

ABOVE THIS LINE FOR DIVISION USE ONLY

NEW MEXICO OIL CONSERVATION DIVISION
 - Engineering Bureau -

ADMINISTRATIVE APPLICATION COVERSHEET

THIS COVERSHEET IS MANDATORY FOR ALL ADMINISTRATIVE APPLICATIONS FOR EXCEPTIONS TO DIVISION RULES AND REGULATIONS

Application Acronyms:

- [NSP-Non-Standard Proration Unit] [NSL-Non-Standard Location]
- [DD-Directional Drilling] [SD-Simultaneous Dedication]
- [DHC-Downhole Commingling] [CTB-Lease Commingling] [PLC-Pool/Lease Commingling]
- [PC-Pool Commingling] [OLS - Off-Lease Storage] [OLM-Off-Lease Measurement]
- [WFX-Waterflood Expansion] [PMX-Pressure Maintenance Expansion]
- [SWD-Salt Water Disposal] [IPI-Injection Pressure Increase]
- [EOR-Qualified Enhanced Oil Recovery Certification] [PPR-Positive Production Response]

[1] TYPE OF APPLICATION - Check Those Which Apply for [A]

- [A] Location - Spacing Unit - Directional Drilling
 NSL NSP DD SD

Check One Only for [B] and [C]

- [B] Commingling - Storage - Measurement
 DHC CTB PLC PC OLS OLM

- [C] Injection - Disposal - Pressure Increase - Enhanced Oil Recovery
 WFX PMX SWD IPI EOR PPR

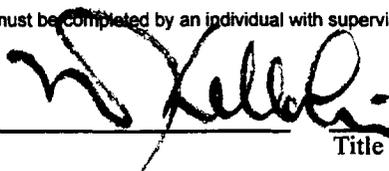
[2] NOTIFICATION REQUIRED TO: - Check Those Which Apply, or Does Not Apply

- [A] Working, Royalty or Overriding Royalty Interest Owners
- [B] Offset Operators, Leaseholders or Surface Owner
- [C] Application is One Which Requires Published Legal Notice
- [D] Notification and/or Concurrent Approval by BLM or SLO
U.S. Bureau of Land Management - Commissioner of Public Lands, State Land Office
- [E] For all of the above, Proof of Notification or Publication is Attached, and/or,
- [F] Waivers are Attached

[3] INFORMATION / DATA SUBMITTED IS COMPLETE - Statement of Understanding

I hereby certify that I, or personnel under my supervision, have read and complied with all applicable Rules and Regulations of the Oil Conservation Division. Further, I assert that the attached application for administrative approval is accurate and complete to the best of my knowledge and where applicable, verify that all interest (WI, RI, ORRI) is common. I understand that any omission of data, information or notification is cause to have the application package returned with no action taken.

Note: Statement must be completed by an individual with supervisory capacity.

W. THOMAS KELLAHIN  ATTORNEY 3/10/98
 Print or Type Name Signature Title Date

KELLAHIN AND KELLAHIN

ATTORNEYS AT LAW

EL PATIO BUILDING

117 NORTH GUADALUPE

POST OFFICE BOX 2265

SANTA FE, NEW MEXICO 87504-2265

TELEPHONE (505) 982-4285
TELEFAX (505) 982-2047

W. THOMAS KELLAHIN*

*NEW MEXICO BOARD OF LEGAL SPECIALIZATION
RECOGNIZED SPECIALIST IN THE AREA OF
NATURAL RESOURCES-OIL AND GAS LAW

JASON KELLAHIN (RETIRED 1991)

March 10, 1998

HAND DELIVERED

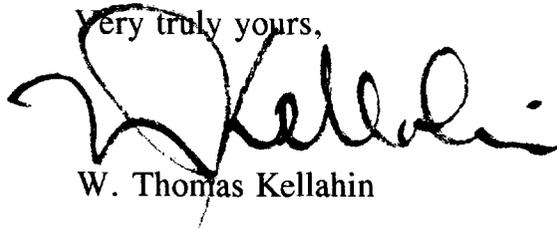
Mr. David R. Catanach
Oil Conservation Division
2040 South Pacheco
Santa Fe, New Mexico 87501

RE: **Anasazi "16" State Well No. 1**
Unit G, Section 16, T20S, R33E
Administrative Application of
Stevens & Tull Inc. to amended
injection interval authorized by
Administrative Order SWD-663
Lea County, New Mexico

Dear Mr. Catanach:

On behalf of Stevens & Tull, Inc., please find enclosed our administrative application in which we seek to amend the injection intervals for this salt water disposal well previously approved by Division Administrative Order SWD-663 issued May 7, 1997.

Very truly yours,



W. Thomas Kellahin

**STATE OF NEW MEXICO
ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT
OIL CONSERVATION DIVISION**

**IN THE MATTER OF THE ADMINISTRATIVE
APPLICATION OF STEVENS & TULL, INC.
TO AMEND ADMINISTRATIVE ORDER SWD-663
LEA COUNTY, NEW MEXICO**

ADMINISTRATIVE APPLICATION

Comes now Stevens & Tull, Inc., by and through its attorneys, Kellahin and Kellahin, and in accordance with Division General Rule 701.C and 701.E, applies to the New Mexico Oil Conservation Division to amend Administrative Order SWD-663 to change the approved injection interval in its Anasazi "16" State Well No 1, located 1730 feet from the North line and 1980 feet from the East line of Section 16, T20S, R33E, Lea County New Mexico, from the current perforations from 9,306 feet to 9,3502 feet, being within the Bone Springs formation to proposed perforations from 7,720 feet to 7,736 feet and 7,.872 feet to 7,886 feet being within the Delaware formation, and in support states:

(1) Stevens & Tull, Inc. is the operator of the subject well which has been approved for disposal of water produced from the Yates formation into the Bone Springs formation. **See Exhibit "A" attached.**

(2) Stevens & Tull, Inc. pressured up the Bone Springs formation to 1,500 pounds and was only able to disposal of water at the rate of 60 BWPD into that formation.

(3) Stevens & Tull, Inc. requests authority to attempt to utilize the Delaware formation in this wellbore for disposal through perforations from 7,720 feet to 7,736 feet and from 7,872 feet to 7,886 feet. **See Division Form C-108 attached as Exhibit "B".**

(4) The subject well is offset by those operators listed on Exhibit "C" attached.

WHEREFORE, Stevens & Tull requests that this matter be approved administratively by the Division.

Respectfully submitted,



W. Thomas Kellahin
Kellahin and Kellahin
P.O. Box 2265
Santa Fe, New Mexico 87504



ADMINISTRATIVE ORDER SWD-663

*APPLICATION OF STEVENS & TULL, INC. FOR SALT WATER DISPOSAL,
LEA COUNTY, NEW MEXICO.*

**ADMINISTRATIVE ORDER
OF THE OIL CONSERVATION DIVISION**

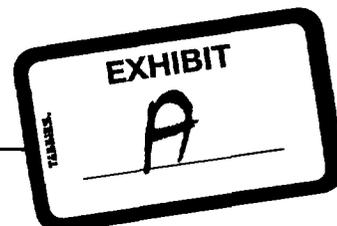
Under the provisions of Rule 701(B), Stevens & Tull, Inc. made application to the New Mexico Oil Conservation Division on May 7, 1997, for permission to complete for salt water disposal its Anasazi '16' State Well No.1 located 1730 feet from the North line and 1980 feet from the East line (Unit G) of Section 16, Township 20 South, Range 33 East, NMPM, Lea County, New Mexico.

THE DIVISION DIRECTOR FINDS THAT:

- (1) The application has been duly filed under the provisions of Rule 701(B) of the Division Rules and Regulations;
- (2) Satisfactory information has been provided that all offset operators and surface owners have been duly notified;
- (3) The applicant has presented satisfactory evidence that all requirements prescribed in Rule 701 will be met; and
- (4) No objections have been received within the waiting period prescribed by said rule.

IT IS THEREFORE ORDERED THAT:

The applicant herein, is hereby authorized to complete its Anasazi '16' State Well No.1 located 1730 feet from the North line and 1980 feet from the East line (Unit G) of Section 16, Township 20 South, Range 33 East, NMPM, Lea County, New Mexico, in such manner as to permit the injection of salt water for disposal purposes into the Bone Spring formation at approximately 9,306 feet to 9,352 feet through 2 7/8-inch plastic-lined tubing set in a packer located at approximately 9,206 feet.



IT IS FURTHER ORDERED THAT:

The operator shall take all steps necessary to ensure that the injected water enters only the proposed injection interval and is not permitted to escape to other formations or onto the surface.

Prior to commencing injection operations into the well, the casing shall be pressure tested from the surface to the packer setting depth to assure the integrity of said casing.

The casing-tubing annulus shall be loaded with an inert fluid and equipped with a pressure gauge at the surface or left open to the atmosphere to facilitate detection of leakage in the casing, tubing, or packer.

The injection well or system shall be equipped with a pressure limiting device which will limit the wellhead pressure on the injection well to no more than 1861 psi.

The Director of the Division may authorize an increase in injection pressure upon a proper showing by the operator of said well that such higher pressure will not result in migration of the injected fluid from the Bone Spring formation. Such proper showing shall consist of a valid step-rate test run in accordance with and acceptable to this office.

The operator shall notify the supervisor of the Hobbs district office of the Division of the date and time of the installation of disposal equipment and of the mechanical integrity test so that the same may be inspected and witnessed.

The operator shall immediately notify the supervisor of the Hobbs district office of the Division of the failure of the tubing, casing, or packer in said well and shall take such steps as may be timely and necessary to correct such failure or leakage.

PROVIDED FURTHER THAT, jurisdiction of this cause is hereby retained by the Division for the entry of such further order or orders as may be deemed necessary or convenient for the prevention of waste and/or protection of correlative rights; upon failure of the operator to conduct operations in a manner which will ensure the protection of fresh water or in a manner inconsistent with the requirements set forth in this order, the Division may, after notice and hearing, terminate the injection authority granted herein.

The operator shall submit monthly reports of the disposal operations in accordance with Rule Nos. 706 and 1120 of the Division Rules and Regulations.

Administrative Order SWD-663

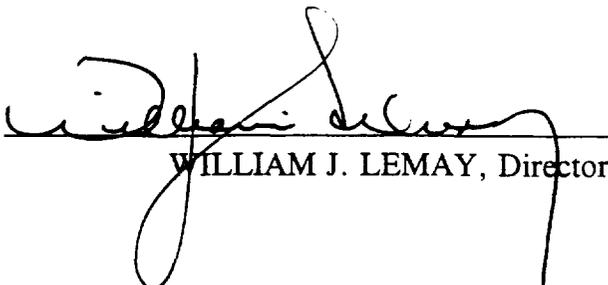
Stevens & Tull, Inc.

July 2, 1997

Page 3

The injection authority granted herein shall terminate one year after the effective date of this order if the operator has not commenced injection operations into the subject well, provided however, the Division, upon written request by the operator, may grant an extension thereof for good cause shown.

Approved at Santa Fe, New Mexico, on this 2nd day of July, 1997.


WILLIAM J. LEMAY, Director

S E A L

WJL/BES

xc: Oil Conservation Division - Hobbs
NM State Land Office - Oil & Gas Division

APPLICATION FOR AUTHORIZATION TO INJECT

- I. PURPOSE: Secondary Recovery Pressure Maintenance Disposal Storage
Application qualifies for administrative approval? Yes No
- II. OPERATOR: Stevens & Tull, Inc.
ADDRESS: P. O. Box 11005 Midland, Texas 79702
CONTACT PARTY: Jerry Weant 915-699-1410 PHONE: _____
- III. WELL DATA: Complete the data required on the reverse side of this form for each well processed for injection. Additional sheets may be attached if necessary.
- IV. Is this an expansion of an existing project: Yes No SWD-663
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 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 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 Kellahan TITLE: Attorney
SIGNATURE: [Signature] DATE: 3/10/98

EXHIBIT
B

ion required under Sections VI, VIII, X, and XI above has been previously submitted, it need not be
ase show the date and circumstance of the earlier submittal.

inal and one copy to Santa Fe with one copy to the appropriate 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, PO Box 2088, Santa Fe, NM 87504-2088 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.

INJECTION WELL DATA SHEET

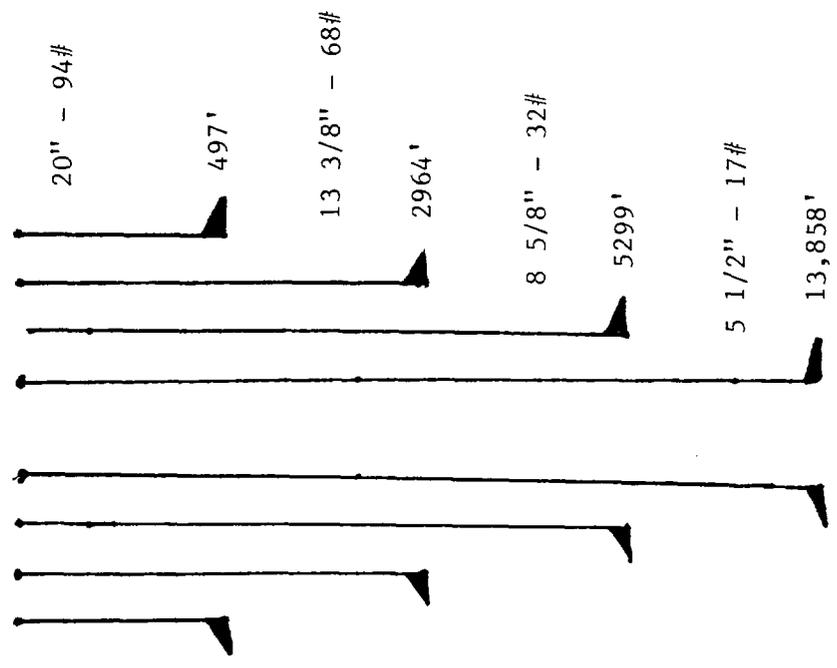
OPERATOR STEVENS & TULL, INC. LEASE ANASAZI 16 STATE

WELL NO. 1 1730' FNL & 1980' FEL UNINT G 16 20 South 33 East

FOOTAGE LOCATION

SECTION 16 TOWNSHIP 20 South RANGE 33 East
LEA COUNTY, NEW MEXICO

Schematic



Well Construction Data

Surface Casing
Size 13 3/8" Cemented with 2100 sx.
TOC Surface _____ feet determined by Circulated
Hole Size 17 1/2"

Intermediate Casing
Size 8 5/8" Cemented with 1150 sx.
TOC Surface _____ feet determined by Circulated
Hole Size 12 1/4"

Long String
Size 5 1/2" Cemented with 1200 sx.
TOC Surface _____ feet determined by CBL
Hole Size 7 7/8"

Total Depth 13,858'

Injection Interval

9306 feet to 9352 feet (PERFORATED)
(perforated or open-hole; indicate which)

INJECTION WELL DATA SHEET

Tubing Size 2 7/8" lined with NONE set in a _____
(type of internal coating) _____
feet
packer at _____

Other type of tubing / casing seal if applicable _____

Other Data

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

If no, for what purpose was the well originally drilled? Originally drilled as a marginal well in Morrow and Bone Springs Formations (1993)

2. Name of the Injection formation Bone Springs

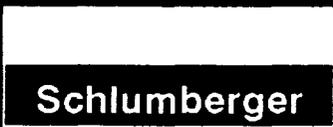
3. Name of Field or Pool (if applicable) Wildcat Bone Springs

4. Has the well ever been perforated in any other zone(s)? List all such perforated intervals and give plugging detail, i.e., sacks of cement or plug(s) used. Morrow - (13,204' - 13,422')

CIBP @ 13,075 - 35' cement, Wolfcamp (11,576' - 11,686') - CIBP @ 11,558' - 35' cement

5. Give the names and depths of any over or underlying oil of gas zones (pools) in this area.

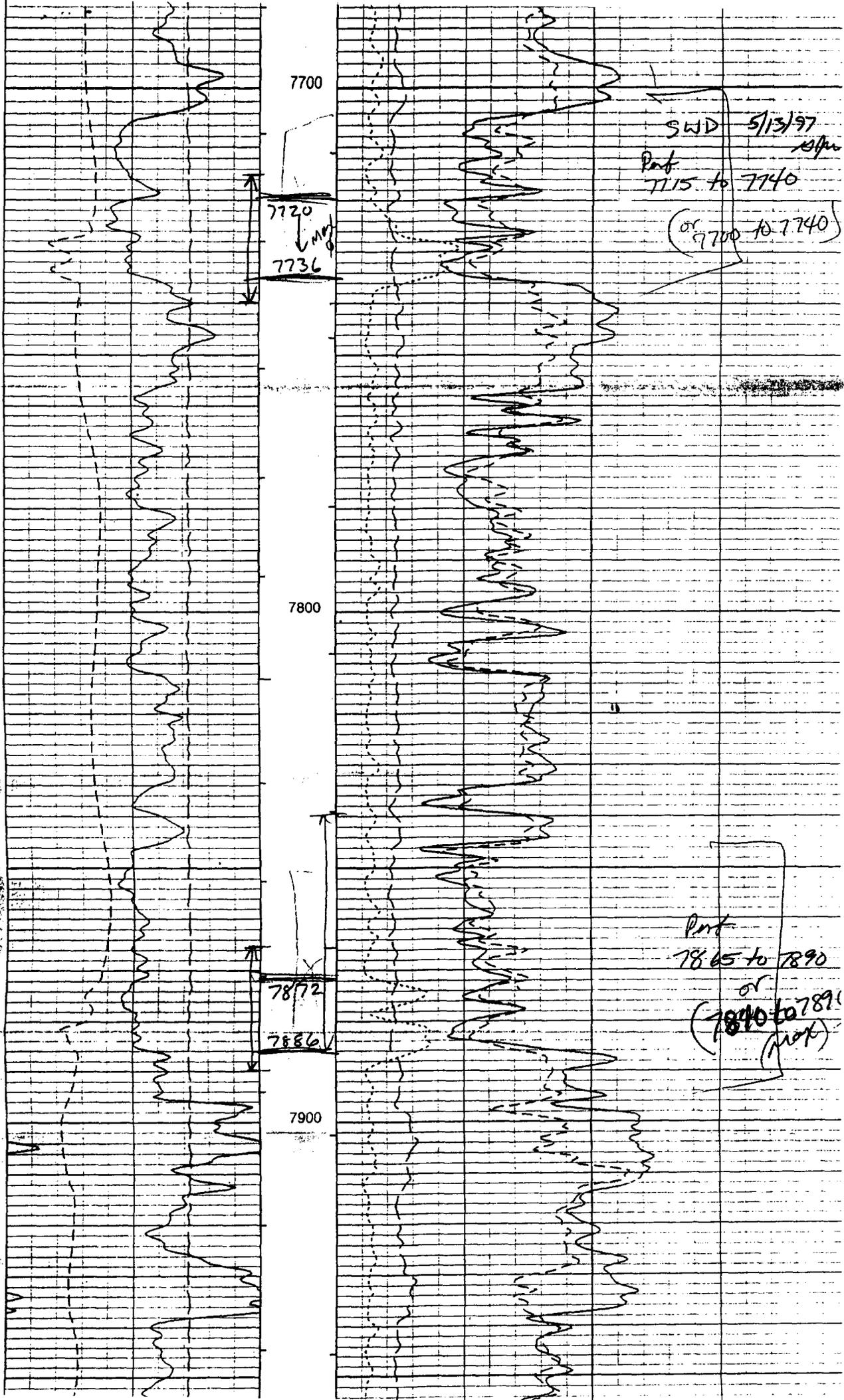
West Teas Yates - Seven Rivers Field (3,100' - 3,200')



LITHO DENSITY/ COMPENSATED NEUTRON

FINAL COMPOSITE

County: LEA Field: WEST TEAS (MORROW) Location: 1730' FNL & 1980' FEL Well: ANASAZI "16" STATE COM #1 Company: MITCHELL ENERGY CORP	Company: MITCHELL ENERGY CORPORATION				Well: ANASAZI "16" STATE COM #1		Field: WEST TEAS (MORROW)		County : LEA		State: NEW MEXICO	
	LOCATION 1730' FNL & 1980' FEL				Other Services:		AT/DLL/MSFL		BHC		ML	
	API SERIAL NO. 30-025-31856		SECTION 16	TOWNSHIP 20-S		RANGE 33-E						
Permanent Datum		G.L.	Elevation:		3539 F		Log Measured From		RKB		Elevations:	
Drilling Measured From		RKB	19		Ft. above Perm. Datum						KB: 3558 F	
		RKB									DF: 3557 F	
											GL: 3539 F	
Date	13-JUN-93		05-JUL-93									
Run No.	1		2									
Depth-Driller	8305		13860									
Depth-Logger	8307		13852									
Btm. Log Interval	8304		13850									
Top Log Interval	250		8050									
Casing-Driller	8.625 @ 5300		8.625 @ 5306									
Casing-Logger	5310		5310									
Bit Size	7.875		7.875									
Fluid Type	PAC		SALT POLYMER									
Dens. / Visc.	9.5 LB/G / 31 S		10 LB/G / 45 S									
pH / Fluid Loss	10 / 82.4 C3		9.5 / 9.8 C3									
Source of Sample	SHAKER		PIT									
Rm @ Meas Temp	.871 @ 86		.065 @ 88									
Rmf @ Meas Temp	.787 @ 86		.041 @ 88									
Rmc @ Meas Temp			.110 @ 88									
Source: Rmf/Rmc	MEAS /		PRESS / PRESS									
Rm @ BHT	.618 @ 124		.036 @ 165									
Time Circ. Stopped	1430 6-13		1345 7-5									
Logger on Btm.	2217 6-13		0511 7-6									
Max. Rec. Temp.	124		165									
Equip. / Location	2033 / HOBBS		2020 / ROSWELL									
Recorded By:	LIEBERENZ		SULLIVAN									
Witnessed By:	FEDRO		JORDAN									



7700

7720

7736

7800

7872

7886

7900

SWD 5/13/97
SPM
Part 7715 to 7740

(or 7700 to 7740)

Part 7865 to 7890

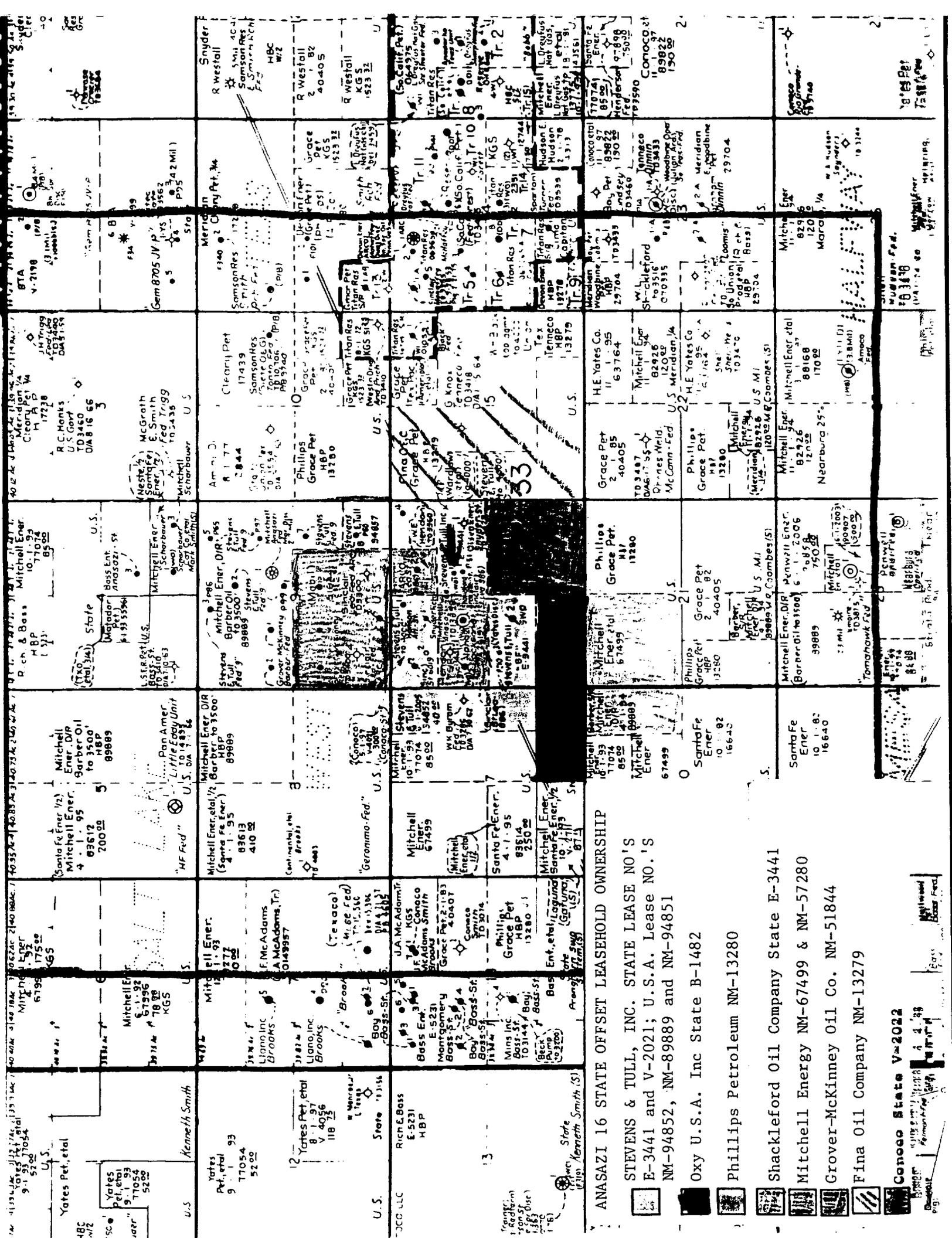
or
(7840 to 7890
(not))

ANASAZI 16 STATE INJECTION REQUEST

WELLBORE SUMMARY

	<u>WELL NAME</u>	<u>UNIT</u>	<u>SECTION</u>	<u>STATUS</u>
1.	STATE BF #4	A	16-20S-33E	PRODUCING
2.	LEA 886 STATE #2	B	16-20S-33E	P&A
3.	ATLANTIC STATE #1	C	16-20S-33E	P&A
4.	CONOCO STATE #1	C	16-20S-33E	PRODUCING
5.	STATE LEA 6019 #2	D	16-20S-33E	P&A
6.	CONOCO STATE #2	D	16-20S-33E	PRODUCING
7.	JACKSON STATE #1	E	16-20S-33E	P&A
8.	ARCO STATE #1	E	16-20S-33E	P&A
9.	ARCO 886 #1	F	16-20S-33E	PRODUCING
10.	ANASAZI 16 STATE #1	G	16-20S-33E	T/A
11.	STATE BF #1	G	16-20S-33E	PRODUCING
12.	SNYDER-STATE #1	H	16-20S-33E	P&A
13.	SNYDER #1	J	16-20S-33E	P&A
14.	BF STATE #2	K	16-20S-33E	INJECTION
15.	BF STATE #3	L	16-20S-33E	PRODUCING
16.	SNYDER #2	M	16-20S-33E	P&A
17.	LEA 6015 ARC FEDERAL #1	N	9-20S-33E	P&A
18.	LEA 6015 ARC FEDERAL #2	O	9-20S-33E	P&A
19.	FEDERAL "9" #8	P	9-20S-33E	PRODUCING

F:\EX\ANASAZI.INJ



ANASAZI 16 STATE OFFSET LEASEHOLD OWNERSHIP

STEVENS & TULL, INC. STATE LEASE NO'S
 E-3441 and V-2021; U.S.A. Lease NO.'S
 NM-94852, NM-89889 and NM-94851

Oxy U.S.A. Inc State B-1482

Phillips Petroleum NM-13280

Shackelford Oil Company State E-3441

Mitchell Energy NM-67499 & NM-57280

Grover-McKinney Oil Co. NM-51844

Fina Oil Company NM-13279

Conoco State V-2022

State V-2022

State V-2022

State V-2022