



March 16, 1973

New Mexico Oil Conservation Commission  
P. O. Box 2088  
Santa Fe, New Mexico 87501

ATTN: Mr. Dan Nutter

RE: Case 4793-Order No. R-4389  
Expansion of Project Area  
Hospah, South-Lower Sand  
(Tenneco Lower Hospah  
Pressure Maintenance) Pool

Gentlemen:

Tenneco Oil Company respectfully requests administrative approval to expand the Lower Hospah Pressure Maintenance Project, in accordance with Rule 10 of Order No. R-4389.

The expansion is to include the injection of produced water into Tenneco's Whigham No. 2 well, located 990' FSL & 990' FEL, Section 11, T17N & R9W, McKinley County, New Mexico.

The following are submitted in support of this application:

- 1) A plat showing the location of the proposed injection well, all wells within the project area, and the location of the only additional offset operator, Tesoro Petroleum Corporation.
- 2) A schematic diagram of the proposed injection well.
- 3) A log section of the proposed injection zone (Lower Hospah @ 1872'-1966').
- 4) A prognosis of the conversion procedure.

Tesoro will be notified by receiving a copy of this application, along with the supporting data.

*For the purpose of this application, we request that the  
well be converted from Lower Hospah - Lower Hospah injection  
well to produce water. This is being done by Jim Caruso to D.D. by  
phone on 3/15/73.*

## TENNECO OIL COMPANY

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Tenneco requests your early consideration and approval of this application.

Yours very truly,

TENNECO OIL COMPANY

  
R. A. Williford

District Production Manager

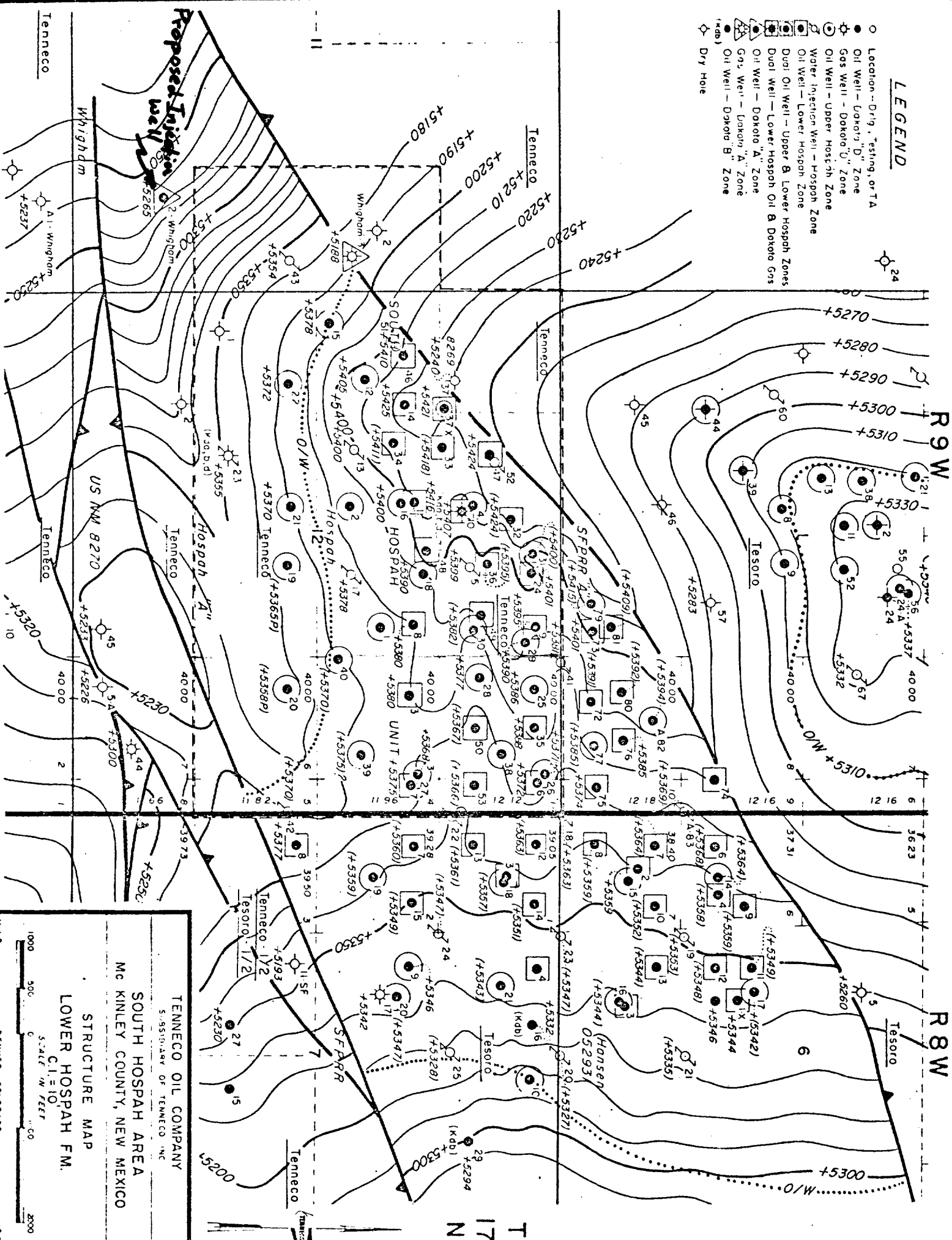
MJD/lj

### Attachments

cc: Mr. Emery C. Arnold-NMOCC-Aztec, N.M.  
Mr. Harvey Ashford-Tesoro-Denver, Colo.  
C. W. Nance-Tenneco-Rocky Mountain Division  
Mr. Harold Vaghtborg-Tesoro-San Antonio, Texas

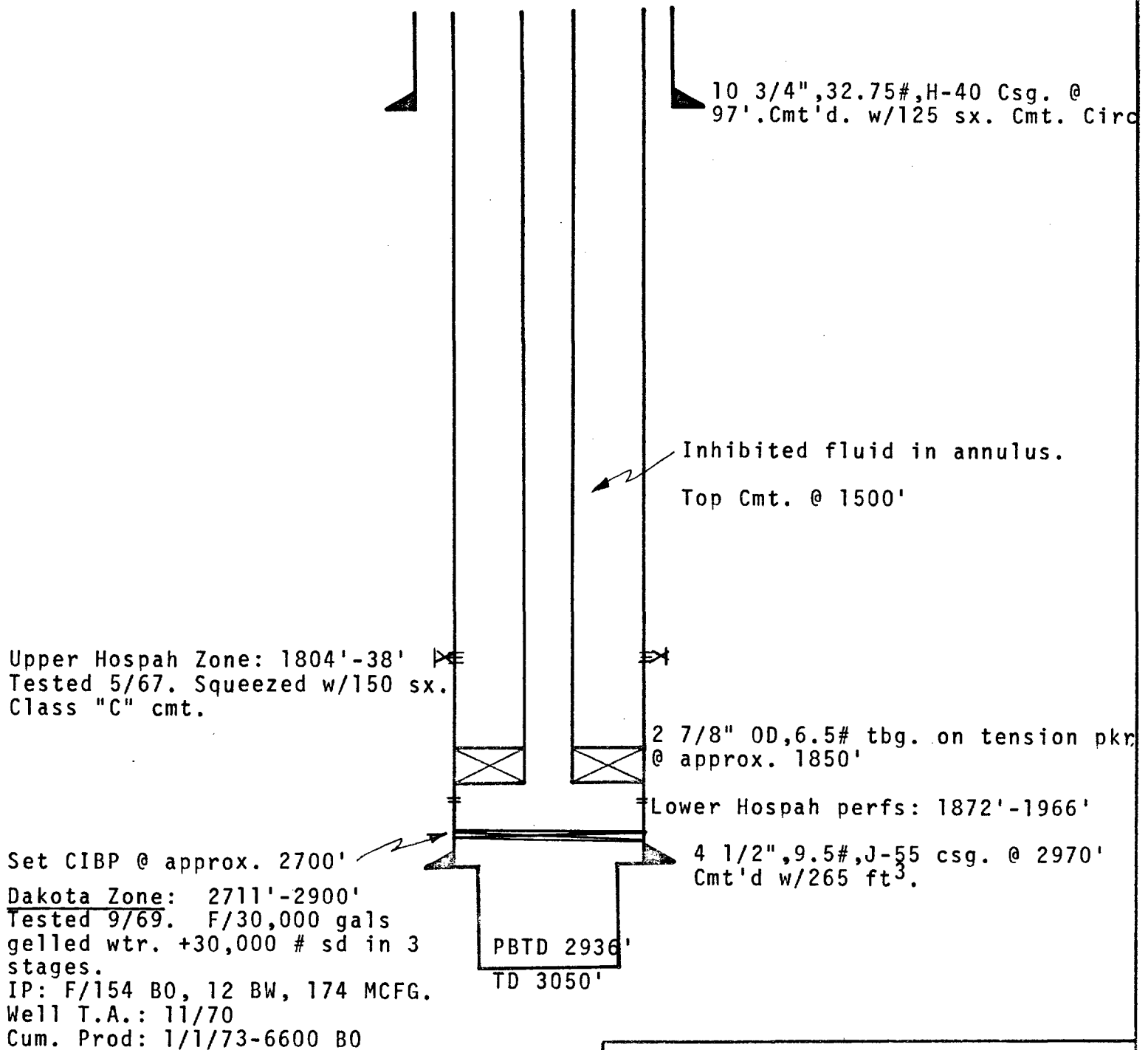
# LEGEND

- Location - Dry, Testing, or TA
- Oil Well - Dakota "D" Zone
- ⊕ Gas Well - Dakota "U" Zone
- ⊙ Oil Well - Upper Hoshpah Zone
- ⊖ Water Injection Well - Hoshpah Zone
- ⊗ Oil Well - Lower Hoshpah Zone
- ⊘ Dual Oil Well - Upper & Lower Hoshpah Zones
- ⊙ Dual Oil Well - Lower Hoshpah Zone
- ⊙ Gas Well - Dakota "A" Zone
- ⊙ Gas Well - Dakota "B" Zone
- ⊙ Dry Hole



TENNECO OIL COMPANY  
 S. S. KINLEY OF TENNECO, INC.  
 SOUTH HOSHAP AREA  
 LOWER HOSHAP F.M.  
 STRUCTURE MAP  
 C.I. = 10  
 SCALE IN FEET  
 1000 500 0 500 1000  
 DENVER, COLORADO  
 12 72

Elev: 7119' KB (13' AGL)



Tenneco Oil Company  
South Hospah Lower Sand Field  
McKinley County, New Mexico

Whigham No. 2  
Proposed Injection well  
990' FSL & 990' FEL, Sec. 11,  
T17N & R9W

[illegible]

Parent Deposit: 26, Elev. 7106  
 Measured From 43, 13 Ft. Above Perm. Datum  
 Measured From K.B.

Elev.: K.B. 7119  
 D.F. 7108  
 G.L. 7106

The well name, location and borehole reference data were furnished by the customer.

USED S.O.: FH-49089, 1-VC  
Used: CART. No. 282B  
PANEL No. 320C  
SONDE No. 310D

$$\text{Velocity (feet per second)} = \frac{1,000,000}{\text{Interval Transit Time (microseconds per foot)}}$$

DEPTHS	INTERVAL TRANSIT TIME	
	MICROSECONDS PER FOOT	
	T, R <sub>1</sub> , Z, R <sub>2</sub>	
120	90	
180	50	

TENNISCO WAGON # 2

UPPER HOSPAN ZONE

1800



LOWER HOSPAN

PROPOSED PERFS:  
1872'-1966'

1900



2000

TENNIS WYKAGAN #2

CIBP + 105K. CMT.

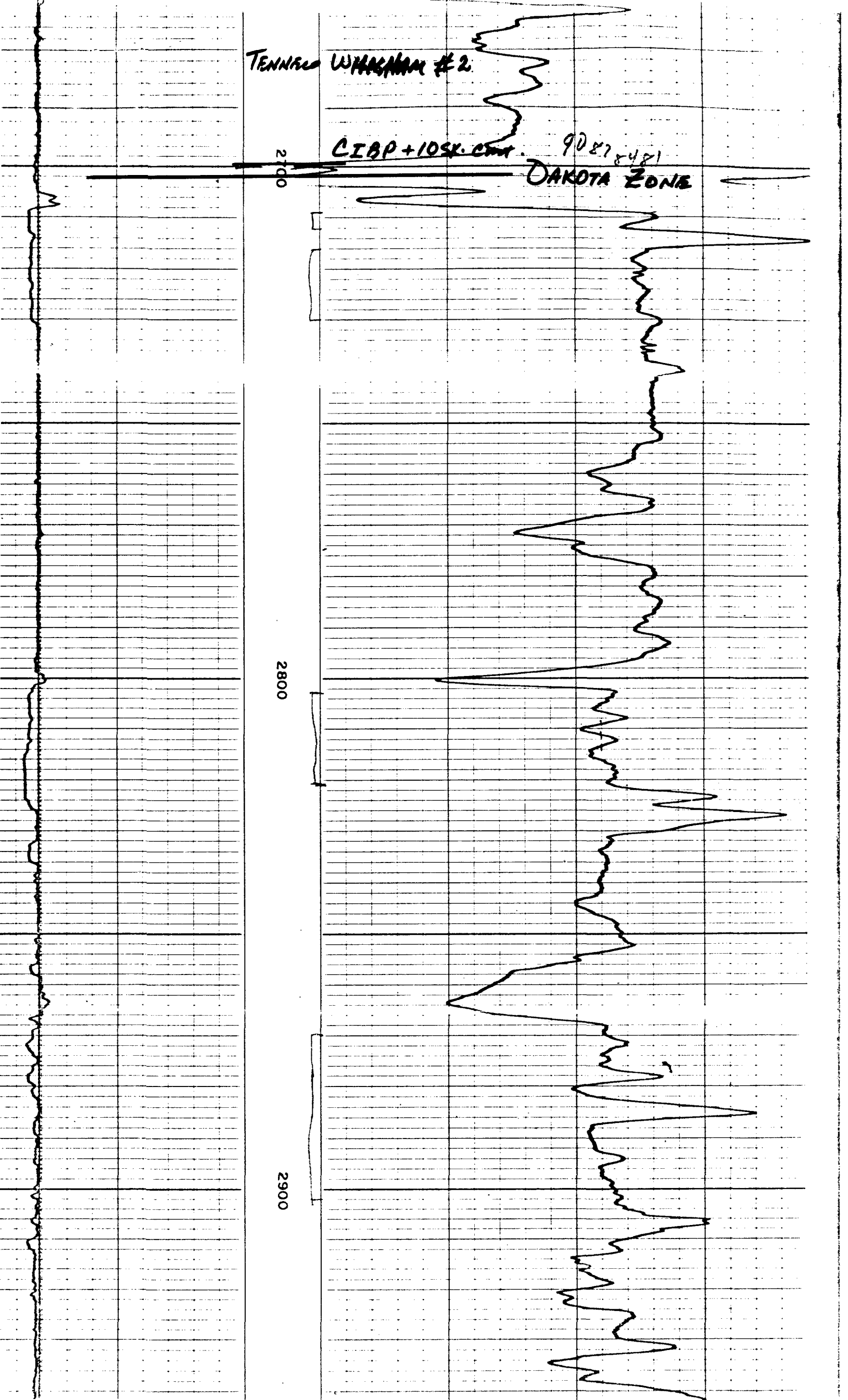
90878481

DAKOTA ZONE

2700

2800

2900



WIGHAM NO. 2 INJECTION WELL  
CONVERSION PROCEDURE

1. Unseat pkr. & pull out of hole. Redress pkr. & rig for 2 7/8" O.D. NUE tbg.
2. Set CIBP @ 2700' & dump 10 sx. cmt on top.
3. Load hold w/ fresh water containing 2% KCL & 1 gal. "Addmall"/1000 gals.
4. Spot 15% LSTNE acid from 1966'-1850' (150 gals.) & lay down 2 3/8" tbg. - Pick up 2 7/8" NUE, 6.5#, J.55 tbg. w/turned down collars, internally plastic coated.
5. Perforate 4 1/2" csg. @ 1872'-1966' (Lower Hospah Zone) w/ 1 CJSPF (0.45" Hyper set or equiv.) Total of 94 holes.
6. Treat w/1000 gals 15% LSTNE acid.
7. GIH w/ 2 7/8" NUE tbg. & re-dressed "Lok-Set" pkr.
8. Set pkr. @ 1850' # & load backside w/inhibited water.
9. Put well on injection.