

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: R7504
 - 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: _____

MAY 7 1999
OIL CONSERVATION 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 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.

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 Location	Surface csg Size "/>Depth ft	Surface csg Cement sx	Prod csg Size "/>Depth ft	Prod csg Cement sx	TD ft	Completed interval ft	Formatio	Type	Remarks
SDX Resources	Closson "B"	26	10/23/79	19O, T22S, R36E	8 5/8 421	275	5 1/2 3948	675	3950	3442-3580	Yates	Oil	
SDX Resources	Closson "B"	30	4/21/81	30A, T22S, R36E	8 5/8 483	325	5 1/2 3940	650	3940	3801-3884	7 Rivers	Oil	
SDX Resources	Closson "B"	32Y		19I, T22S, R36E	8 5/8 448	275	4 1/2 3864	760	3920	3286-3450	Yates	Gas	
SDX Resources	Closson "B"	32		19I, T22S, R36E	8 5/8 472	Circ	NA NA					Junked	P&A'ed
Conoco	Meyer "A-29"	10	11/4/79	29C, T22S, R36E	8 5/8 1350	460	5 1/2 3771	975	3800	3148-3192 3348-3376	Yates 7 Rivers	Wtr Wtr	P&A'ed P&A'ed
Southwest Royalties, Inc.	Cities Federal	1 SWD	1/15/71	20L, T22S, R36E	8 5/8 335	225	4 1/2 3800	400	3800	3150-3590 3498-3790 3652-3790	Yates 7 Rivers 7 Rivers& Queen	Gas Wtr SWD	TA'ed TA'ed P&A pending

PER.)
B-1375
TO 3921
DIA 8-20-55
State Mexico

C.W. WILLIAMS, JR. TPC.E.O. State
22 19 T/A 8

C.W. WILLIAMS, JR. State
10 T/A 53 54 55
Sanson Res.

ARCO (WO) P/B
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100

JALMAT-YATES UNIT
Chevron B-158
133 132 160
SOX Res
CONE JALMAT Yates Unit
B-11223
6 Yates Unit
32 State

OXY OXY
S. Sell 030132
Cit Serv
(Melrose Ener. 85%)
18
SPX Res
Euratex Corp
U.S.
Closson
T/A

Conoco Breck Oper. (Hartman) (OXY) 8-1584
Breck Oper. 4-H
Gruy Pet. Cigo-St.
S.I. (WO)
SO EUNICE
EURATEX
State

Wiser Oil Marathon
Shell St
Conoco
22-36
State

SOX Res. B-11223 Tr. 1
SOX Res. E-266 Tr. 2
SOX Res. E-267 Tr. 3
SOX Res. F-396 Tr. 4
SOX Res. G-396 Tr. 5
So Roy
State

SOX Res. (Melrose Ener. 85%)
S. Sell 030132
Cit Serv
(Melrose Ener. 85%)
19
SO EUNICE UNIT
CONOCO (OPER.)
U.S.
Tom Closson

Anadarko D/R
D. Hartman
Gruy Pet.
Anadarko
Langley Boren Green
Della Boren
M. Deck Est. (S) E/Z
Millard Deck 2 to 4000
Anadarko 8 11 2000
8 27 2000
8 27 2000
Lamar Lunt
M. Deck Est. (S)

CC D. Hartman
ARCO
Boren
Langley Boren Green
Anadarko
Langley Boren Green
Anadarko
Langley Boren Green
OBO, Inc.
Anadarko Meridian
Langley Gulf Greer
TD 9650 3
Anadarko
Langley Boren Green
M. Deck Est. (S) E/Z
Dual 30
M. Deck Est. (S) E/Z

Tr. 8
Tr. 7
Tr. 9
SOX Res
State

SDX Res
Melrose Ener. 85%
S. Sell 030132
Euratex Closson
Cities Serv
Tom Closson
U.S.

Conoco et al
Conoco Meyer
TD 3800
Quantum Ener. to 3570
Jack Huff 13125
Huff Meyer
Cont'l Meyer
Meyer
U.S.

Conoco et al
Conoco Meyer
TD 3800
Quantum Ener. to 3570
Jack Huff 13125
Huff Meyer
Cont'l Meyer
Meyer
U.S.

Chevron
VASTAR
State

Rice Oil
to 4000
13126
B-31-A
31
"Meyer"
U.S. Mill Meyer-Fed
Millard Deck (S) 190
TR 1979

Conoco
Conoco Store TUN
TD 3800
2 MILES
State

(Burlington)
ARCO-VASTAR
Conoco
Cont'l Meyer
Cont'l Meyer
Meyer
U.S.

Deep Wells Rch. (S) N/2
Energen
State

Continental, et al
H.B.P.
029864B
6
Continental
Danciger
TD 5302
Deep Wells
3/4, et al (S)
U.S.

Trebol
Farrar Fed
U.S. Mill
J.T. Dinwiddie (S) 5/2

SEVEN RIVERS UNIT
Permian Resources
Gulf Janda
TD 3627
Gruy Pet.
(Chevron)
Tex Poe
(AC 4)
TD 2088
B/N/A 9 5 N/2
C.M. (I) (I)
(P/B) State

SOUTHWEST ROYALTIES

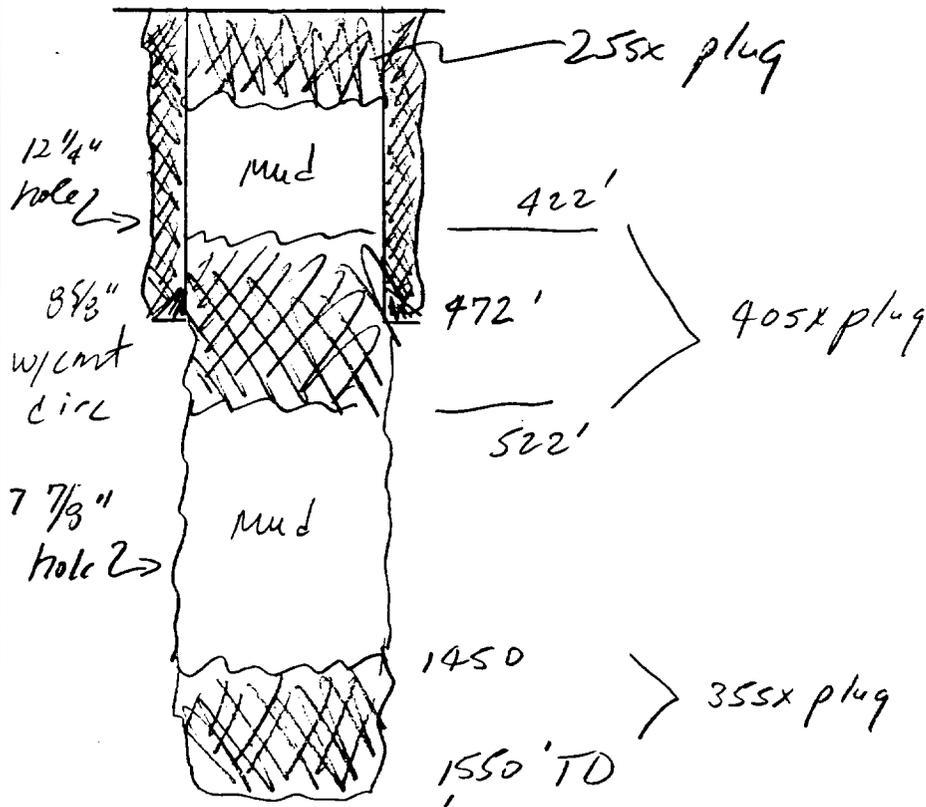
PROJECT Plugged Well Schematic

PAGE _____ OF _____

BY _____ DATE _____

Classon "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'ed 11/21/86

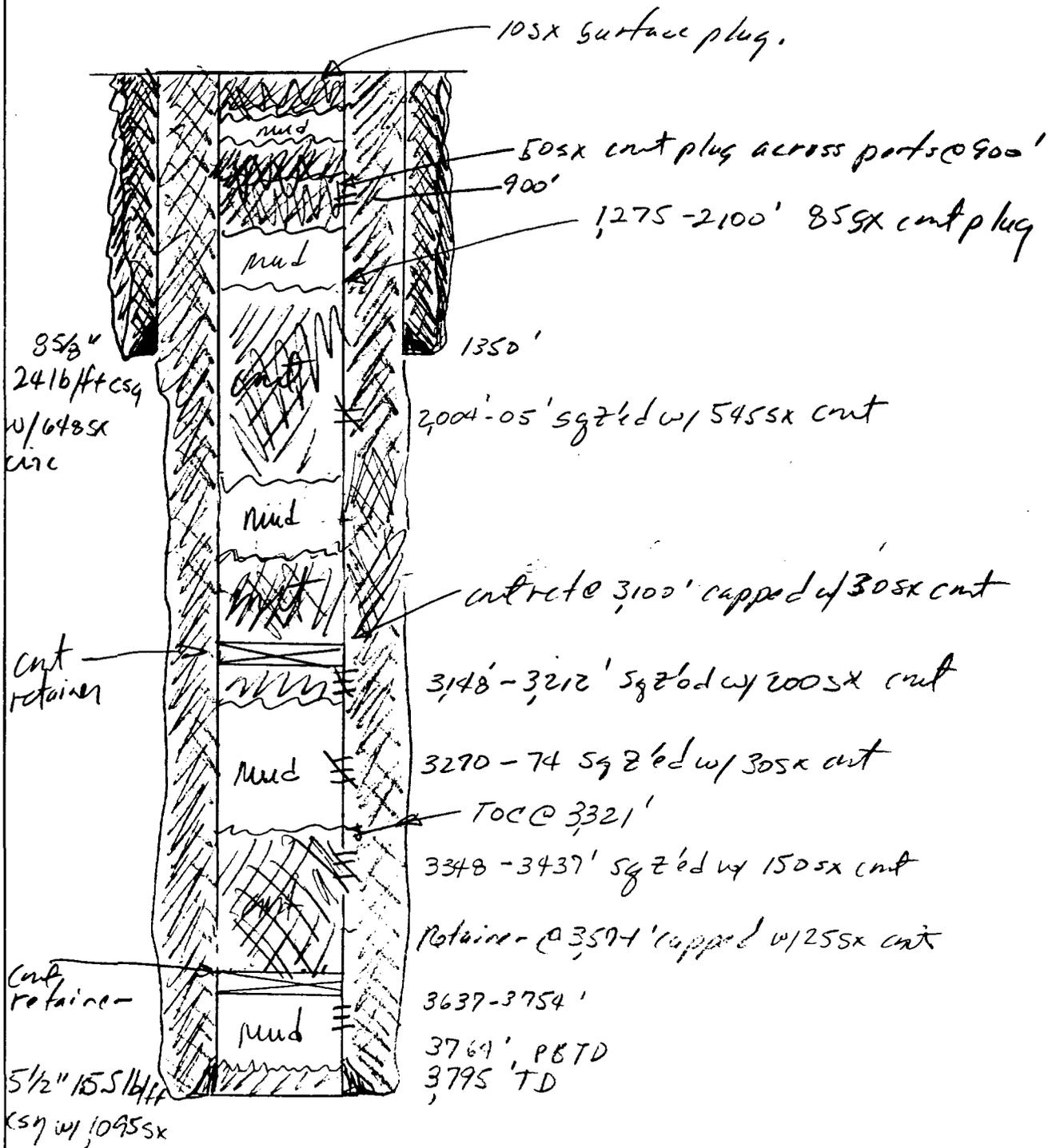


SOUTHWEST ROYALTIES

PROJECT Plugged well Schematic

PAGE _____ OF _____
 BY _____ DATE _____

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



SOUTHWEST ROYALTIES

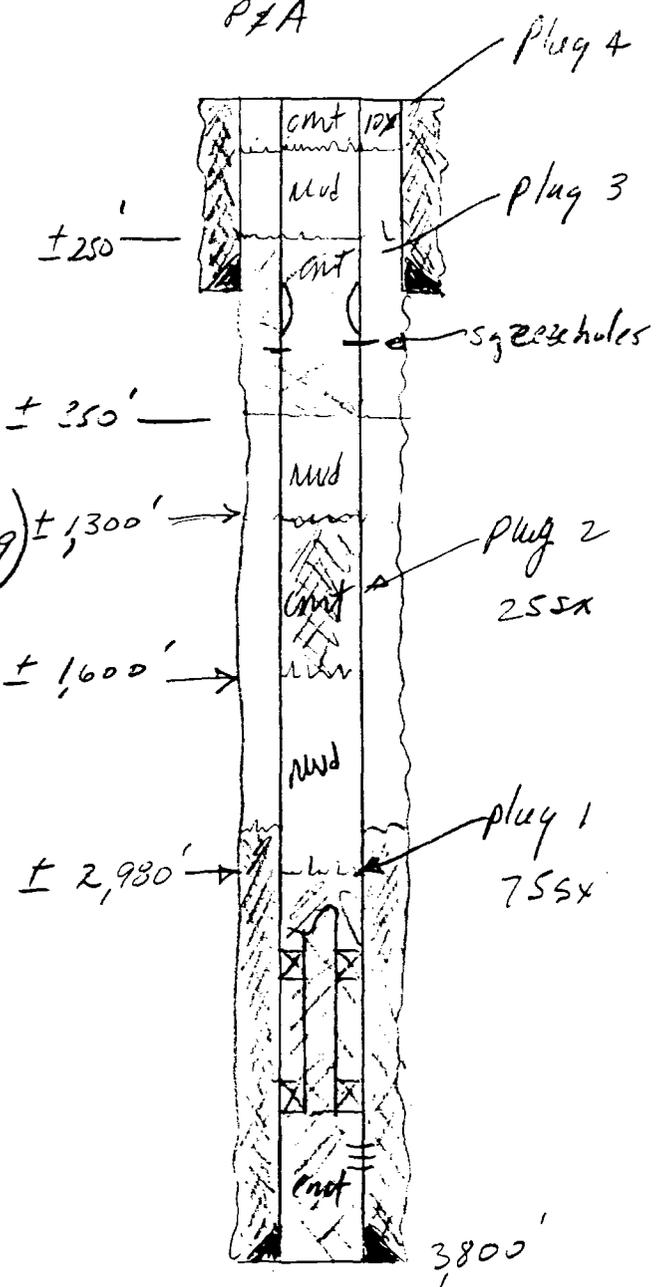
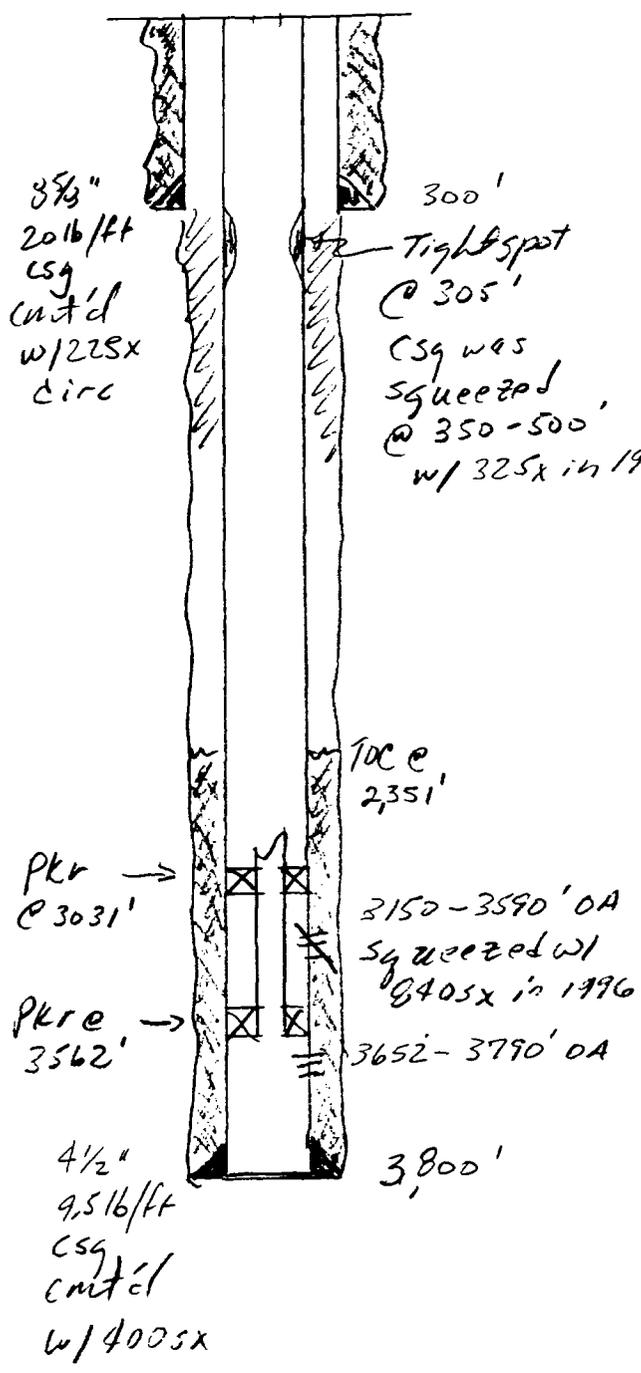
PROJECT *Cities Federal #1 SWD*

PAGE *1* OF *1*
 BY _____ DATE _____

Sec 20, T22S, R36E, Lea Co,

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

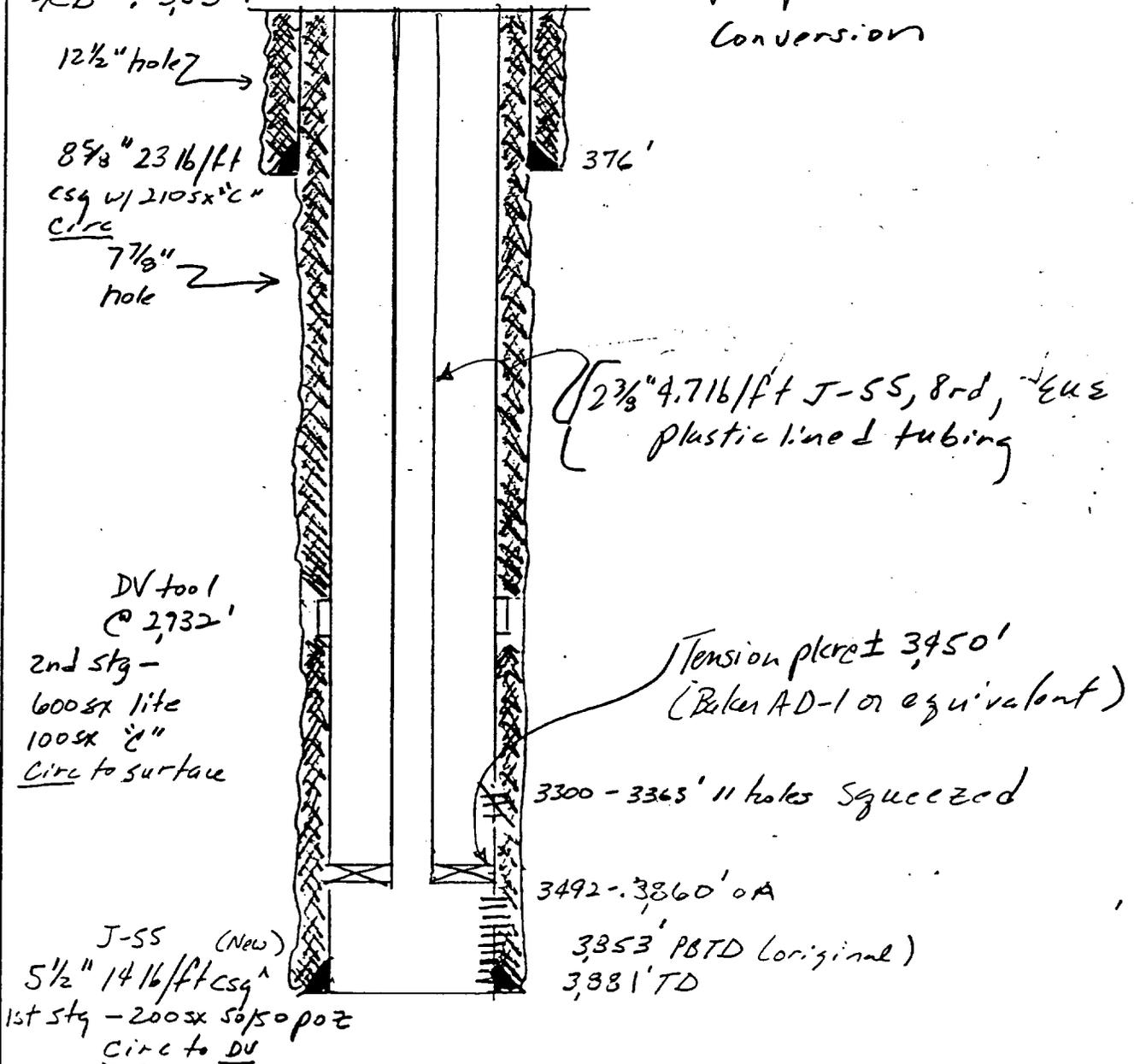
Cities Federal No 2-M
 Talmat Tansill Yates 7 Rivers
 660' FSL & 660' FWL
 Sec 20, T22S, R36E Unit M
 Lea Co, NM

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

Top of salt 1650'
 Base of salt 3149'

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

Proposed after
 Conversion



SOUTHWEST ROYALTIES

PROJECT Cities Federal Lease

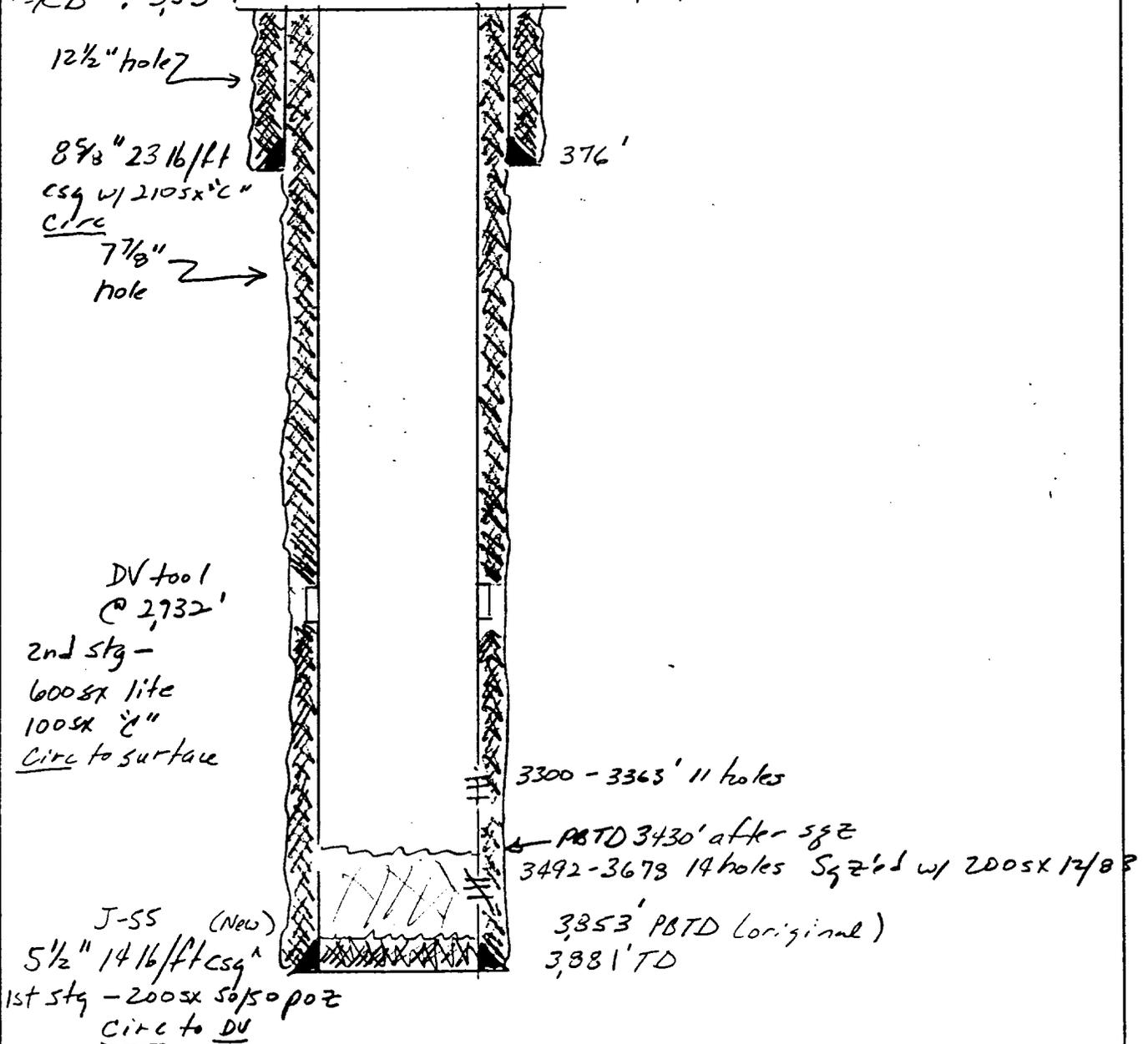
PAGE 1 OF 2
 BY CMB DATE 9/12/99

Cities Federal No 2-M
 Talmat Tansill Yates 7 Rivers
 660' FSL & 660' FWL
 Sec 20, T 22S, R 36E 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 3149'

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

Before Conversion



SWD-746



STATE OF NEW MEXICO
ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT

OIL CONSERVATION DIVISION
HOBBS DISTRICT OFFICE

5/7/99

GOVERNOR

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