#### GRARIDGE CORPORATION IBEX BUILDING POST OFFICE BOX 752 BRECKENRIDGE, TEXAS

We are have by March 7, 1960

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 request administrative approval to convert the following well to a water injection well.

LEASE AND WELL NO.LOCATIONResler Yates State No. 303SE/4, SE/4, Sec. 21, T 18S, R 28E

The following data pertinent to the proposed expansion are given.

(1) The proposed injection well is directly offset by a producer 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 Western Yates as they are the offset operator to the proposed expansion. This signed waiver will be forwarded to you as soon as it is received.

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

## <u>GRARIDGE</u> <u>CORPORATION</u>

## MONTHLY WATER FLOOD REPORT

#### Injection Well Data

Project: Artesia Flood No. 2

Month: January, 1960

	1	Total W	later input	Injection				
Lease & Well N	No.	Month	Avg. /Day	Pressure	Cumulative input			
.ackawanna St.	I-A	3,171	102	1,010	8,155			
••••••••••••••••••••••••••••••••••••••	3-A	5,473	176	880	13,675			
McNutt State	2	9,062	292	1,180	207,676			
••••========================	5	2,866	92	530	48,488			
	6	3,338	108	855	80,801			
	8	9,965	322	970	125,102			
;; ;;	11	3,636	117	900	12,003			
پر <u>است میں ایک اور ایک اور ایک اور ایک ایک ایک ایک ایک ایک ایک ایک ایک ایک</u>	17	4,224	136	1,000	7,841			
Resler Yates	13	3,556	115	1,160	169,463			
	18	5,346	172	1,150	188,174			
	22	5,708	184	1,105	96,043			
	24	5,771	186	965	14,752			
	39	1,796	60	1,100	40,767			
	51	3,067	114	1,150	138,614			
3(	01	3,529	114	915	37 <b>, 3</b> 78			
30	04	3,088	100	1,010	20,973			
/entures St.	52	5,367	173	1,000	<b>12,59</b> 8			
3(	05	3,941	127	1,050	32,319			
leich Duke St.	4	4,606	154	1,100	76,157			
	5	7,479	241	1,100	197,687			

Exhibit II

#### Page 11.

# GRARIDGE CORPORATION

## MONTHLY WATER FLOOD REPORT

#### Injection Well Data

Project: Artesia Flood No. 2

Month: January, 1960

		Total W	later Input	Injection					
Lease & Well No.		Month	Avg. /Day	Pressure	Cumulative input				
lch Duke	<u>St. 7</u>	7,218	233	9 <b>7</b> 0	231,899				
	10	4,931	197	945	104,681				
*	13	4,452	144	905	5,872				
	15	3,235	115	885	44,288				
	16	3,520	114	470	73, 744				
	19	3,082	110	930	23, 389				
	20	3,323	111	790	25,575				
	21	2,504	83	855	31,485				
	21	4,328	206	800	4,328				
		·			·				
Totals	(29)	131,582	4,398	. 954(avg)	2,073,927				
					,				

Page 11. (2)

Oil Conservation Commission

early as responses warrant in order to maintain a balance.

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

The subject well has been completed in the following manner.

Resler Yates State No. 303 was drilled to a total depth of 2212'. The 7" OD 23# J-55 casing was set at 582' and cemented with 200 sacks. Four and one-half inch 9.5# J-55 casing was set at 2203' and cemented with 150 sacks. The first Grayburg sand will be perforated at approximately 2156 to 2180'. 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 top of the cement outside the  $4\frac{1}{2}$ " casing, approximately 2150'. Water will be injected down the tubing.

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

Yours very truly,

GRARIDGE CORPORATION

A. G. Harrison Manager of Secondary Recovery

SHL:BGH:gl

cc: Oil Conservation Commission, Artesia State Engineers Office Graham Office Mr. Cliff Chapman Mr. Paul Darnell

Attachments



IO YEARS BY MONTHS 359-205L X 3 CYCLES KEUFFEL & ESSER CO. MADE IN U.S.A.



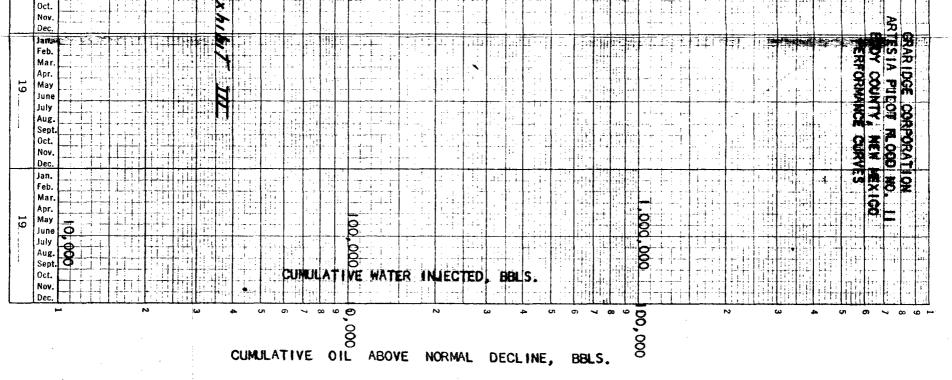
INJECTION PRESSURE, PSIG.

1

WATER INJECTION, BBLS/DAY

### OIL PRODUCTION, BBLS/MO.

	Jan. Feb. Mar. Apr.						6 7		4 Q							<b>5</b>	6 \	<b>1 00</b>					2			5	6 7	00	
19 21	May June July Aug. Sept. Oct. Nov.									-				A. WATER	- 1	· · · · · · · · · · · · · · · · · · ·													
19_	Jan. Feb. Mar. Apr. May June July								7							2 3 3 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4													
8	Aug. Sept. Oct. Nov. Dec.				/			×			>				14														
19	Jan. Feb. Mar. Apr. May June				CUM. OIL			PRESSURE	R	WATER					>	-	CON.					//.	//	Σ					
60	July Aug. Sept. Oct. Nov. Dec.				ABOVE NORMAL				· · · · · · ·				····		$\left\{ \right.$		WATER												
19 00	Jan. Feb. Mar. Apr. May June July Aug.				MAL DECLINE				*										1										
	Sept. Oct. Nov. Dec. Jan.							· · · · · · · · · · · · · · · · · · ·	7				· · · · · · · · · · · · · · · · · · ·		· · · · · · · · · · · · · · · · · · ·							· · · · · · · · · · · · · · · · · · ·		· · · · · · · · · · · · · · · · · · ·			· · · - · · · · · · · · · · · · · · · ·		
19	Feb. Mar. Apr. May June July							•	· · · · · · · · · · · · · · · · · · · ·			· · · · ·				•					1 1 1								
	Aug. Sept. Oct. Nov. Dec.										· · · · · ·																		
19	Feb. Mar. Apr. May June								· · · · · · · · · · · · · · · · · · ·											· · · · · · · · · · · · · · · · · · ·	۵ ــــد ۱۰۰۰ ۲۰۰۰ ۱۰۰۰ ۲۰۰۰ ۱۰۰۰ ۲۰۰۰ ۱۰۰۰ ۲۰۰۰								
	July Aug. Sept. Oct. Nov. Dec.							· · · · · · · · · · · · · · · · · · ·								- -						•							
19	Jan. Feb. Mar. Apr. May June										· · · · · · · · · · · · · · · · · · ·					<u>.</u>					· · · ·								
	July Aug. Sept. Oct. Nov. Dec.		· · · · · · · · · · · · · · · · · · ·										· · · · · · · · · · · · · · · · · · ·																
19	Jan. Feb. Mar. Apr. May June							-								· · · ·						· · · · · · · · · · · · · · · · · · ·							
	July Aug. Sept. Oct.			ħ		L						1												· · · · · · · · · · · · · · · · · · ·					



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#### NEW MEXICO OIL CONSERVATION COMMISSION

#### GAS-OIL RATIO REPORT

OPERATOR	Graridge	e Corporat	ion	POOL	Artesia					
	Box 752	Brockenri	dge, Texas	NONTHO	-	March	10 60			
							2			
SCHEDULED	TEST	X	COMPLETION TEST	·····	SPECIAL	TEST	(Check One)			
(See Instructions on Reverse Side)										

					Choke	Test	Daily	Produ	GOR		
e.	Lease	Well No.	Date of Test	Producing Method	Size	Hours	Allowable Bbls.	Water Bbls.	Oil Bbls.	Gas MCF	Cu. Ft. Per Bbl.
	BEFORE WATE	RFLOOD	RESPO	<u>ISE</u>							
sler	Yates <b>S</b> t.	302	9-2	Pump		24	ł	0	1/2	т <b>ѕ</b> тм	TSTM
	AFTER WATER	FLOOD	RESPON	<u>E</u>							
sler	Yates St.	302	1-25	Pump		24	6	0	14	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	March	7,	1960	
Date				

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



#### STATE OF NEW MEXICO

#### STATE ENGINEER OFFICE SANTA FE

S. E. REYNOLDS STATE ENGINEER

March 11, 1960

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

Mr. A. L. Porter, Jr. Secretary-Director Oil Conservation Commission Santa Fe, N. M.

Dear Mr. Porter:

Reference is made to **Gra**ridge Corporation's application for approval to convert one well to water injection well in Artesia Flood No. 2, Eddy County, New Mexico which is dated March 7, 1960.

Having reviewed the manner in which the subject well has been completed and taking into account the statement that injection will be through  $2 \ 3/8$ " cement-lined tubing, I have reached the conclusion that the use of this well as an injection well will not constitute a threat to the quality of fresh waters which may be encountered 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. Irbv

Chief Water Rights Division

FEI/ma cc-B. G. Harrison F. H.Hennighausen

#### GRARIDGE CORPORATION IBEX BUILDING POST OFFICE BOX 752 BRECKENRIDGE, TEXAS

March 15, 1960

Oil Conservation Commission State Capitol Building P. 0. Box 871 Santa Fe, New Mexico

Gentlemen:

Attached is a signed waiver from Western-Yates indicating they, as an offset operator, have no objection to the expansion of Artesia Flood No. 2 in Eddy County by conversion of Resler Yates State Well No. 303, Section 21, T18S, R28E, to a water injection well.

Your cooperation in expediting this application will be appreciated.

Yours very truly,

GRARIDGE CORPORATION

S. H. Lindley, Jr.

Engineer

SHL:gl

Attachment

cc: Graham Office

## GRARIDGE CORPORATION

IBEX BUILDING POST OFFICE BOX 752 BRECKENRIDGE, TEXAS

March 7, 1960

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

Dear Sirs:

It is the desire of Granidge 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.

LEASE AND WELL NO. LOCATION

Resier Yates State No. 303

SE/4, SE/4, Sec. 21, T 185, R 28E

A fitteen-day waiting period is set up by the Commission unless waivers are obtained from all offset operators offsetting the proposed expansion.

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

226-5-

8. G. Marrison Manager of Secondary Recovery

Signed by M.E. Spitle For\_Western - Yates

SHL:BOH:gl

# LARGE FORMAT EXHIBIT HAS BEEN REMOVED AND IS LOCATED IN THE NEXT FILE