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September 9, 1960

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

> Re: Application of 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 respectively requests adminstrative approval to convert the following well to a water injection well.

LEASE	WELL NO.	LOCATION
Lackawanna State	2	Unit G, Section 21, T18S, R28E

The following data pertinent to the proposed expansion are qiven.

- (I) 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. I 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 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 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.

The subject well will be completed in the following manner after approval of our C-102 Form from the Commission.

The well now has 314' of 10" casing and 894' of 8-1/4" casing in it. We will clean out to a depth of 2169', run an electric log, run 4-1/2" casing to approximately 2100' and cement with 150 sacks of cement. Before placing the well on injection, a string of 2-3/8" cement lined tubing will be run with a tension packer set at a depth well below the cement outside the 4-1/2" casing. Injection will be down the tubing into open hole 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

SHL/BGH: VI

Attachments

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

NEW MEXICO OIL CONSERVATION COMMISSION

GAS-OIL RATIO REPORT

	OPERATORGr	aridge	aridge Corporation			POOL					
	ADDRESSBo								er		, 19
	SCHEDULED TEST				TION TEST			SPECIAL	TEST	X	(Check One)
	Lease	Well No.	Date of Test	Producing Method	Choke Size	Test Hours	Daily Allowable Bbls.	Produ Water Bbls.	Oil Bbls,	ring Test Gas MCF	GOR Cu. Ft. Per Bbl.
_ack	BEFORE WATERF	LDOD R 4-A		Pump		24	2	0	2	TSTM	TSTM
Laci	AFTER WATERFL kawanna State	OOD RE	SPONSE 9-2	Pump		24	2	0	9	TSTM	TSTM

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

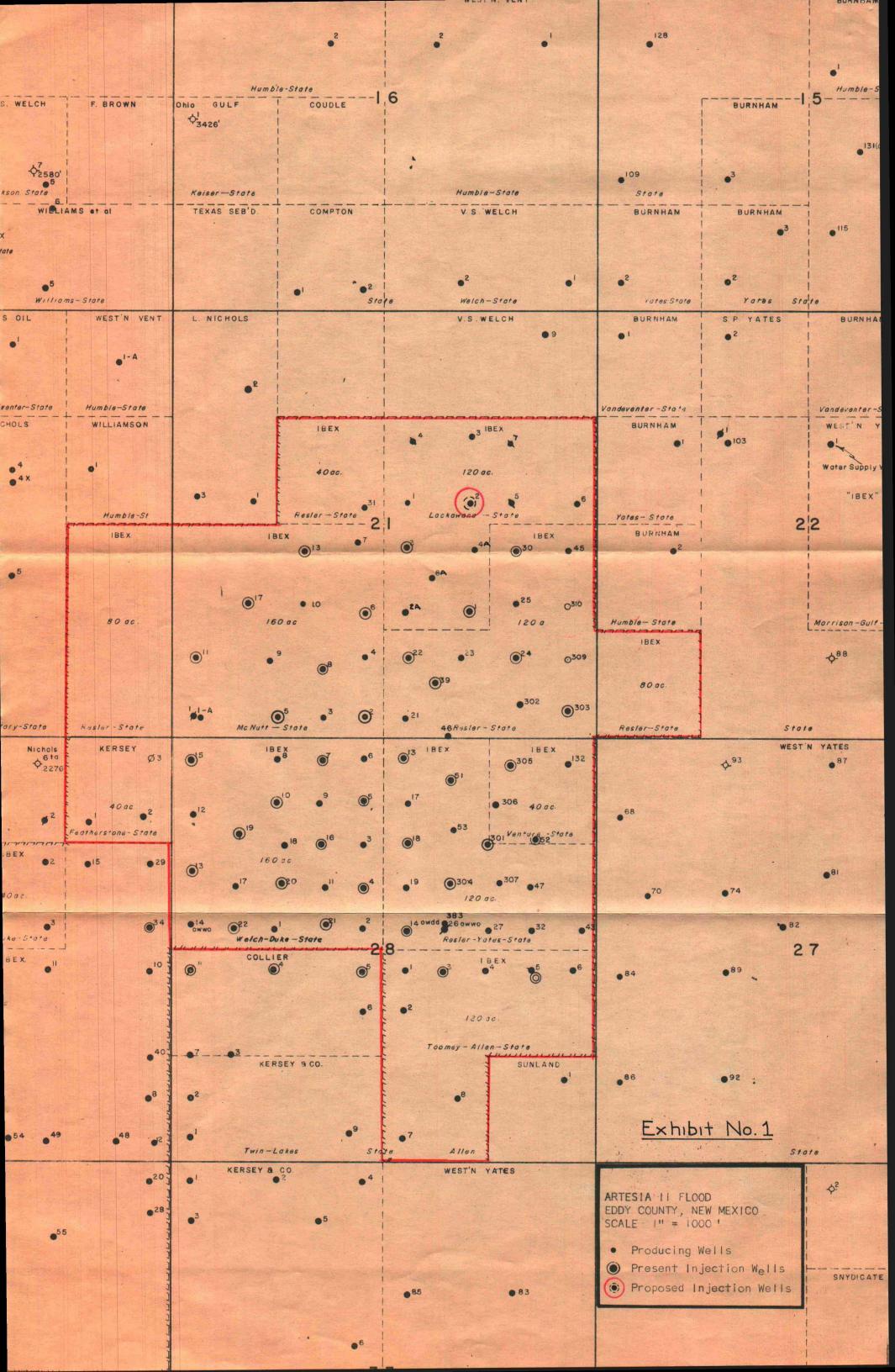
During gas-oil ratio test, each well shall be produced at a rate not exceeding the top unit allowable for the pool in which well is located by more than 25 percent. Operator is encouraged to take advantage of this 25 percent tolerance in order that well can be assigned increased allowables when authorized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

DateSeptember 12, 1960	Graridge Corporation
	By A. A. Landle
	S. H. Lindley, dr. Engineer
	Title



$\underline{G\ R\ A\ R\ L\ D\ G\ E}\qquad \underline{C\ O\ R\ P\ O\ R\ A\ T\ L\ O\ N}$

MONTHLY WATER FLOOD REPORT

Page II.

Injection Well Data

Project: Artesia Flood No. 2 Month: August, 1960

		Total W	later Input	Injection		
<u>Lease & Well N</u>	10.	Month	Avg./Day	Pressure	Cumulative Input	
Toomey Allen	3	3,596	116	1000	12,318	
Lackawanna	ļ	5,063	163	950	34,499	
State "A"	3	4,099	132	995	44,744	
McNutt	2	6,492	210	995	247,379	
	5	4,613	149	980	71,167	
	6	2,848	98	990	104,759	
	8	4,651	155	980	160,508	
	11	4,552	147	990	47,054	
	13	1,960	63	1000	22,169	
	17	5,236	175	995	46,218	
Resler Yates State	13	4,019	130	995	197,413	
	14	1,526	49	1000	16,352	
	18	3,444	111	1000	213,317	
	22	1,277	44	995	123,010	
	24	2,313	75	995	37,664	
* 30	30	1,543	221	770	1,543	
	39	2,858	92	995	60,271	
	51	4,287	139	995	161,166	
2	30 I	2,463	79	1000	74,316	
2	303	3,608	116	995	13,458	

GRARIDGE CORPORATION

MONTHLY WATER FLOOD REPORT

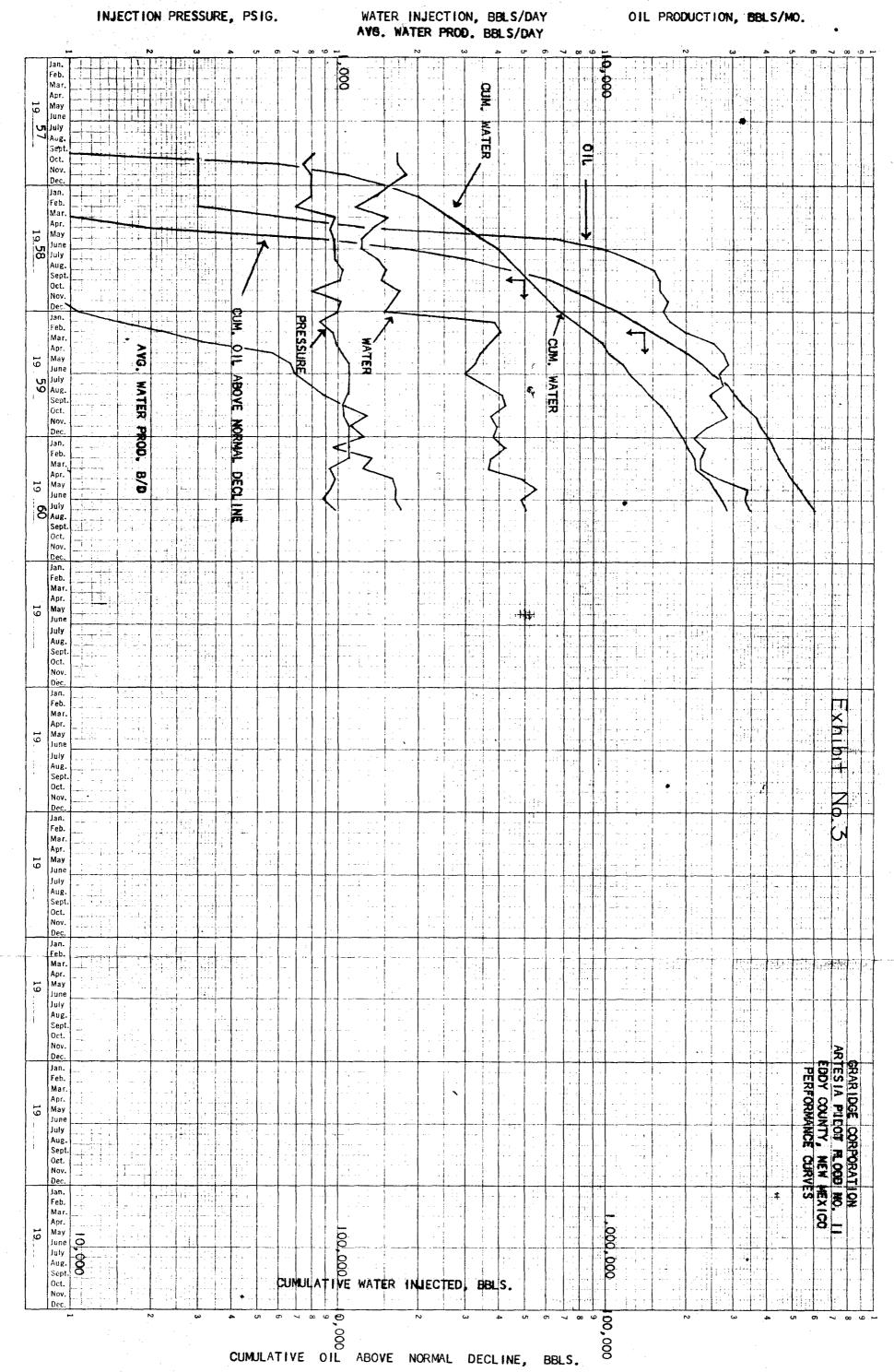
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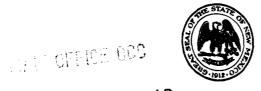
Injection Well Data

, 1960
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_ease & Well No.	Total Water Input Month Avg./Day		injection Pressure	Cumulative Input	
Resler Yates	MOTI II	AVG.7DGY	11033010		
State 304	4,085	132	990	45,225	
Ventures State 52	5,420	175	1005	40,447	
305	317	10	990	49,249	
Welch Duke State 4	2,461	. 79	980	102,093	
5	5,518	178	965	236,192	
7	6,657	215	950	274,314	
10	5,127	171	930	121,075	
13	3,508	113	975	34,915	
15	6,510	210	990	81,069	
16	6,566	212	850	108,844	
19	3,841	124	995	49,766	
20	5,885	190	955	56,284	
21	386	13	990	49,648	
22	7,651	247	950	43,446	
TOTALS (34)	134,380	4,533	975 (avg)	2,981,892	
* Resler Yates Sta	te #30 put on	Injection Augu	ust 24, 1960		







WASEP ISTATE OF NEW MEXICO

STATE ENGINEER OFFICE SANTA FE

S.E. REYNOLDS STATE ENGINEER

September 21, 1960

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 September 9, 1960 which seeks administrative approval to convert one well to water injection well in Artesia Flood No. 2. The specific well is designated as Lackawanna State No. 2, Unit G, 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 packer set at a depth well below the top of cement outside the $4\frac{1}{2}$ " casing, 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

Frank E. Irby

Chief

Water Rights Division

FEI/ma

cc-F. H. Hennighausen Gradige Corp.