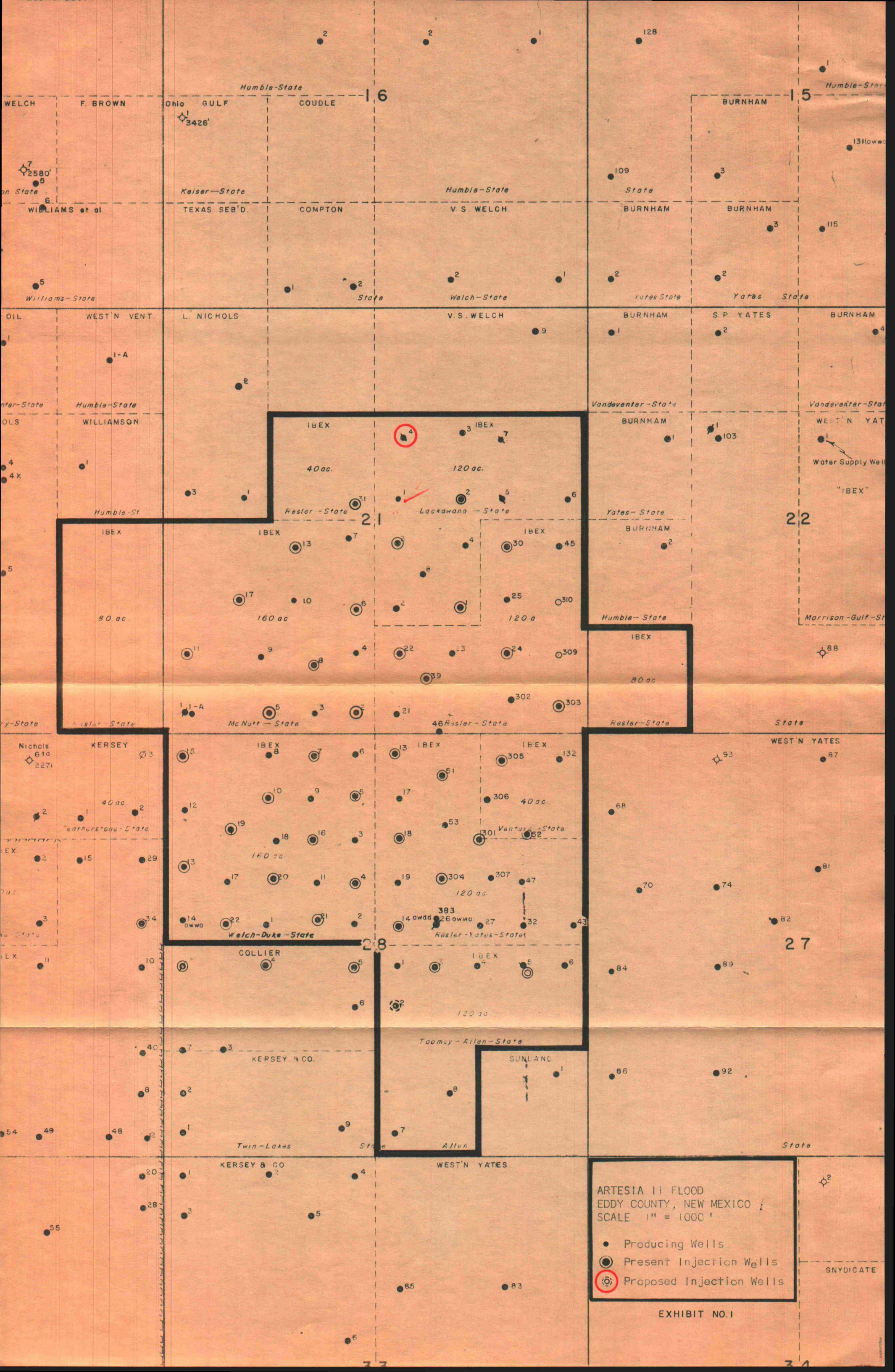
INJECTION PRESSURE, PSIG.

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

OIL PRODUCTION, BBLS/MO.



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



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

- Producing Wells
- Present Injection Wells
- ⊙ Proposed Injection Wells

EXHIBIT NO.1

GRARIDGE CORPORATION

18EX BUILDING

POST OFFICE BOX 752

BRECKENRIDGE, TEXAS

January 31, 1961

Western Yates, Inc.
P. O. Box 427
Artesia, New Mexico

Gentlemen:

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>
Lackawanna State	4	Unit Letter G, 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 object on to the proposed expansion.

Yours very truly,

GRARIDGE CORPORATION

B. G. Harrison
Manager of Secondary Recovery

SIGNED BY M. E. Spitzer
Chairman of Operating Committee
FOR WESTERN-YATES
2-24-61

SHL/BGH:vl

cc: Graham Office

Date Received FEB 27 1961			
ROUTE TO		ROUTE TO	
	DATE CHECKED		DATE CHECKED
LC		LC	
OHR		CRA	
TAF		BOB	
FFD		WFB	
WFB		JWC	
BGH ✓			
Mail To:		FILE:	
Graham		WK	

GRARIDGE CORPORATION

IBEX BUILDING

POST OFFICE BOX 752

BRECKENRIDGE, TEXAS

January 31, 1961

Mr. V. S. Welch
Booker Building
Artesia, New Mexico

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.

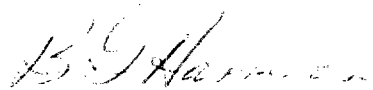
<u>Lease</u>	<u>Well No.</u>	<u>Location</u>
Lackawanna State	4	Unit Letter G, S21, T18S, R28E

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
Manager of Secondary Recovery

SIGNED BY 

FOR _____

SHL/BGH:VI

cc: Graham Office



STATE OF NEW MEXICO

STATE ENGINEER OFFICE

SANTA FE

February 2, 1961

S. E. REYNOLDS
STATE ENGINEER

ADDRESS CORRESPONDENCE TO:

P. O. BOX 1079
SANTA FE, N. M.

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

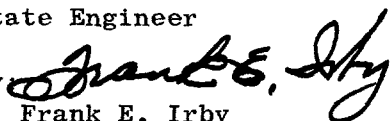
Dear Mr. Porter:

Reference is made to the application of the Graridge Corporation dated January 31, 1961, which seeks administrative approval to convert one well, Lackawanna State, No. 4, Unit Letter G, Section 21, T. 18 South, Range 28 East in Artesia Flood No. 2, Eddy County, New Mexico, to water injection well.

In view of the statement that injection will be through 2 3/8" cement lined tubing with a tension type packer, set at a depth well below the top of the cement outside the 4 1/2" casing, with injection down the tubing, it appears that 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.

Yours truly,

S. E. Reynolds
State Engineer

By 
Frank E. Irby
Chief
Water Rights Division

ma
cc-Graridge Corp.
F. H. Hennighausen