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January 27, 1969

Adm-305

New Mexico Oil Conservation Commission
Box #2088
Santa Fe, New Mexico 87501

Attention: Mr. A. L. Porter, Jr., Secretary-Director

Dear Sir:

Order No. R-3257 approved by the New Mexico Oil Conservation Commission on June 8, 1967, authorized Windfohr Oil Company to conduct a waterflood project on their Grayburg Jackson San Andres Unit in the Grayburg Jackson Pool, Eddy County, New Mexico. This order also provided that the project could be expanded by Administrative approval without the necessity of showing response to the flood in those wells being added to the project. This project has been in operation since August 1967, and indications of a definite response to flooding have been noticed for the past several months. Windfohr Oil Company now requests your authorization to expand this project and it is requested that authorization be given by Administrative approval.

It is proposed to convert the following producing wells to water injection.

UNIT WELL NO.	LOCATION
1	SE/4 NE/4 Sec. 24-17S-30E
4	NW/4 NE/4 Sec. 24
8	NW/4 NE/4 Sec. 23
9	SE/4 SW/4 Sec. 14
15	SE/4 SE/4 Sec. 13
21	NW/4 SE/4 Sec. 14
22	NW/4 SW/4 Sec. 14
23	SW/4 NE/4 Sec. 14
28	SE/4 NE/4 Sec. 13
29	NW/4 NE/4 Sec. 13
33	SE/4 SW/4 Sec. 12
35	SE/4 SE/4 Sec. 12
37	NW/4 SE/4 Sec. 12

Also, there are 3 additional injection wells proposed which will be new wells. The locations of these will be SE/4 NW/4 Sec. 24; NE/4 NE/4 Sec. 23; SE/4 NE/4 Sec. 12.

Attached is a map showing the location of the Grayburg Jackson San Andres Unit, wells within the Unit and surrounding areas. This map also indicates the 8 injection wells which are presently serving the pilot stage shown by the red circles and the proposed expansion program indicating proposed injection wells

by the blue circles. Also attached is a typical well log for the area and a tabulation showing well data for each of the proposed injection wells. This well data tabulation can be correlated readily with the schematic diagram which was submitted in the original application.

The conversion plan which we propose to follow in most of the wells is to clean out the holes to bottom and inject water into the open hole until some pressure resistance is developed in the formation. At that time, we will run surveys and cement liners, most of which will be $4\frac{1}{2}$" O.D. These liners will extend from either total depth up to the production string, or will extend from some point above but near the top of pay back into the production string. However, in cases where production strings have been set low enough, we do not propose to install additional liners. There are perhaps 2 or 3 wells which will fall into this category but we will have to run surveys before this can be definitely established. After liners have been cemented and cleaned out, we will run a string of 2-3/8" O.D. tubing which will be coated internally with either cement lining or plastic lining and packers will be set on the bottom of the tubing string. Where liners are cemented, packers will be set in top part of liners. Where no liners are used, packers will be set in lower part of production string.

The formation being waterflooded is the San Andres dolomite and is predominately the 9th zone or what is commonly referred to as the Jackson Pay, which lies just below the Lovington Sand. Most of the injection water at this time will be fresh water which is being purchased from the Yucca Water Company. However, the new plant expansion will provide for the installation of separate pumping equipment to inject the produced water into one or more injection wells. At this time we propose to keep the produced water separate from the fresh water injection system.

Copies of this application are being furnished to the State Engineer, Sinclair Oil and Gas Company, Cities Service Oil Company and Petroleum Corporation of Texas.

Your approval of this application will be appreciated.

Yours very truly,

Ralph L Gray

REGISTERED PETROLEUM ENGINEER.

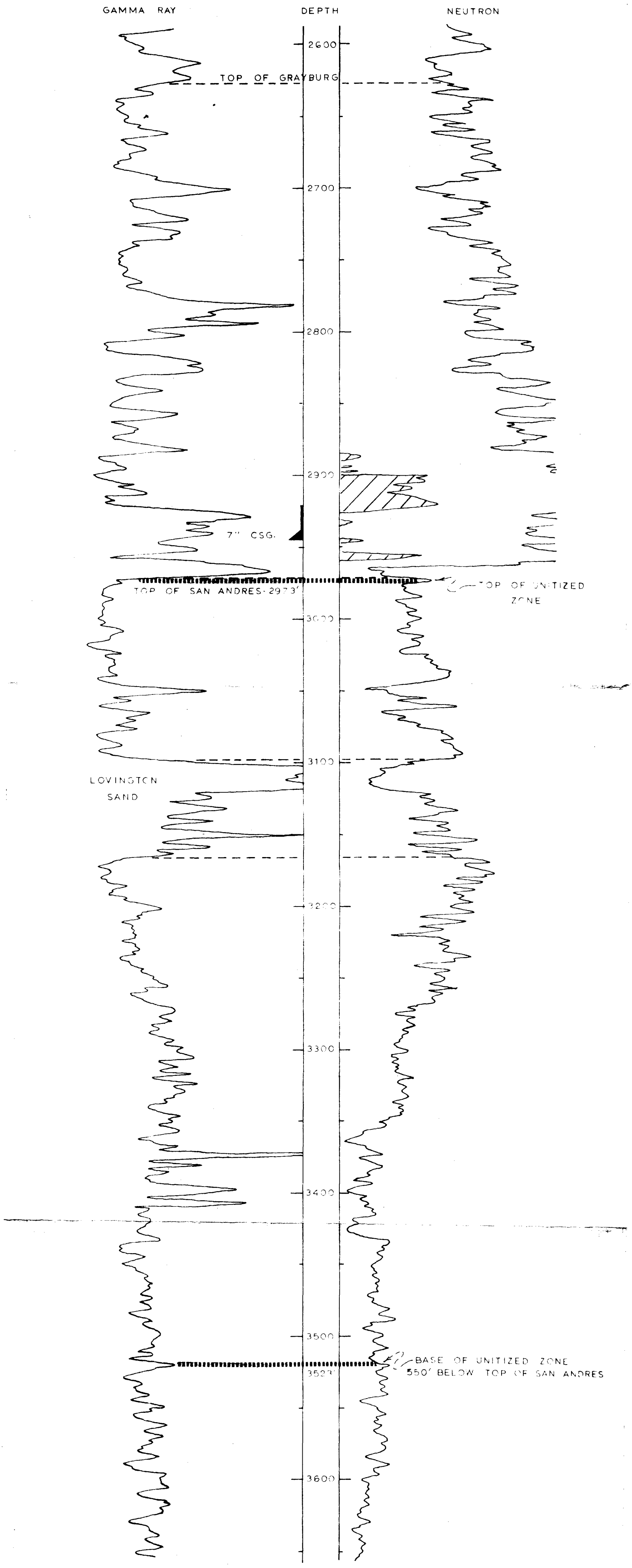
RLG:lw

Encls.

DATA ON PROPOSED WATER INJECTION WELLS

UNIT WELL NO.	SURFACE CASING	ESTIMATED TOP OF CEMENT	OIL STRING	ESTIMATED TOP OF CEMENT	TOTAL DEPTH
1	8-5/8" - 565 50 sx.	200'	7" at 2946' 100 sx.	1946'	3460'
4	8-5/8" - 545 50 sx.	200'	7" at 2935' 100 sx.	1935'	3510'
8	8-5/8" - 463 50 sx.	150'	7" at 2953' 100 sx.	1953'	3474
9	9" - - 423' 10 sx.	325'	7" at 2943' 35 sx.	2593'	3490
15	8-5/8" - 565' 50 sx.	200'	7" at 2971 100 sx.	1971'	3518
21	8-5/8" - 460' 50 sx.	150'	7" at 2891' 100 sx.	1891'	3429
22	8-5/8" - 450' 50 sx.	150'	7" at 2948 100 sx.	1948'	3492
23	8-5/8" - 441' Unknown	150'	7" at 3200' 100 sx.	2200'	3532
28	8-5/8" - 580' 50 sx.	200'	7" at 2995 100 sx.	1995'	3514
29	12½" - 498' 20 sx. 10" - 1340' 40 sx.	300'	8-5/8" at 2415 5½" at 3428'	Unknown Unknown	3560
33	12½" - 585' Unknown	Unknown	7" at 2860' 360 sx.	Surface	3615
35	8-5/8" - 590' 50 sx.	225'	7" at 2936' 100 sx.	1936	3482
37	8-5/8" - 557' 50 sx.	200'	7" at 3397' 125 sx.	2147'	3510

WELL LOG



WINDFOHR OIL CO. – STEVENS "A" 2

NW/4 SW/4 SEC. 13 - 17S - 30E

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