

**CHECKLIST for ADMINISTRATIVE INJECTION APPLICATIONS**

SWD 681

Operator: SHACKLEFORD Oil Company Well: TOLTO FEDERAL No. 1

Contact: DAVE SHACKLEFORD Title: PRESIDENT Phone: 915-682-9784

DATE IN 9-15-97 RELEASE DATE 9-30-97 DATE OUT 11-18-97

Proposed Injection Application is for:  WATERFLOOD  Expansion  Initial

Original Order: R-  Secondary Recovery  Pressure Maintenance

**SENSITIVE AREAS**

SALT WATER DISPOSAL  Commercial Well

WIPP  Capitan Reef

Data is complete for proposed well(s)?  Additional Data Req'd \_\_\_\_\_

**AREA of REVIEW WELLS**

5 Total # of AOR

0 # of Plugged Wells

113 Tabulation Complete

Schematics of P & A's

100 Cement Tops Adequate

AOR Repair Required

**INJECTION FORMATION**

Injection Formation(s) EVAN SPRINGS Compatible Analysis \_\_\_\_\_

Source of Water or Injectate AREA PRODUCTION

**PROOF of NOTICE**

Copy of Legal Notice

Information Printed Correctly

Correct Operators

Copies of Certified Mail Receipts

NO Objection Received

Set to Hearing \_\_\_\_\_ Date

NOTES: \* WITHIN SURFACE BOUNDARIES OF REEF BUT WITHIN, WITHIN DEEPER

**APPLICATION QUALIFIES FOR ADMINISTRATIVE APPROVAL?** YES

**COMMUNICATION WITH CONTACT PERSON:**

1st Contact:	<input type="checkbox"/> Telephoned	<input type="checkbox"/> Letter	_____ Date	Nature of Discussion _____
2nd Contact:	<input type="checkbox"/> Telephoned	<input type="checkbox"/> Letter	_____ Date	Nature of Discussion _____
3rd Contact:	<input type="checkbox"/> Telephoned	<input type="checkbox"/> Letter	_____ Date	Nature of Discussion _____

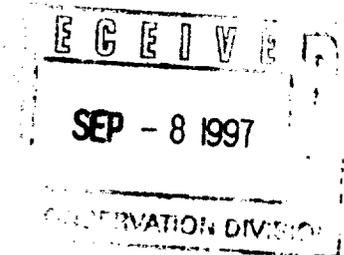
SWD 7/23/97

# SHACKELFORD OIL COMPANY

P.O. Box 10665 Midland Texas 79702  
9784

Phone (915) 682-

August 26, 1997



Oil Conservation Division  
P.O. Box 2088  
State Land Office Building  
Santa Fe, NM 87501

Attn: David R. Catanach

Re: Application for Saltwater Disposal  
Tonto Federal Well No. 1  
Teas Bone Springs

Dear Sir:

Enclosed is Shackelford Oil Company's Application For Authorization To Inject (Form C- 108) and required supporting data, for salt water disposal in the referenced well bore. I trust this will fulfill the data needed for the administrative approval of Shackelford Oil Company's application, but should you need additional data or have any questions, please contact me.

Very truly yours,

  
Don G. Shackelford

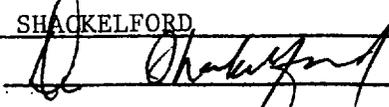
DGS:nps

APPLICATION FOR AUTHORIZATION TO INJECT

- I. Purpose:  Secondary Recovery  Pressure Maintenance  Disposal  Storage  
Application qualifies for administrative approval?  yes  no
- II. Operator: SHACKELFORD OIL COMPANY  
Address: P O BOX 10665 MIDLAND TX 79702  
Contact party: DON SHACKELFORD Phone: (915) 684-9784
- 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: DON SHACKELFORD Title PRESIDENT

Signature:  Date: AUGUST 25, 1997

- \* 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.

## 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.

SHACKELFORD OIL COMPANY  
APPLICATION FOR SALT WATER DISPOSAL  
WELL DATA SHEET

III.

A. 1. Lease Name: Tonto Federal  
Well No.: 1  
Lease No.: NM 17439  
Location: 1980' FNL & 660' FEL  
Sec. 10, T20S, R33E

2. Casing Data: Hole size  
17 1/2" 13 3/8", 54# K-55 set @ 523', 400 sx. cement circ to surface  
12 1/4" 8 5/8", 24# J-55 set @ 5000', 2900 sx cement circ. to surface  
7 7/8" \*5 1/2", 17# N-80 set @ 10697', 1535 sx cement . Top at 4200'

\* The Tonto Federal No. 1 was originally plugged 10/85, ~ 4000' of casing was cut & pulled. In 11/90 the well was re-entered and the 5 1/2" casing was ran back in to the well.

3. Tubing Data: 2 7/8" 6.5 # N-80 @ 9300'

4. Packer Data: 5 1/2" Baker R type packer

B. 1. Injection Information: Teas Bone Springs 9302'-9316' , 9498'- 9514'

2. Perforated interval: Bone Springs 9302'-9316', 9498'-9514'

3. Original purpose of well: To test the Bone Springs Formations for production of oil and gas in commercial quantities.

4. Other perforated intervals: 10240'-10247', 10446'-10455', set CIBP @ 9760' w/20' of cement on top of CIBP

5. Next higher productive zone: Delaware 5000'-8200'  
Next lower productive zone: Wolfcamp 10400'

VII.

1. Proposed average daily rate: 200 BWPD  
Proposed maximum daily rate: 750 BWPD
2. The system will be a closed system
3. Proposed average injection pressure: 500 psi  
Proposed maximum injection pressure: 1500 psi
4. Attached
5. Not applicable

VIII.

1. Formation Name: Bone Springs  
Lithology: Sandstone  
Thickness: 30'  
Depth: 9302'-9316', 9498'-9514'



APPLICATION FOR  
SALT WATER DISPOSAL  
TONTON FEDERAL NO. 1  
TEAS BONE SPRING FIELD, LEA COUNTY, NEW MEXICO

WELL DATA TABULATION

Operator: Well Name	Type	Date Drilled	Location	Total Depth	Completion		Date	Status
					Perf	Reservoir		
BTA Oil Producers 8705 JV-P Gem #5	Oil	6-5-91	Sec. 2, T20S, R33E 660' FSL & 810' FWL	10340'	10150-10216	Bone Springs	9-7-91	Active
					9482-9528	Bone Springs		Active
					9278-9397	Bone Springs		Active
Samson Resources 1 Smith Ranch Federal	Oil	6-21-88	Sec. 11, T20S, R33E 1980' FNL & 660' FWL	13650'	9324-9344	Bone Springs	6-21-88	Active OWWO
					9380-9424	Bone Springs		Original completion
					13534-13544	Lower Morrow		
					13318-13326	Perm.		
					13334-13464			
					13534-13544			
Samson Resources 2 Smith Ranch Federal	Oil	1-26-91	Sec. 11, T20S, R33E 660' FNL & 1980' FWL	9746'	9386-9442	Bone Springs	3-13-91	Active
Devon Energy 1 Smith Ranch "11" Federal	Oil	6-28-91	Sec. 11, T20S, R33E 2310' FSL & 900' FWL	9700'	9436-9454	Bone Springs	9-17-91	Active
					9462-9474	Bone Springs		Active
Devon Energy 2 Smith Ranch "11" Federal	Oil	7-29-93	Sec. 11, T20S, R33E 2250' FSL & 2014' FWL	9520'	9410-9474	Bone Springs	11-8-93	Active

**CONFIDENTIAL**

**Schlumberger**

**SIMULTANEOUS  
COMPENSATED NEUTRON-  
LITHO DENSITY**

COUNTY FIELD LOCATION WELL COMPANY	COMPANY <u>SIETE OIL AND GAS CORP.</u>		
	WELL <u>TONTO FEDERAL #1</u>		
	FIELD <u>TEAS BONE SPRINGS</u>		
	COUNTY <u>LEA</u> STATE <u>NEW MEXICO</u>		
LOCATION	<u>1980 FNL, 660 EEL</u>		Other Services: <u>DIL, LSS</u> <u>EPT, CST</u>
API SERIAL NO.	SEC.	TWP.	RANGE
	<u>10</u>	<u>20-S</u>	<u>33-E</u>

Permanent Datum: <u>GROUND LEVEL</u> ; Elev.: <u>3576</u>	Elev.: K.B. <u>3595</u>
Log Measured From <u>KB</u> , <u>19</u> Ft. Above Perm. Datum	D.F. <u>3594</u>
Drilling Measured From <u>KB</u>	G.I. <u>3576</u>

Date	<u>7/6/85</u>	<b>EXPLORATION WELL FILE RECEIVED</b>			
Run No.	<u>TWO</u>				
Depth-Driller	<u>10,701</u>	<b>JUL 11 1985</b>			
Depth-Logger	<u>10,706</u>				
Btm. Log Interval	<u>10,703</u>				
Top Log Interval	<u>5001</u>				
Casing-Driller	<u>85/2 @ 4995</u>	@	@	@	@
Casing-Logger	<u>5001</u>				
Bit Size	<u>7 7/8</u>				
Type Fluid in Hole	<u>FW GEL/ORIS PAC</u>				
Dens.	<u>9.1</u>	<u>35</u>			
pH	<u>9</u>	<u>18 ml</u>	ml	ml	ml
Source of Sample	<u>FLOWLINE</u>				
Rm @ Meas. Temp.	<u>4.75 @ 85 °F</u>	@ °F	@ °F	@ °F	@ °F
Rmf @ Meas. Temp.	<u>3.40 @ 85 °F</u>	@ °F	@ °F	@ °F	@ °F
Rmc @ Meas. Temp.	<u>- @ - °F</u>	@ °F	@ °F	@ °F	@ °F
Source: Rmf   Rmc	<u>MEAS   -</u>				
Rm @ BHT	<u>2.93 @ 138 °F</u>	@ °F	@ °F	@ °F	@ °F
TIME	Circulation Stopped <u>1500 7-6</u>				
	Logger on Bottom <u>2330 7-6</u>				
Max. Rec. Temp.	<u>138 °F</u>	°F	°F	°F	°F
Equip.   Location	<u>8279   HOBBS</u>				
Recorded By	<u>Tom McDONALD</u>				
Witnessed By	<u>Tom WELCH</u>				

# SHACKELFORD OIL COMPANY

---

P. O. Box 10665  
Midland, Texas 79702

Phone (915) 682-9784  
Fax (915) 684-5026

AUGUST 25, 1997

**APPLICATION FOR SALT WATER DISPOSAL (FORM C-108)  
SHACKELFORD OIL COMPANY  
TONTO FEDERAL #1  
TEAS BONE SPRINGS FIELD  
LEA CO, NEW MEXICO**

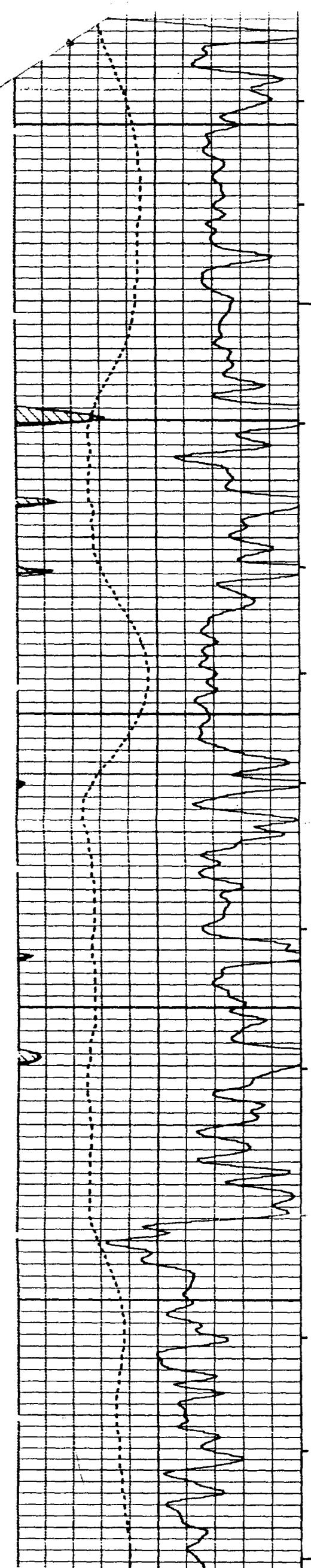
Gentleman:

I have reviewed geological and engineering data in the Teas Bone Springs area and have found no evidence of faulting or hydrologic connection between the proposed water disposal zone and any underground source of fresh water.

Very truly yours,



Bob L. Shackelford  
Geologist



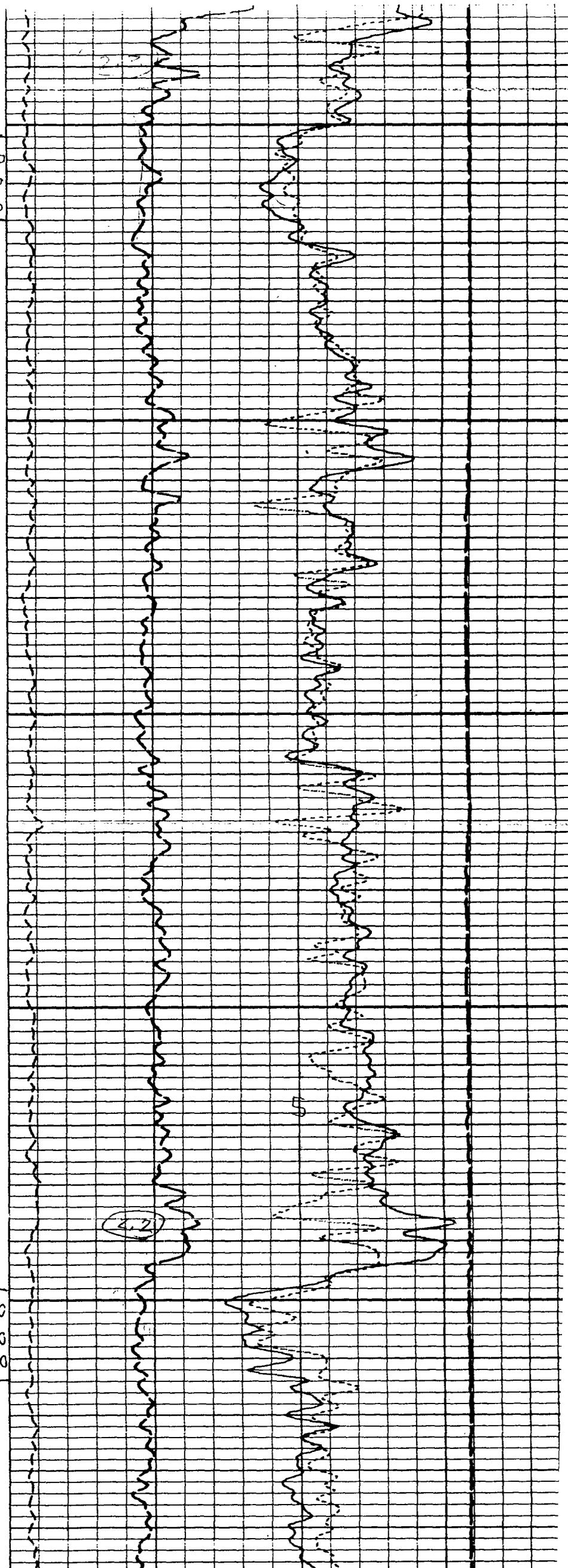
9300

0000

9400

9500

0000



DATE: 8/9/96

OMEGA TREATING CHEMICALS, INC.  
2500 W. FRANCES STREET  
MIDLAND, TEXAS 79701

WATER ANALYSIS REPORT

COMPANY NAME: SHACKELFORD OIL

LEASE NAME: ARCO 886

WELL#\SAMPLE POINT: #1

1. WELLHEAD pH	6.42
2. H2S (QUALITATIVE)	67.32 PPM
3. CALCIUM (Ca)	1560.00 Mg/L
4. MAGNESIUM (Mg)	170.10 Mg/L
5. IRON (Fe)	0.54 PPM
6. SODIUM	6421.85 Mg/L
7. CHLORIDE (Cl)	10650.00 Mg/L
8. BICARBONATE (HCO3)	854.00 Mg/L
9. SULFATE (SO4)	2743.4 Mg/L
10. TOTAL HARDNESS	4600.00 Mg/L
11. TOTAL DISSOLVED SOLIDS	22467.19 Mg/L
12. RESISTIVITY	0.29
13. CARBONATE SCALING TENDENCY	0.19
14. SULFATE SCALING TENDENCY	2.49

BOPD \_\_\_\_

BWPD \_\_\_\_

REMARKS:

COPIES TO: DON SHACKELFORD, JOHN NOGELMEIER

KB 3595

TONTO FEDERAL #1  
TEAS BONE SPRINGS  
LEA CO., NEW MEXICO  
SEC. 10, T-20-S, R-33-E

13 3/8" SET AT 523'

CEMENT PLUG WAS  
SET AT 3250'-  
3500' DURING  
P+A OPERATIONS  
10/85



PERFS  
3380'-3456'  
3545'-3579'

8 5/8" SET AT 5000'

CEMENT PLUG  
6534'-6753'  
10/85



CEMENT PLUG  
7931'-8150'  
10/85



PERFS 8081'-8090'

CEMENT PLUG  
9165'-9200'  
10/85



PERFS  
9302'-9316' + 9498'-9514'

PERFS 9812'-9824'

PERFS  
10,240-247 + 10,446' - 10,455'

CIBP SET  
AT 9760'  
W/20' CEMENT  
ON TOP

5 1/2" SET AT 10,697'

TO 10,697'  
PBD 9740

# SHACKELFORD OIL COMPANY

P. O. Box 10665  
Midland, Texas 79702

Phone (915) 682-9784  
Fax (915) 684-5026

August 25, 1997

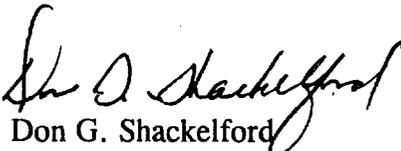
Bureau of Land Management  
P.O. Box 1778  
Carlsbad, NM 88221-1778

Dear Sirs:

This letter shall constitute official notice that Shackelford Oil Company proposes to convert the Tonto Federal #1, located at 1980' from the North line and 660' from the East line, Section 10, Township 20S, Range 33E, Lea County, New Mexico, into a salt water disposal well with water to be disposed into the Bone Springs formation from 9302-9316' and 9498-9514'.

Should you have any questions related to this application, please contact the New Mexico Oil Conservation Division within fifteen days of the date of this letter.

Sincerely,

  
Don G. Shackelford  
President

US Postal Service  
**Receipt for Certified Mail**  
No Insurance Coverage Provided.  
Do not use for International Mail (See reverse)

Sent to <i>Bureau of Land Management</i>	Post Office, State, & ZIP Code <i>PO Box 1778, Carlsbad, NM 88221</i>
Street & Number	
Postage \$	
Certified Fee	
Special Delivery Fee	
Restricted Delivery Fee	
Return Receipt Showing to Whom & Date Delivered	
Return Receipt Showing to Whom, Date, & Addressee's Address	
TOTAL Postage & Fees \$	
Postmark or Date	

PS Form 3800, April 1995

Fold at line over top of envelope to the right of the return address

**CERTIFIED**

P 245 748 448

**MAIL**

P 245 748 448

# SHACKELFORD OIL COMPANY

P. O. Box 10665  
Midland, Texas 79702

Phone (915) 682-9784  
Fax (915) 684-5026

August 25, 1997

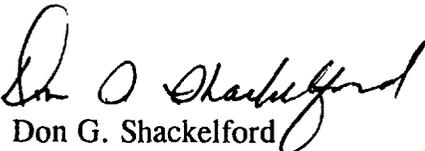
BTA  
104 S. Pecos  
Midland, Tx 79702

Dear Sirs:

This letter shall constitute official notice that Shackelford Oil Company proposes to convert the Tonto Federal #1, located at 1980' from the North line and 660' from the East line, Section 10, Township 20S, Range 33E, Lea County, New Mexico, into a salt water disposal well with water to be disposed into the Bone Springs formation from 9302-9316' and 9498-9514'.

Should you have any questions related to this application, please contact the New Mexico Oil Conservation Division within fifteen days of the date of this letter.

Sincerely ,

  
Don G. Shackelford  
President

P 245 748 450

US Postal Service

## Receipt for Certified Mail

No Insurance Coverage Provided.

Do not use for International Mail (See reverse)

Sent to	BTA
Street & Number	104 S. Pecos
Post Office, State, & ZIP Code	Midland, TX 79702
Postage	\$
Certified Fee	
Special Delivery Fee	
Restricted Delivery Fee	
Return Receipt Showing to Whom & Date Delivered	
Return Receipt Showing to Whom, Date, & Addressee's Address	
TOTAL Postage & Fees	\$
Postmark or Date	

PS Form 3800, April 1995

Fold at line over top of envelope to the right of the return address

**CERTIFIED**

P 245 748 450

**MAIL**

# SHACKELFORD OIL COMPANY

P. O. Box 10665  
Midland, Texas 79702

Phone (915) 682-9784  
Fax (915) 684-5026

August 25, 1997

Samson Resources  
Samson Plaza  
Two West Second Street  
Tulsa, OK 74103-3103

Midland, Tx 79702

Dear Sirs:

This letter shall constitute official notice that Shackelford Oil Company proposes to convert the Tonto Federal #1, located at 1980' from the North line and 660' from the East line, Section 10, Township 20S, Range 33E, Lea County, New Mexico, into a salt water disposal well with water to be disposed into the Bone Springs formation from 9302-9316' and 9498-9514'.

Should you have any questions related to this application, please contact the New Mexico Oil Conservation Division within fifteen days of the date of this letter.

Sincerely ,

  
Don G. Shackelford  
President

P 245 748 449

US Postal Service  
**Receipt for Certified Mail**  
No Insurance Coverage Provided.  
Do not use for International Mail. (See reverse)

Sent to	Samson Resources
Street & Number	Samson Plaza, Two W. 2nd St.
Post Office, State, & ZIP Code	Tulsa, OK 74103-3103
Postage	\$
Certified Fee	
Special Delivery Fee	
Restricted Delivery Fee	
Return Receipt Showing to Whom & Date Delivered	
Return Receipt Showing to Whom, Date, & Addressee's Address	
TOTAL Postage & Fees	\$
Postmark or Date	

PS Form 3800, April 1995

Fold at line over top of envelope to the right of the return address

**CERTIFIED**

P 245 748 449

**MAIL**

# SHACKELFORD OIL COMPANY

P. O. Box 10665  
Midland, Texas 79702

Phone (915) 682-9784  
Fax (915) 684-5026

August 25, 1997

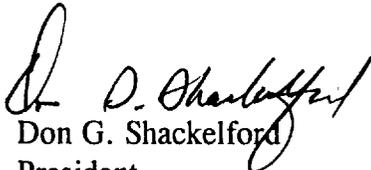
Devon Energy Corporation  
20 N. Broadway suite 1500  
Oklahoma City, Oklahoma 73102

Dear Sirs:

This letter shall constitute official notice that Shackelford Oil Company proposes to convert the Tonto Federal #1, located at 1980' from the North line and 660' from the East line, Section 10, Township 20S, Range 33E, Lea County, New Mexico, into a salt water disposal well with water to be disposed into the Bone Springs formation from 9302-9316' and 9498-9514'.

Should you have any questions related to this application, please contact the New Mexico Oil Conservation Division within fifteen days of the date of this letter.

Sincerely ,

  
Don G. Shackelford  
President

P 245 748 451

US Postal Service  
**Receipt for Certified Mail**  
No Insurance Coverage Provided.  
Do not use for International Mail (See reverse)

Sent to <i>Devon Energy Corp.</i>	Street & Number <i>20 N. Broadway - Suite 1500</i>	Post Office, State, & ZIP Code <i>Oklahoma City, OK 73102</i>	Postage \$	Certified Fee	Special Delivery Fee	Restricted Delivery Fee	Return Receipt Showing to Whom & Date Delivered	Return Receipt Showing to Whom, Date, & Addressee's Address	TOTAL Postage & Fees \$	Postmark or Date
--------------------------------------	---	--	---------------	---------------	----------------------	-------------------------	---	---	----------------------------	------------------

PS Form 3800, April 1995

Fold at line over top of envelope to the right of the return address

**CERTIFIED**

P 245 748 451

**MAIL**