



ANADARKO PRODUCTION COMPANY

3109 WINTHROP AVENUE P. O. BOX 9817 FORT WORTH, TEXAS 76107
CABLE ADDRESS: ANADARK

May 19, 1970

WFX-341

John Jones

State of New Mexico
Oil Conservation Commission
P.O. Box 2088
Santa Fe, New Mexico 87501

RE: North Caprock Queen Unit No. 2,
Lea and Chaves Counties, New
Mexico

Gentlemen:

Anadarko Production Company as Unit Operator of the North Caprock Queen Unit No. 2, Lea and Chaves Counties, New Mexico, that was authorized by Commission Order R-1194, hereby requests administrative approval to convert the following Unit producing wells to water injection:

<u>Well Number</u>	<u>Location</u>
1-2	NE/4NE/4 Section 1-T13S-R31E.
3-2	NE/4NW/4 Section 1-T13S-R31E.
7-3	NE/4SE/4 Section 1-T13S-R31E.
9-1	NE/4SW/4 Section 1-T13S-R31E.
14-1	NE/4NE/4 Section 12-T13S-R31E.
15-1	NE/4NW/4 Section 12-T13S-R31E.
18-2	NE/4SE/4 Section 12-T13S-R31E.
23-2	NE/4SW/4 Section 12-T13S-R31E.
25-1	NE/4NE/4 Section 11-T13S-R31E.
27-2	NE/4SE/4 Section 11-T13S-R31E.
27-7	NE/4SW/4 Section 11-T13S-R31E.

The conversion of the referenced producing wells to water injection service is part of a program that is designed to recover additional waterflood oil from the Queen sand under the North Caprock Queen

Unit No. 2 by changing flow patterns.

This program will consist of the temporary abandonment of all existing Unit water injection wells that were approved by Commission Order Nos. R-1053, R-1053-A, and R-1053-B, the conversion to water injection service of the referenced Unit producing wells, and the continued operation of the remaining Unit producing wells for production. Reference is hereby made to the attached plat of the Unit Area for the proposed program.

The North Caprock Queen Unit No. 2 has been an extremely successful waterflood project. As of January, 1970, 3,719,552 barrels of waterflood oil have been recovered from this project as compared to a primary recovery of 1,964,404 barrels of oil. Therefore, the Rule 701-E-5 requirement of response at an offset producing well before commencement of water injection operations has been met throughout the subject project.

With this application for administrative approval to convert the referenced eleven (11) Unit producing wells to water injection, we are enclosing data required under the provisions of Rule 701-B. This data includes (1) the plat referred to earlier to show the proposed water injection pattern and offset operations, (2) a log of a typical water injection well, and (3) a diagrammatic sketch of a typical proposed water injection well completion on which we have indicated the zone to be open for water injection and the type and quantity of water to be injected.

The initiation of this program is urgently needed to accomplish maximum recoveries of waterflood oil from the Queen sand under the Unit Area. Your approval of this request at your earliest convenience will be appreciated.

Very truly yours,

ANADARKO PRODUCTION COMPANY



C.W. Stumhöffer
Superintendent
Secondary Recovery Division

CWS/nl

Encl:

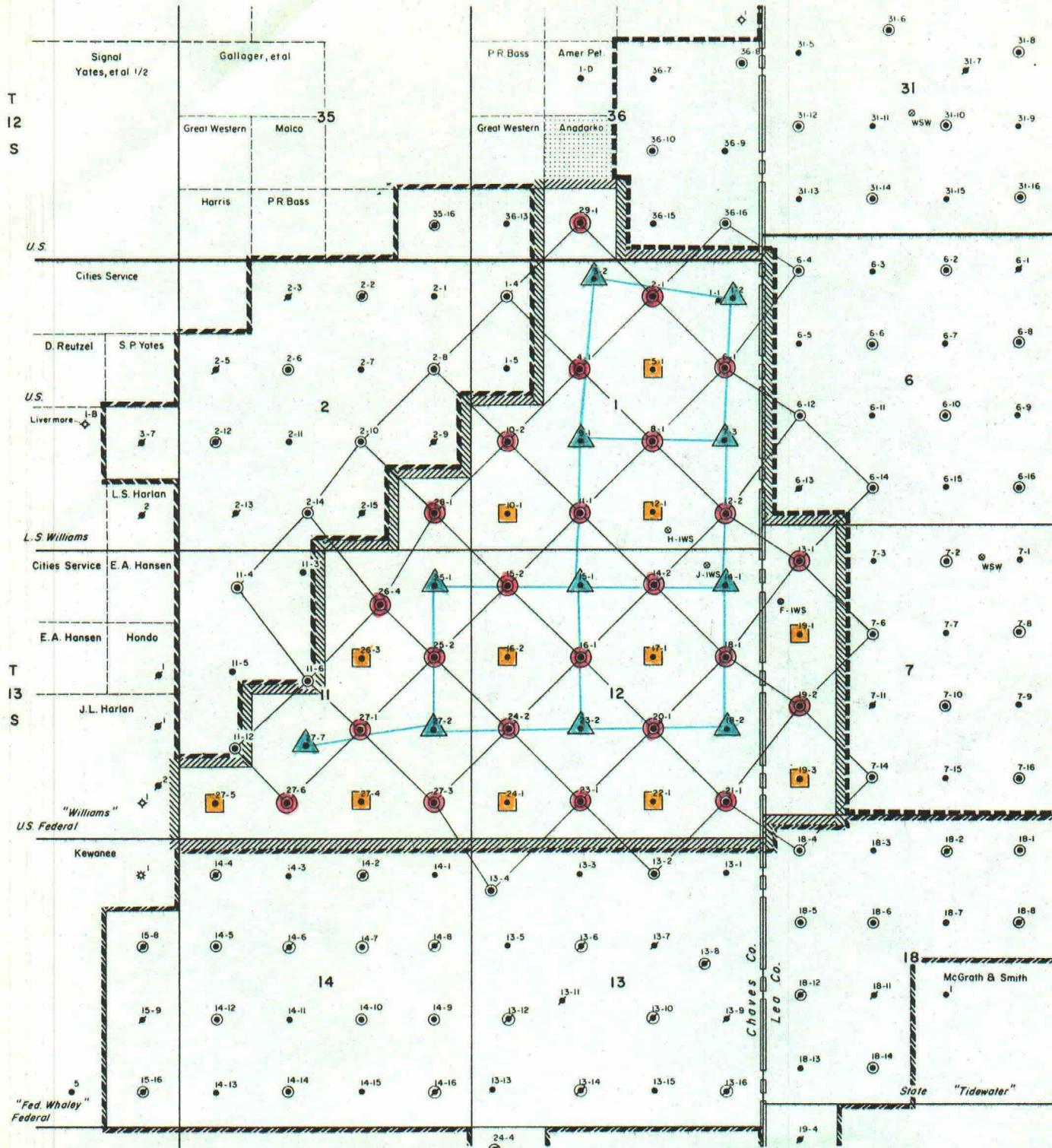
cc: State of New Mexico
Commissioner of Public Lands
American Petrofina Company of Texas, Big Spring, Texas
Great Western Drilling Corporation, Midland, Texas

R - 31 - E

R - 32 - E

T
12
S

T
13
S



LEGEND

- Oil Well
- ◆ Plugged & Abandoned
- Temporarily Abandoned
- ◇ Dry & Abandoned
- ⊙ Water Injection Well
- ▨ Anadarko Acreage
- ▤ Unit Boundary
- ▥ Great Western Operated
- ▧ North Caprock Queen, Unit No. 3
- ▨ America Petrofina Operated
- ▩ North Caprock Queen, Unit No. 1
- Great Western Operated
- North Caprock Queen, Pebble Unit
- ⊙ W Water Injection Well to be T.A.
- ▲ Producing Well to be Converted to Injection
- Remaining Producing Well

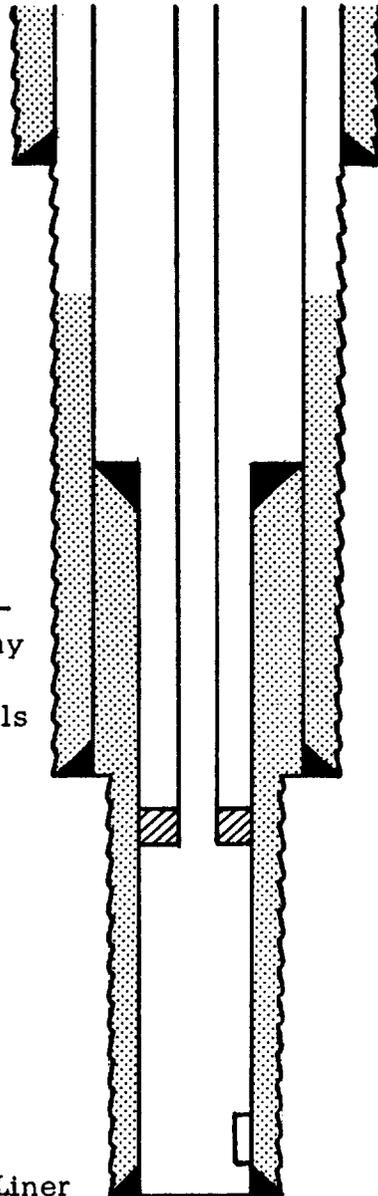


**ANADARKO
PRODUCTION COMPANY**

**NORTH CAPROCK QUEEN UNIT NO. 2
LEA & CHAVES COUNTIES, NEW MEXICO
FLOOD NO. 27**

CAPROCK QUEEN POOL





289' 8-5/8" Surface Casing

2936' Top of 4 1/2" FJ
Liner Cemented

Fluid to be injected -
450 barrels per day
fresh water from
Water Supply Wells
and produced
water.

2985' 5 1/2" Casing

2990' 2" Tubing

2992' 4 1/2" x 2" Packer

3056' Bottom 4 1/2" FJ Liner

TD 3056

3038-3054' Perfs
Queen Sand

WELL LOCATION

660' FNL and 660' FEL
Sec. 12-T13S-R31E



**ANADARKO
PRODUCTION COMPANY**

WELL BORE DIAGRAM

NORTH CAPROCK QUEEN UNIT, NO. 2
CHAVES COUNTY, NEW MEXICO

Well No. 14-1