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W. Thomas Kellahin
Karen Aubrey

Jason Kellahin
Of Counsel

Telephone 982-4285
Area Code 505
Fax: 505/982-2047

July 26, 1989

RECEIVED
JUL 26 1989
OIL CONSERVATION DIVISION

Case 9736

Mr. William J. LeMay
Oil Conservation Division
Post Office Box 2088
Santa Fe, New Mexico 87501

Re: Application of Wallen Production Company for Approval of the Wallen Tonto Waterflood Project and Approval of the Wallen Tonto #7 WIW Well as the Initial Injection Well, Lea County, New Mexico

Dear Mr. LeMay:

On behalf of Wallen Production Company, please find enclosed a completed Division Form C-108 which constitutes our application for approval of the referenced waterflood.

We suggest the following as a possible advertisement for this case:

> Application of Wallen Production Company for Waterflood Project, Lea County, New Mexico. Applicant, in the above-styled cause, seeks approval of the Wallen Tonto Waterflood Project and authority to inject produced water into the Yates Seven Rivers formation of the South Tonto Yates Seven Rivers Pool in the open hole interval from approximately 2,900 feet to 3,113 feet in its Wallen Tonto #7 WIW Well located 1,650 feet FSL and 990 feet FEL of Section 30, Township 19 South, Range 33 East, NMPM, Lea County, New Mexico. Said well is located approximately _____.

We would appreciate this application being set for hearing at the next available examiner's docket now scheduled for August 23, 1989.

By copy of this letter to all parties, sent certified mail, return-receipt requested, we are notifying them that they have the right to appear at the hearing, to make a statement to the Division, to present evidence and cross-examine witnesses either in support of or in opposition to

the application. Those parties are directed to contact the Division or the Applicant's attorney to determine what additional rights they may have.

Very truly yours,

W. Thomas Kellahin

WTK/rs
Encl.

cc: Mr. Walter W. Krug - Wallen Production Company

Certified Mail-Return Receipt Requested:

Mr. Jerry Sexton
Oil Conservation Division
Post Office Box 1980
Hobbs, New Mexico 88240

Bureau of Land Management
Roswell District Office
Attn: District Manager
Post Office Box 1397
Roswell, New Mexico 88201-1397

Oil Conservation Division
State Land Office
Attn: Land Commissioner
Post Office Box 1148
Santa Fe, New Mexico 87501

Kaiser-Francis
Route Box 208
Odessa, Texas 78765

FI-RO Corporation
Post Office Box 8148
Roswell, New Mexico 88201

Union Oil Company of California
4000 North Big Spring
Suite 300
Midland, Texas 79702

STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT

OIL CONSERVATION DIVISION
POST OFFICE BOX 2088
STATE LAND OFFICE BUILDING
SANTA FE, NEW MEXICO 87501

Case 9716

FORM C-108
Revised 7-1-81

RECEIVED
JUL 26 1989
OIL CONSERVATION DIVISION

APPLICATION FOR AUTHORIZATION TO INJECT

I. Purpose: ☐ Secondary Recovery ☐ Pressure Maintenance ☒ Disposal ☐ Storage
Application qualifies for administrative approval? ☒ yes ☐ no

II. Operator: Wallen Production Company
Address: P.-O. Box 1960 Midland, Texas 79702
Contact party: Walter W. Krug Phone: 915-683-2600

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 _____.

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 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.

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 source 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: W. Thomas Kellahin Title Attorney

Signature: _____ Date: July 24, 1989

* 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. _____

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

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.

WALLEN PRODUCTION COMPANY

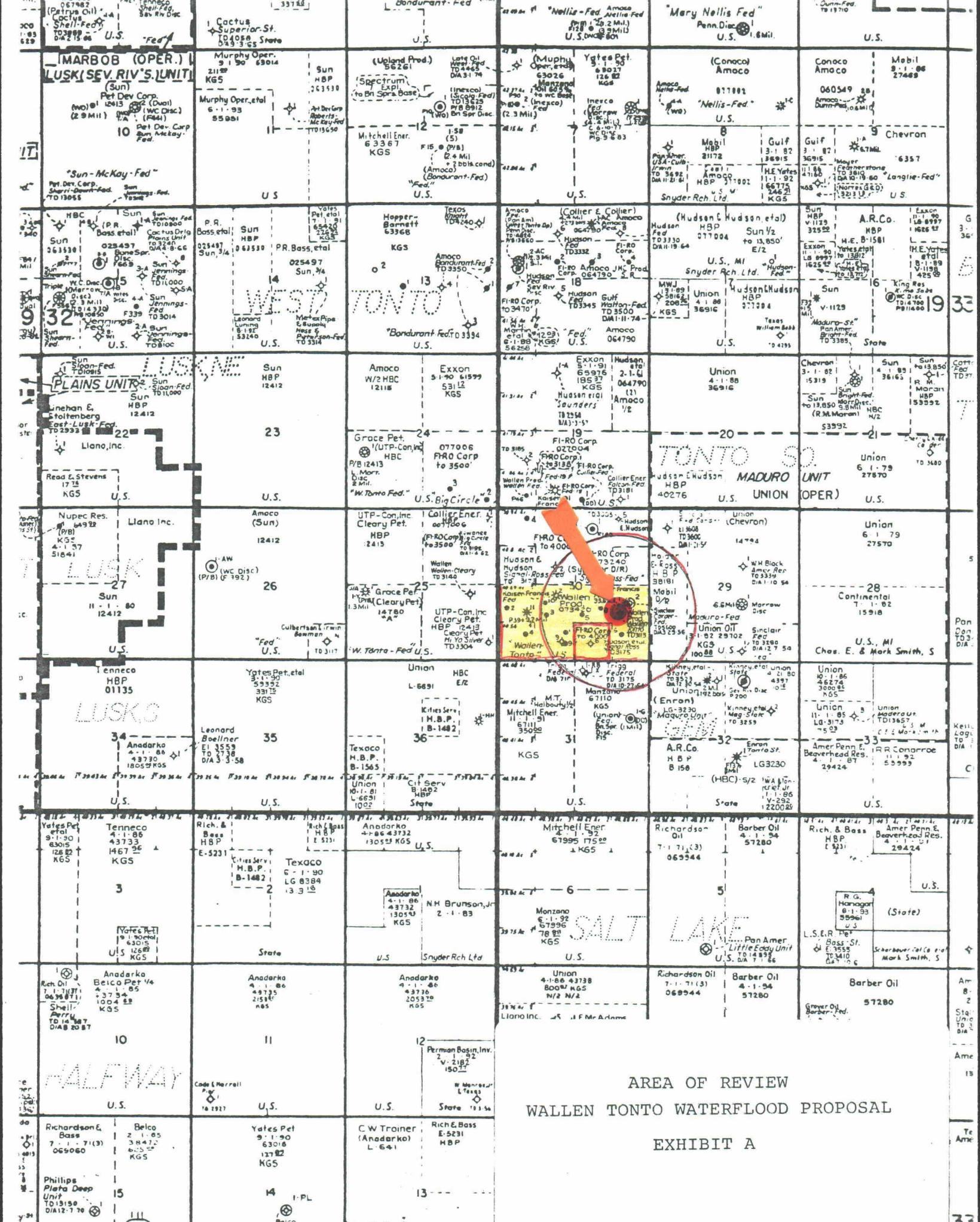
Proposed Wallen Tonto Waterflood
Wallen Tonto #7 WIW
Section 30, T19S, R33E
Lea County, New Mexico

List of Exhibits - Form C-108

Exhibit A	Map required by Paragraph V
Exhibit B	Tabular Summary required by Paragraph VI
Exhibit C	Data Sheet required by Paragraph VII
Exhibit D	Geological Data - Paragraph VIII
Exhibit E	Log of Injection Well
Exhibit F	Data Sheet on Proposed Injection Well
Exhibit G	Schematic of Proposed Injection Well
Exhibit H	Schematic of P&A Wells within Area of Review
Exhibit I	Water Analysis Produced Water to be re-injected
Exhibit J	Statement per Paragraph XII
Exhibit K	Notice Requirements

Exhibit B

Operator Well Name, Number	Location: Unit, Sec., Twp., Range	Type	Date Spudded	 Completed	Depth TD	 PBD	Zone(s)	Record of Completion Perfs and Well Construction
Aminoil USA Federal 30 Well No. 1	I, Sec 30, T19S, R33E 1980' FSL & 760' FEL	Gas	6/19/81	9/21/81	13712	13670	Morrow	Perfs: 13244-561 Casing: 13 3/8 @ 1276'/775 sx 9 5/8 @ 5310'/3440 sx 5 1/2 @ 13712'/2150 sx
Aminoil USA Federal 30 Well No. 2	K, Sec 30, T19S, R33E 2310' FSL & 1980' FWL	Gas	12/18/81	3/4/83	13800	13753	Morrow	Perfs: 13372-440 Casing: 13 3/8 @ 1315'/1050 sx 9 5/8 @ 5315'/3181 sx 5 1/2 @ 13800'/2360 sx
Edward Hudson Signal Ross-Fed Well No. 6	O, Sec 30, T19S, R33E 660' FSL & 1980' FEL	D&A	2/10/64 P&A 3/12/64	-	3127	-	Yates Svn Rvrs	Perfs: Not reported Casing: 13 3/8 @ 65'/100 sx 5 1/2 @ 3115'/30 sx
Sinclair O&G Co. Carder-Federal Well No. 2	I, Sec 30, T19S, R33E 1980' FSL & 660' FEL	P&A	2/14/56 P&A 3/29/56	-	5600	-	Delaware	Perfs: Open Hole Casing: 10 3/4 @ 305'/250 sx
John H. Trigg Federal RB 31 Well No. 1	B, Sec 31, T19S, R33E 330' FNL & 2310' FEL	J&A	9/18/64 P&A 10/2/64	-	700	-	---	Perfs: NA Casing: 13 3/8 @ 85'/50 sx
John H. Trigg Federal RB 31 Well No. 1X	B, Sec 31, T19S, R33E 335' FNL & 2223' FEL	D&A	10/3/64 P&A 10/27/64	-	3175	-	Svn Rvrs	Perfs: NA Casing: 10 3/4 @ 497' 8 5/8 @ 940'
Wallen Prod. Co. Wallen-Tonto Well No. 7	I, Sec 30, T19S, R33E 1650' FSL & 990' FEL	D&A	5/17/78 P&A 7/18/78	-	3123	-	Svn Rvrs	Perfs: NA Casing: 13 3/8 @ 225'/300 sx 7 @ 2900'/200sx
Wallen Prod. Co. Wallen-Tonto Well No. 8	J, Sec 30, T19S, R33E 1790' FSL & 1710' FEL	OIL	10/16/81	2/20/82	3120	3115	Svn Rvrs	Perfs: 2981-3110 Casing: 13 3/8 @ 115'/500 sx 7 @ 2940'/1000 sx 4 1/2 @ 2612-3120'/60 sx
Wallen Prod. Co. Wallen-Tonto Well No. 5	J, Sec 30, T19S, R33E 1650' FSL & 2310' FEL	OIL	6/30/77	8/25/77	3094	3094	Svn Rvrs	Perfs: Open Hole Casing: 13 3/8 @ 227'/300 sx 7 @ 2884'/1000 sx
Wallen Prod. Co. Wallen-Tonto Well No. 3	K, Sec 30, T19S, R33E 1650' FS & WL	OIL	8/31/77	10/21/77	3073	3073	Svn Rvrs	Perfs: Open Hole Casing: 13 3/8 @ 220'/300 sx 7 @ 2850'/1000 sx
Wallen Prod. Co. Wallen-Tonto Well No. 6	P, Sec 30, T19S, R33E 990' FS & EL	OIL	2/8/78	4/28/78	3096	3085	Svn Rvrs	Perfs: 2986-3080 Casing: 13 3/8 @ 210'/300 sx 7 @ 2901'/1420 sx 4 1/2 @ 2600-3096'/60 sx
Wallen Prod. Co. Wallen-Tonto Well No. 1	N, Sec 30, T19S, R33E 990' FSL & 2310' FWL	OIL	10/15/76	12/5/76	3082	3082	Svn Rvrs	Perfs: Open Hole Casing: 13 3/8 @ 225'/100 sx 8 5/8 @ 2896'/1000 sx
Wallen Prod. Co. Wallen-Tonto Well No. 9	N, Sec 30, T19S, R33E 600' FSL & 2300' FWL	J&A	9/20/80 P&A 10/8/80	-	570	-	---	Perfs: NA Casing: NA
Wallen Prod. Co. Wallen-Tonto Well No. 9Y	N, Sec 30, T19S, R33E 660' FSL & 2300' FWL	OIL	10/12/80	3/18/81	3086	3086	Svn Rvrs	Perfs: 2981-3110 OH 3084-86 Casing: 10 3/8 @ 225'/450 sx 7 @ 2800'/1100 sx 4 1/2 @ 2617-3083'/60 sx



AREA OF REVIEW

WALLEN TONTO WATERFLOOD PROPOSAL

EXHIBIT A

WALLEN PRODUCTION COMPANY

Proposed Wallen Tonto Waterflood
Wallen Tonto #7 WIW
Section 30, T19S, R33E
Lea County, New Mexico

Exhibit C

Data on Proposed Operation

1. Proposed average and maximum daily rate and volume of fluids to be injected:

   Average daily rate of 200 BWIPD
   Maximum daily rate of 400 BWIPD

2. System is closed.

3. Proposed Average Injection Pressure: 600 psig
   Proposed Maximum Injection Pressure: 1000 psig

   The proposed average and maximum injection pressures are to be determined from step rate tests to be run after the well is re-entered.

4. (A) Source of injection fluid:
   Produced water from South Tonto Yates Seven Rivers Pool.

   (B) Analysis of formation fluid:
   Not applicable - re-injected produced water.

5. Zone of disposal is productive of oil and gas within one mile of proposed disposal well.

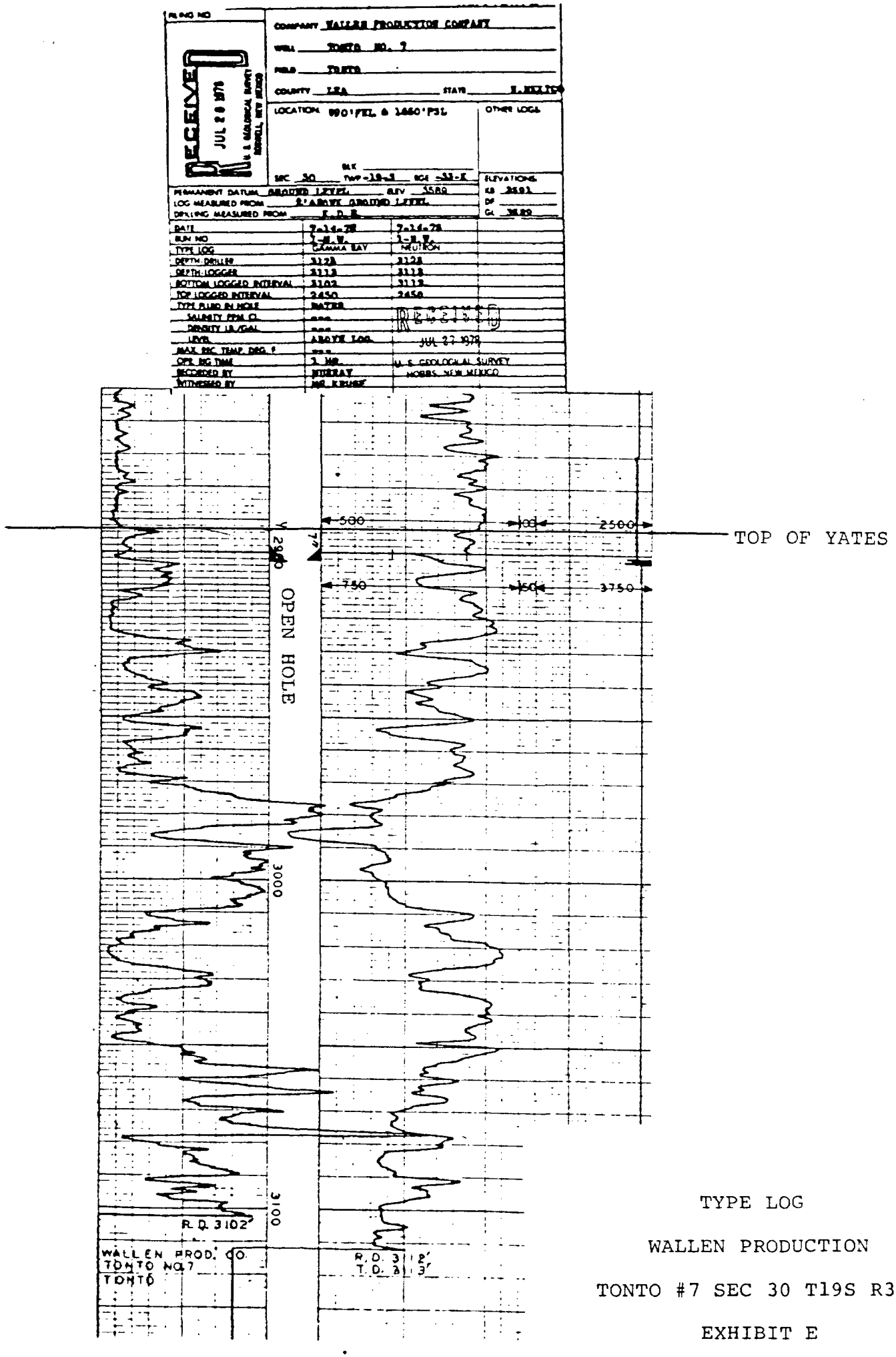
WALLEN PRODUCTION COMPANY

Proposed Wallen Tonto Waterflood
Wallen Tonto #7 WIW
Section 30, T19S, R33E
Lea County, New Mexico

Exhibit D

Geological Data on Injection Zone

Pool:	South Tonto Yates Seven Rivers
Formation:	Yates Seven Rivers
Geological Name:	Yates
Thickness:	@200 feet
Depth:	@2900 feet
Injection Interval:	2900 to 3113 feet



TYPE LOG

WALLEN PRODUCTION

TONTO #7 SEC 30 T19S R33E

EXHIBIT E

WALLEN PRODUCTION COMPANY

Proposed Wallen Tonto Waterflood
Wallen Tonto #7 WIW
Section 30, T19S, R33E
Lea County, New Mexico

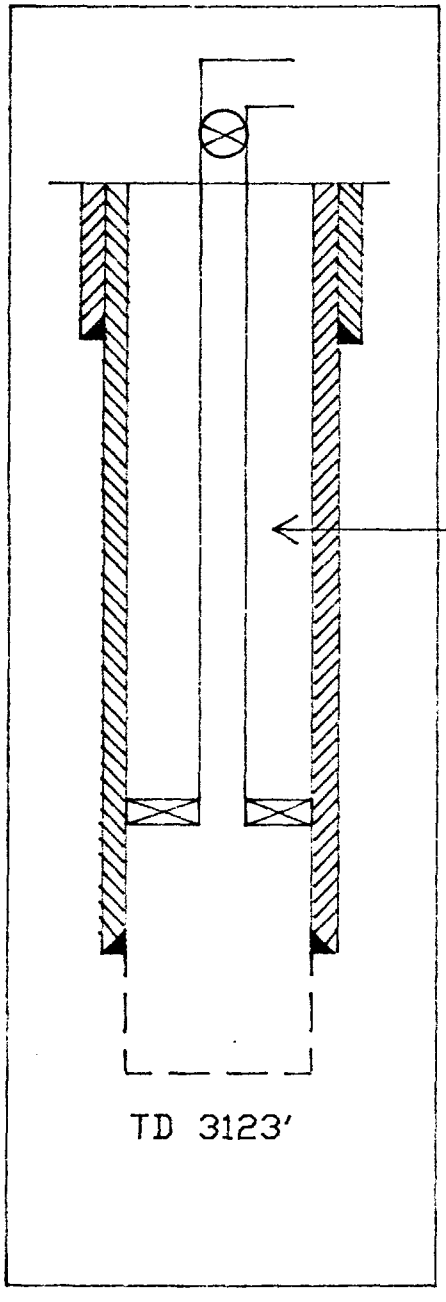
Exhibit F

Well Data on Injection Well

Stimulation Program:	2000 gallons 15% NE-FE Acid
Location:	1650' FSL & 990' FEL Section 30, T19S, R33E Lea County, New Mexico
Casing:	13 3/8" @225' cmtd w/300 sx 7" @2900' cmtd w/200 sx
Tubing:	2 3/8" @2850' - Plastic Coated
Packer:	Halliburton R4 Injection Packer
Injection Formation:	Yates in the South Tonto Yates-Seven Rivers Pool.
Injection Interval:	2900' to 3113' Open Hole

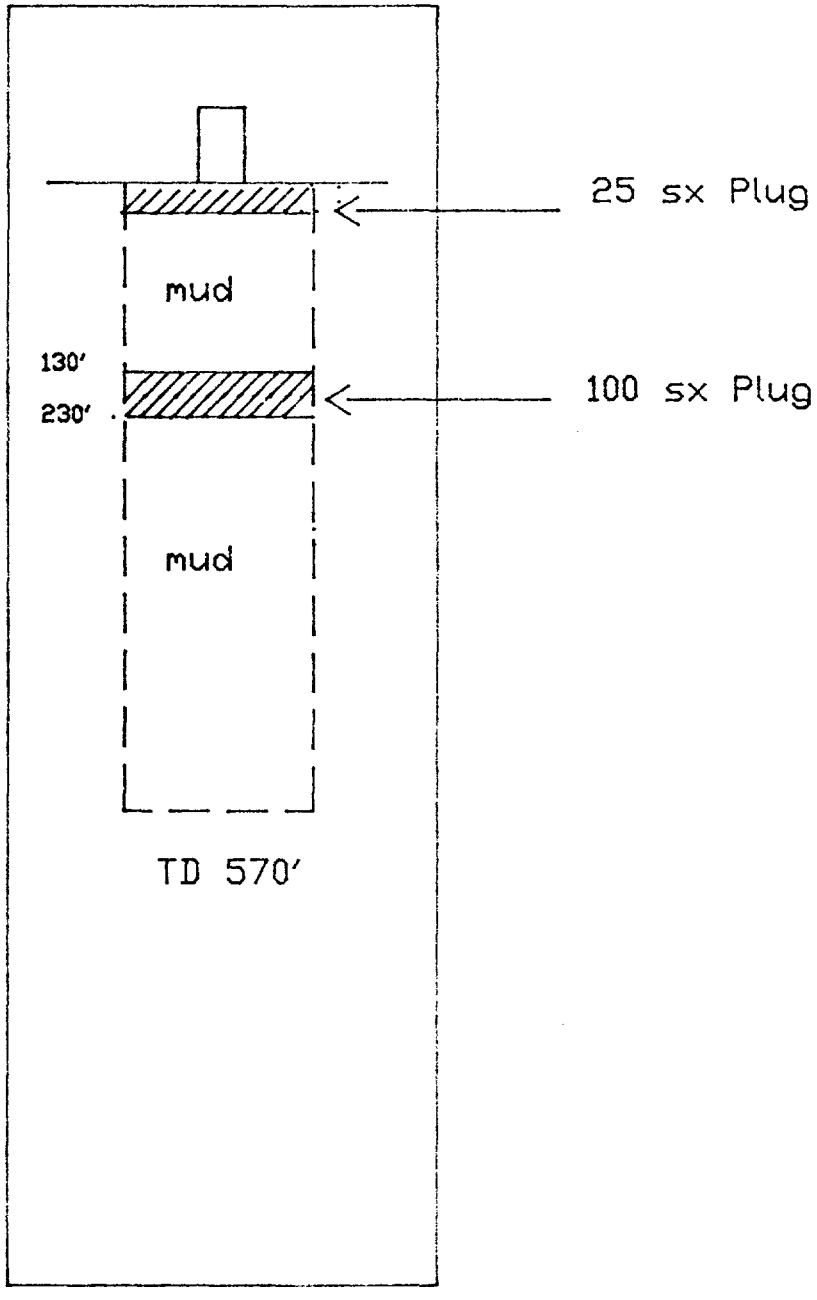
Well was originally drilled as oil producer. Currently P&A.

Wallen Production Company
Wallen-Tonto Well No. 7
990' FEL & 1650' FSL
Sec. 30, T19S, R33E



Wallen Production Company
Wallen-Tonto Well No. 9
2300' FWL & 600' FSL
Sec. 30, T19S, R33E

P&A 10/8/80

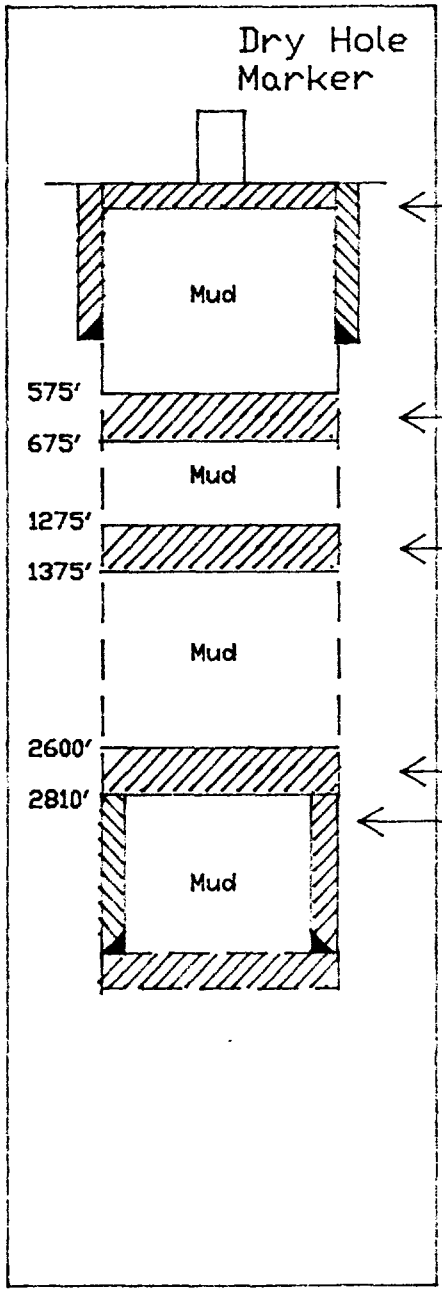


Open Hole

Casing

Edward Huston
Signal Ross_Fed. Well No. 6
660' FSL & 1980' FEL
Sec. 30, T19S, R33E

P&A 3/12/64



15' Cmt Plug

13 3/8" Casing
@ 65'
Cmt w/100sx Circ

30 sx Cmt Plug

35 sx Cmt Plug

70 sx Cmt Plug

5 1/2" Casing Stub
@2810'

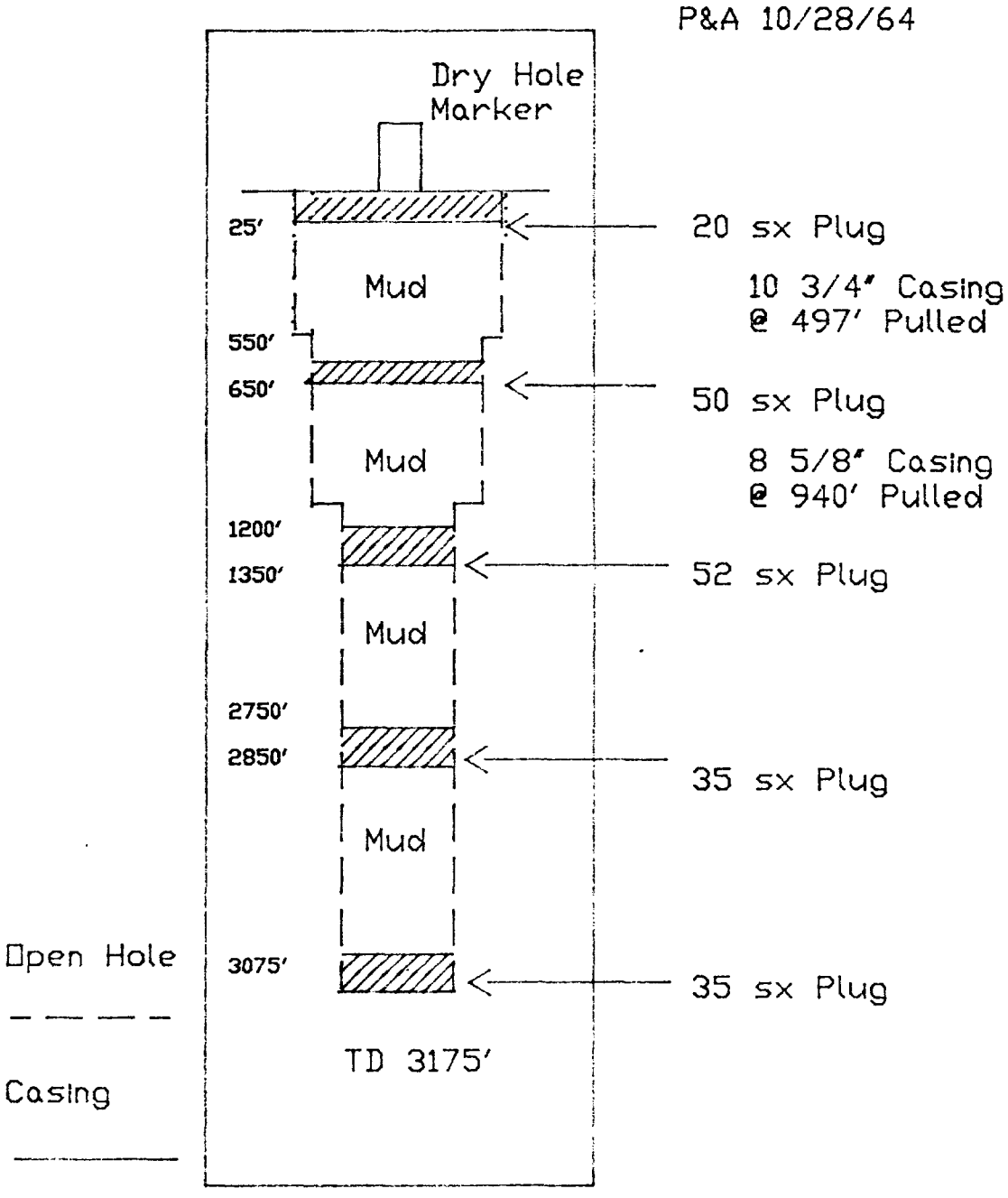
5 1/2" Casing
@ 3115'
Cmt w/30 sx

Open Hole

Casing

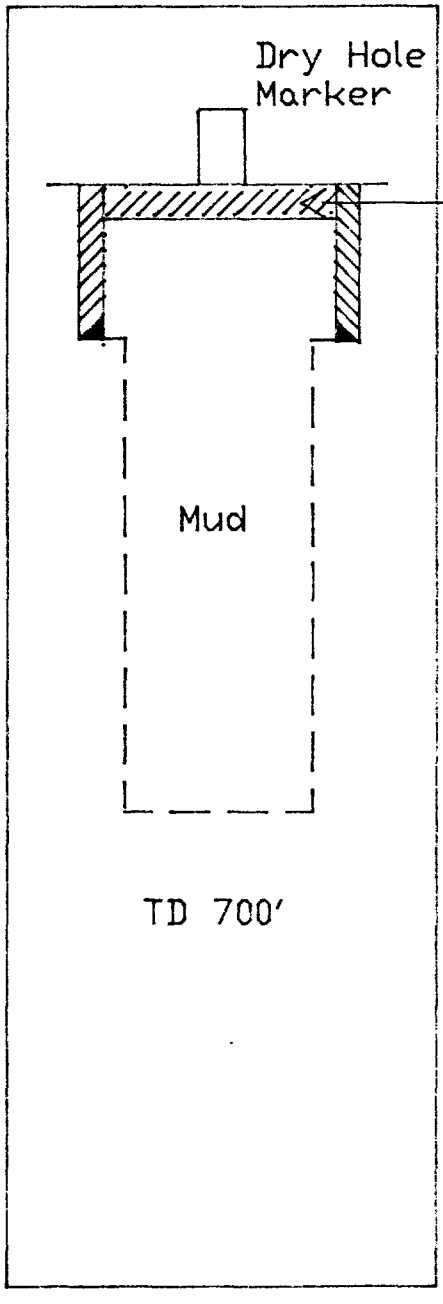
John H. Trigg
Federal "RB" 31 Well No. 1X
335' FNL & 2223' FEL
Sec. 31, T19S, R33E

P&A 10/28/64



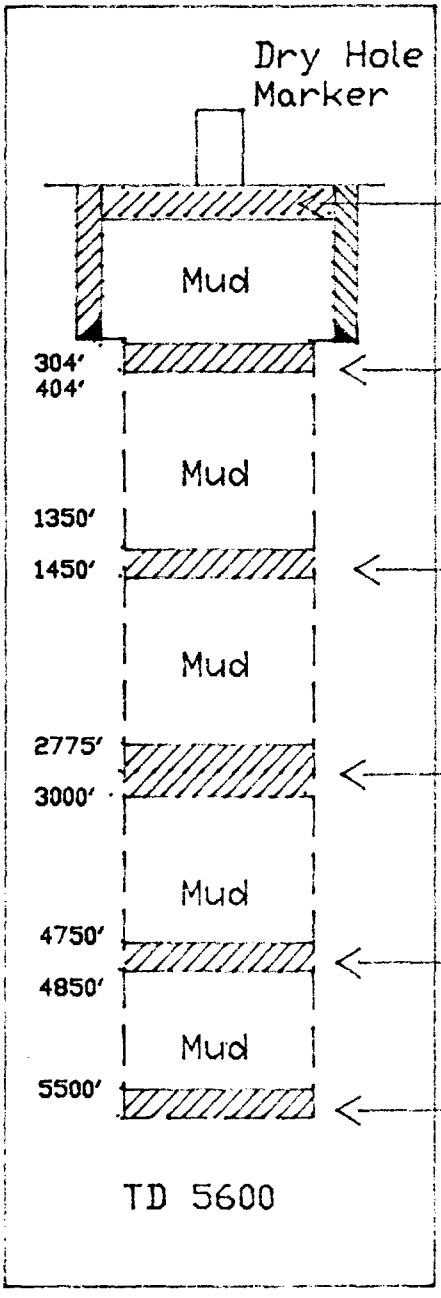
John H. Trigg
Federal "RB" 31 Well No. 1
330' FNL & 2310' FEL
Sec. 31, T19S, R33E

P&A 9/18/64



Sinclair Oil & Gas Company
Carder-Federal Well No. 2
330' FNL & 2310' FEL
Sec. 31, T19S, R33E

P&A 3/29/56



13 sx Plug

13 3/8' Casing
@ 305'
cmtd w/250 sx

25 sx Plug

25 sx Plug

320 sx Plug

25 sx Plug

25 sx Plug

Open Hole

Casing

WATER ANALYSIS REPORT
furnished by TRETOLITE CHEMICALS

COMPANY:	WALLEN PRODUCTION
LEASE:	TONTO
SAMPLE POINT:	HEATER TREATER
SAMPLE DATE:	5-27-87
SAMPLE TEMP.:	

pH:	6.5
H2S:	500
SPECIFIC GRAVITY:	1.025

TITRATED AND CALCULATED IONS

	MILLIGRAMS PER LITER	MILLIEQUIVALENTS PER LITER
HCO3	915.00	15.00
Cl	11210.00	315.77
SO4	1250.00	26.04
Ca	2800.00	140.00
Mg	0.00	0.00
Na	4986.78	216.82

IONIC STRENGTH =	0.44
TOTAL HARDNESS =	6000.0 mg/ltr.
TOTAL DISSOLVED SOLIDS =	21155.5 mg/ltr.
TOTAL IRON (Fe) =	3.0 ppm

PROBABLE MINERAL COMPOSITION AND ION PAIRING

	MILLIEQUIVALENTS PER LITER	MILLIGRAMS PER LITER
Ca(HCO3)2	15.00	1215.60
CaSO4	26.04	1772.66
CaCl2	98.96	5492.19
Mg(HCO3)2	0.00	0.00
MgSO4	0.00	0.00
MgCl2	0.00	0.00
NaHCO3	0.00	0.00
Na2SO4	0.00	0.00
NaCl	216.82	12675.08

CALCULATED SCALING TENDENCIES

SCALING INDEX

CaCO3 @ 80 DEG F. = 0.5
CaCO3 @ 120 DEG F. = 1.0

SATURATION POINT

CaSO4 @ 70 DEG F. = 1996.5 MG/LTR.
CaSO4 @ 110 DEG F. = 2020.2 MG/LTR.

(THIS SAMPLE CONTAINED 1772.7 MG/LTR. CaSO4)

WALLEN PRODUCTION COMPANY

Proposed Wallen Tonto Waterflood
Wallen Tonto #7 WIW
Section 30, T19S, R33E
Lea County, New Mexico

Exhibit J

Affirmative Statement

Wallen Production Company has examined available geologic and engineering data and finds no evidence of open faults or any other hydrologic connection between the disposal zone and any underground source of drinking water.

WALLEN PRODUCTION COMPANY

Proposed Wallen Tonto Waterflood
Wallen Tonto #7 WIW
Section 30, T19S, R33E
Lea County, New Mexico

Exhibit K

Notice

Pursuant to Section XIV of Form C-108,

Applicant has mailed copies of the application to the following:

Surface Owners:

Bureau of Land Management
Roswell District Office
P.O. Box 1397
Roswell, New Mexico 88201-1397

Attention: District Manager

Oil Conservation Division
State Land Office
P.O. Box 1148
Santa Fe, New Mexico 87501

Attention: Land Commissioner

Leasehold Operators within one-half mile:

Kaiser-Francis
Rt. Box 208
Odessa, Texas 78765

FI-RO Corporation
P.O. Box 8148
Roswell, New Mexico 88201

Union Oil Company of California
4000 N. Big Spring
Suite 300
Midland, Texas 79702

KELLAHIN, KELLAHIN and AUBREY
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WTK/rs
Encl.

cc: Mr. Walter W. Krug - Wallen Production Company

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Post Office Box 1980
Hobbs, New Mexico 88240

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Union Oil Company of California
4000 North Big Spring
Suite 300
Midland, Texas 79702

STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT

OIL CONSERVATION DIVISION
POST OFFICE BOX 2088
STATE LAND OFFICE BUILDING
SANTA FE, NEW MEXICO 87501

RECEIVED
JUL 26 1989
OIL CONSERVATION DIVISION

FORM C-108
Revised 7-1-81

Case 9736

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If yes, give the Division order number authorizing the project _____.

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 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.

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 source 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: W. Thomas Kellahin Title Attorney

Signature: [signature] Date: July 24, 1989

* 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. _____

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

STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT

OIL CONSERVATION DIVISION
POST OFFICE BOX 2088
STATE LAND OFFICE BUILDING
SANTA FE, NEW MEXICO 87501

RECEIVED
JUL 26 1989
OIL CONSERVATION DIVISION

Revised 7-1-81

Case 9736

APPLICATION FOR AUTHORIZATION TO INJECT

I. Purpose: ☐ Secondary Recovery ☐ Pressure Maintenance ☒ Disposal ☐ Storage
Application qualifies for administrative approval? ☐ yes ☒ no

II. Operator: Wallen Production Company
Address: P.-O. Box 1960 Midland, Texas 79702
Contact party: Walter W. Krug Phone: 915-683-2600

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 _____.

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 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.

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Name: W. Thomas Kellahin Title Attorney

Signature: [signature] Date: July 24, 1989

* 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. _____

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.

WALLEN PRODUCTION COMPANY

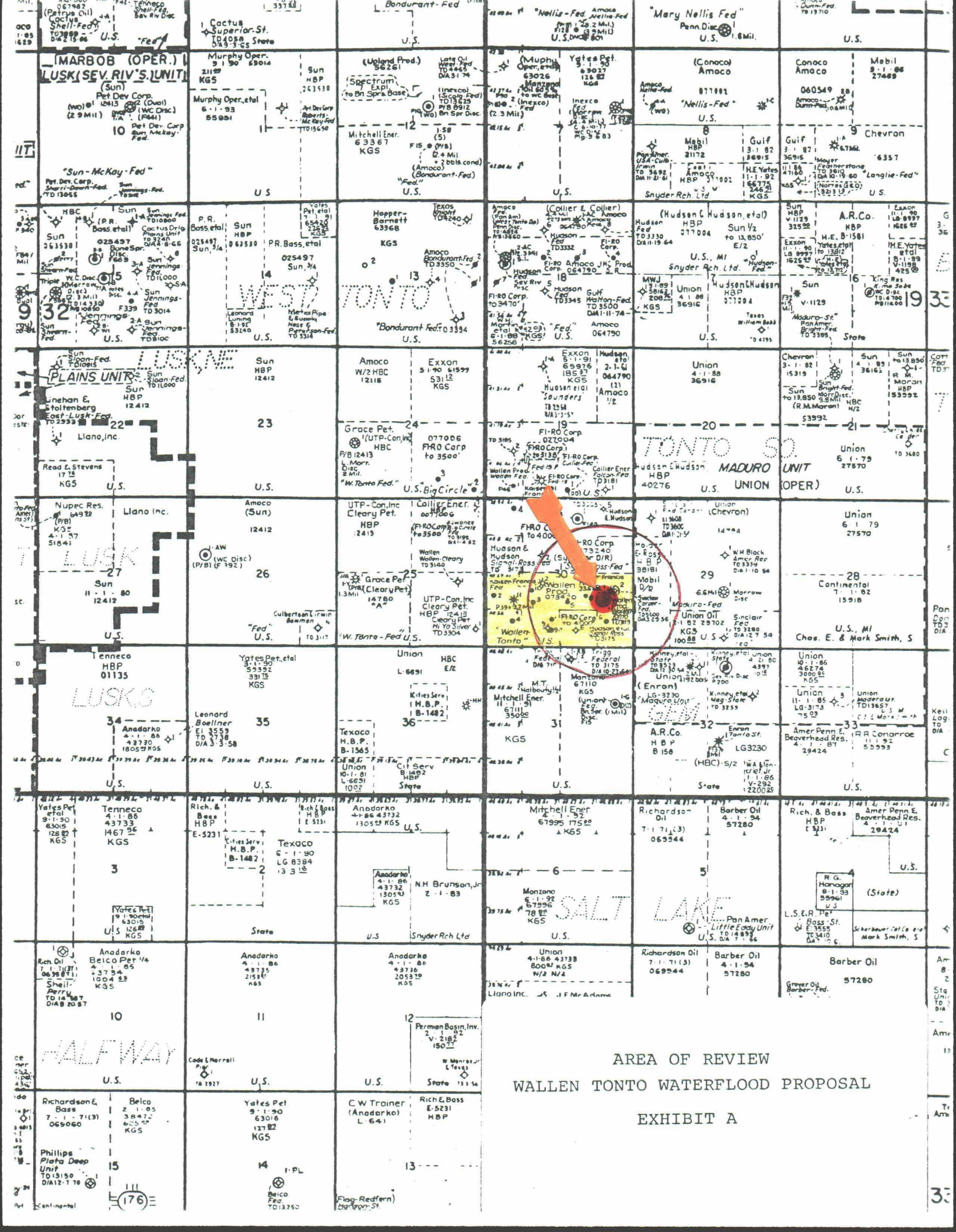
Proposed Wallen Tonto Waterflood
Wallen Tonto #7 WIW
Section 30, T19S, R33E
Lea County, New Mexico

List of Exhibits - Form C-108

Exhibit A	Map required by Paragraph V
Exhibit B	Tabular Summary required by Paragraph VI
Exhibit C	Data Sheet required by Paragraph VII
Exhibit D	Geological Data - Paragraph VIII
Exhibit E	Log of Injection Well
Exhibit F	Data Sheet on Proposed Injection Well
Exhibit G	Schematic of Proposed Injection Well
Exhibit H	Schematic of P&A Wells within Area of Review
Exhibit I	Water Analysis Produced Water to be re-injected
Exhibit J	Statement per Paragraph XII
Exhibit K	Notice Requirements

Exhibit B

Operator Well Name, Number	Location: Unit, Sec., Twp., Range	Type	Date Spudded	 Completed	Depth TD	 PBD	Record of Completion Zone(s)	 Perfs and Well Construction
Aminoil USA Federal 30 Well No. 1	I, Sec 30, T19S, R33E 1980' FSL & 760' FEL	Gas	6/19/81	9/21/81	13712	13670	Morrow	Perfs: 13244-561 Casing: 13 3/8 @ 1276'/775 sx 9 5/8 @ 5310'/3440 sx 5 1/2 @ 13712'/2150 sx
Aminoil USA Federal 30 Well No. 2	K, Sec 30, T19S, R33E 2310' FSL & 1980' FWL	Gas	12/18/81	3/4/83	13800	13753	Morrow	Perfs: 13372-440 Casing: 13 3/8 @ 1315'/1050 sx 9 5/8 @ 5315'/3181 sx 5 1/2 @ 13800'/2360 sx
Edward Hudson Signal Ross-Fed Well No. 6	O, Sec 30, T19S, R33E 660' FSL & 1980' FEL	D&A	2/10/64 P&A 3/12/64	-	3127	-	Yates Svn Rvrs	Perfs: Not reported Casing: 13 3/8 @ 65'/100 sx 5 1/2 @ 3115'/30 sx
Sinclair O&G Co. Carder-Federal Well No. 2	I, Sec 30, T19S, R33E 1980' FSL & 660' FEL	P&A	2/14/56 P&A 3/29/56	-	5600	-	Delaware	Perfs: Open Hole Casing: 10 3/4 @ 305'/250 sx
John H. Trigg Federal RB 31 Well No. 1	B, Sec 31, T19S, R33E 330' FNL & 2310' FEL	J&A	9/18/64 P&A 10/2/64	-	700	-	---	Perfs: NA Casing: 13 3/8 @ 85'/50 sx
John H. Trigg Federal RB 31 Well No. 1X	B, Sec 31, T19S, R33E 335' FNL & 2223' FEL	D&A	10/3/64 P&A 10/27/64	-	3175	-	Svn Rvrs	Perfs: NA Casing: 10 3/4 @ 497' 8 5/8 @ 940'
Wallen Prod. Co. Wallen-Tonto Well No. 7	I, Sec 30, T19S, R33E 1650' FSL & 990' FEL	D&A	5/17/78 P&A 7/18/78	-	3123	-	Svn Rvrs	Perfs: NA Casing: 13 3/8 @ 225'/300 sx 7 @ 2900'/200sx
Wallen Prod. Co. Wallen-Tonto Well No. 8	J, Sec 30, T19S, R33E 1790' FSL & 1710' FEL	OIL	10/16/81	2/20/82	3120	3115	Svn Rvrs	Perfs: 2981-3110 Casing: 13 3/8 @ 115'/500 sx 7 @ 2940'/1000 sx 4 1/2 @ 2612-3120'/60 sx
Wallen Prod. Co. Wallen-Tonto Well No. 5	J, Sec 30, T19S, R33E 1650' FSL & 2310' FEL	OIL	6/30/77	8/25/77	3094	3094	Svn Rvrs	Perfs: Open Hole Casing: 13 3/8 @ 227'/300 sx 7 @ 2884'/1000 sx
Wallen Prod. Co. Wallen-Tonto Well No. 3	K, Sec 30, T19S, R33E 1650' FS & WL	OIL	8/31/77	10/21/77	3073	3073	Svn Rvrs	Perfs: Open Hole Casing: 13 3/8 @ 220'/300 sx 7 @ 2850'/1000 sx
Wallen Prod. Co. Wallen-Tonto Well No. 6	P, Sec 30, T19S, R33E 990' FS & EL	OIL	2/8/78	4/28/78	3096	3085	Svn Rvrs	Perfs: 2986-3080 Casing: 13 3/8 @ 210'/300 sx 7 @ 2901'/1420 sx 4 1/2 @ 2600-3096'/60 sx
Wallen Prod. Co. Wallen-Tonto Well No. 1	N, Sec 30, T19S, R33E 990' FSL & 2310' FWL	OIL	10/15/76	12/5/76	3082	3082	Svn Rvrs	Perfs: Open Hole Casing: 13 3/8 @ 225'/100 sx 8 5/8 @ 2896'/1000 sx
Wallen Prod. Co. Wallen-Tonto Well No. 9	N, Sec 30, T19S, R33E 600' FSL & 2300' FWL	J&A	9/20/80 P&A 10/8/80	-	570	-	---	Perfs: NA Casing: NA
Wallen Prod. Co. Wallen-Tonto Well No. 9Y	N, Sec 30, T19S, R33E 660' FSL & 2300' FWL	OIL	10/12/80	3/18/81	3086	3086	Svn Rvrs	Perfs: 2981-3110 OH 3084-86 Casing: 10 3/8 @ 225'/450 sx 7 @ 2800'/1100 sx 4 1/2 @ 2617-3083'/60 sx



AREA OF REVIEW

WALLEN TONTO WATERFLOOD PROPOSAL

EXHIBIT A

WALLEN PRODUCTION COMPANY

Proposed Wallen Tonto Waterflood
Wallen Tonto #7 WIW
Section 30, T19S, R33E
Lea County, New Mexico

Exhibit C

Data on Proposed Operation

1. Proposed average and maximum daily rate and volume of fluids to be injected:

   Average daily rate of 200 BWIPD
   Maximum daily rate of 400 BWIPD

2. System is closed.

3. Proposed Average Injection Pressure: 600 psig
   Proposed Maximum Injection Pressure: 1000 psig

   The proposed average and maximum injection pressures are to be determined from step rate tests to be run after the well is re-entered.

4. (A) Source of injection fluid:
   Produced water from South Tonto Yates Seven Rivers Pool.

   (B) Analysis of formation fluid:
   Not applicable - re-injected produced water.

5. Zone of disposal is productive of oil and gas within one mile of proposed disposal well.

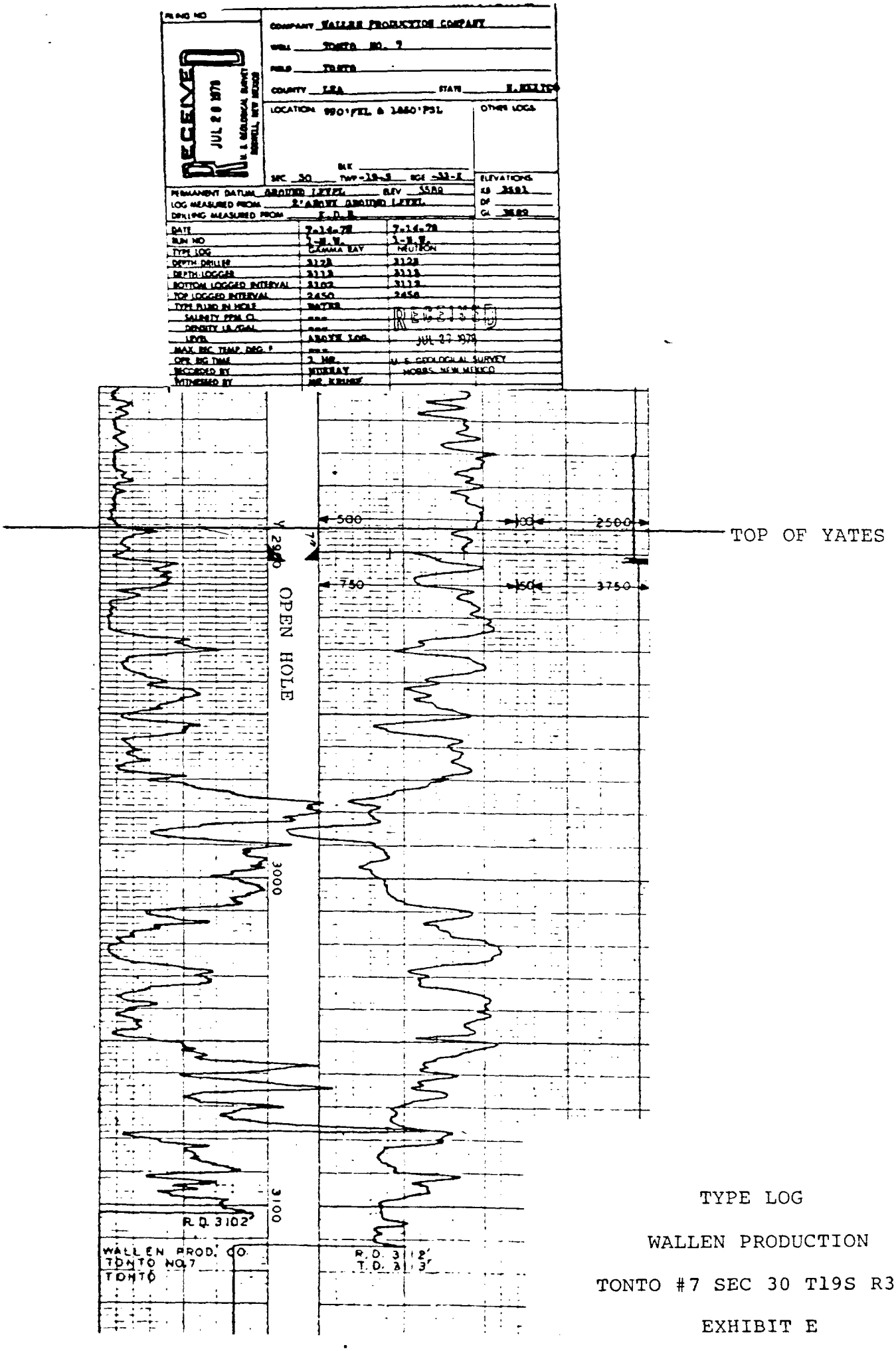
WALLEN PRODUCTION COMPANY

Proposed Wallen Tonto Waterflood
Wallen Tonto #7 WIW
Section 30, T19S, R33E
Lea County, New Mexico

Exhibit D

Geological Data on Injection Zone

Pool:	South Tonto Yates Seven Rivers
Formation:	Yates Seven Rivers
Geological Name:	Yates
Thickness:	@200 feet
Depth:	@2900 feet
Injection Interval:	2900 to 3113 feet



TOP OF YATES

TYPE LOG

WALLEN PRODUCTION

TONTO #7 SEC 30 T19S R33E

EXHIBIT E

WALLEN PRODUCTION COMPANY

Proposed Wallen Tonto Waterflood
Wallen Tonto #7 WIW
Section 30, T19S, R33E
Lea County, New Mexico

Exhibit F

Well Data on Injection Well

Stimulation Program: 2000 gallons 15% NE-FE Acid

Location: 1650' FSL & 990' FEL
Section 30, T19S, R33E
Lea County, New Mexico

Casing: 13 3/8" @225' cmtd w/300 sx
7" @2900' cmtd w/200 sx

Tubing: 2 3/8" @2850' - Plastic Coated

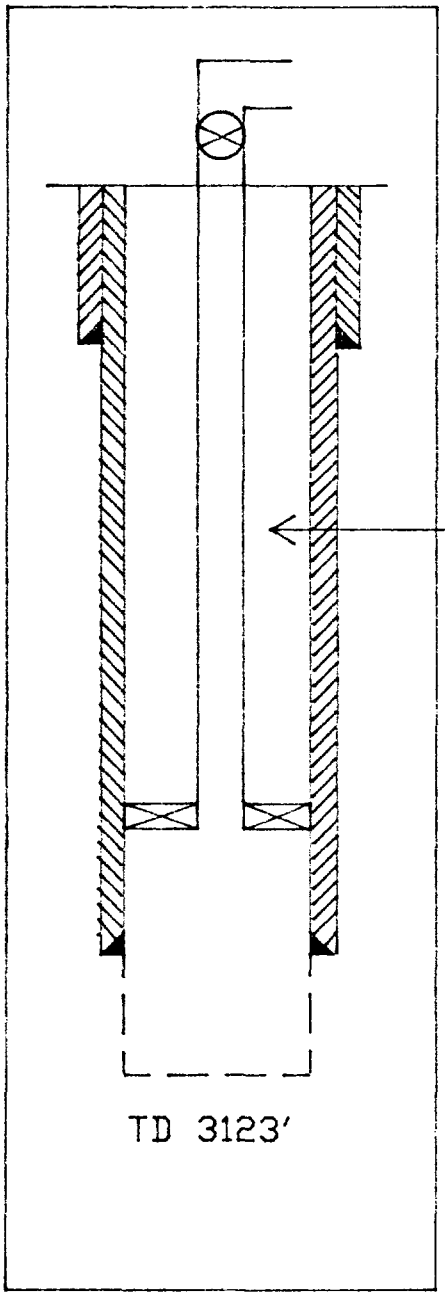
Packer: Halliburton R4 Injection Packer

Injection Formation: Yates in the South Tonto Yates-Seven Rivers Pool.

Injection Interval: 2900' to 3113' Open Hole

Well was originally drilled as oil producer. Currently P&A.

Wallen Production Company
Wallen-Tonto Well No. 7
990' FEL & 1650' FSL
Sec. 30, T19S, R33E



13 3/8" Casing
@ 225' w/300 sx
Cmt Circ

Packer Fluid

Injection Packer
@ 2800'

7" Casing
@ 2900' w/200 sx
Cmt Circ

TD 3123'

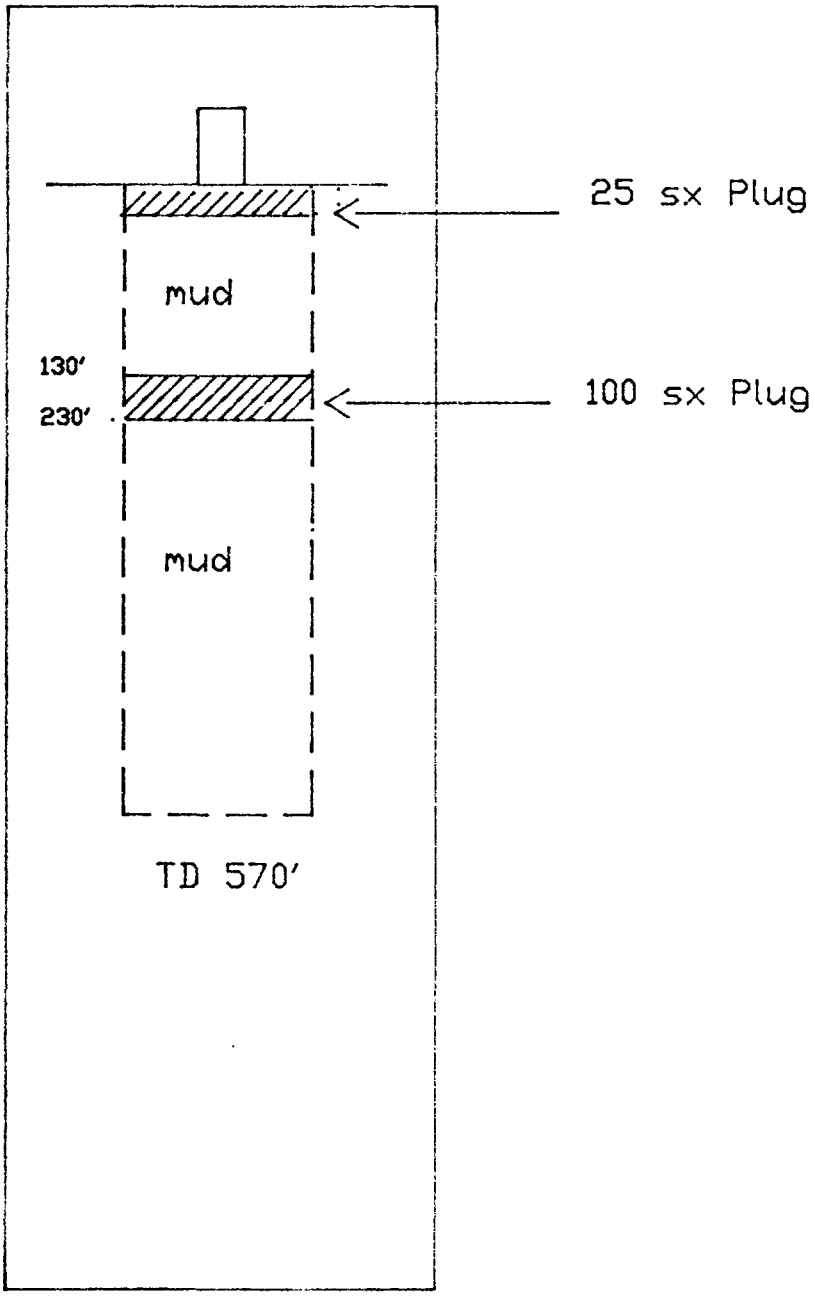
Injection Interval
2900-3123' OH

Open Hole

Casing

Wallen Production Company
Wallen-Tonto Well No. 9
2300' FWL & 600' FSL
Sec. 30, T19S, R33E

P&A 10/8/80

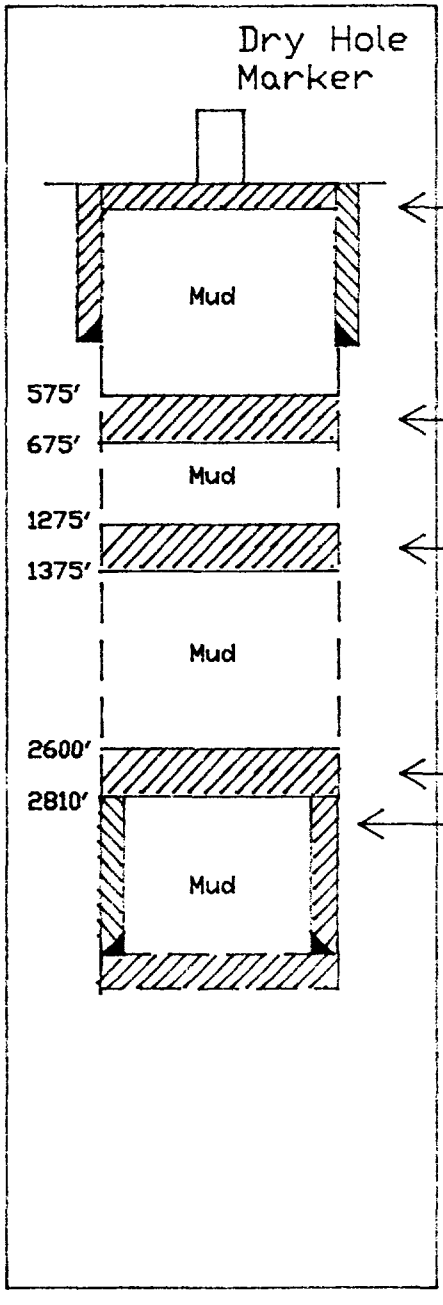


Open Hole

Casing

Edward Huston
Signal Ross_Fed. Well No. 6
660' FSL & 1980' FEL
Sec. 30, T19S, R33E

P&A 3/12/64



15' Cmt Plug

13 3/8" Casing
@ 65'
Cmt w/100sx Circ

30 sx Cmt Plug

35 sx Cmt Plug

70 sx Cmt Plug

5 1/2" Casing Stub
@2810'

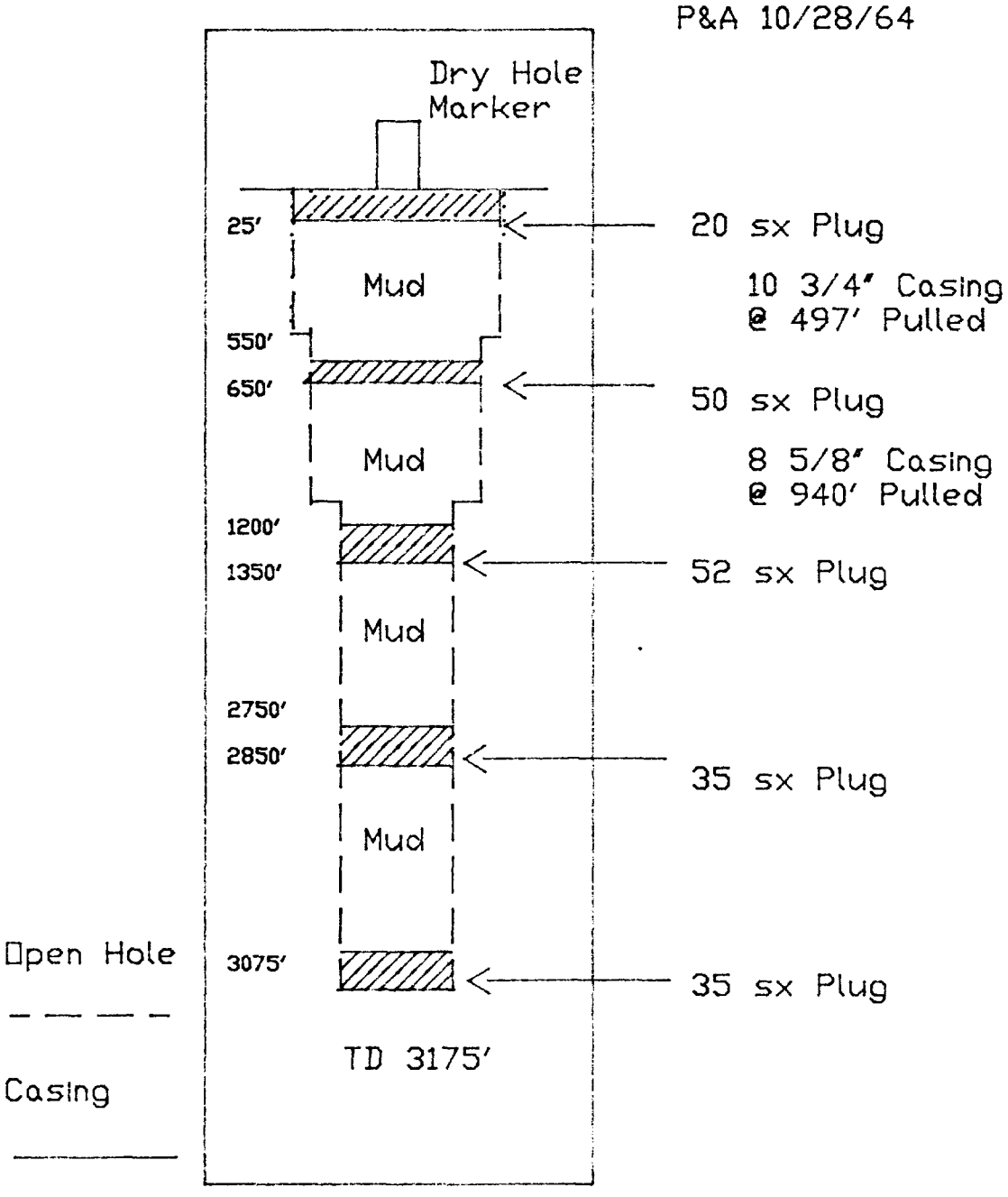
5 1/2" Casing
@ 3115'
Cmt w/30 sx

Open Hole

Casing

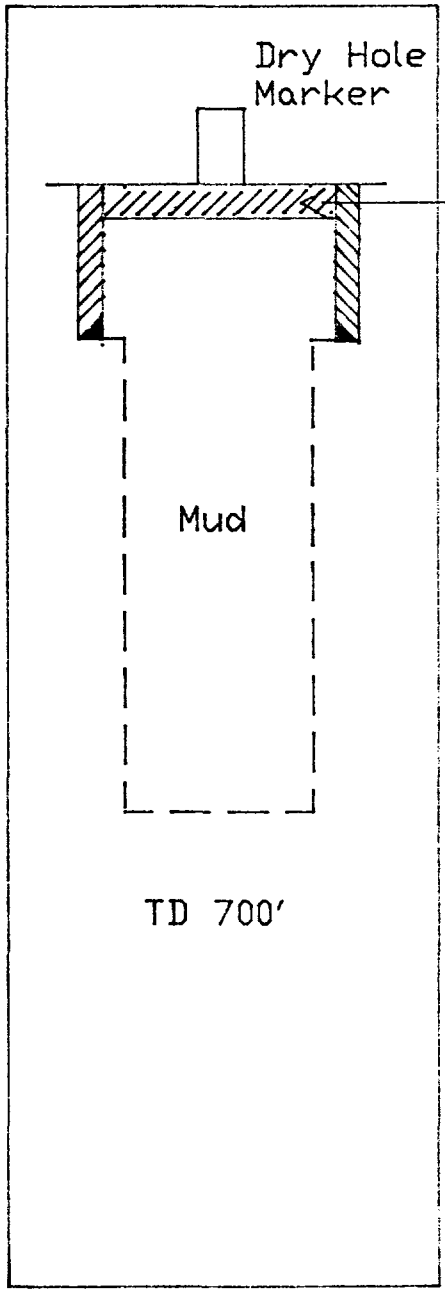
John H. Trigg
Federal "RB" 31 Well No. 1X
335' FNL & 2223' FEL
Sec. 31, T19S, R33E

P&A 10/28/64



John H. Trigg
Federal "RB" 31 Well No. 1
330' FNL & 2310' FEL
Sec. 31, T19S, R33E

P&A 9/18/64



20' Cmt Plug

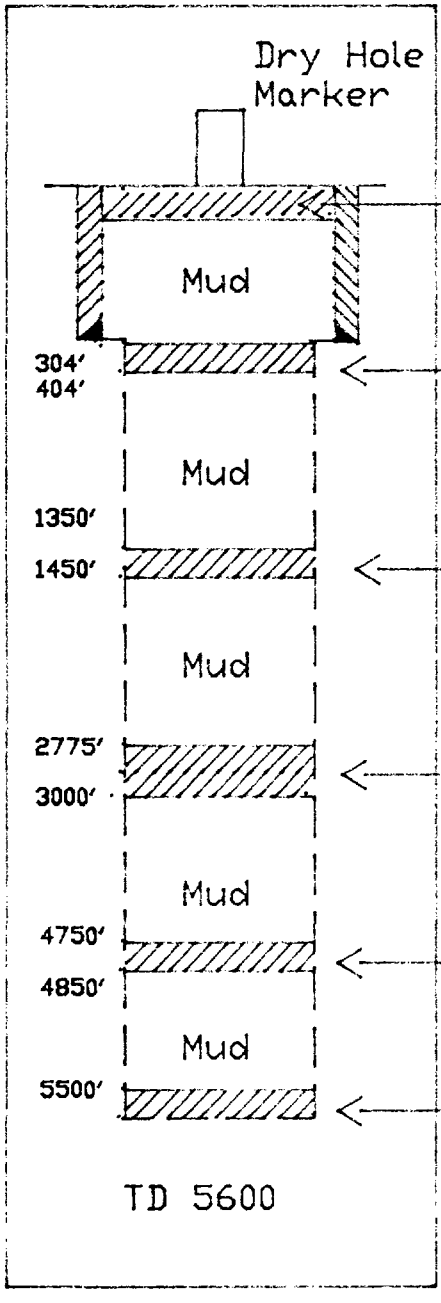
13 3/8" Casing
@ 85'
Cmtd w/50 sx

Open Hole

Casing

Sinclair Oil & Gas Company
Carder-Federal Well No. 2
330' FNL & 2310' FEL
Sec. 31, T19S, R33E

P&A 3/29/56



13 sx Plug

13 3/8' Casing
@ 305'
cmtd w/250 sx

25 sx Plug

25 sx Plug

320 sx Plug

25 sx Plug

25 sx Plug

Open Hole

Casing

WATER ANALYSIS REPORT
furnished by TRETOLITE CHEMICALS

COMPANY:	WALLEN PRODUCTION
LEASE:	TONTO
SAMPLE POINT:	HEATER TREATER
SAMPLE DATE:	5-27-87
SAMPLE TEMP.:	

pH:	6.5
H2S:	500
SPECIFIC GRAVITY:	1.025

TITRATED AND CALCULATED IONS

	MILLIGRAMS PER LITER	MILLIEQUIVALENTS PER LITER
HCO3	915.00	15.00
Cl	11210.00	315.77
SO4	1250.00	26.04
Ca	2800.00	140.00
Mg	0.00	0.00
Na	4986.78	216.82

IONIC STRENGTH =	0.44
TOTAL HARDNESS =	6000.0 mg/ltr.
TOTAL DISSOLVED SOLIDS =	21155.5 mg/ltr.
TOTAL IRON (Fe) =	3.0 ppm

PROBABLE MINERAL COMPOSITION AND ION PAIRING

	MILLIEQUIVALENTS PER LITER	MILLIGRAMS PER LITER
Ca(HCO3)2	15.00	1215.60
CaSO4	26.04	1772.66
CaCl2	98.96	5492.19
Mg(HCO3)2	0.00	0.00
MgSO4	0.00	0.00
MgCl2	0.00	0.00
NaHCO3	0.00	0.00
Na2SO4	0.00	0.00
NaCl	216.82	12675.08

CALCULATED SCALING TENDENCIES

SCALING INDEX
CaCO3 @ 80 DEG F. = 0.5
CaCO3 @ 120 DEG F. = 1.0

SATURATION POINT
CaSO4 @ 70 DEG F. = 1996.5 MG/LTR.
CaSO4 @ 110 DEG F. = 2020.2 MG/LTR.

(THIS SAMPLE CONTAINED 1772.7 MG/LTR. CaSO4)

WALLEN PRODUCTION COMPANY

Proposed Wallen Tonto Waterflood
Wallen Tonto #7 WIW
Section 30, T19S, R33E
Lea County, New Mexico

Exhibit J

Affirmative Statement

Wallen Production Company has examined available geologic and engineering data and finds no evidence of open faults or any other hydrologic connection between the disposal zone and any underground source of drinking water.

Wallen Tonto #7 WIW
Section 30, T19S, R33E
Lea County, New Mexico

Exhibit K

Notice

Pursuant to Section XIV of Form C-108,

Applicant has mailed copies of the application to the following:

Surface Owners: Bureau of Land Management
Roswell District Office
P.O. Box 1397
Roswell, New Mexico 88201-1397

Attention: District Manager

WALLEN PRODUCTION COMPANY

Proposed Wallen Tonto Waterflood
Wallen Tonto #7 WIW
Section 30, T19S, R33E
Lea County, New Mexico

Exhibit K

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Bureau of Land Management
Roswell District Office
P.O. Box 1397
Roswell, New Mexico 88201-1397

Attention: District Manager

Oil Conservation Division
State Land Office
P.O. Box 1148
Santa Fe, New Mexico 87501

Attention: Land Commissioner

Leasehold Operators within one-half mile:

Kaiser-Francis
Rt. Box 208
Odessa, Texas 78765

FI-RO Corporation
P.O. Box 8148
Roswell, New Mexico 88201

Union Oil Company of California
4000 N. Big Spring
Suite 300
Midland, Texas 79702