

SWD  
746

5/24/99  
FORM C-108  
Revised 4-1-98

VERBAL  
6-11-99  
MM

APPLICATION FOR AUTHORIZATION TO INJECT

- I. PURPOSE: Secondary Recovery Pressure Maintenance ☒ Disposal Storage  
Application qualifies for administrative approval? ☒ Yes ☐ No
- II. OPERATOR: Southwest Royalties, Inc.  
ADDRESS: P.O. Box 11390 Midland, Tx 79702  
CONTACT PARTY: C.M. Bloodworth, P.E. PHONE: (915) 638-9927
- ✓ 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 7504
- ✓ 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.
- ✓ VII. Attach data on the proposed operation, including:
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 geologic data on the injection zone including appropriate lithologic detail, geologic 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 sources known to be immediately underlying the injection interval.
- IX. Describe the proposed stimulation program, if any.
- \*X. Attach appropriate logging and test data on the well. (If well logs have been filed with the Division, they need not be resubmitted).
- \*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.
- 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 sources of drinking water.
- 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: C.M. Bloodworth, P.E. TITLE: Area Supervisor  
SIGNATURE: [Signature] DATE: 5/5/99
- \* If the information required under Sections VI, VIII, X, and XI above has been previously submitted, it need not be resubmitted. Please show the date and circumstances of the earlier submittal: \_\_\_\_\_

### 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 the 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, 2040 South Pacheco, Santa Fe, New Mexico 87505, within 15 days.

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

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**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.

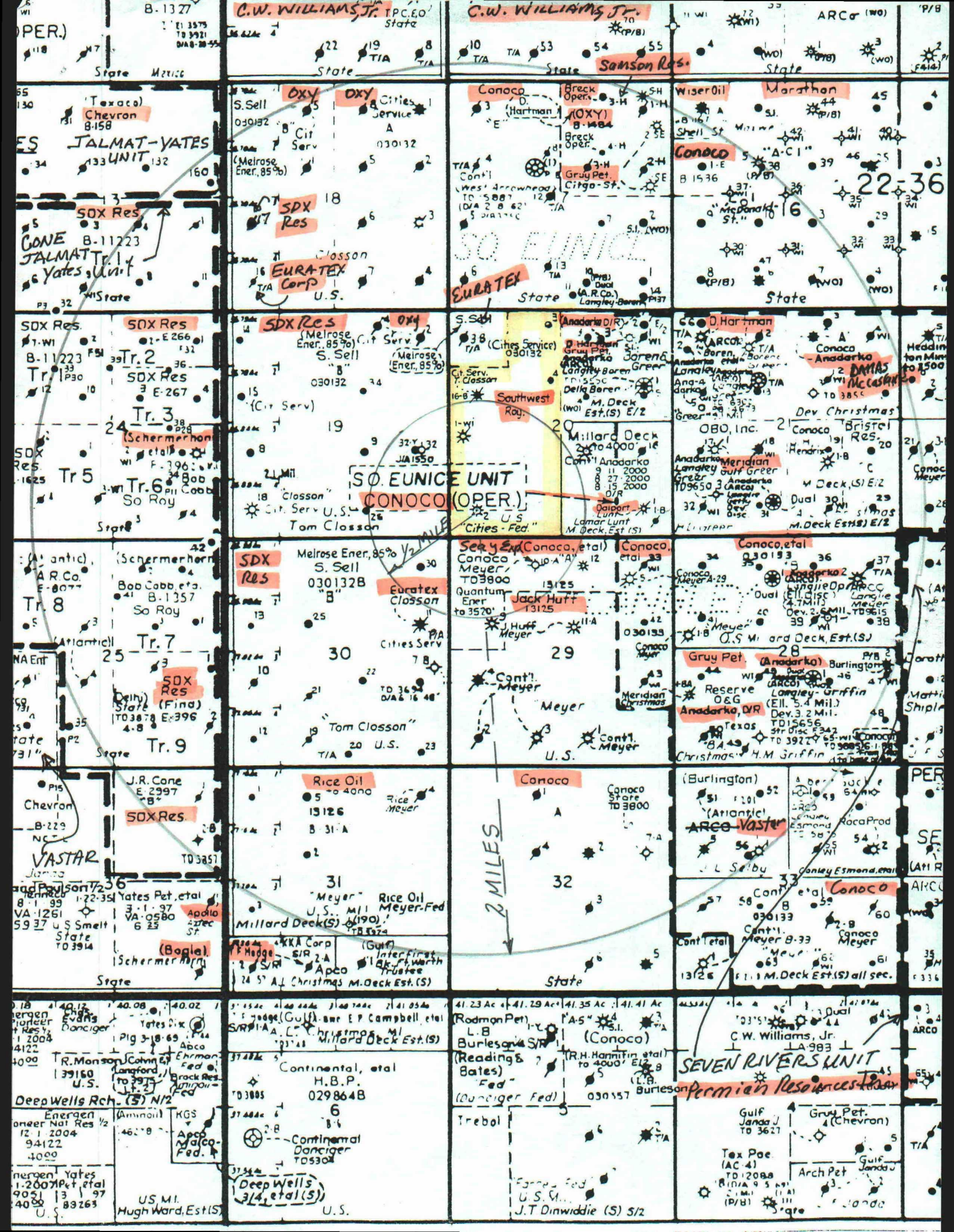
## Cities Federal Well No. 2 Salt Water Disposal Application

### Well Data:

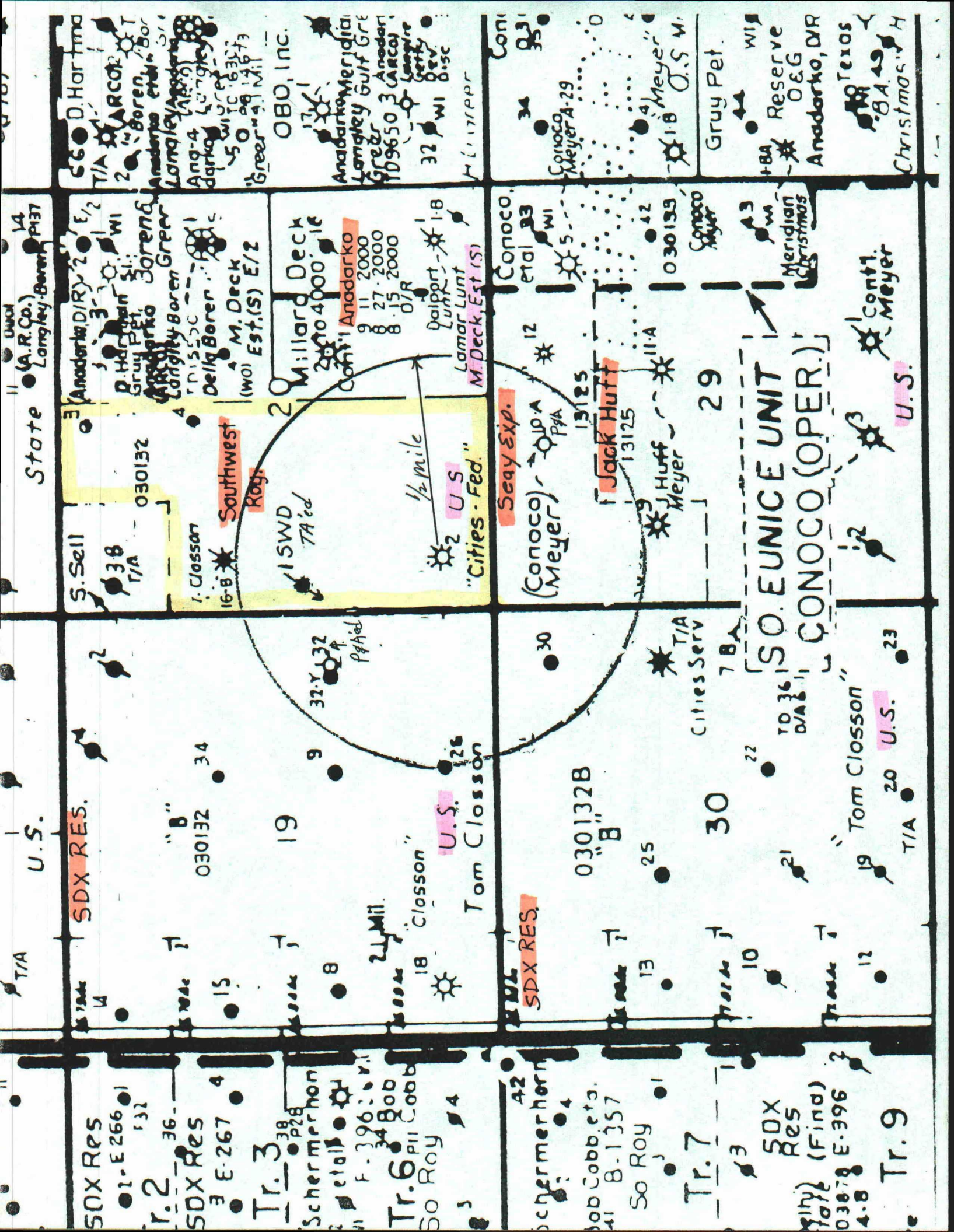
- III B. Porous intervals in the Seven Rivers and Queen formations from 3,492' to 3,860' are to be perforated and used for disposal of water. The well was originally drilled as a Yates and Seven Rivers gas well. The Seven Rivers was tested through perforations at 3,492' to 3,678'. The Seven Rivers interval did not yield commercial production. The Seven Rivers interval was abandoned by squeezing it with 200 sacks of cement. The Yates was tested through perforations at 3,300' to 3,363'. Commercial production was established in the Yates and the well was put on production. Prior to conversion for disposal the Yates interval will be squeezed with 100 to 150 sacks of cement.
- The next highest productive formation above the propose disposal zone is the Yates which is found at 3,300' to 3,363' in this well, and the next lower productive formation is the Langley (Strawn) with a top at  $\pm 9,000'$ .
- VII. The subject disposal well is to be converted to disposal to replace the Cities Federal No. The No. 1 well is scheduled to plugged and abandoned due to downhole mechanical problems. The new well will utilize the existing closed disposal system, as well as the existing location, access road and flowline. The maximum disposal volume is anticipated to be 1000 BWPD with a maximum disposal pressure of 1700 psi. Disposal is to be in the same Seven Rivers and Queen formations that were being used by the No. 1 well. Water will be disposed from the same sources as was previously disposed in the No. 1 well, thus no compatibility problems are expected.
- VIII. The Seven Rivers and Queen formations which are to be used for disposal are primarily limestone and dolomite. There are no known underground sources of drinking water overlying or underlying the disposal zone(s).
- IX. The perforations will be broken down with acid. If the zones will not take sufficient water then a fracture treatment may be performed.
- XI. There are no fresh water wells in the area.
- XII. The proposed replacement well is  $\pm 1,600'$  from the original disposal well, which had not shown any evidence of open faults or other hydrologic connection to an underground source of drinking water. No connections are anticipated in the new well.
- XIV. The surface owner and all leasehold owners within one half mile have been notified. The attached letters provides evidence of the notice. Please note that Seay Exploration is an agent for Quantum Energies. Quantum requested a copy of the permit application, and one was hand delivered on April 30,1999. Also attached is a copy of the published legal advertisement.

| Operator                  | Lease          | Well No. | Date Drld | Lea County, NM<br>Location | Surface csg<br>Size " /Depth ft | Surface csg<br>Cement sx | Prod csg<br>Size " /Depth ft | Prod csg<br>Cement sx | TD<br>ft | Completed interval<br>ft            | Formatio                                 | Type              | Remarks                          |
|---------------------------|----------------|----------|-----------|----------------------------|---------------------------------|--------------------------|------------------------------|-----------------------|----------|-------------------------------------|--|-------------------|----------------------------------|
| SDX Resources             | Closson "B"    | 26       | 10/23/79  | 19O, T22S, R36E            | 8 5/8<br>421                    | 275                      | 5 1/2<br>3948                | 675                   | 3950     | 3442-3580                           | Yates                                    | Oil               |                                  |
| SDX Resources             | Closson "B"    | 30       | 4/21/81   | 30A, T22S, R36E            | 8 5/8<br>483                    | 325                      | 5 1/2<br>3940                | 650                   | 3940     | 3801-3884                           | 7 Rivers                                 | Oil               |                                  |
| SDX Resources             | Closson "B"    | 32Y      |           | 19I, T22S, R36E            | 8 5/8<br>448                    | 275                      | 4 1/2<br>3864                | 760                   | 3920     | 3286-3450                           | Yates                                    | Gas               |                                  |
| SDX Resources             | Closson "B"    | 32       |           | 19I, T22S, R36E            | 8 5/8<br>472                    | Circ                     | NA<br>NA                     |                       |          |                                     |  | Junked            | P&A'ed                           |
| Conoco                    | Meyer "A-29"   | 10       | 11/4/79   | 29C, T22S, R36E            | 8 5/8<br>1350                   | 460                      | 5 1/2<br>3771                | 975                   | 3800     | 3148-3192<br>3348-3376              | Yates<br>7 Rivers                        | Wtr               | P&A'ed<br>P&A'ed                 |
| Southwest Royalties, Inc. | Cities Federal | 1 SWD    | 1/15/71   | 20L, T22S, R36E            | 8 5/8<br>335                    | 225                      | 4 1/2<br>3800                | 400                   | 3800     | 3150-3590<br>3498-3790<br>3652-3790 | Yates<br>7 Rivers<br>7 Rivers &<br>Queen | Gas<br>Wtr<br>SWD | TA'ed<br>TA'ed<br>P&A<br>pending |









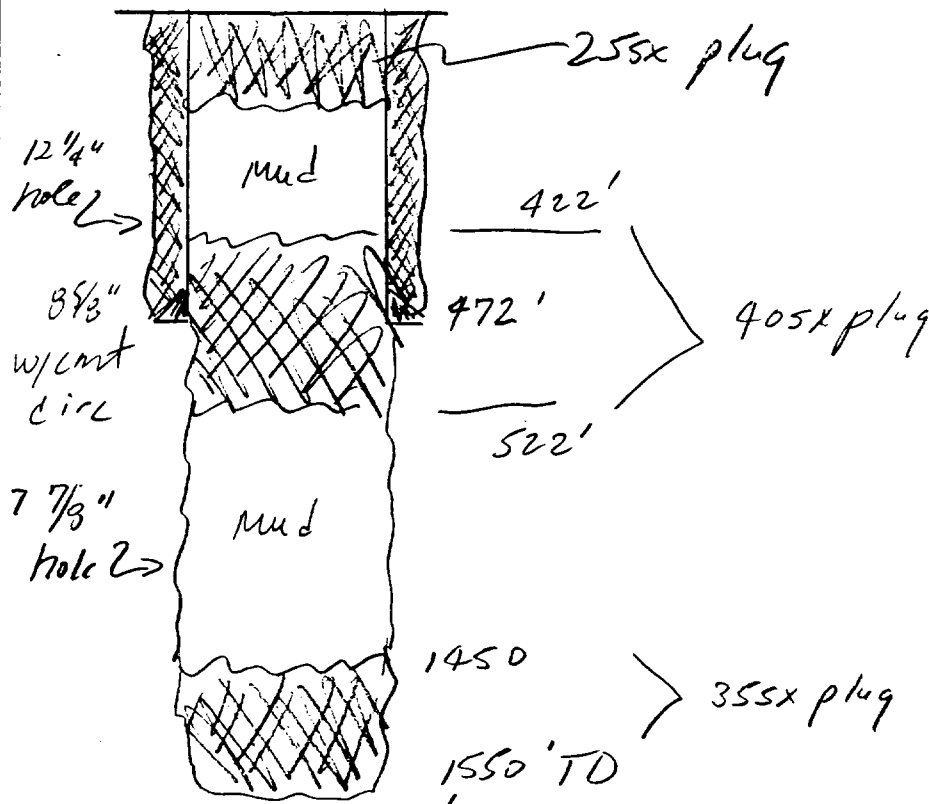
# SOUTHWEST ROYALTIES

PROJECT Plugged Well Schematic

PAGE \_\_\_\_\_ OF \_\_\_\_\_  
BY \_\_\_\_\_ DATE \_\_\_\_\_

Closson "B" No 32  
Talmat Yates Tansill 7 Rivers Field  
660' FEL & 1930' FSL  
Sec 19, T22S, R36E Unit I  
Fed Lease LC 030132  
Lea County, NM

Spudded 11/7/86  
Junked 11/21/86  
P&A'd 11/21/86





# SOUTHWEST ROYALTIES

PROJECT Plugged well Schematic

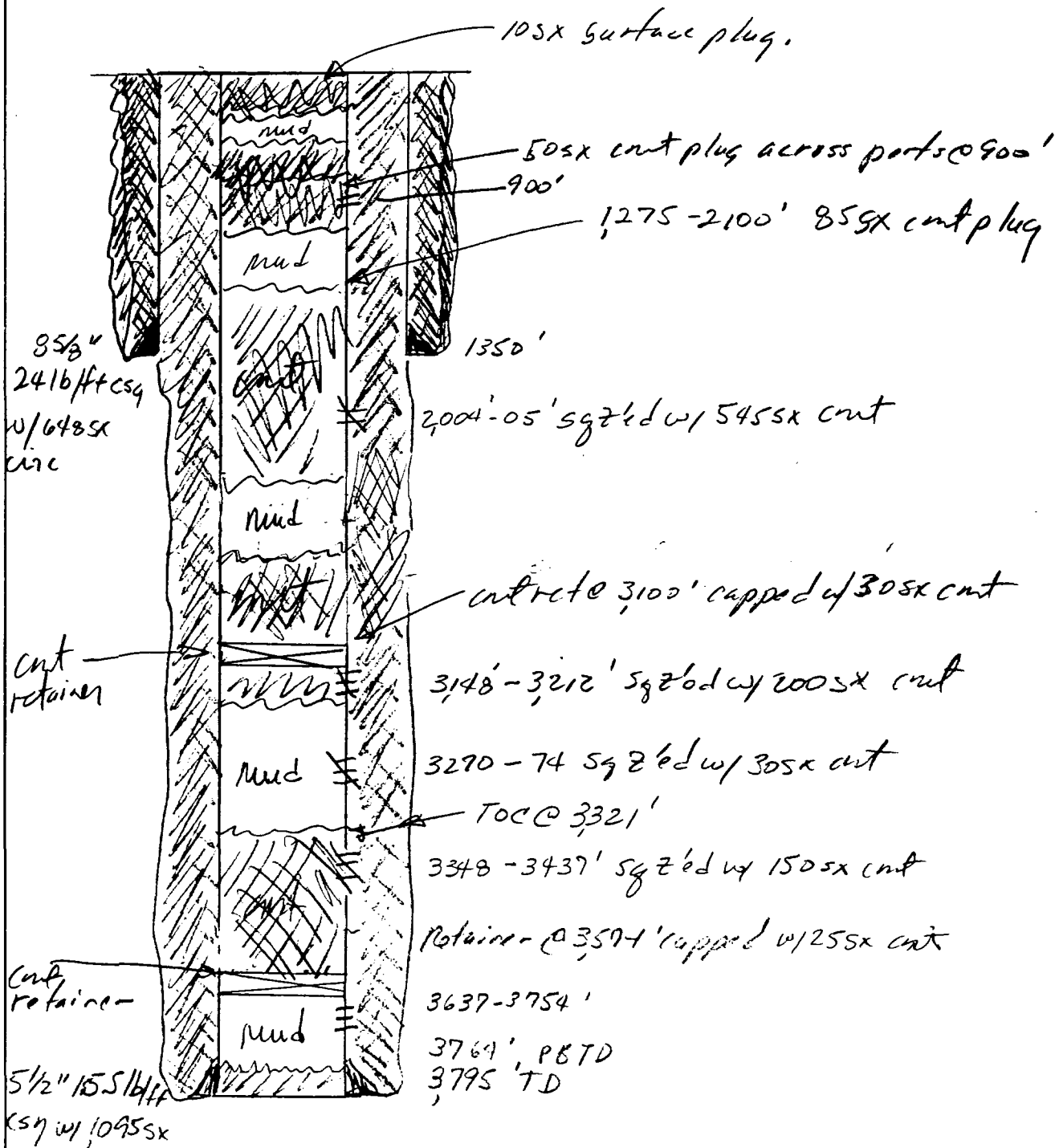
PAGE

OF

BY

DATE \_\_\_\_\_

Mayer A-29 No 10  
Tahmat Yates Tansill Trivers  
660' FNL & 1980' FWL  
Sec 29, T22S, R36E Unit C  
Federal lease NM 613125D  
Lea Co, NM





# SOUTHWEST ROYALTIES

PROJECT Cities Federal #1 SWD

PAGE 1

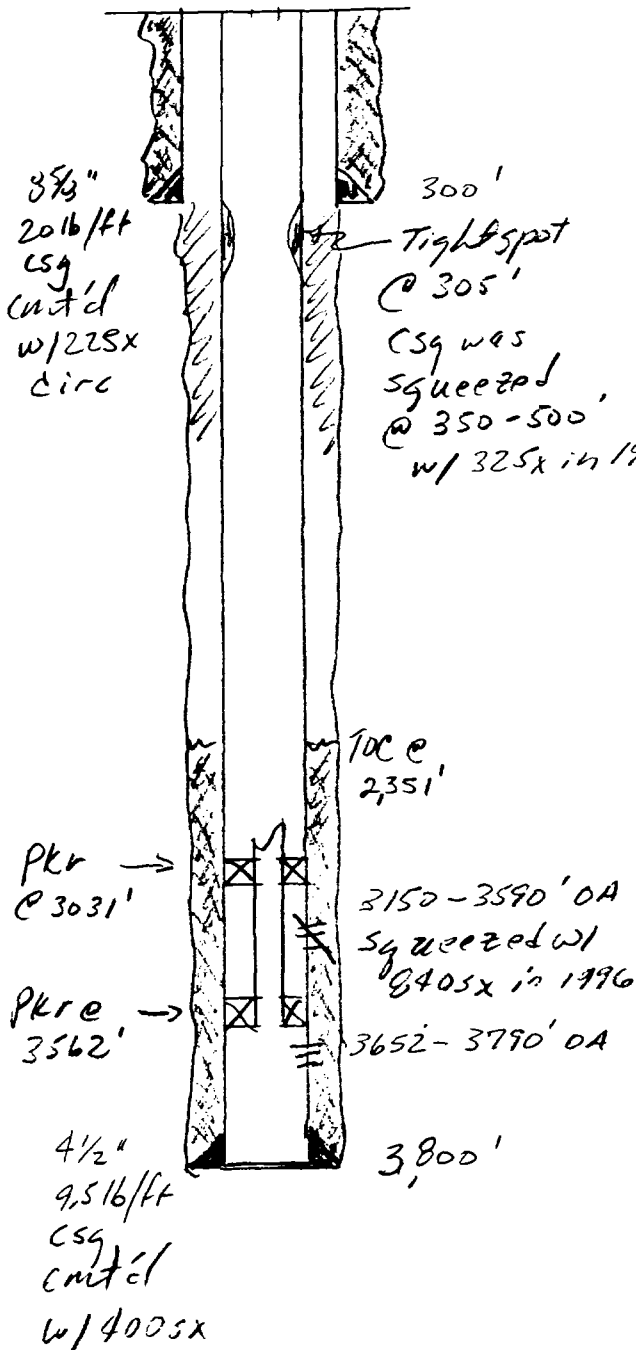
OF 1

BY

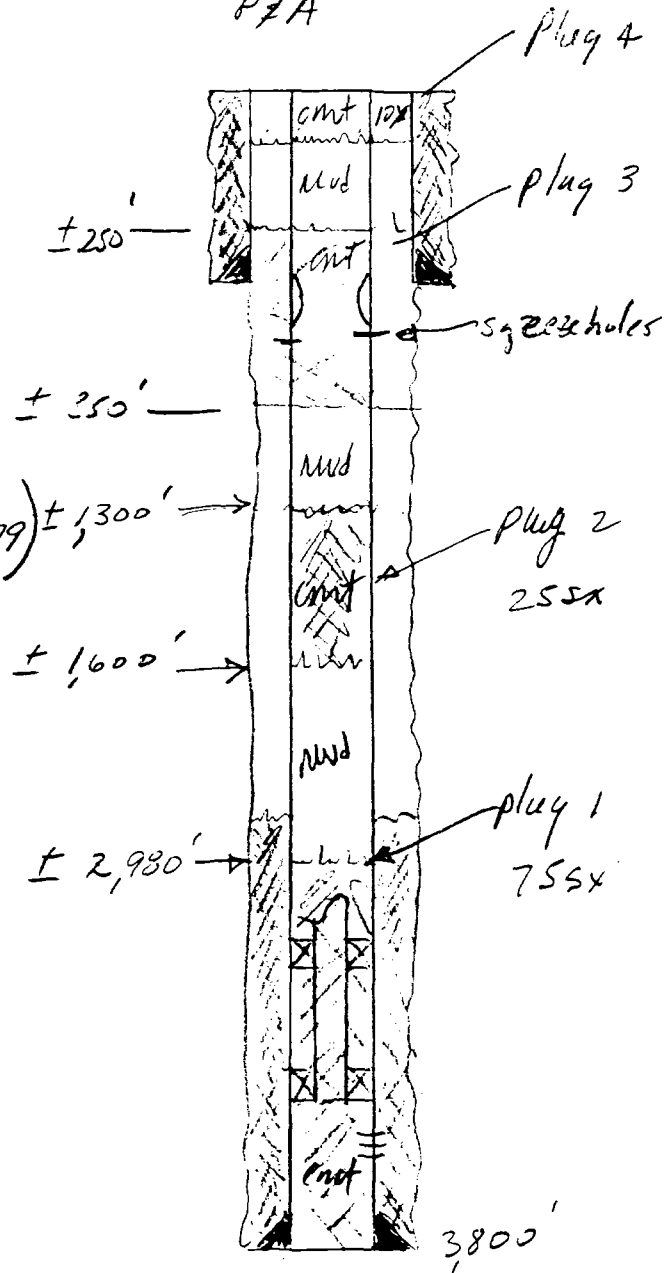
DATE

Sec 20, T22S, R36E, L46A,

Current  
Condition



Proposed  
P#A



Not to Scale  
diagrammatic sketch  
prepared by  
CM Bloodworth, P.E.  
4/10/99

# SOUTHWEST ROYALTIES

PROJECT Cities Federal Lease

PAGE 2 OF 2  
BY CMB DATE 9/12/99

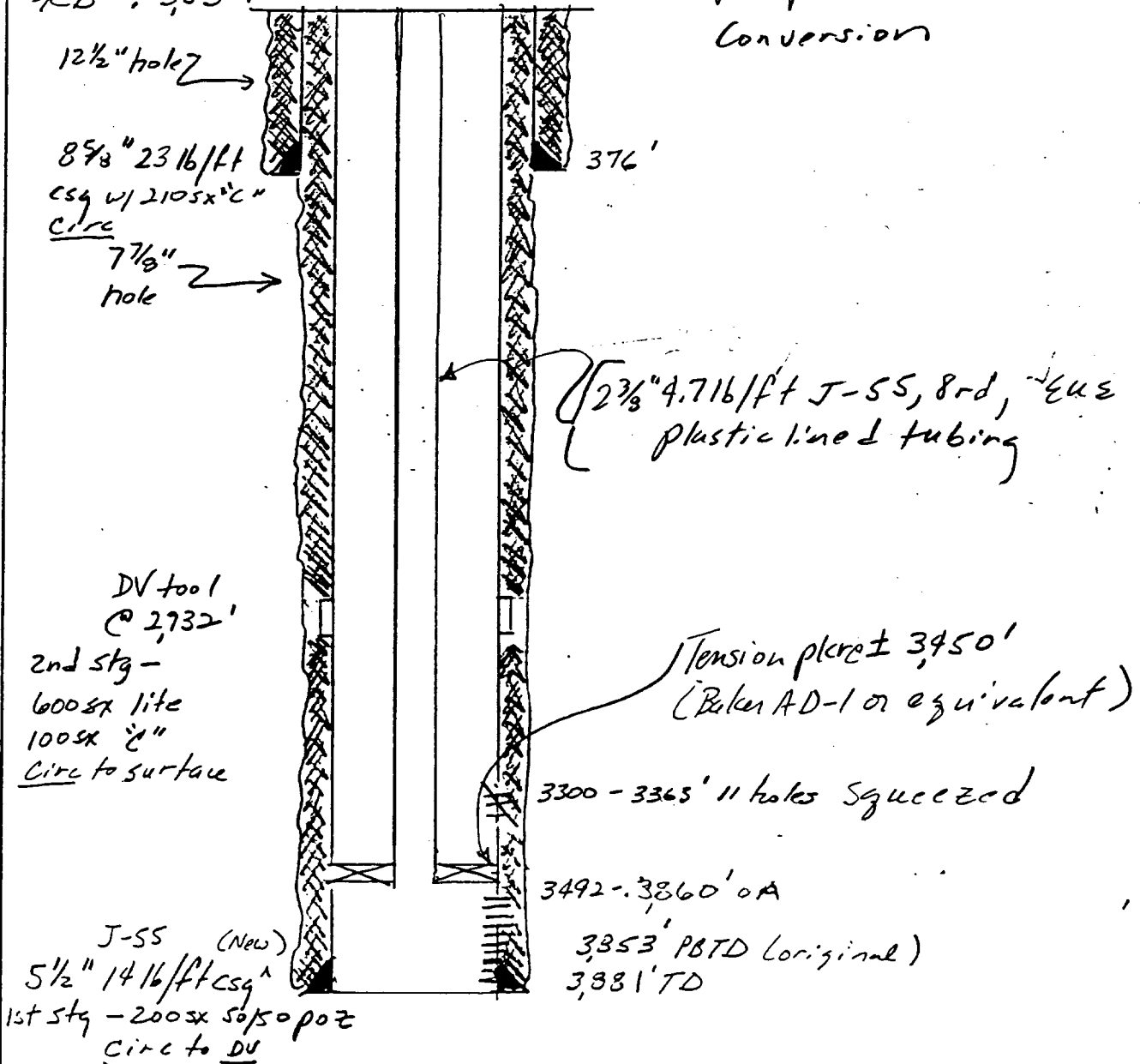
Cities Federal No 2-M  
Talmat Tansill Yates 7 Rivers  
660' FSL & 660' FWL  
Sec 20, T22S, R36E Unit M  
Lea Co, NM

Spudded: 11/11/83  
Dry Cap: 11/16/83  
Completed: 12/31/83

Top of salt 1650'  
Base of salt 3148'

GR: 3539'  
DF: 12'  
KB: 3551'

Proposed after  
Conversion



# SOUTHWEST ROYALTIES

PROJECT Cities Federal Lease

PAGE 1 OF 2  
BY CMB DATE 9/12/99

Cities Federal No 2-M  
Talmat Tansill Yates 7 Rivers  
660' FSL & 660' FWL  
Sec 20, T22S, R36E Unit M  
Lea Co, NM

Spudded: 11/11/83  
Drly Comp: 11/16/83  
Completed: 12/31/83

Top of salt 1650'  
Base of salt 3148'

GR: 3,539'  
DF: 12'  
KB: 3,551'

Before Conversion

12 1/2" hole →

8 5/8" 23 16/ft  
CSG w/ 2105x 1/2" CIRC

7 7/8" hole →

376'

DV tool  
@ 2732'

2nd stg -  
600sx lite  
100sx 8"  
Circ to surface

3300 - 3363' 11 holes

→ PBTD 3430' after 58E  
3492 - 3673 14 holes 58E w/ 2005x 1 1/2"

J-55 (New)

5 1/2" 14 16/ft CSG

1st stg - 200sx 50/50 pot  
Circ to DV

3353' PBTD (original)  
3381' TD



AFFIDAVIT OF PUBLICATION

State of New Mexico,  
County of Lea.

I,

Publisher

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 a  
supplement thereof for a period.

of 1

weeks.

Beginning with the issue dated

April 18 1999

and ending with the issue dated

April 18 1999

*Jodi Benson*

Publisher

Sworn and subscribed to before

me this 17th day of

April 1999

*Jodi Benson*

Notary Public.

My Commission expires  
October 18, 2000  
(Seal)

**LEGAL NOTICE**  
**April 18, 1999**  
**APPLICATION FOR**  
**AUTHORIZATION TO**  
**INJECT**

Southwest Royalties, Inc.,  
P.O. Box 11390, Midland, Tx.  
79702. (915) 686-9927 is  
seeking approval from the  
New Mexico Oil Conservation  
Division to utilize the Cities  
Federal #2 as a replacement  
disposal well for the Cities  
Federal #1 well. The well is  
located 660 FWL & 660 FSL  
Unit M, Sec 20, T22S, R36E,  
Lea County, New Mexico.

The proposed disposal inter-  
val is the Seven Rivers, and  
Queen formations through  
perforations from 3492 to  
3860'. Southwest Royalties,  
Inc. intends to inject a maxi-  
mum of 1000 BWPD with a  
maximum pressure of 1700  
psig.

Parties with questions regard-  
ing this proposal can contact  
Marty Bloodworth with South-  
west Royalties, Inc. at the ad-  
dress or phone number  
above.

Interested parties must file  
objections or requests for  
hearing within 15 days to the  
Oil Conservation Division;  
2040 Pacheco, Santa Fe,  
New Mexico 87505.

#16559

**ILLEGIBLE**

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

01101469000      02526370  
Southwest Royalties, Inc.  
P.O. Box 11390  
a/c# 476043  
Midland, TX 79702

SWD-746



STATE OF NEW MEXICO  
ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT  
OIL CONSERVATION DIVISION  
HOBBS DISTRICT OFFICE

GOVERNOR

5/7/99

POST OFFICE BOX 1980  
HOBBS, NEW MEXICO 88241-1980  
(505) 393-6161

OIL CONSERVATION DIVISION  
P. O. BOX 2088  
SANTA FE, NEW MEXICO 87501

RE: Proposed:

|     |                |
|-----|----------------|
| MC  | _____          |
| DHC | _____          |
| NSL | _____          |
| NSP | _____          |
| SWD | <u>X</u> _____ |
| WFX | _____          |
| PMX | _____          |

Gentlemen:

I have examined the application for the:

|                                |                       |                   |
|--------------------------------|-----------------------|-------------------|
| <u>Southwest Royalties Inc</u> | <u>Cities Federal</u> | <u>#2-M</u>       |
| Operator                       | Lease & Well No.      | Unit S-T-R        |
|                                |                       | <u>20-225-36e</u> |

and my recommendations are as follows:

OK

Yours very truly,

*Chris Williams*

Chris Williams  
Supervisor, District 1

/ed