

# Union Oil Company of California

205 EAST WASHINGTON AVENUE



LOVINGTON, NEW MEXICO

UNIT OPERATOR  
SOUTH CAPROCK QUEEN UNIT

October 1, 1963

MAIN OFFICE OCC  
1963 OCT 7 AM 8:05

WFX - 153

*Alvin [unclear]*

Mr. A. L. Porter, Jr.  
Secretary-Director  
New Mexico Oil Conservation Commission  
P. O. Box 871  
Santa Fe, New Mexico

Re: Expansion of Waterflood Project Area,  
South Caprock Queen Unit, Chaves  
County, New Mexico (Case No. 2032,  
Orders R-1729 and R-1729-A)

Dear Mr. Porter:

The Union Oil Company of California, as Operator of the South Caprock Queen Unit in Chaves County, hereby requests administrative approval for the expansion of the waterflood project area and approval to convert an additional two wells in the project area to water injection service. This request is submitted pursuant to the provisions of Rule 701-E, paragraph 5, of the Rules and Regulations of the New Mexico Oil Conservation Commission.

The wells proposed for conversion are as follows:

1. Tract 39, Well 4-30 located in NW $\frac{1}{4}$  of NW $\frac{1}{4}$ , Section 30, T-15-S, R-31-E, NMP
2. Tract 39, Well 6-30, located in SE $\frac{1}{4}$  of NW $\frac{1}{4}$ , Section 30, T-15-S, R-31-E, NMP

Water injection at the South Caprock Queen Unit commenced on May 23, 1961, into ten wells situated along the contact between the gas cap and the oil zone. The purpose of this initial pattern was to prevent the migration and loss of recoverable secondary oil into the gas cap. Since May, 1961, the project area has been expanded eight times. These expansions are tabulated below:

1. April, 1962 - Administrative Order WFX-102 (7 new injectors)
2. August, 1962 - Administrative Order WFX-116 (5 new injectors)
3. December, 1962 - Administrative Order WFX-124 (6 new injectors)
4. January, 1963 - Administrative Order WFX-127 (3 new injectors)
5. March, 1963 - Administrative Order WFX-134 (4 new injectors)
6. May, 1963 - Administrative Order WFX-136 (1 new injector)
7. June, 1963 - Administrative Order WFX-138 (7 new injectors)
8. September, 1963 - Administrative Order WFX-152 (9 new injectors)

As of September 1, 1963, 9,857,988 barrels of water have been injected into 43 wells.

Stimulation from the water injection program has recently been observed in another producing well. The two proposed injection wells are offsets to this stimulated well. The location of the subject wells is shown on the attached plat (Exhibit I.)

Porter - 2

These wells are a part of the master plan of operation for the project as presented at the hearing on Case No. 2032. This was Union's application for authority to institute a waterflood project in the South Caprock Queen Unit.

In support of this application, the following are attached:

Exhibit I: A plat of the South Caprock Queen Unit showing the present project area, the proposed expansion of the project area and the location of all injection and producing wells. The newly stimulated well and the two wells to be converted to injection service are identified on the plat. Because this is a Unit operation, there are no offset operators who will be affected by this proposed expansion.

Exhibit II: Commission Form C-116 showing production tests for the stimulated well both before and after being affected by the waterflood.

Exhibit III: A table showing the casing program of the two proposed injectors.

Conversion of the two wells is recommended in order to continue to maintain proper control of the advancing flood front. This will permit a more efficient sweep of the reservoir in the project area.

By copy of this application, the State Engineer is being advised of the proposed conversions. Attached is a copy of our transmittal letter to the State Engineer's office.

Three copies of this letter and supporting data are transmitted herewith, as requested in Rule 701-E. Please contact me if any additional information is required for this application.

Very truly yours,

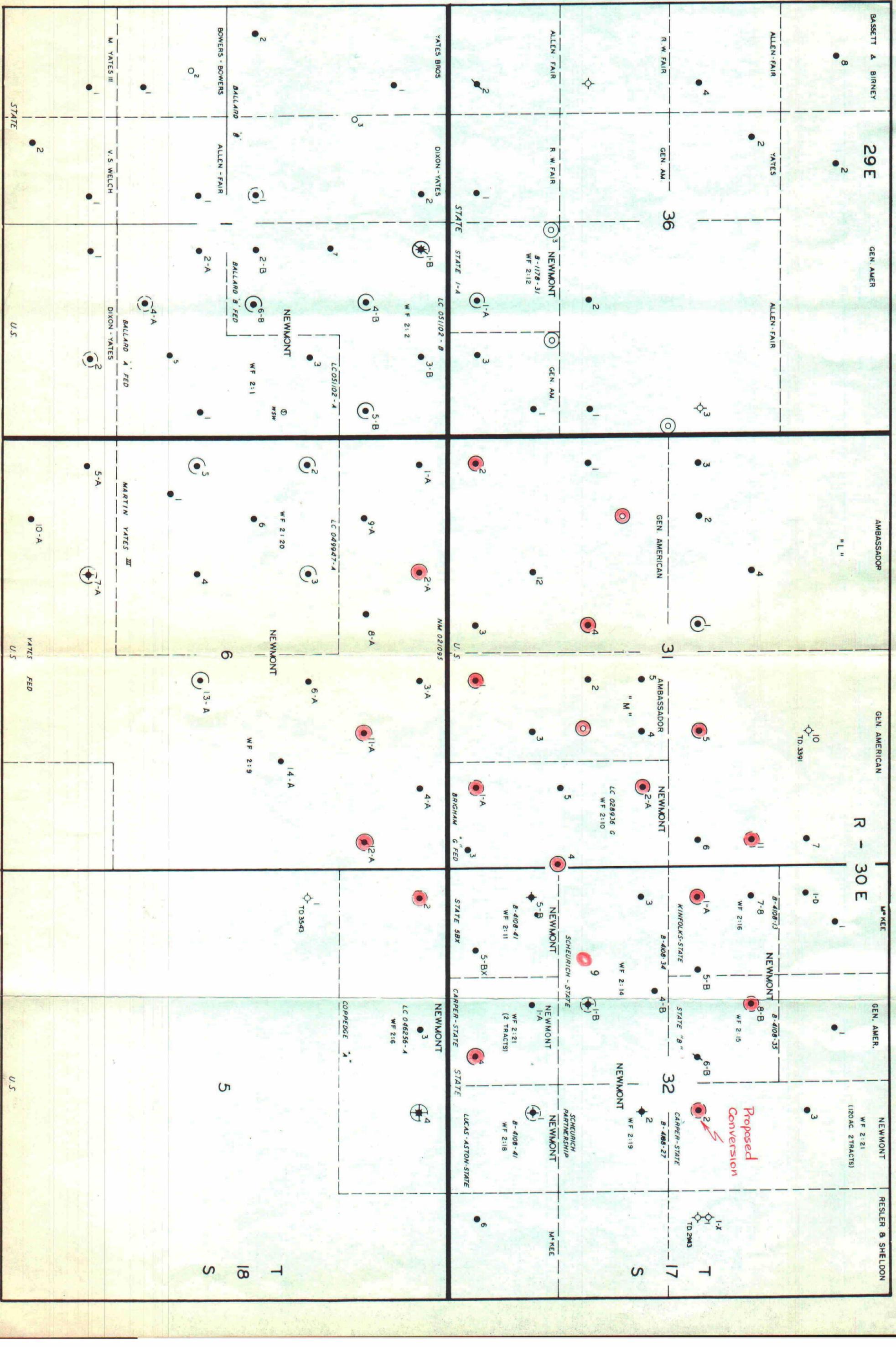


Richard H. Butler  
Unit Engineer

RHB:am

Attachments (3)

cc: Mr. Frank Irby,  
State Engineer Office



29E

R - 30E

36

3

32

5

BASSETT & BIRNEY

GEN. AMER

AMBASSADOR

GEN. AMERICAN

M-KEE

GEN. AMER.

NEWMONT  
WF 2:21  
(120 AC. 2 TRACTS)

RESLER & SHELDON

ALLEN-FAIR

YATES

ALLEN-FAIR

R. W. FAIR

GEN. AM.

GEN. AMERICAN

NEWMONT

KINFOLKS-STATE

STATE "B"

CARPER-STATE

M-KEE

ALLEN-FAIR

R. W. FAIR

NEWMONT

GEN. AM.

GEN. AMERICAN

AMBASSADOR

"M"

NEWMONT

NEWMONT

SCHURICH-STATE

SCHURICH PARTNERSHIP

M-KEE

YATES BROS

DIXON-YATES

LC 05/102-B

WF 2:2

NM 02/095

U.S.

BRIGHAM G FED

STATE SBX

CARPER-STATE

NEWMONT

U.S.

BOWERS - BOWERS

ALLEN-FAIR

NEWMONT

WF 2:1

WF 2:20

NEWMONT

WF 2:9

NEWMONT

NEWMONT

NEWMONT

NEWMONT

U.S.

BALLARD

ALLEN-FAIR

BALLARD B FED

WF 2:1

WF 2:20

NEWMONT

WF 2:9

NEWMONT

NEWMONT

NEWMONT

NEWMONT

U.S.

M. YATES III

V. S. WELCH

BALLARD A FED

DIXON-YATES

MARTIN YATES III

YATES FED

U.S.

STATE

U.S.

U.S.

U.S.

U.S.

U.S.

Proposed Conversion

T 18 S

T 17 S

NEW MEXICO OIL CONSERVATION COMMISSION

GAS-OIL RATIO REPORT EXHIBIT II

OPERATOR Union Oil Company of California POOL Caprock Queen (South Caprock Queen Unit)  
 ADDRESS 205 E. Washington, Lovington, New Mexico MONTH OF Aug.-Sept., 1963  
 SCHEDULED TEST..... COMPLETION TEST..... SPECIAL TEST XX..... (Check One)  
 (See Instructions on Reverse Side) (Tests to verify waterflood stimulation)

Lease	Well No.	Date of Test 1963	Producing Method	Choke Size	Test Hours	Daily Allowable Bbls.	Production During Test			GOR Cu. Ft. Per Bbl.
							Water Bbls.	Oil Bbls.	Gas MCF	
Tract 39	3-30	8-26	P	-	24	13	0	9	TSTM	-
Tract 39	3-30	9-23	P	-	24	13	2	52	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 October 1, 1963

Union Oil Company of California  
 By *Richard H. Butler*  
 Richard H. Butler  
 Unit Engineer  
 Title

SOUTH CAPROCK QUEEN UNIT  
Chaves County

CASING DATA FOR PROPOSED INJECTION WELLS

<u>Tract</u>	<u>Well</u>	<u>TD</u>	<u>ETD</u>	<u>Perforations</u>	<u>Cement, Sacks</u>	<u>Circ. ?</u>	<u>Grade Pipe</u>	<u>Weight, Lbs/Ft.</u>	<u>Age, Years</u>	<u>Condition</u>
39	4-30	3134	3114	3100' - 3105'	200	Yes	J-55	24	6	Good
39	6-30	3148	3147	3125' - 3139'	175	Yes	J-55	24	8	New

SURFACE CASING

OIL STRING

<u>Tract</u>	<u>Well</u>	<u>Size</u>	<u>Setting Depth</u>	<u>Cement, Sacks</u>	<u>Grade Pipe</u>	<u>Weight, Lbs/Ft.</u>	<u>Age, Years</u>	<u>Condition</u>
39	4-30	4 1/2"	3133	300	J-55	9.5	4	New
39	6-30	5 1/2"	3148	400	J-55	14	8	New

# Union Oil Company of California

205 EAST WASHINGTON AVENUE



LOVINGTON, NEW MEXICO

UNIT OPERATOR  
SOUTH CAPROCK QUEEN UNIT

October 1, 1963

Mr. Frank Irby  
Chief of Water Rights Division  
State Engineer's Office  
State Capitol Building  
Santa Fe, New Mexico

Re: Casing Data on Proposed Water Injection  
Wells, South Caprock Queen Unit,  
Chaves County, New Mexico

Dear Mr. Irby:

Attached please find a copy of an application submitted by the Union Oil Company of California to the New Mexico Oil Conservation Commission requesting administrative approval to expand our waterflood project in the South Caprock Queen Unit. This expansion will include the conversion of two more producing wells to water injection service. The application is in accordance with the provisions of Rule 701-E of the Rules and Regulations of the New Mexico Oil Conservation Commission.

Exhibit III of the attached application is a table of casing information on the two wells to be converted to injection service. The two wells will be completed with plastic lined tubing and tension packers set just above the perforations in the Queen Sand. The annulus between the casing (oil string) and the tubing will then be filled with an inhibited water for protection against corrosion. The maximum anticipated surface injection pressure for the two wells will be 1000 psig.

Data on the age, grade and condition of the various casing strings in the two wells to be converted are tabulated in Exhibit III.

If you are in agreement with this proposal, we would appreciate your so notifying the Secretary-Director of the New Mexico Oil Conservation Commission as soon as possible. Thank you for your consideration of this matter.

Very truly yours,

Richard H. Butler  
Unit Engineer

RHB:am  
Attachments (3)  
cc: Mr. A. L. Porter, Jr. (3)



MAIL OFFICE OCC

STATE OF NEW MEXICO OCT 9 PM 1:33

STATE ENGINEER OFFICE  
SANTA FE

S. E. REYNOLDS  
STATE ENGINEER

ADDRESS CORRESPONDENCE TO:  
STATE CAPITOL  
SANTA FE, N. M.

October 7, 1963

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

Dear Mr. Porter:

Reference is made to the application of Union Oil Company of California submitted on October 1, 1963 which seeks administrative approval for the expansion of their South Caprock Queen Unit, Chaves County, New Mexico waterflood project which involves two wells.

In view of Mr. Butler's statement in his letter "The two wells will be completed with plastic lined tubing and tension packers set just above the perforations in the Queen Sand. The annulus between the casing (oil string) and the tubing will then be filled with an inhibited water for protection against corrosion," it appears that no threat of contamination to the fresh waters which may exist in the area will occur. Therefore, this office offers no objection to the granting of this application.

Very truly yours,

S. E. Reynolds  
State Engineer

By:   
Frank E. Irby  
Chief  
Water Rights Division

ma  
cc-Union Oil Co. of California  
F. H. Hennighausen