

Union Oil Company of California

205 EAST WASHINGTON AVENUE

LOVINGTON, NEW MEXICO

UNIT OPERATOR
SOUTH CAPROCK QUEEN UNIT

January 4, 1963

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

WFX-127
R-1729 4

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 three 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.

Water injection commenced in the South Caprock Queen Unit on May 23, 1961. Ten wells situated along the contact between the gas cap and the oil zone were placed on injection at that time. The purpose of this initial pattern was to prevent the migration and loss of recoverable secondary oil into the gas cap. In April, 1962, the project area was expanded for the first time and seven more wells were converted to water injection service (Administrative Order No. WFX-102). The area was again expanded in August, 1962, to include five more injection wells (Administrative Order No. WFX-116). Then, in December, 1962, the area was again expanded and six additional wells were converted to injection service (Administrative Order No. WFX-124). As of December 30, 1962, 5,527,585 barrels of water have been injected into 28 wells.

Stimulation from the water injection program has recently been observed in three additional wells. The three proposed injection wells are offsets to these stimulated wells. The location of the wells is shown on the attached plat (Exhibit 1). 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:

Porter - 2

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 three newly stimulated wells and the three wells to be converted to injection service are identified on the plat. Because this is a Unit operation, there are no other offset operators who will be affected by this proposed expansion.

Exhibit II Commission Form C-116, showing production tests of the three stimulated wells both before and after being affected by the waterflood.

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

Conversion of the three 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 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,

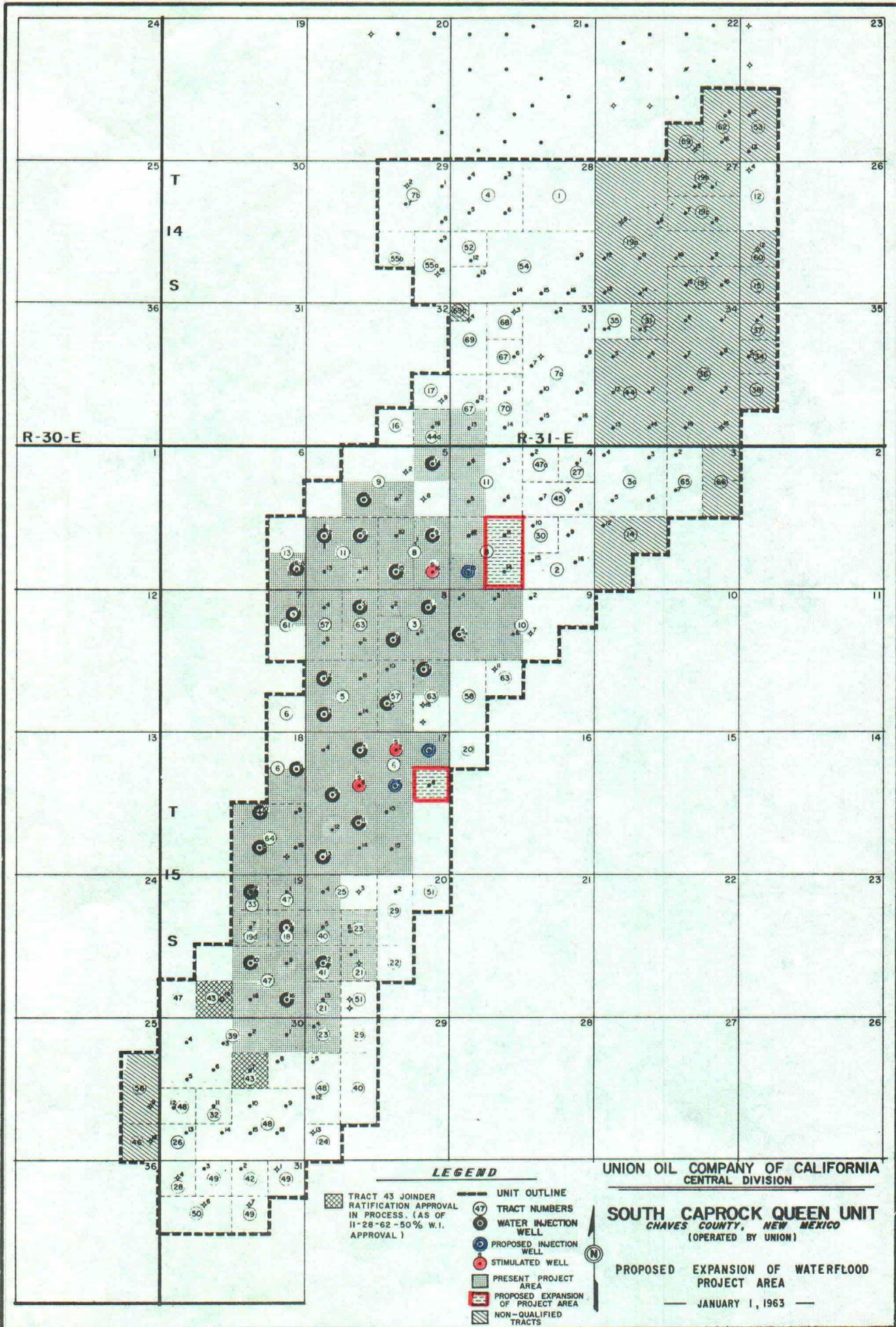


Richard H. Butler
Unit Engineer

Enclosures (4)

cc: Mr. Frank Irby
State Engineer's Office

RHB:am



R-30-E

R-31-E

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LEGEND

-  TRACT 43 JOINDER RATIFICATION APPROVAL IN PROCESS. (AS OF 11-28-62 - 50% W.I. APPROVAL)
-  UNIT OUTLINE
-  47 TRACT INJECTION WELLS
-  WATER INJECTION WELL
-  PROPOSED INJECTION WELL
-  STIMULATED WELL
-  PRESENT PROJECT AREA
-  PROPOSED EXPANSION OF PROJECT AREA
-  NON-QUALIFIED TRACTS

UNION OIL COMPANY OF CALIFORNIA
CENTRAL DIVISION

SOUTH CAPROCK QUEEN UNIT
CHAVES COUNTY, NEW MEXICO
(OPERATED BY UNION)

PROPOSED EXPANSION OF WATERFLOOD
PROJECT AREA

JANUARY 1, 1963

NEW MEXICO OIL CONSERVATION COMMISSION

Exhibit II

GAS-OIL RATIO REPORT

OPERATOR Union Oil Company of California POOL Caprock Queen, South Caprock Queen Unit
 ADDRESS 205 E. Washington, Lovington, N.M. MONTH OF December, 1962
 SCHEDULED TEST..... COMPLETION TEST..... SPECIAL TEST..... (Check One)
 (See Instructions on Reverse Side) (Tests to Verify Waterflood Stimulation)

Lease	Well No.	Date of Test 1962	Producing Method	Choke Size	Test Hours	Daily Allowable Bbls.	Production During Test			GOR Cu. Ft. Per Bbl.
							Water Bbls.	Oil Bbls.	Gas MCF	
1. Tract 6	6-17	11-2	P	-	24	10	0	3	TSTM	-
Tract 6	6-17	12-29	P	-	24	10	0	48	"	-
2. Tract 8	16-5	11-1	P	-	24	7	0	2	"	-
Tract 8	16-5	12-30	P	-	24	7	0	15	"	-
3. Tract 6	2-17	11-3	P	-	24	10	0	3	"	-
Tract 6	2-17	1-3-63	P	-	24	10	0	27	"	-

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 January 4, 1963 Union Oil Company of California
 By Richard H. Butler
 Richard H. Butler
 Unit Engineer Title

CASING DATA FOR PROPOSED INJECTION WELLS

<u>Tract</u>	<u>Well</u>	<u>I.D.</u>	<u>E.I.D.</u>	<u>Perforations</u>	<u>Circ.</u>	<u>Grade Pipe</u>	<u>Weight Lbs/ft</u>	<u>Age, Years</u>	<u>Condition</u>
6	7-17	3155'	3154'	3131'-3141'					
8	13-4	3167'	3167'	Open hole 3149'-3167'					
6	1-17	3177'	3159'	3136'-3140'					
<u>SURFACE CASING</u>									
<u>Tract</u>	<u>Well</u>	<u>Size</u>	<u>Setting Depth</u>	<u>Cement Sacks</u>	<u>Circ.</u>	<u>Grade Pipe</u>	<u>Weight Lbs/ft</u>	<u>Age, Years</u>	<u>Condition</u>
6	7-17	8 5/8"	305'	175	Yes	J-55	24	6 1/2	New
8	13-4	8 5/8"	309'	275	Yes	J-55	24	8	New
6	1-17	8 5/8"	317'	200	Yes	J-55	24	10	Good
<u>OIL STRING</u>									
<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>	
6	7-17	5 1/2"	3155'	400	J-55	14	6 1/2	New	
8	13-4	5 1/2"	3149'	300	N-80 & J-55	20,17, 15.5 & 14	8	New	
6	1-17	4 1/2"	3177'	300	J-55	9.5	3	New	

Union Oil Company of California

205 EAST WASHINGTON AVENUE



LOVINGTON, NEW MEXICO

UNIT OPERATOR
SOUTH CAPROCK QUEEN UNIT

January 4, 1963

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

Re: Casing Data on Proposed 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 an additional three producing wells to water injection service. The application is in accordance with 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 three proposed injection wells. The wells will be completed with plastic-lined tubing and tension packers set just above the perforations or open hole 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 three wells will be 1000 psig.

Data on the age, grade, and condition of the various casing strings in the three wells 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

Attachment

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

RHB:am