


NEW MEXICO OIL CONSERVATION COMMISSION
APPLICATION TO DISPOSE OF SALT WATER BY INJECTION INTO A POROUS FORMATION

OPERATOR Continental Oil Company		ADDRESS Box 460 Hobbs, New Mexico					
LEASE NAME Thompson Federal 19	WELL NO. 2	FIELD North Mason	COUNTY Lea				
LOCATION UNIT LETTER F ; WELL IS LOCATED 1980 FEET FROM THE North LINE AND 1980 FEET FROM THE West LINE, SECTION 19 TOWNSHIP 26 RANGE 32 NMPM.							
CASING AND TUBING DATA							
NAME OF STRING	SIZE	SETTING DEPTH	SACKS CEMENT	TOP OF CEMENT	TOP DETERMINED BY		
SURFACE CASING	8 5/8"	1014	350	surface	Circ.		
INTERMEDIATE							
LONG STRING	5 1/2	4320	350	3080	Temp. log		
TUBING	2 3/8	Approx 4250'	NAME, MODEL AND DEPTH OF TUBING PACKER Baker Tension Model AD or equivalent at 4250				
NAME OF PROPOSED INJECTION FORMATION Delaware Sand		TOP OF FORMATION 4290		BOTTOM OF FORMATION 5400			
IS INJECTION THROUGH TUBING, CASING, OR ANNULUS? tubing		PERFORATIONS OR OPEN HOLE? perforations		PROPOSED INTERVAL(S) OF INJECTION 4303-4307			
IS THIS A NEW WELL DRILLED FOR DISPOSAL? No		IF ANSWER IS NO, FOR WHAT PURPOSE WAS WELL ORIGINALLY DRILLED? producing oil well		HAS WELL EVER BEEN PERFORATED IN ANY ZONE OTHER THAN THE PROPOSED INJECTION ZONE? yes			
LIST ALL SUCH PERFORATED INTERVALS AND SACKS OF CEMENT USED TO SEAL OFF OR SQUEEZE EACH 4302-4306, 4312-4313, 4315-4316, squeezed with 105 sks, cement.							
DEPTH OF BOTTOM OF DEEPEST FRESH WATER ZONE IN THIS AREA Est. 300'		DEPTH OF BOTTOM OF NEXT HIGHER OIL OR GAS ZONE IN THIS AREA none		DEPTH OF TOP OF NEXT LOWER OIL OR GAS ZONE IN THIS AREA none			
ANTICIPATED DAILY INJECTION VOLUME (BBL'S.)	MINIMUM 150	MAXIMUM 250	OPEN OR CLOSED TYPE SYSTEM closed	IS INJECTION TO BE BY GRAVITY OR PRESSURE? pressure	APPROX. PRESSURE (PSI) 1000		
ANSWER YES OR NO WHETHER THE FOLLOWING WATERS ARE MINERALIZED TO SUCH A DEGREE AS TO BE UNFIT FOR DOMESTIC, STOCK, IRRIGATION, OR OTHER GENERAL USE -		WATER TO BE DISPOSED OF yes		NATURAL WATER IN DISPOSAL ZONE yes	ARE WATER ANALYSES ATTACHED? no		
NAME AND ADDRESS OF SURFACE OWNER (OR LESSEE, IF STATE OR FEDERAL LAND) USA Lessee: M. R. & Ellen Kate Madera, Box 94, Orla, Texas							
LIST NAMES AND ADDRESSES OF ALL OPERATORS WITHIN ONE-HALF (1/2) MILE OF THIS INJECTION WELL Texaco, Inc. Box 728, Hobbs, New Mexico							
			BEFORE EXAMINER NUTTER OIL CONSERVATION COMMISSION EXHIBIT NO. 2 CASE NO. 3904				
HAVE COPIES OF THIS APPLICATION BEEN SENT TO EACH OF THE FOLLOWING?		SURFACE OWNER no		EACH OPERATOR WITHIN ONE-HALF MILE OF THIS WELL no		THE NEW MEXICO STATE ENGINEER no	
ARE THE FOLLOWING ITEMS ATTACHED TO THIS APPLICATION (SEE RULE 701-B)		PLAT OF AREA yes		ELECTRICAL LOG no		DIAGRAMMATIC SKETCH OF WELL no	

I hereby certify that the information above is true and complete to the best of my knowledge and belief.

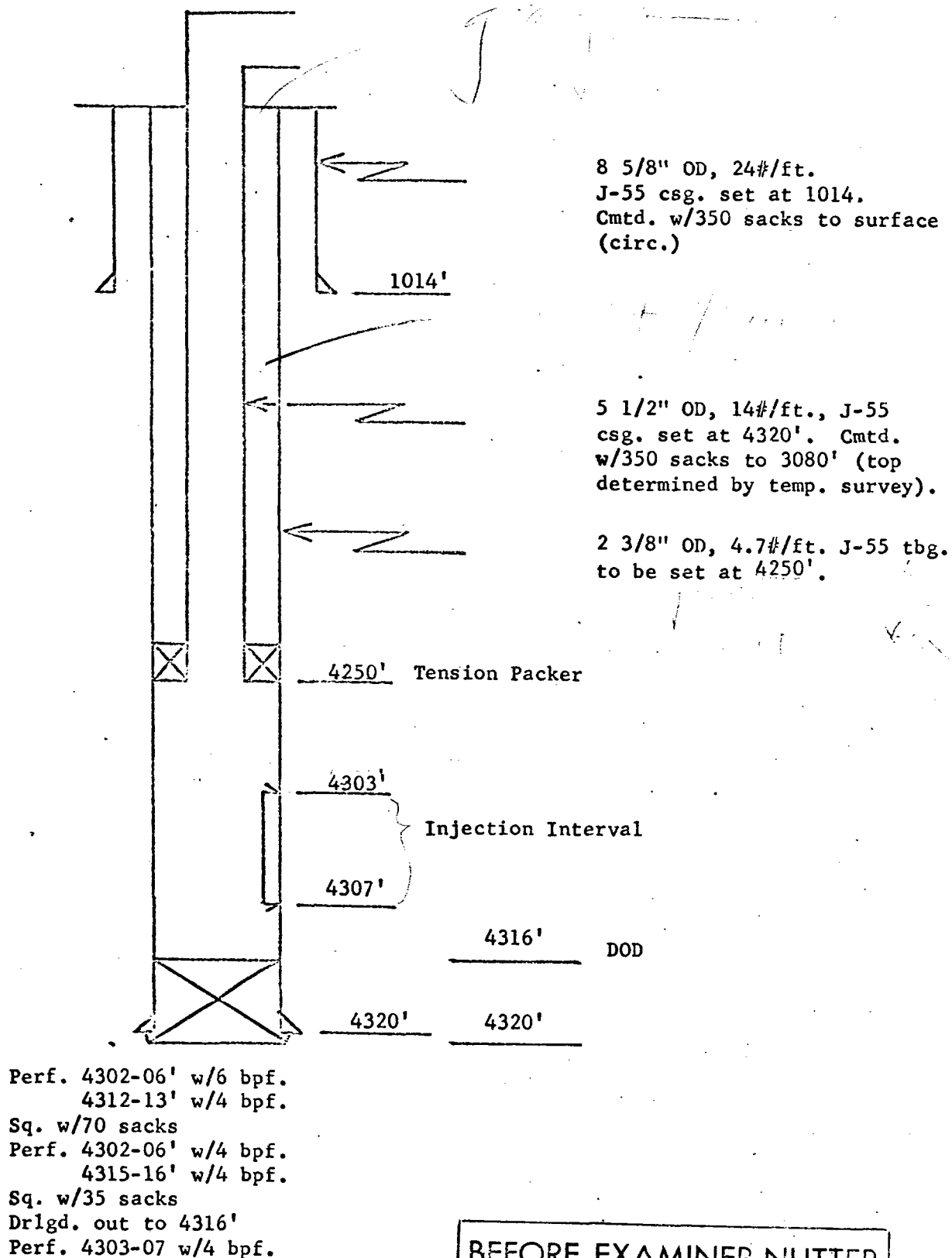

(Signature)

Asst. Division Manager
(Title)

September 26, 1968
(Date)

NOTE: Should waivers from the State Engineer, the surface owner, and all operators within one-half mile of the proposed injection well, not accompany this application, the New Mexico Oil Conservation Commission will hold the application for a period of 15 days from the date of receipt by the Commission's Santa Fe office. If at the end of the 15-day waiting period no protest has been received by the Santa Fe office, the application will be processed. If a protest is received, the application will be set for hearing, if the applicant so requests. SEE RULE 701.

Thompson 19 Federal No. 2
 1980' FNL & 1980' FWL, Sec. 19, T-26S, R-32E
 Lea County, New Mexico
 Elevation 3197' (10' above C.F.)

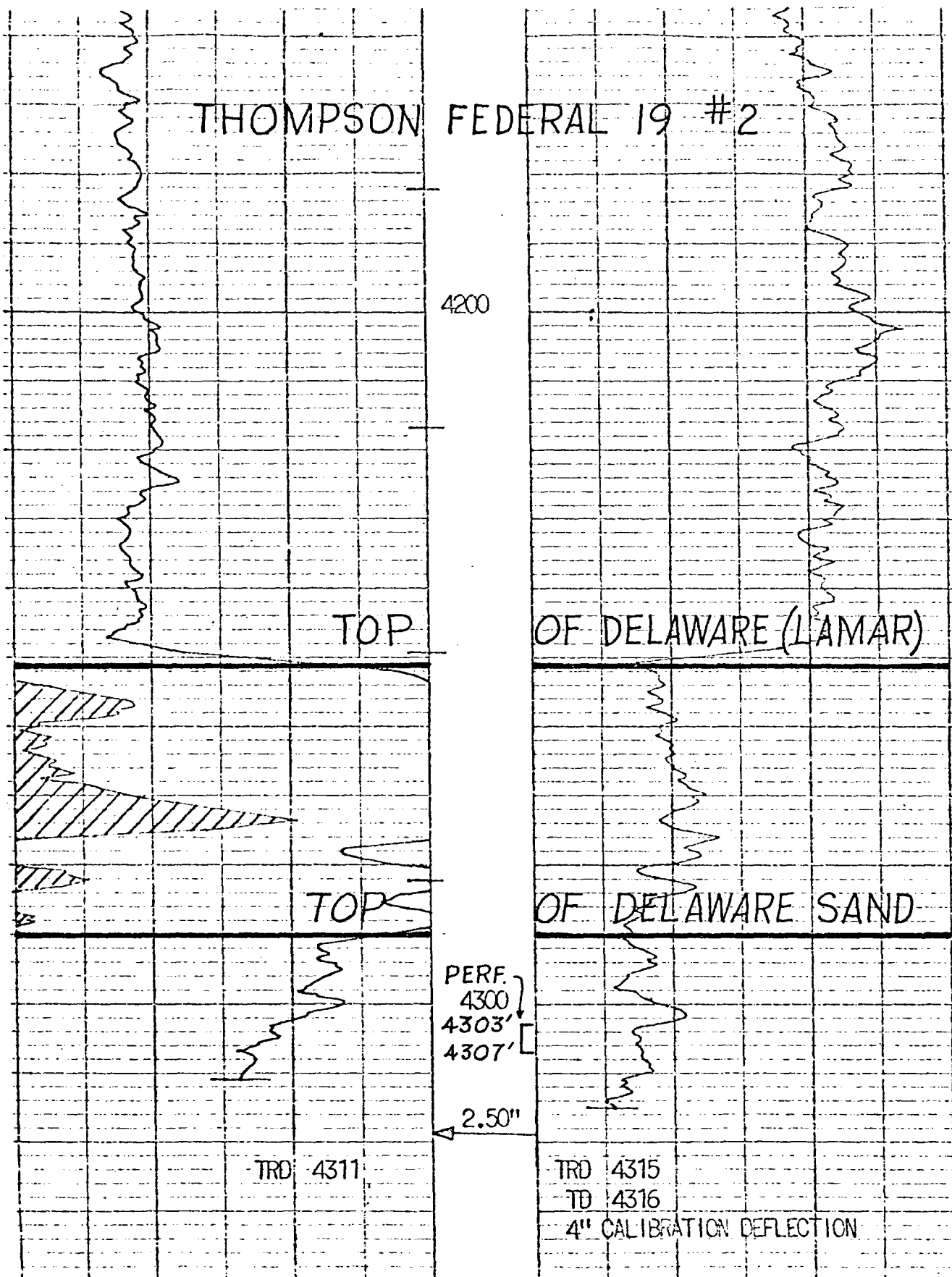


BEFORE EXAMINER NUTTER

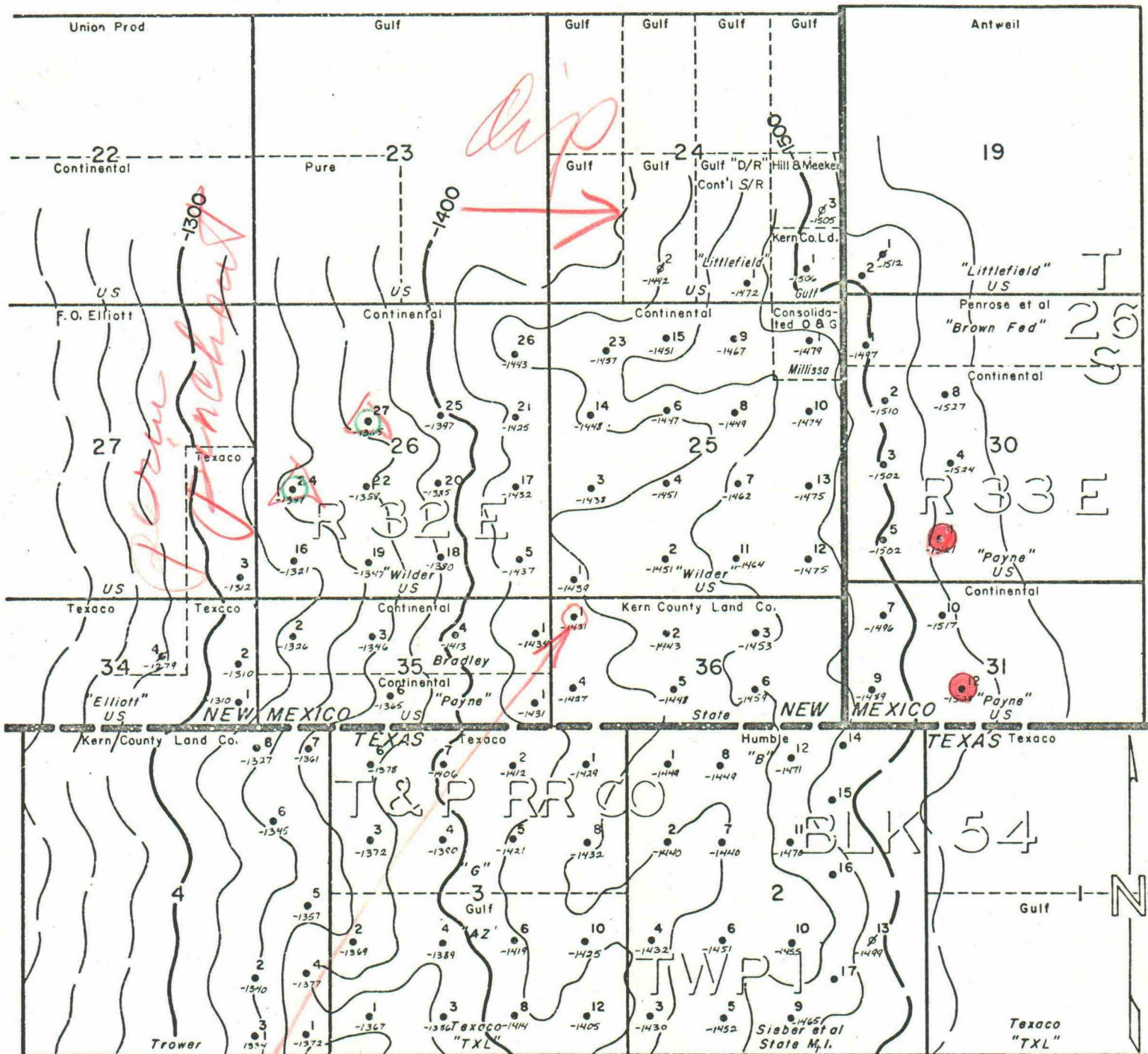
OIL CONSERVATION COMMISSION

EXHIBIT NO. 3

CASE NO. 3904



BEFORE EXAMINER NUTTER
OIL CONSERVATION COMMISSION
EXHIBIT NO. 4
CASE NO. 3904



BEFORE EXAMINER NUTTER
OIL CONSERVATION COMMISSION
EXHIBIT NO. 9
CASE NO. 3903

CONTINENTAL OIL COMPANY	
PRODUCTION DEPARTMENT—HOBBS DISTRICT	
EL MAR-DELAWARE POOL	
LEA COUNTY, NEW MEXICO	
8	
LOVING COUNTY, TEXAS	
Contoured on T/Delaware Limestone	
Contour Interval: 20'	
Exhibit No. 9	
1/6/67	SCALE IN FEET 0 660 1320 1980 2640

SUMMARY DATA SHEET

NORTH MASON POOL

EDDY & LEA COUNTIES, NEW MEXICO

Reservoir Rock Properties

Average Porosity	24.7%
Average Air Permeability	42.6 md
Initial Water Saturation	40.0%
Initial Oil Saturation	60.0%
Estimated Original Reservoir Pressure	1840 psi

Reservoir Fluid Properties

Estimated Bubble Point Pressure	1840 psi
Initial Formation Volume Factor	1.33
Initial Solution Gas-Oil Ratio	690 cf/Bbl.
Initial Oil Viscosity	0.7 cp
API Gravity, Degrees	42

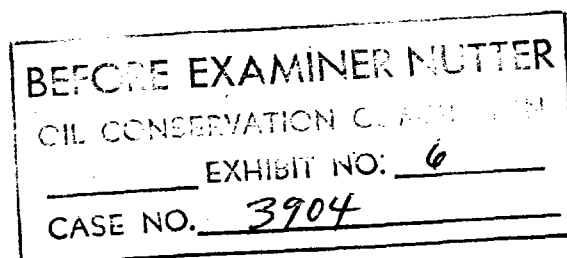
Primary Recovery

Primary Reservoir Volume, acre-feet	13,800
Original Stock Tank Oil in Place	11,975,000 bbls.
Cumulative Primary Recovery 8-1-68	2,600,000 bbls.
Remaining Primary Reserve 8-1-68	346,000 bbls.
Estimated Ultimate Recovery	2,946,000 bbls.

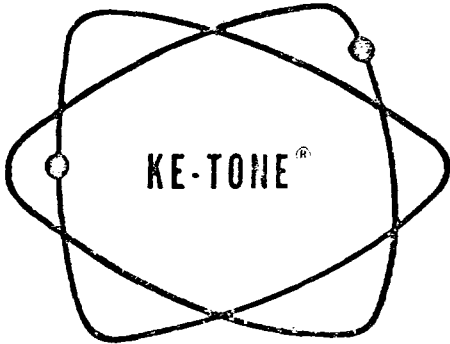
Secondary Recovery

Secondary Reservoir Volume, acre-feet	12,800
Estimated Ultimate Secondary Recovery	1,792,000 bbls.

approx 25%



TELEPHONE: HOBBS 393-6215



SPECIAL

UNITED CHEMICAL CORPORATION
OF NEW MEXICO

601 NORTH LEECH

P. O. BOX 1499

HOBBS, NEW MEXICO 88240

Company Continental Oil Company
Field North Mason - Delaware SD
Lease Thompson Federal 19 Sampling Date 9/18/68
Type of Sample Heater Treater

WATER ANALYSIS

IONIC FORM	me/l *	mg/l *
Calcium (Ca++)	1097.80	22,000
Magnesium (Mg++)	313.17	3808
Sodium (Na+) (cal.)	2602.77	59,838
Bicarbonate (HCO ₃ -)	0.60	36
Carbonate (CO ₃ -)	NOT	FOUND
Hydroxide (OH-)	NOT	FOUND
Sulphate (SO ₄ -)	8.74	423
Chloride (Cl-)	4004.40	142,000
6.2 ph c@ 68 °F		
Dissolved Solids on Evap. at 103° - 105° C		
Hardness as Ca CO ₃	1410.97	70,549
Carbonate Hardness as CaCO ₃ (temporary)	0.60	30
Non-Carbonate Hardness as CaCO ₃ (permanent)	1410.37	70,519
Alkalinity as CaCO ₃	0.60	30
Specific Gravity c 68° F	1.155	

* mg/l = milligrams per Liter
* me/l = milliequivalents per Liter

BEFORE EXAMINER NUTTER
CIL CONSERVATION CORP.
EXHIBIT NO. 7
CASE NO. 3904

EXHIBIT NO. 7

Makes Water Work