

BAILEY, SIPES, WILLIAMSON & RUNYAN, INC.

CONSULTING ENGINEERS

SUCCESSOR TO LLC&C ENGINEERING, INC.

ROBERT F. BAILEY, P. E.-PRESIDENT
L. D. SIPES, JR., P. E.
ROY C. WILLIAMSON, JR., P. E.
E. E. RUNYAN, P. E.
T. SCOTT HICKMAN, P. E.

November 24, 1969

1100 V & J TOWER
MIDLAND, TEXAS 79701
915 683-1841

Mr. Albert Metcalfe
Tamarack Petroleum Co., Inc.
910 Building of The Southwest
Midland, Texas 79701

Dear Mr. Metcalfe:

Subject: Northeast Pearl Queen Unit
Pearl Queen Field, Lea County, New Mexico

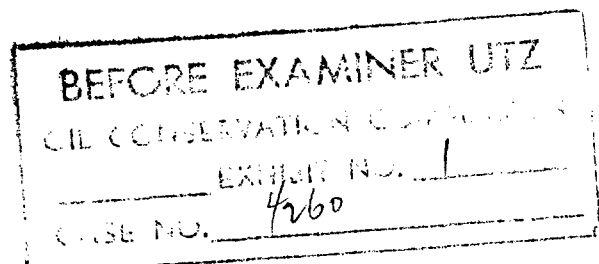
This letter presents supporting data for requesting the conversion of Unit Well No. 18 (Gulf State No. 1) to water injection service.

The subject Unit became effective October 1, 1969. The attached Figure No. 1 shows the outline of the Northeast Pearl Queen Unit. Figures 2, 3 and 4 are net effective pay isopach maps of pay zones designated as IV, V and VII respectively. All figures show current injection wells in blue and proposed injection wells in red within the unit area. Permission to inject into the other wells designated as "proposed" was requested at a hearing dated 9-10-69. This request was granted along with formation of the unit. Also attached is a down hole diagrammatic sketch and a log of Unit Well No. 18. The log shows pay designations and current and proposed perforations.

The following described land constitutes the proposed unit area.

<u>T-19-S, R-35-E</u>	Sec. 15	E/2 of SW/4, W/2 of SE/4 and SE/4 of SE/4
	Sec. 22	E/2 of NE/4
	Sec. 23	N/2 and N/2 of S/2
	Sec. 24	W/2 of NW/4, NE/4 of NW/4 and NW/4 of SW/4

The following table shows the proposed injection zones and the anticipated injection rates for Unit Well No. 18.



Proposed Injection Well

<u>Well</u>	<u>Zones</u>	<u>Injection Rates</u> <u>Bbls of Water/Day</u>
Unit Well No. 18	V & VII	150

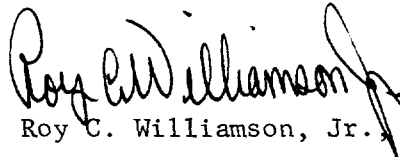
This well is located in Section 23, Unit L.

No cooperative injection program is anticipated with leases lying outside the unit area. There is no development to the north, east or south of the unit and the East Pearl Unit to the west of this proposed unit is already under injection.

If further information is required, please give us a call.

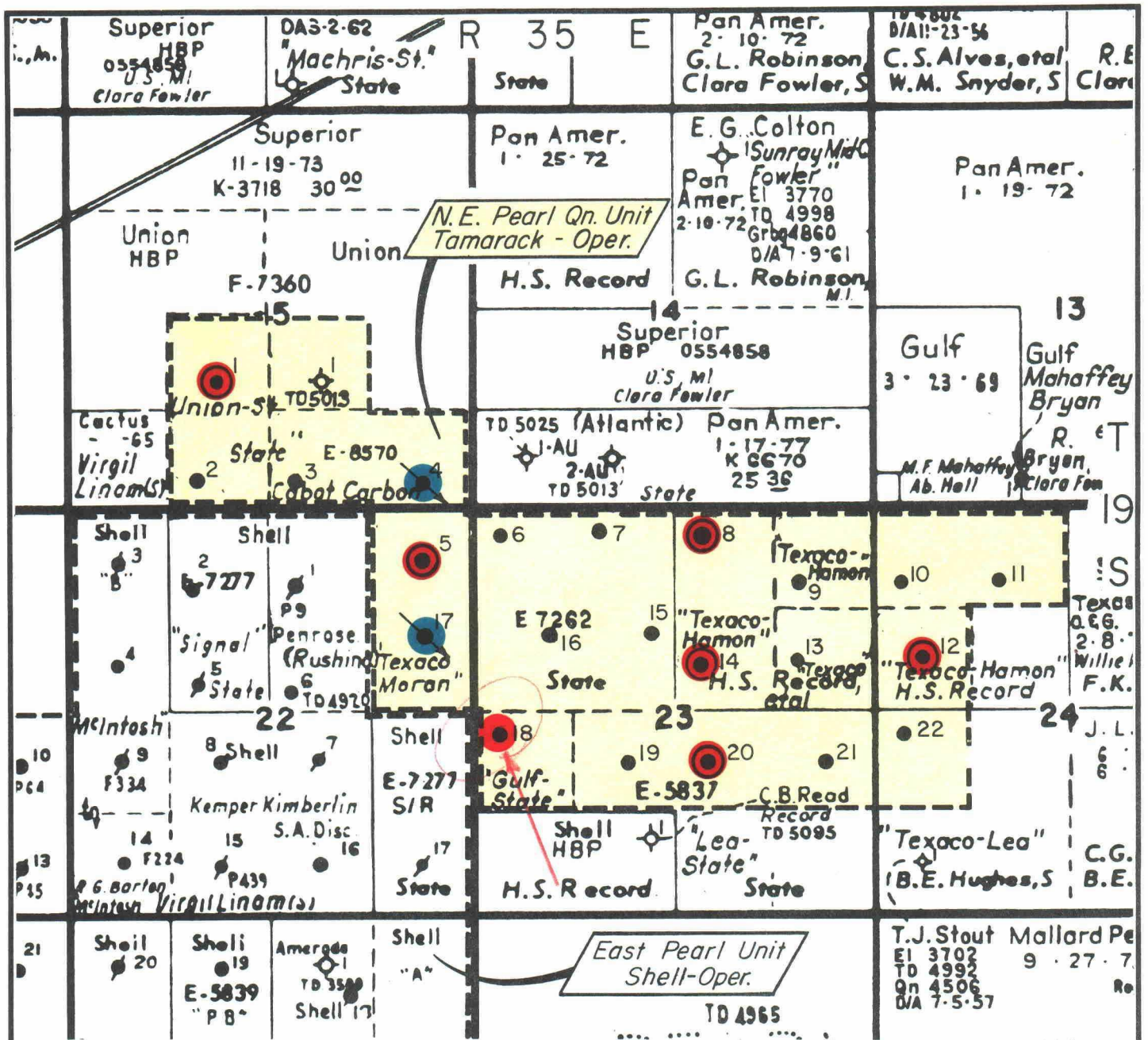
Very truly yours,

BAILEY, SIPES, WILLIAMSON & RUNYAN, INC.


Roy C. Williamson, Jr., P. E.

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Attachments



LEGEND



Current Injection Well



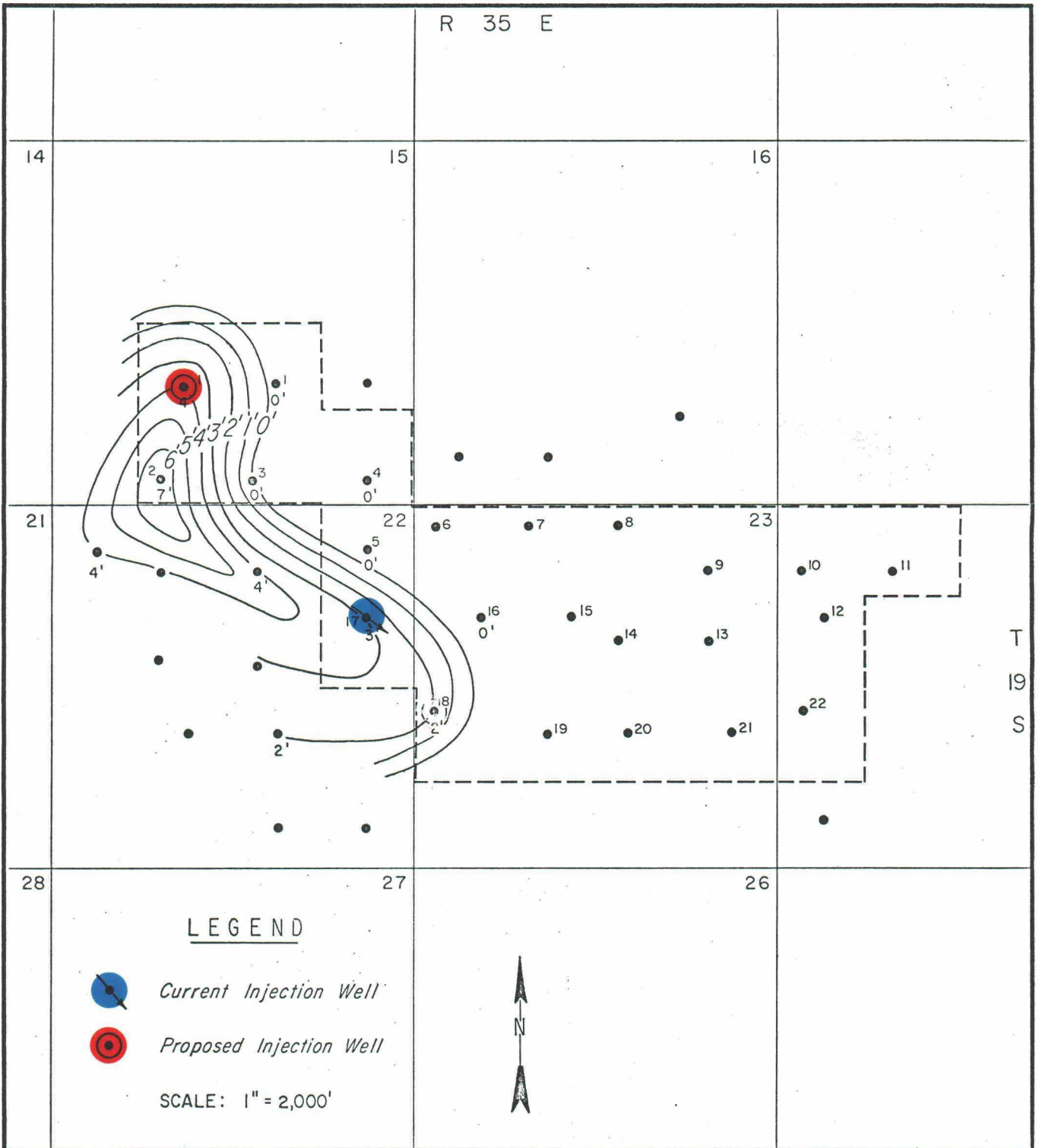
Proposed Injection Well



42
22
84
84
9
SCALE: 2" = 2,000'

N. E. PEARL QUEEN UNIT

FIELD	PEARL QUEEN	COUNTY	LEA	STATE	NEW MEX.
Engineer	R. C. W.	Date	11-24-69	Drwn. By	Del
BAILEY, SIPES, WILLIAMSON & RUNYAN, INC.				File	PEARL QUEEN
CONSULTING ENGINEERS				1100 V&J TOWER	MIDLAND, TEXAS
FIGURE NO.					1



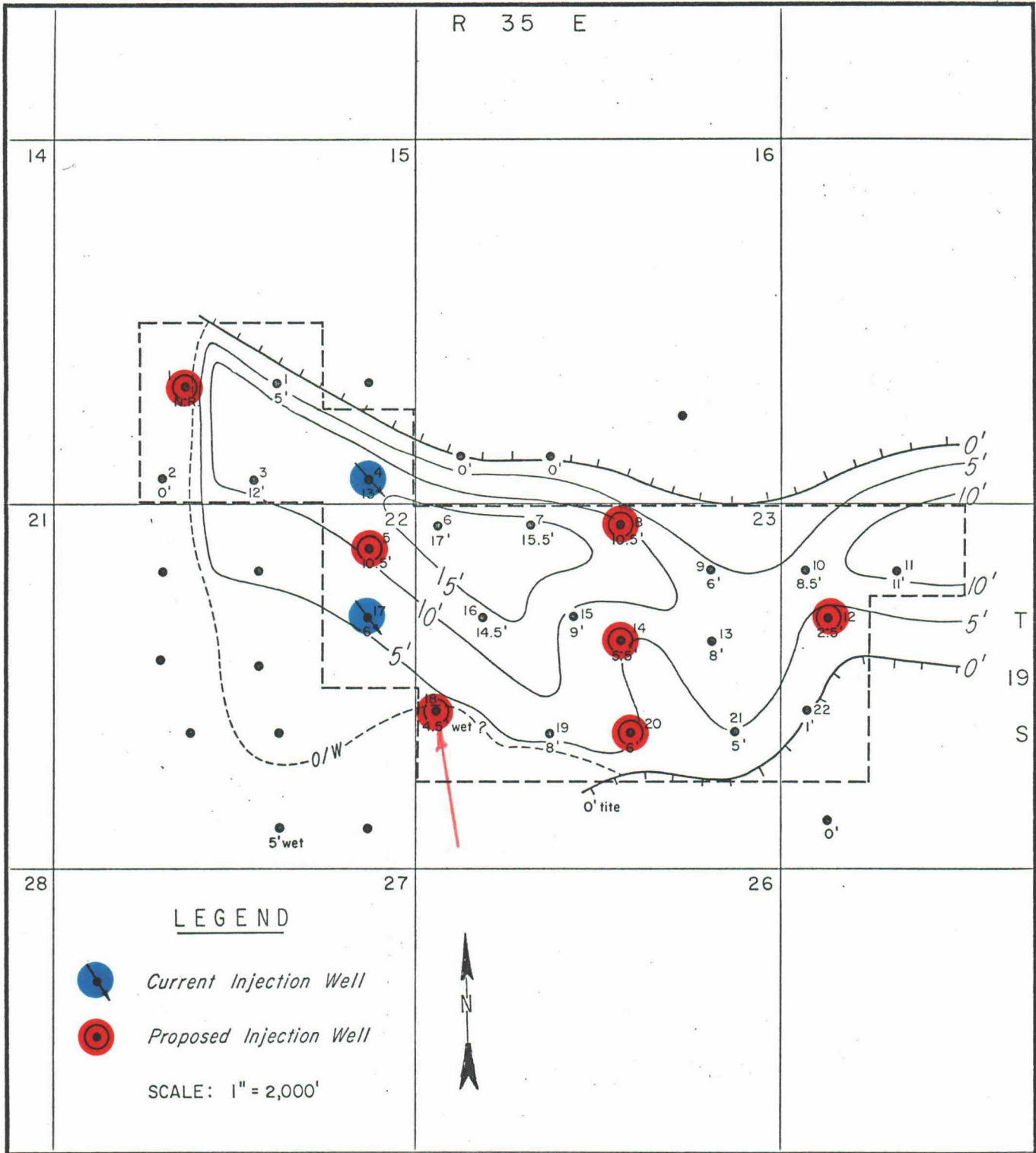
NET EFFECTIVE PAY ISOPACH MAP
 ZONE IV
 N. E. PEARL QUEEN UNIT

FIELD N. E. PEARL QUEEN	COUNTY LEA	STATE NEW MEXICO
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Engineer R. C. W.	Date 11-24-69	Drwn. By Del	File PEARL QUEEN, N. E.
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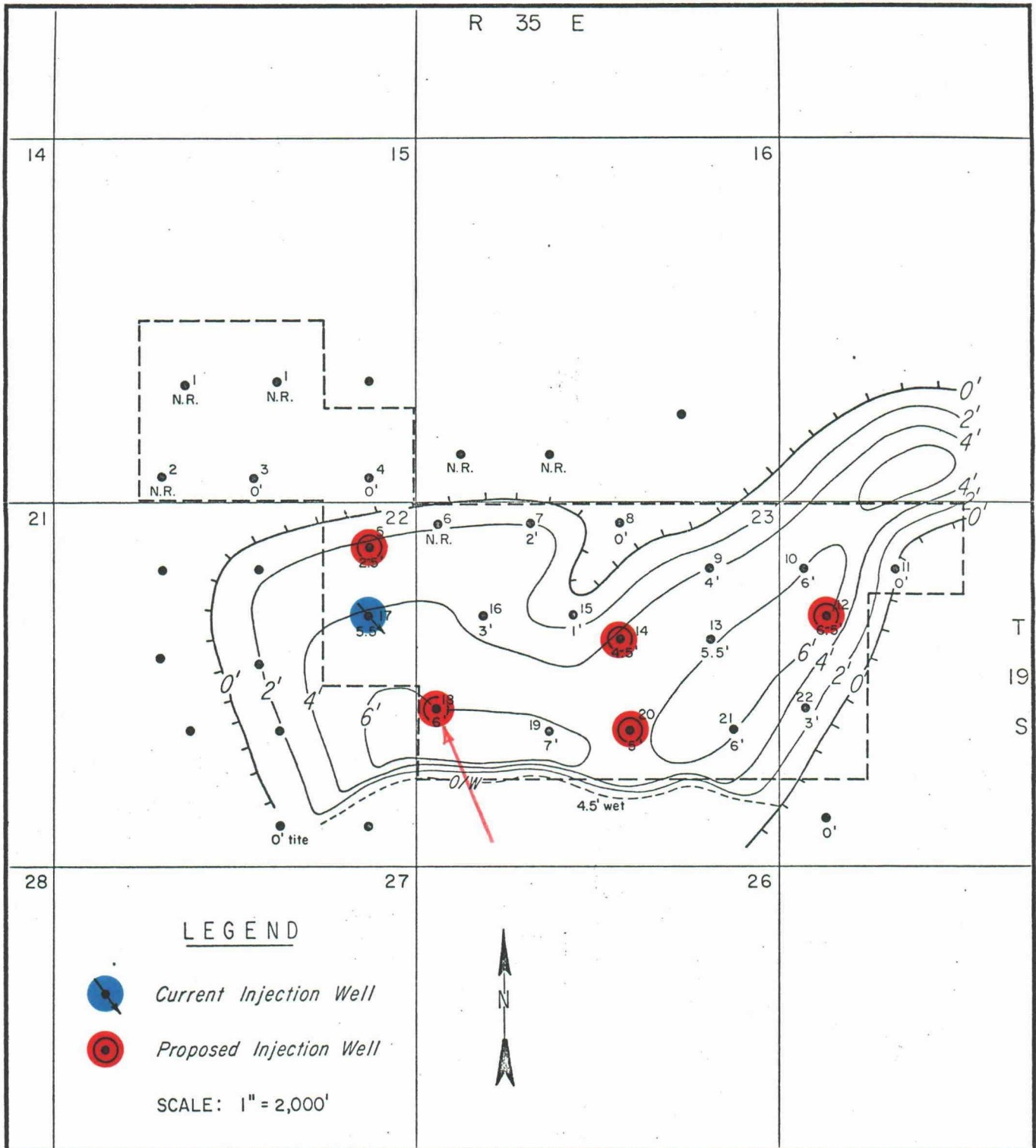
BAILEY, SIPES & WILLIAMSON, INC. <small>CONSULTING ENGINEERS</small>	FIGURE NO. 2
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1100 V & J Tower Midland, Texas



NET EFFECTIVE PAY ISOPACH MAP
ZONE V
 N. E. PEARL QUEEN UNIT

FIELD N. E. PEARL QUEEN	COUNTY LEA	STATE NEW MEXICO
Engineer R. C. W.	Date 11-24-69	Drwn. By Del
BAILEY, SIPES & WILLIAMSON, INC.		File PEARL QUEEN, N. E.
CONSULTING ENGINEERS		1100 V & J Tower Midland, Texas
		FIGURE NO. 3



NET EFFECTIVE PAY ISOPACH MAP

ZONE VII

N. E. PEARL QUEEN UNIT

FIELD N. E. PEARL QUEEN	COUNTY LEA	STATE NEW MEXICO
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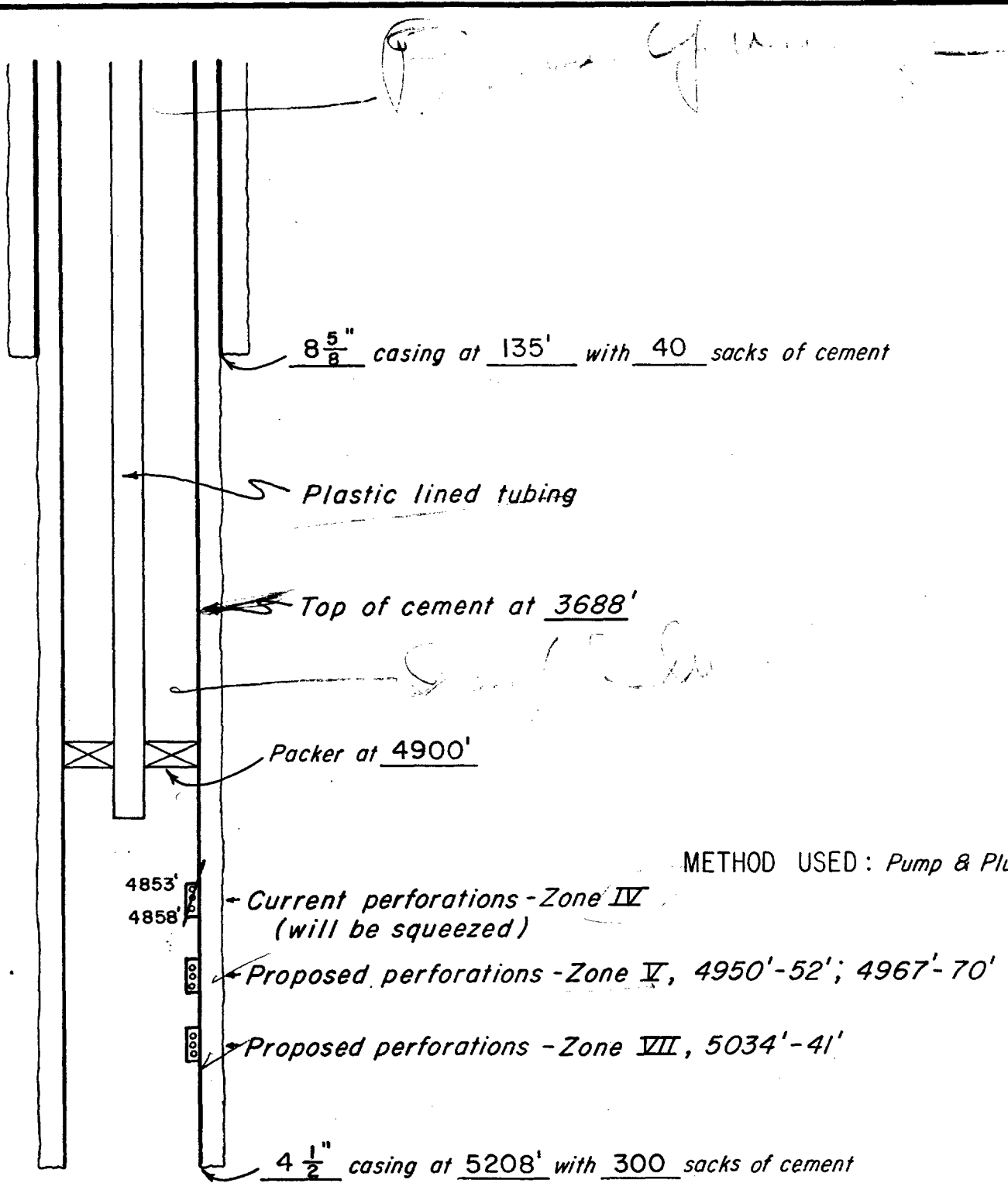
Engineer R. C. W.	Date 11-24-69	Drwn. By Del	File PEARL QUEEN, N. E.
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BAILEY, SIPES & WILLIAMSON, INC.

CONSULTING ENGINEERS

1100 V & J Tower Midland, Texas

FIGURE NO. 4



UNIT WELL NO. 18 Gulf State No. 1		
FIELD N. E. PEARL QUEEN	COUNTY LEA	STATE NEW MEX.
Engineer R. C. W.	Date 11-24-69	Drwn. By Del
BAILEY, SIPES, WILLIAMSON & RUNYAN, INC. CONSULTING ENGINEERS		File PEARL QUEEN, N. E.
1100 V&J TOWER MIDLAND, TEXAS		FIGURE NO.

SCHLUMBERGER

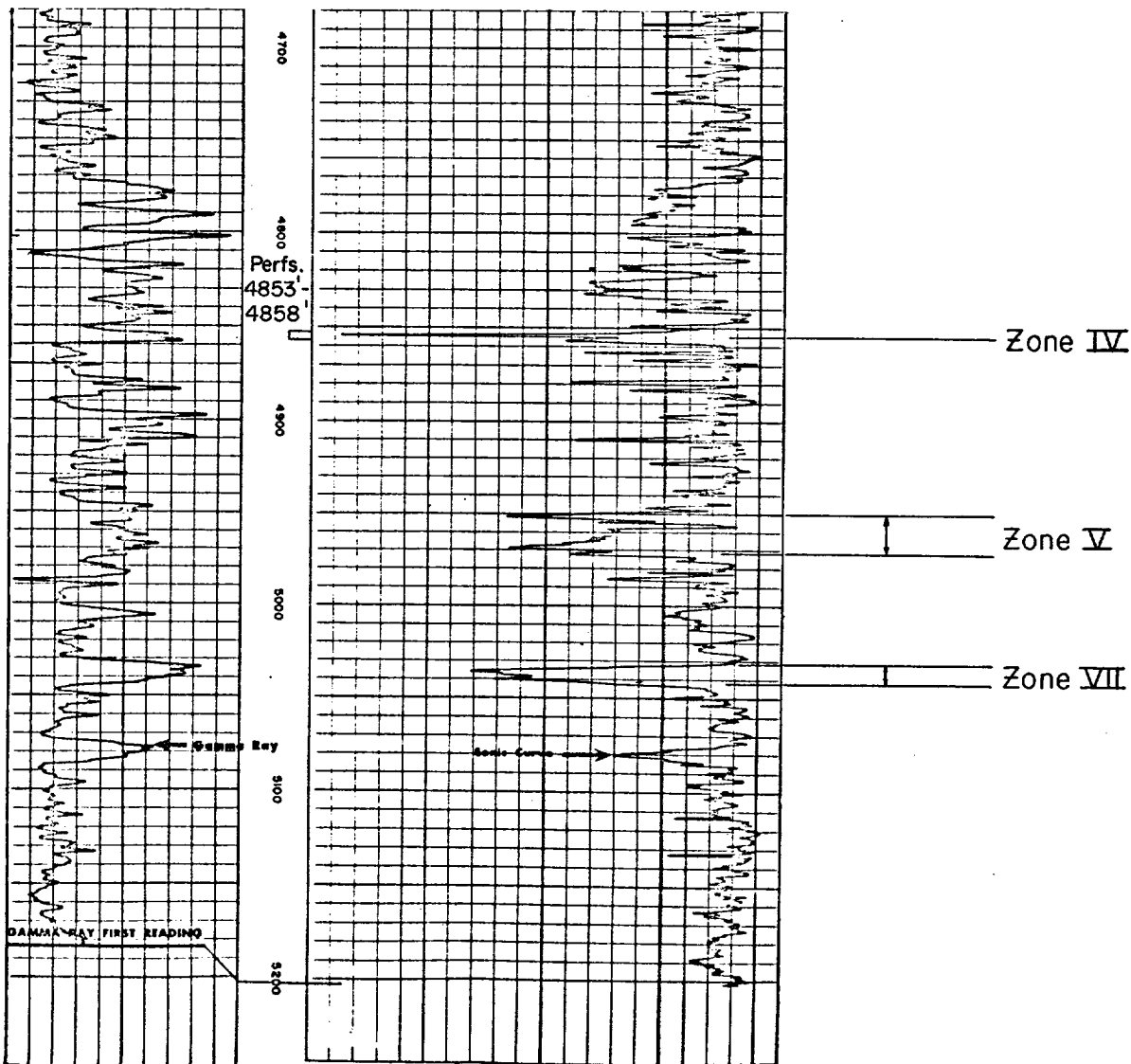
Reproduced By
West Texas Electrical Log Service
Dallas 2, Texas



REFERENCE W1655M

12 COMPLETION RECORD

COUNTY LEA FIELD or LOCATION UNDESIGNATED WELL GULF STATE # 1 COMPANY EARL G. COLTON	COMPANY EARL G. COLTON	Other Surveys
	WELL GULF STATE # 1	Location of Well 2310' FROM S/L 330' FROM W/L
	FIELD UNDESIGNATED	
	LOCATION SEC. 23-19S-35E	
	COUNTY LEA	Elevation: K.B.: 3767 D.F.: or G.L.: 3756
STATE NEW MEXICO		
Log Depths Measured From KB 11 Ft. above GL		
RUN No.	ONE	
Date	9-24-61	
First Reading	5203	
Last Reading	0	
Feet Measured	5203	
Csg. Schlum.	-	
Csg. Driller	130	
Depth Reached	5209	
Bottom Driller	5210	
Mud Mat.	SALT-STARCH-GEL	
Dens. Visc.	9.8 @ 16	
Mud Resist.	0.042 @ 81 °F	@ °F @ °F @ °F
Res. BHT	0.035 @ 100 °F	@ °F @ °F @ °F
pH	@ °F	@ °F @ °F @ °F
Wtr. Loss	5.8 CC 30 min	CC 30 min CC 30 min
Rmf	0.04 @ 78 °F	@ °F @ °F @ °F
Bit Size	7 7/8"-5010"-7 9/4"	
Spacing:		
T ₁ R ₁ R ₂	5203 To 3200	To To
T ₂ R ₁ R ₂	3200 To CSG	To To
Opn. Rig Time	6 HOURS	
Truck No.	2524-H0985	
Recorded By	SCHAEFFER	



OIL CONSERVATION COMMISSION

P. O. BOX 2088

SANTA FE, NEW MEXICO 87501

December 2, 1969

C
Mr. Jason Kellahin
Kellahin & Fox
Attorneys at Law
P. O. Box 1769
Santa Fe, New Mexico

Dear Mr. Kellahin:

O
Enclosed herewith is Commission Order No. R-3888, entered in Case No. 4260, approving the expansion of the Tamarack NE Pearl Queen Waterflood Project.

P
Injection through the one newly authorized water injection well shall be through plastic-lined tubing set in a packer located at approximately 4900 feet. The casing-tubing annulus shall be loaded with an inert fluid and equipped with a pressure gauge at the surface.

Y
As to allowable, our calculations indicate that when all of the authorized injection wells have been placed on active injection, the maximum allowable which this project will be eligible to receive under the provisions of Rule 701-E-3 is 924 barrels per day when the Southeast New Mexico normal unit allowable is 42 barrels per day or less.

Please report any error in this calculated maximum allowable immediately, both to the Santa Fe office of the Commission and the appropriate district proration office.

In order that the allowable assigned to the project may be kept current, and in order that the operator may fully benefit from the allowable provisions of Rule 701, it behooves him to promptly notify both of the aforementioned Commission offices

OIL CONSERVATION COMMISSION

P. O. BOX 2088

SANTA FE, NEW MEXICO 87501

-2-

December 2, 1969

Mr. Jason Kellahin
Kellahin & Fox
Attorneys at Law
P. O. Box 1769
Santa Fe, New Mexico

C
O
by letter of any change in the status of wells in the project area, i.e., when active injection commences, when additional injection or producing wells are drilled, when additional wells are acquired through purchase or unitization, when wells have received a response to water injection, etc.

O
Your cooperation in keeping the Commission so informed as to the status of the project and the wells therein will be appreciated.

P
Very truly yours,

A. L. PORTER, Jr.
Secretary-Director

Y
ALP/DSN/esr

cc: Oil Conservation Commission
P. O. Box 1980
Hobbs, New Mexico

Mr. D. E. Gray
State Engineer Office
Santa Fe, New Mexico