

APPLICATION FOR AUTHORIZATION TO INJECT

- I. Purpose: Secondary Recovery Pressure Maintenance Disposal Storage
Application qualifies for administrative approval? yes no
- II. Operator: Tamarack Petroleum Company, Inc.
Address: P. O. BOX 2046, Midland, TX 79702
Contact party: Randy A. McClay Phone: 915/683-5474
- III. Well data: Complete the data required on the reverse side of this form for each well proposed for injection. Additional sheets may be attached if necessary.
- IV. Is this an expansion of an existing project? yes no
If yes, give the Division order number authorizing the project R-3383.
- V. Attach a map that identifies all wells and leases within two miles of any proposed injection well with a one-half mile radius circle drawn around each proposed injection well. This circle identifies the well's area of review.
- VI. Attach a tabulation of data on all wells of public record within the area of review which penetrate the proposed injection zone. Such data shall include a description of each well's type, construction, date drilled, location, depth, record of completion, and a schematic of any plugged well illustrating all plugging detail. SEE ATTACHED.
- VII. Attach data on the proposed operation, including: SEE ATTACHED
1. Proposed average and maximum daily rate and volume of fluids to be injected;
 2. Whether the system is open or closed;
 3. Proposed average and maximum injection pressure;
 4. Sources and an appropriate analysis of injection fluid and compatibility with the receiving formation if other than reinjected produced water; and
 5. If injection is for disposal purposes into a zone not productive of oil or gas at or within one mile of the proposed well, attach a chemical analysis of the disposal zone formation water (may be measured or inferred from existing literature, studies, nearby wells, etc.).
- VIII. Attach appropriate geological data on the injection zone including appropriate lithologic detail, geological name, thickness, and depth. Give the geologic name, and depth to bottom of all underground sources of drinking water (aquifers containing waters with total dissolved solids concentrations of 10,000 mg/l or less) overlying the proposed injection zone as well as any such source known to be immediately underlying the injection interval. SEE ATTACHED
- IX. Describe the proposed stimulation program, if any. SEE ATTACHED
- X. Attach appropriate logging and test data on the well. (If well logs have been filed with the Division they need not be resubmitted.) SEE ATTACHED
- XI. Attach a chemical analysis of fresh water from two or more fresh water wells (if available and producing) within one mile of any injection or disposal well showing location of wells and dates samples were taken. SEE ATTACHED
- XII. Applicants for disposal wells must make an affirmative statement that they have examined available geologic and engineering data and find no evidence of open faults or any other hydrologic connection between the disposal zone and any underground source of drinking water. SEE ATTACHED
- XIII. Applicants must complete the "Proof of Notice" section on the reverse side of this form.
- XIV. Certification

I hereby certify that the information submitted with this application is true and correct to the best of my knowledge and belief.

Name: Randy A. McClay Title: Engineering Manager

Signature: *Randy A. McClay* Date: 5/24/85

If the information required under Sections VI, VIII, X, and XI above has been previously submitted, it need not be duplicated and resubmitted. Please show the date and circumstance of the earlier submittal. Unitization Hearing NMOCC February 28, 1968

Case No. 3730 Order No. R-3385

DISTRIBUTION: Original and one copy to Santa Fe with one copy to the appropriate Division

III. WELL DATA

A. The following well data must be submitted for each injection well covered by this application. The data must be both in tabular and schematic form and shall include:

- (1) Lease name; Well No.; location by Section, Township, and Range; and footage location within the section.
- (2) Each casing string used with its size, setting depth, sacks of cement used, hole size, top of cement, and how such top was determined.
- (3) A description of the tubing to be used including its size, lining material, and setting depth.
- (4) The name, model, and setting depth of the packer used or a description of any other seal system or assembly used.

Division District offices have supplies of Well Data Sheets which may be used or which may be used as models for this purpose. Applicants for several identical wells may submit a "typical data sheet" rather than submitting the data for each well.

B. The following must be submitted for each injection well covered by this application. All items must be addressed for the initial well. Responses for additional wells need be shown only when different. Information shown on schematics need not be repeated.

- (1) The name of the injection formation and, if applicable, the field or pool name.
- (2) The injection interval and whether it is perforated or open-hole.
- (3) State if the well was drilled for injection or, if not, the original purpose of the well.
- (4) Give the depths of any other perforated intervals and detail on the sacks of cement or bridge plugs used to seal off such perforations.
- (5) Give the depth to and name of the next higher and next lower oil or gas zone in the area of the well, if any.

XIV. PROOF OF NOTICE

All applicants must furnish proof that a copy of the application has been furnished, by certified or registered mail, to the owner of the surface of the land on which the well is to be located and to each leasehold operator within one-half mile of the well location.

Where an application is subject to administrative approval, a proof of publication must be submitted. Such proof shall consist of a copy of the legal advertisement which was published in the county in which the well is located. The contents of such advertisement must include:

- (1) The name, address, phone number, and contact party for the applicant;
- (2) the intended purpose of the injection well; with the exact location of single wells or the section, township, and range location of multiple wells;
- (3) the formation name and depth with expected maximum injection rates and pressures; and
- (4) a notation that interested parties must file objections or requests for hearing with the Oil Conservation Division, P. O. Box 2088, Santa Fe, New Mexico 87501 within 15 days.

NO ACTION WILL BE TAKEN ON THE APPLICATION UNTIL PROPER PROOF OF NOTICE HAS BEEN SUBMITTED.

NOTICE: Surface owners or offset operators must file any objections or requests for hearing of administrative applications within 15 days from the date this application was mailed to them.

Faye Klein
P. O. BOX 1503
Hobbs, NM 88240

VI

| <u>WELL</u> | <u>TYPE</u> | <u>CONSTRUCTION CSG DEPTH</u> | <u>DATE COMPLETED</u> | <u>LOCATION</u> |
|----------------------------------|-----------------|-----------------------------------|---------------------------|-----------------|
| TAMARACK PETROLEUM COMPANY, INC. | | | | |
| SPQU 10 | Prod | 5 1/2 @ 5000 | 10/2/61 | J-4-20S-35E |
| SPQU 11 | Inj | 5 1/2 @ 5016 | 10/18/61 | K-4-20S-35E |
| SPQU 12 | Proposed Inj | 5 1/2 @ 5042 | 12/1/61 | L-4-20S-35E |
| SPQU 13 | Inj | 4 1/2 @ 5055 | 2/14/62 | P-5-20S-35E |
| SPQU 14 | Prod | 5 1/2 @ 5030 | 11/11/61 | M-4-20S-35E |
| SPQU 15 | Proposed Inj | 5 1/2 @ 5041 | 9/14/61 | N-4-20S-35E |
| SPQU 16 | Prod | 5 1/2 @ 5024 | 8/26/60 | O-4-20S-35E |
| SPQU 17 | Prod | 5 1/2 @ 4983 | 12/3/60 | P-4-20S-35E |
| SPQU 23 | Inj | 4 1/2 @ 5013 | 12/17/60 | B-9-20S-35E |
| SPQU 24 | Prod | 4 1/2 @ 5034 | 8/18/61 | C-9-20S-35E |
| SPQU 25 | Proposed Inj | 4 1/2 @ 5063 | 11/13/61 | D-9-20S-35E |
| SPQU 26 | Inj | 4 1/2 @ 5100 | 9/4/68 | A-8-20S-35E |
| SPQU 27 | Inj | 4 1/2 @ 5080 | 11/10/61 | F-9-20S-35E |

SOUTHERN UNION PRODUCTION COMPANY

Federal
Saunders #8 Dry Hole 0 H @ 5040 3/15/62 I-5-20S-35E

ANDERSON PRICHERT OIL COMPANY

Jennie
Fisher #1 Dry Hole 0 H @ 4455 7/19/35 H-8-20S-35E

VII

1. Anticipated average daily injection - 350 Barrels
Maximum daily injection - 700 Barrels
2. Closed system
3. Anticipated average pressure - 1800 PSIG
Maximum pressure - 2300 PSIG
4. Produced water from Pearl Queen

VIII

Geologic Data previously submitted.

IX

No Stimulation anticipated

X

Logs previously submitted

XI

No active fresh water wells within one mile of the proposed injectors.

XII

There are no open faults or any other hydrologic connection between the disposal zone and any underground source of drinking water based on the available geologic and engineering data.

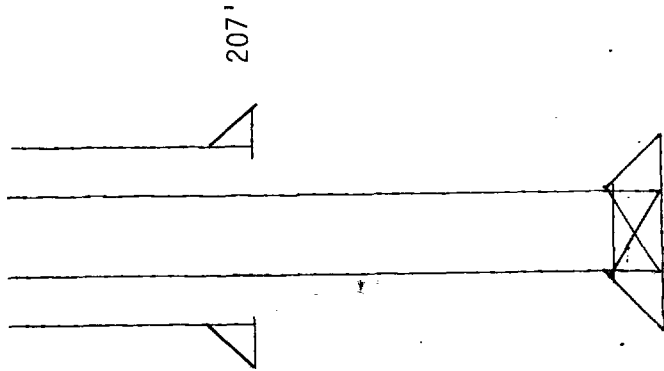
INJECTION WELL DATA SHEET

SIDE 1

OPERATOR Tamarack Petroleum Company, Inc. LEASE South Pearl Queen Unit

WELL NO. 12 FOOTAGE LOCATION 1650' FSL & 990' FWL SECTION L-4-20S-35E TOWNSHIP RANGE

Schematic



8 5/8" 24#
100 sxs CMT

TOC 3206 TEMP

5 1/2" 15.5#
155 sxs 1 1/2 Reg
Diamix W/8% gel
50 sxs 1 1/2 Incon
-Diamix

Tabular Data

Surface Casing
Size 8 5/8 " Cemented with 100 sxs.
TOC Surface feet determined by Circulation
Hole size 11

Intermediate Casing
Size None " Cemented with sxs.
TOC feet determined by
Hole size

Long string
Size 5 1/2 " Cemented with 205 sxs.
TOC 3206 feet determined by Temperature
Hole size 7 7/8
Total depth 5042

Injection Interval
4990 feet to 5003 feet
(perforated or open-hole, indicate which)

Tubing size 2 3/8" lined with TK-75 Plastic set in a

Baker AD-1 Tension packer at 4950 ± feet
(brand and model)

(or describe any other casing-tubing seal),

Other Data

1. Name of the Injection formation Queen

2. Name of field or Pool (if applicable) Pearl Queen

3. Is this a new well drilled for injection? Yes No
If no, for what purpose was the well originally drilled? Production

4. Has the well ever been perforated in any other zone(s)? List all such perforated intervals and give plugging detail (sacks of cement or bridge plug(s) used) Perforated w/ 4CJ at 4960' and squeezed with 185 sxs cement. Drilled out to PRTD at 5007 and tested casing to 2000 PSIG.

5. Give the depth to and name of any overlying and/or underlying oil or gas zones (pools) in this area. NONE

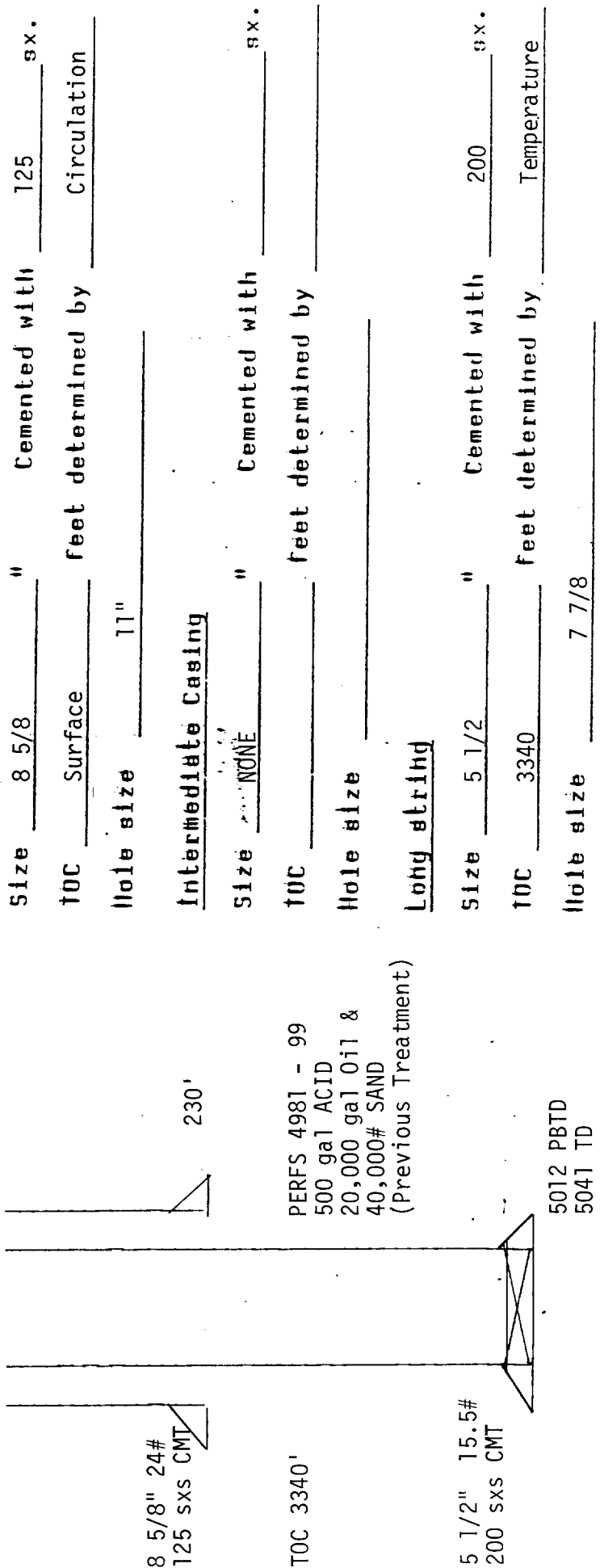
INJECTION WELL DATA SHEET

SIDE 1

Operator: Tamarack Petroleum Company, Inc. Lease: South Pearl Queen Unit

Well No.: 15 Footage Location: 660' FSL & 1980' FWL Section: N-4-20S-35E Township: Range:

Schematic



Tabular Data

Surface Casing
 Size 8 5/8 " Cemented with 125 sx.
 TOC Surface feet determined by Circulation
 Hole size 11"

Intermediate Casing
 Size NONE " Cemented with sx.
 TOC feet determined by
 Hole size

Log string
 Size 5 1/2 " Cemented with 200 sx.
 TOC 3340 feet determined by Temperature
 Hole size 7 7/8
 Total depth 5041

Injection Interval
4981 feet to 4999 feet
 (perforated or open-hole, indicate which)

Tubing size 2 3/8 lined with TK-75 Plastic set in a

Baker AD-1 Tension (material)

(brand and model) packer at 4950 ± feet

(or describe any other casing-tubing seal),

Other Data

1. Name of the injection formation Queen

2. Name of field or Pool (if applicable) Pearl Queen

3. Is this a new well drilled for injection? Yes No

If no, for what purpose was the well originally drilled? Production

4. Has the well ever been perforated in any other zone(s)? List all such perforated intervals and give plugging detail (sacks of cement or bridge plug(s) used) NO

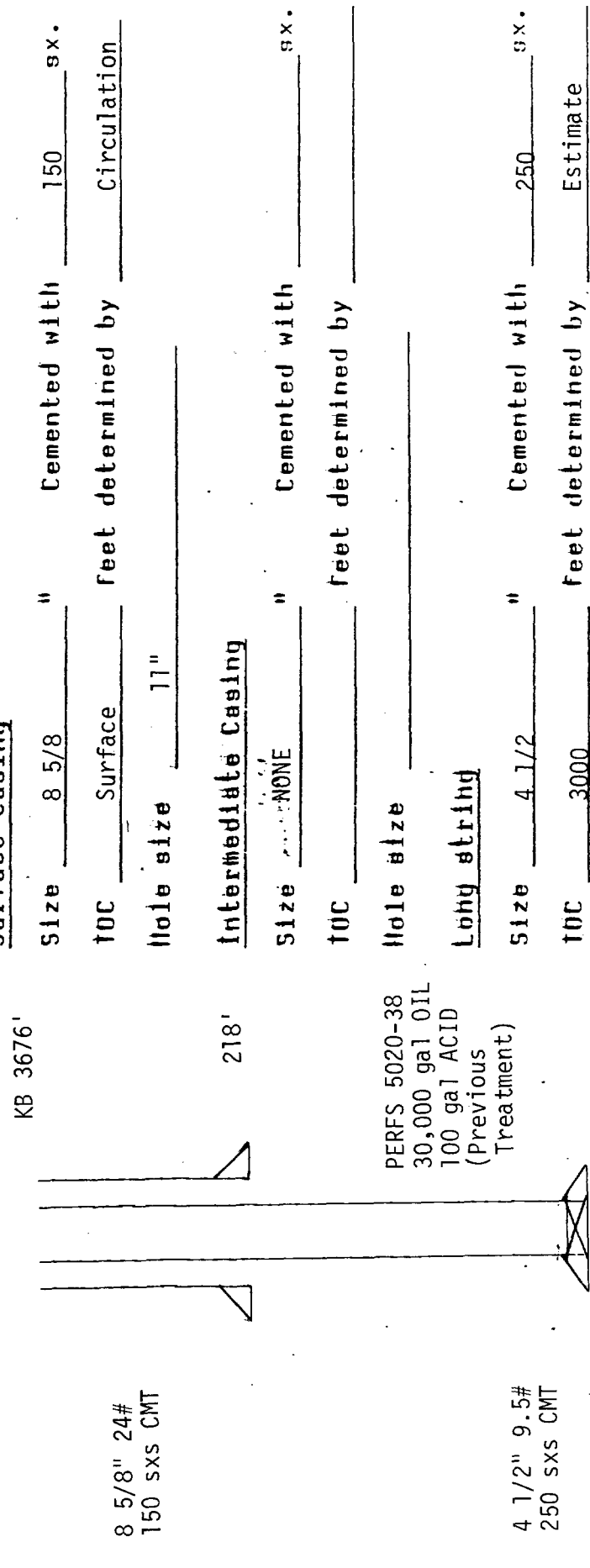
5. Give the depth to and name of any overlying and/or underlying oil or gas zones (pools) in this area. NONE

INJECTION WELL DATA SHEET

SIDE 1

Operator: Tamarack Petroleum Company, Inc. Lease: South Pearl Queen Unit
 Well No.: 25 Footage Location: 330' FNL & 660' FWL Section: D-9-20S-35E Range: _____
 Township: _____

Schematic



Tabular Data

Surface Casing
 Size: 8 5/8" Cemented with: 150 SXS.
 TOC: Surface feet determined by: Circulation
 Hole size: 11"

Intermediate Casing
 Size: NONE Cemented with: _____ SXS.
 TOC: _____ feet determined by: _____

Hole size: _____
 Log string: _____
 Size: 4 1/2" Cemented with: 250 SXS.
 TOC: 3000 feet determined by: Estimate
 Hole size: 7 7/8
 Total depth: 5062

Injection Interval: 5020 feet to 5038 feet
 (perforated or open-hole, indicate which)

Tubing size 2 3/8 lined with TK-75 Plastic set in a

(material)

Baker AD-1 Tension packer at 5000 ± feet

(brand and model)

(or describe any other casing-tubing seal),

Other Data

1. Name of the injection formation Queen

2. Name of field or Pool (if applicable) Pearl Queen

3. Is this a new well drilled for injection? Yes No

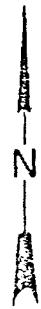
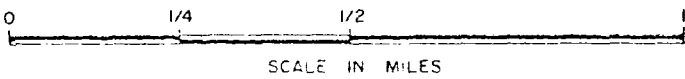
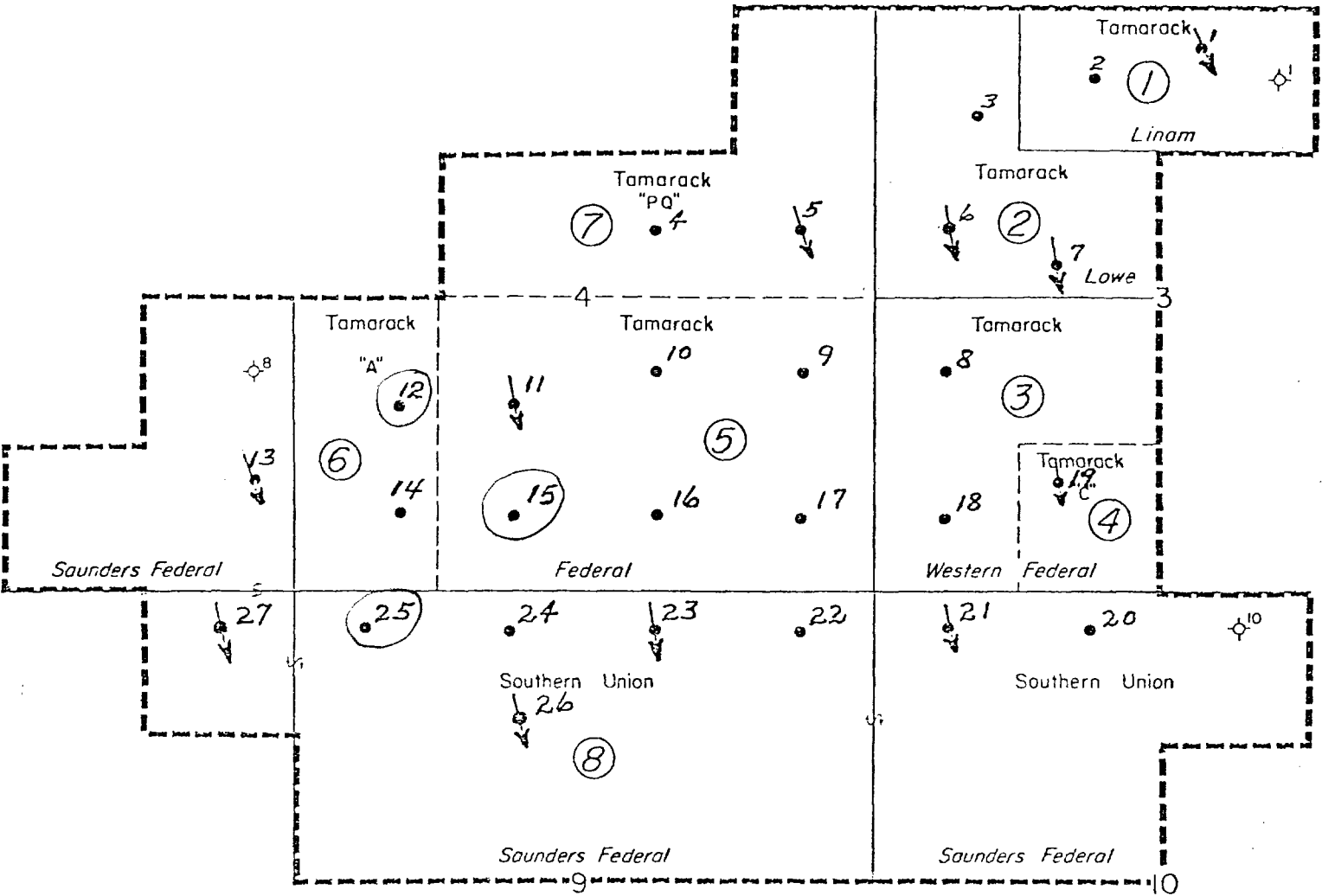
If no, for what purpose was the well originally drilled? Production

4. Has the well ever been perforated in any other zone(s)? List all such perforated intervals and give plugging detail (sacks of cement or bridge plug(s) used) NO

5. Give the depth to and name of any overlying and/or underlying oil or gas zones (pools) in this area. NONE

R 35 E

T
20
S



LEGEND

- (2) Tract Number
- - - Unit Boundary
- ↓ Injection Well

EXHIBIT "A"

TO UNIT AGREEMENT

SOUTH PEARL QUEEN UNIT

LEA COUNTY, NEW MEXICO

AFFIDAVIT OF PUBLICATION

State of New Mexico,

County of Lea.

1, _____

Robert L. Summers

of the Hobbs Daily News-Sun, a daily newspaper published at Hobbs, New Mexico, do solemnly swear that the clipping attached hereto was published once a week in the regular and entire issue of said paper, and not in a supplement thereof for a period

of _____

One weeks.

Beginning with the issue dated

May 17, 19 85

and ending with the issue dated

May 17, 19 85

Robert L. Summers

Publisher.

Sworn and subscribed to before

me this 17 day of

May, 19 85

Vera Murphy

Notary Public.

My Commission expires _____

Nov. 14, 19 88

(Seal)

This newspaper is duly qualified to publish legal notices or advertisements within the meaning of Section 3, Chapter 167, Laws of 1937, and payment of fees for said publication has been made.

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LEGAL NOTICE
MAY 17, 1985
NOTICE OF APPLICATION
FOR FLUID INJECTION
 Tamarack Petroleum Company, Inc. P. O. Box 2046, Midland, TX 79702-2046, (915) 683-5474, Randy A. McClay, Engineering Manager, is making application to the New Mexico Oil Conservation Commission for permission to inject fluid into a formation productive of oil or gas.
 The applicant proposes to inject produced water in South Pearl Queen Unit Wells No. 12, L-4-20S-35E, No. 15, N-4-20S-35E and No. 25, D-9-20S-35E into the Queen Formation from 4981 to 5038 feet, for the purpose of secondary recovery.
 The maximum injection will be 700 barrels of water at 2300 psig into each well.
 Interested parties must file objection or requests for hearing with the Oil Conservation Commission Division, P. O. Box 2088, Santa Fe, New Mexico 87501 within 15 days.