

Gulf Oil Corporation

EXPLORATION AND PRODUCTION DEPARTMENT—U. S. OPERATIONS
ROSWELL DISTRICT

W. B. Hopkins
DISTRICT MANAGER
M. I. Taylor
DISTRICT PRODUCTION
MANAGER
F. O. Mortlock
DISTRICT EXPLORATION
MANAGER
H. A. Rankin
DISTRICT SERVICES MANAGER

October 20, 1967

P. O. Drawer 1938
Roswell, New Mexico 88201

Unit
Case 3683

Secretary Director
New Mexico Oil Conservation Commission
Post Office Box 2088
Santa Fe, New Mexico 87501

OCT 20 1967

Re: Application of Gulf Oil Corporation for the Approval
of the Stuart Langlie Mattix Unit Agreement and
Secondary Recovery Project in a Portion of the
Langlie Mattix Pool, Lea County, New Mexico

Dear Sir:

Gulf Oil Corporation, as Unit Operator, seeks the Commission's approval of the Stuart Langlie Mattix Unit Agreement and Secondary Recovery Project on the basis that the proposed unit plan for waterflooding certain wells in the Langlie Mattix Pool will promote the conservation of oil and gas and prevent waste. Information supporting this application is as follows:

(1) The Unit Area shall include

Township 25 South, Range 37 East

Section 2: Lot 4, S/2 NW/4 and SW/4

Section 3: E/2 E/2

Section 10: N/2 and N/2 S/2

Section 11: NW/4 NE/4 and NW/4

containing 1120.36 acres, more or less, as shown on the attached plat (Figure I).

- (2) Average daily oil production for the 24 qualifying wells in the proposed waterflood project has declined to approximately two (2) barrels per day per well as shown by the attached plot of performance history (Figure II) and these wells "have reached an advanced state of depletion" as described in Rule 701 (E)(1). Also attached is a plat (Figure III) showing the recommended waterflood pattern and the unqualified tract in the Unit.
- (3) Applicant proposes to convert twelve (12) wells to water injection wells. The attached diagrammatic sketch (Figure IV) shows the details of a typical proposed injection well, while the accompanying tabulation (Table I) provides the summarized details of all twelve (12) proposed injection wells.
- (4) Applicant plans to inject up to 500 barrels per day of salt water into each injection well. Injection will be into the Seven Rivers (lower 100') and Queen formations in the approximate depth interval 3100' to 3500'. Copies of logs (Logs No. 1 and 2) of the only two Langlie Mattix wells logged within the Unit Area are attached. (The two particular wells logged will be producing wells.)



October 20, 1967

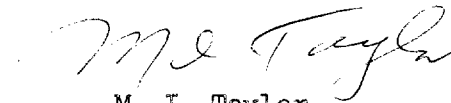
- (5) Source of the injection water will be from a recompleted abandoned well, Gulf's J. A. Stuart No. 9, located in the NE/4 Unit A, Section 10, T-25S, R-37E (located on attached Unit plat, Figure I). Saline water will be produced from the San Andres formation at depths ranging from 3762' to 4943' below the surface. A copy of the log (Log No. 3) of this well is attached. Gulf's application to appropriate ground water from this source has been properly advertised and affidavit of publication filed with the State Engineer.
- (6) Prior to any expansion of the Unit, applicant will request that the expansion be authorized by administrative approval. Unit Operator will file with the Commission an executed original or an executed counterpart of the Stuart Langlie Mattix Unit Agreement within thirty (30) days after the effective date of the approved Unit and/or after the effective date of any approved expansion.
- (7) The order of the Commission should become effective upon the final approval of the Unit Agreement by the Commissioner of Public Lands of the State of New Mexico, Working Interest Owners and the United States Geological Survey, and terminate ipso facto upon termination of the Unit Agreement.

Gulf Oil Corporation has obtained preliminary approval of the Unit Agreement from both the U.S.G.S. and the Commissioner of Public Lands, and a copy of this application, complete with all attachments, has been sent to the State Engineer Office, Santa Fe, New Mexico.

It is requested that this matter be set for hearing before an examiner.

Respectfully submitted,

GULF OIL CORPORATION



M. I. Taylor

Attachments
LCS:sz

cc: United States Department of the Interior
Geological Survey
Post Office Box 1857
Roswell, New Mexico 88201

Commissioner of Public Lands
State of New Mexico
Post Office Box 1148
Santa Fe, New Mexico 87501

State Engineer Office
Post Office Box 1079
Santa Fe, New Mexico 87501

New Mexico Oil Conservation Commission
Post Office Box 1980
Hobbs, New Mexico 88240

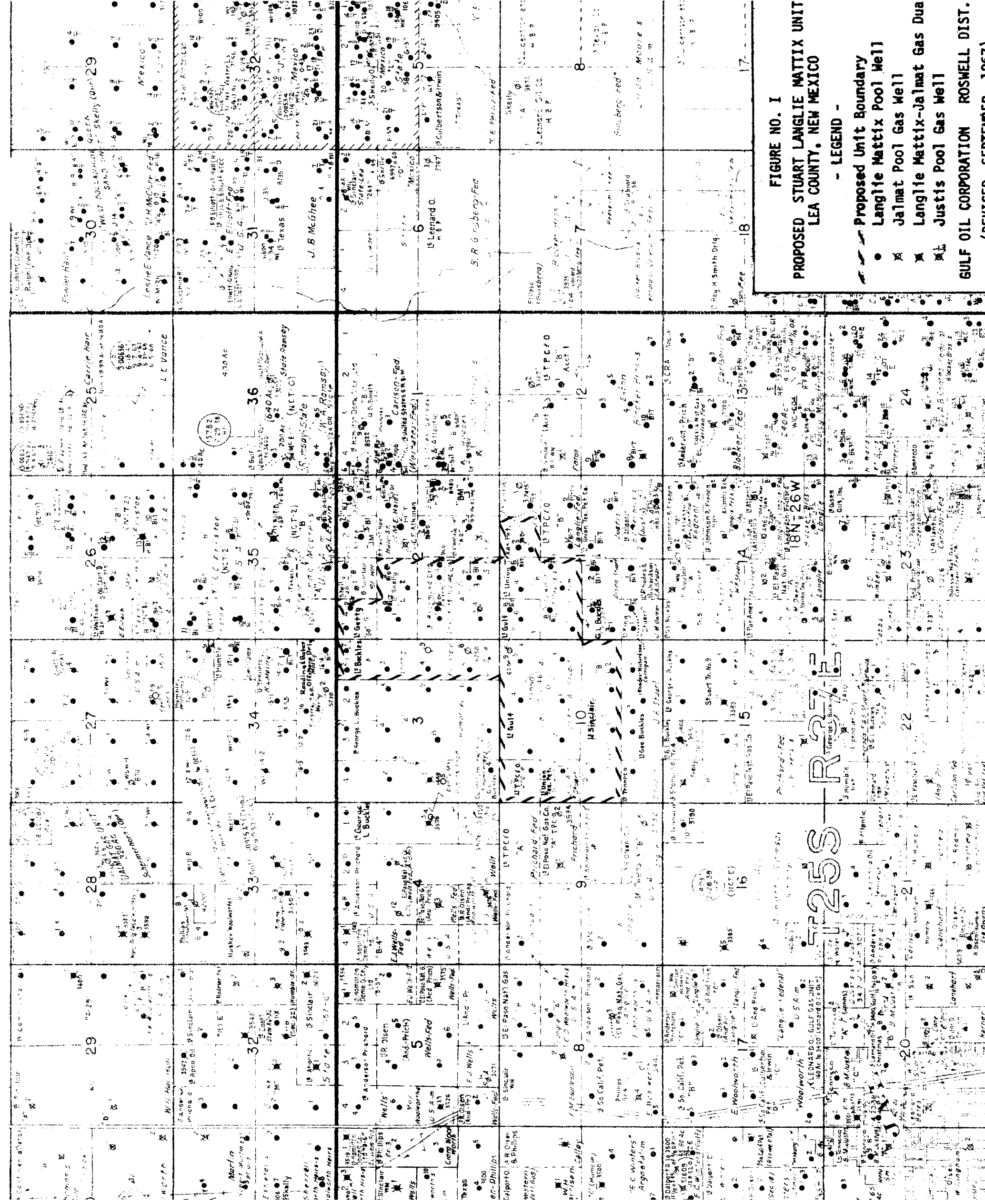


FIGURE NO. I
PROPOSED STUART LANGLIE MATTIX UNIT
LEA COUNTY, NEW MEXICO

- LEGEND -**
- Proposed Unit Boundary
 - Langlie Mattix Pool Well
 - ✕ Jalmat Pool Gas Well
 - ✕ Langlie Mattix-Jalmat Gas Well
 - ✕ Justis Pool Gas Well
- GULF OIL CORPORATION ROSWELL DIST. (REVISED SEPTEMBER, 1967)**

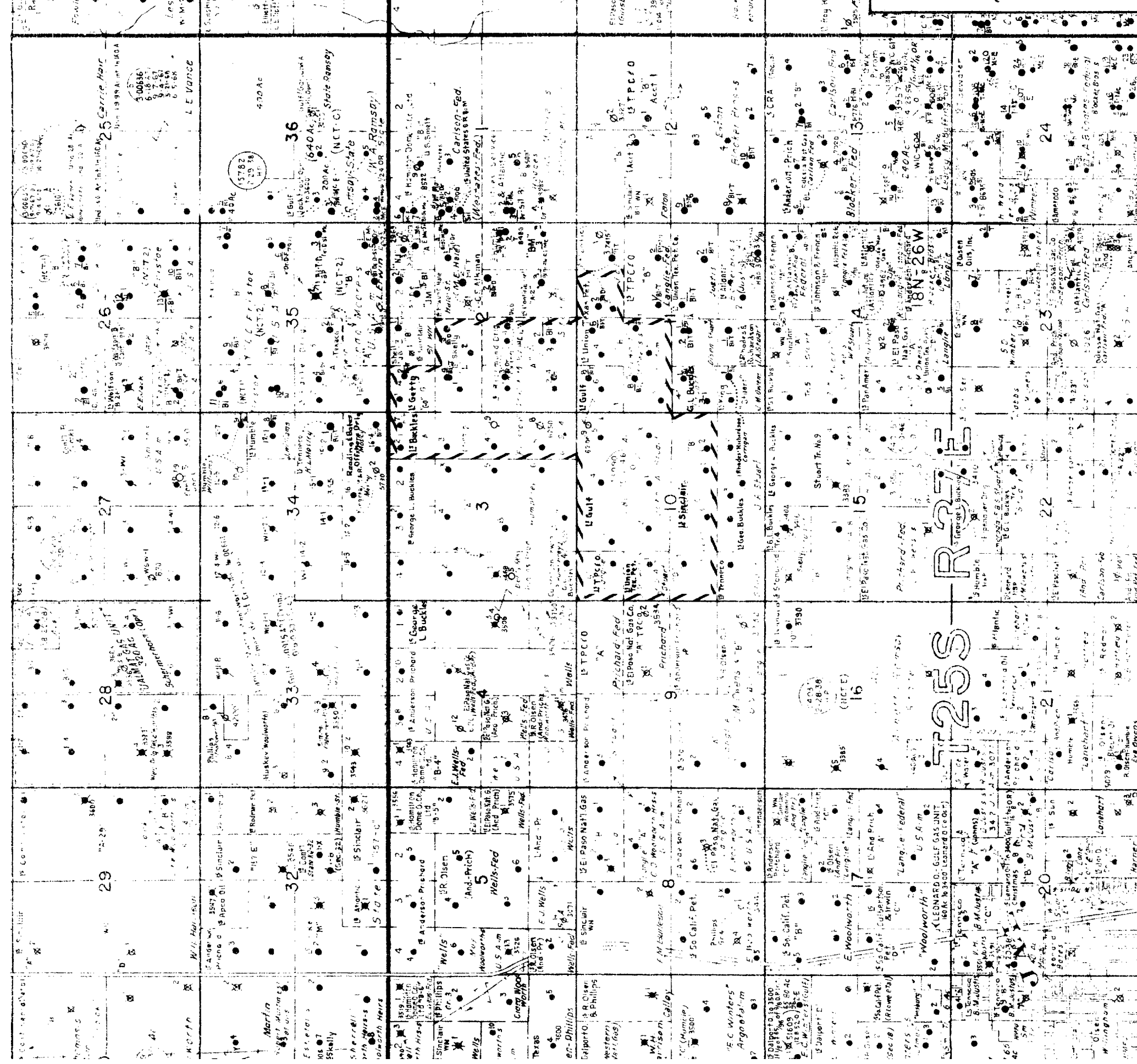


FIGURE NO. II
PROPOSED STUART LANGLIE MATTIX UNIT
LEA COUNTY, NEW MEXICO

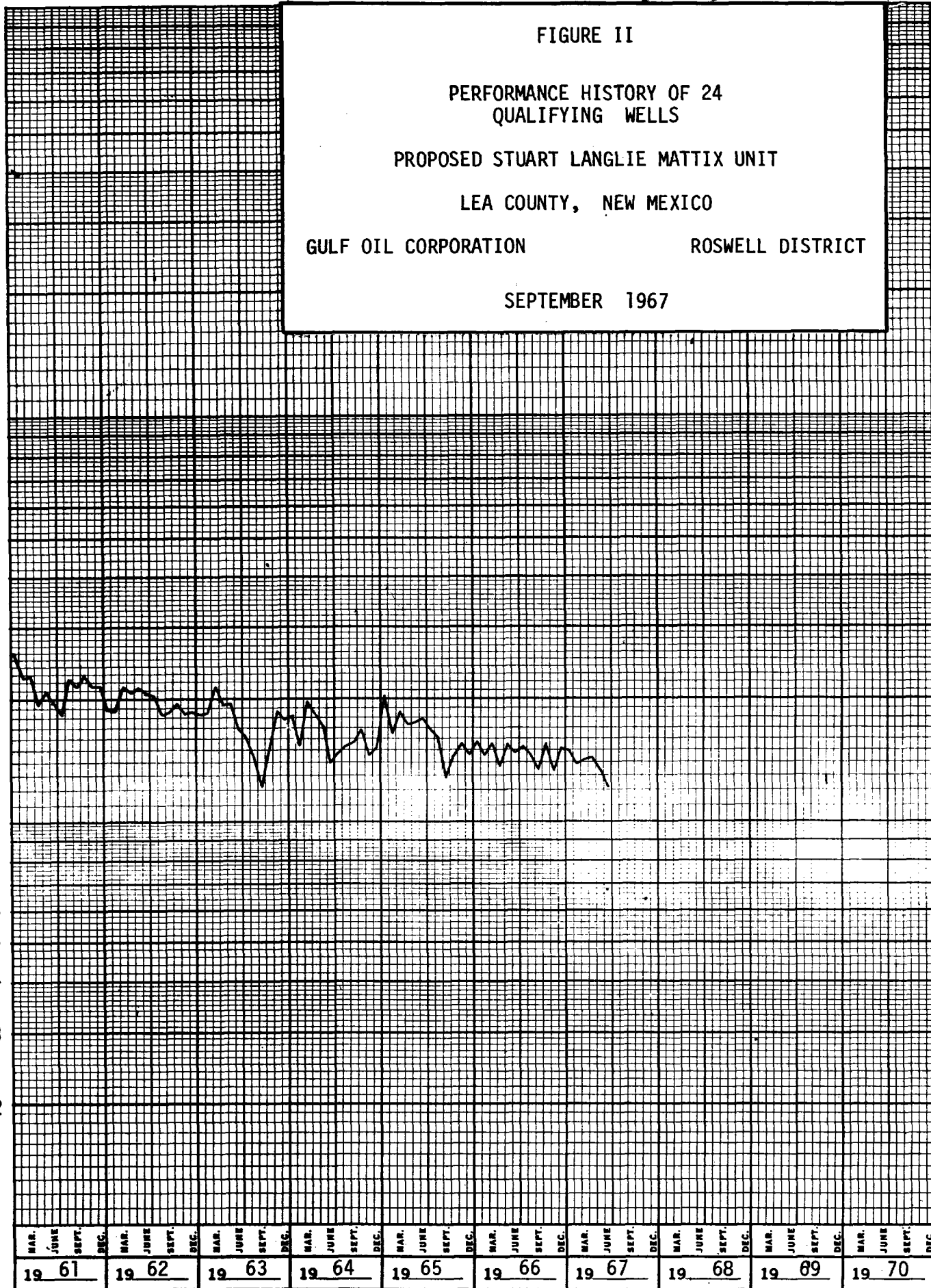
- LEGEND -**
- Proposed Unit Boundary
 - Langlie Mattix Pool Well
 - ✕ Jalmat Pool Gas Well
 - ✕ Langlie Mattix-Jalmat Gas Well
 - ✕ Justis Pool Gas Well
- GULF OIL CORPORATION ROSWELL DIST. (REVISED SEPTEMBER, 1967)**

1000
900
800
700
600
500
400
300
200

FIGURE II
PERFORMANCE HISTORY OF 24
QUALIFYING WELLS
PROPOSED STUART LANGLIE MATTIX UNIT
LEA COUNTY, NEW MEXICO
GULF OIL CORPORATION ROSWELL DISTRICT
SEPTEMBER 1967

OIL PRODUCTION - BARRELS PER MONTH X 100

100
90
80
70
60
50
40
30
20
10
9
8
7
6
5
4
3
2
1



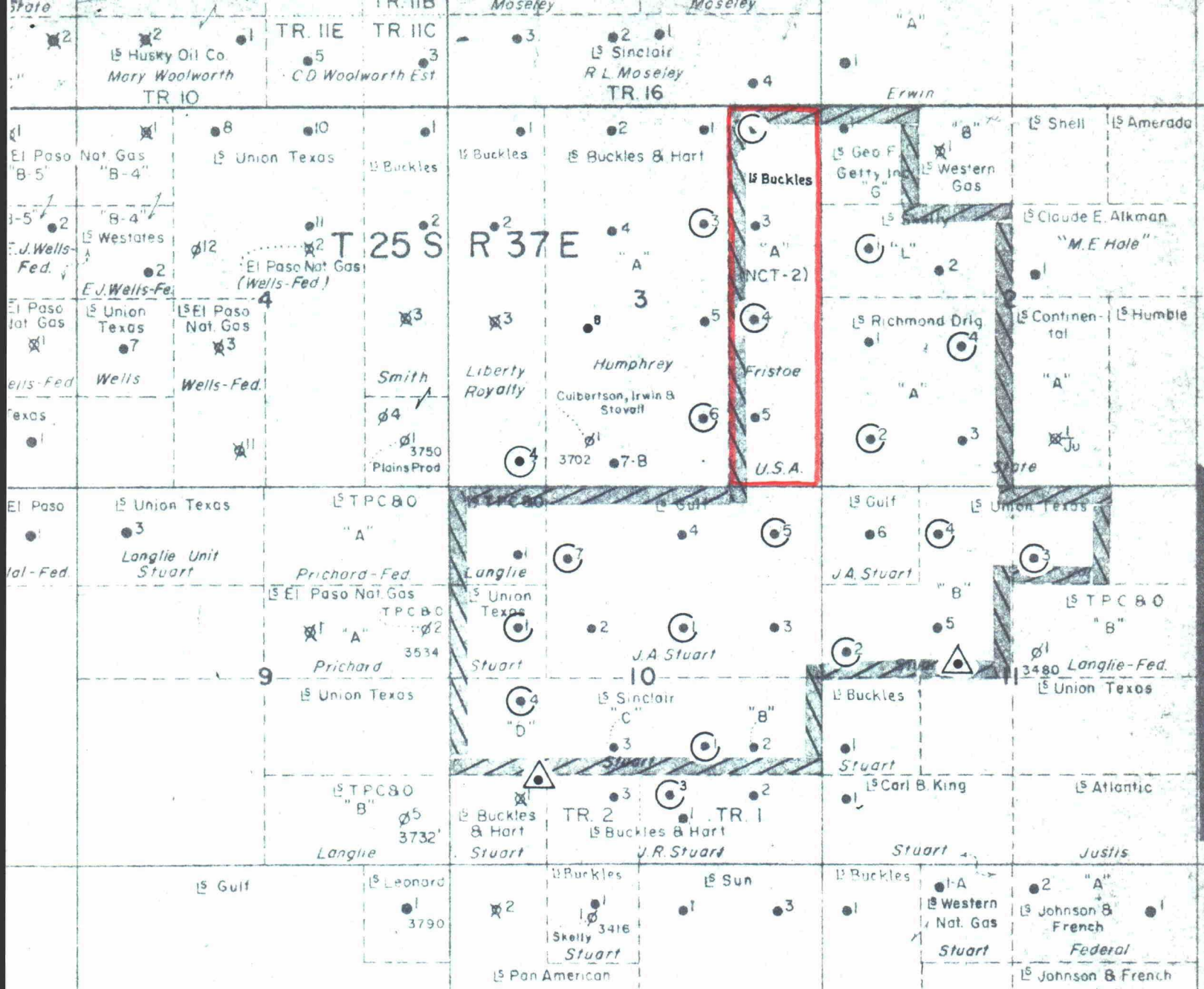










FIGURE NO. III

RECOMMENDED WATERFLOOD PATTERN
 PROPOSED STUART LANGLIE MATTIX UNIT
 LEA COUNTY, NEW MEXICO

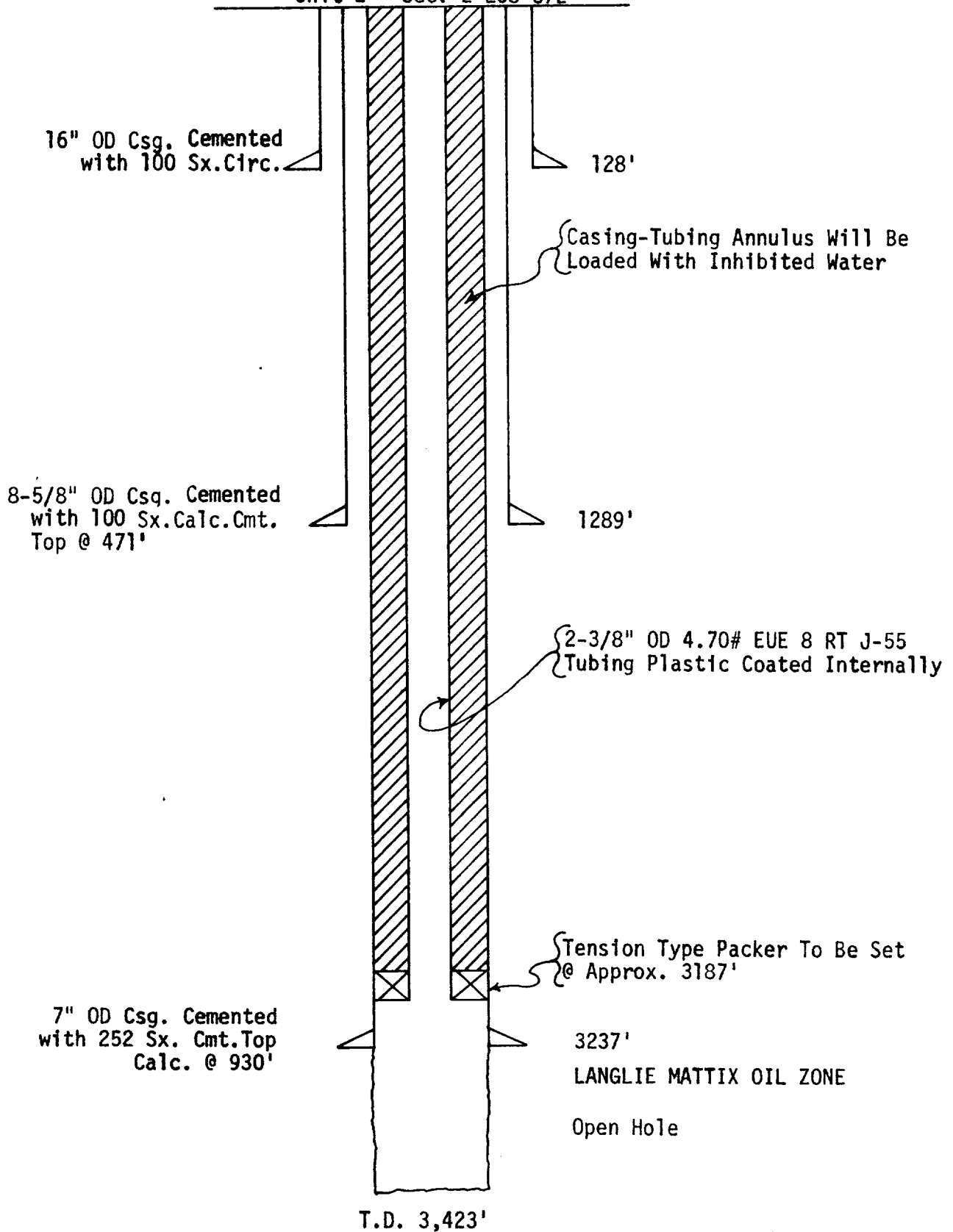
- LEGEND -

-  Proposed Unit Boundary
-  Unqualifying Tract
-  Langlie Mattix Pool Well
-  Jalmat Pool Gas Well
-  Langlie Mattix - Jalmat Gas Dual
-  Justis Pool Gas Well
-  Injection Well
-  Well to be drilled for Injection

GULF OIL CORPORATION ROSWELL DISTRICT
 (REVISED SEPTEMBER, 1967)

Case 3693

FIGURE IV
DIAGRAMMATIC SKETCH
Typical Proposed Injection Well
Proposed Stuart Langlie Mattix Unit
Lea County, New Mexico
Skelly Oil Company State "L" No. 1
Unit E Sec. 2-25S-37E



Case 3683

TABLE I

SECTION WELL DETAIL
 WART LANGLIE MATFIX UNIT
 COUNTY, NEW MEXICO

INTERMEDIATE CASING				PRODUCTION CASING				INJ. INTERVALS		
Size	Depth	Cement	Cmt. Top	Size	Depth	Cement	Cmt. Top	Gross Perf	#Tubing & Packer Set @	
								And/Or OH		
								Top	Btm	
9-5/8"	2473'	600 sx	*	7"	3264'	200 sx	1665' **	3264'	3431'	3214'
--	--	--	--	7"	3324'	350 sx	524' **	3324'	3435'	3385'
--	--	--	--	5-1/2"	3220'	350 sx	Surface**	3220'	3420'	3180'
8-1/4"	1348'	100 sx	Unknown	7"	3315'	125 sx	Unknown	3315'	3414'	3265'
8-5/8"	1202'	100 sx	Unknown	7"	3291'	125 sx	Unknown	3291'	3424'	3240'
8-1/4"	1295'	75 sx	730'	7"	2850'	215 sx	Unknown	--	--	--
			Liner (Top @ 2794')	5"	3404'	75 sx	Unknown	3318'	3378'	3268'
8-5/8"	1308'	200 sx	Unknown	7"	3142'	200 sx	Unknown	3142'	3461'	3092'
8-5/8"	1289'	100 sx	471' **	7"	3237'	252 sx	930' **	3237'	3423'	3187'
9-5/8"	1130'	500 sx	Surface	7"	3267'	300 sx	Surface	3267'	3444'	3217'
9-5/8"	1128'	500 sx	Unknown	7"	3286'	300 sx	Unknown	3286'	3430'	3236'
9-5/8"	538'	260 sx	Unknown	7"	3274'	615 sx	Unknown	3274'	3432'	3224'
9-5/8"	445'	250 sx	Unknown	7"	3328'	600 sx	Unknown	3328'	3447'	3278'

1 "A" (or equivalent) Tension Type Packers