



TENNECO OIL COMPANY • P. O. BOX 1031 • 1800 WILCO BUILDING • MIDLAND, TEXAS 79701

July 14, 1970

*W-345*

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

Attention: Mr. A. L. Porter, Jr.  
Secretary-Director

Re: Tenneco Oil Company  
Mesa Queen Unit Waterflood,  
Lea County, New Mexico

Gentlemen:

Tenneco Oil Company requests administrative authorization to expand the captioned flood by placing Well No. 25 on injection. Injection will be down 2-inch tubing under a packer into the Queen Sand formation.

The proposed injection intervals are within the vertical limits of the field as defined by the Commission field rules. Fresh water, purchased from the Double Eagle Corporation, will be injected in this well at an estimated rate of not more than 500 barrels per day.

To support this request, the following are attached.

- (1) A plat showing the outline of the Mesa Queen Unit with all existing injection wells shown as well as the proposed Well No. 25.
- (2) A log of Unit Well No. 25 with completion intervals shown.
- (3) A diagrammatic sketch of the proposed injection well showing all pertinent information.

The original authorization of this flood was under Order No. R-3444 dated July 3, 1968.

Yours very truly,

F. J. McDonald  
District Production Superintendent

LMW/yt  
Attachments  
cc: (See attached list)

New Mexico Oil Conservation Commission  
July 14, 1970  
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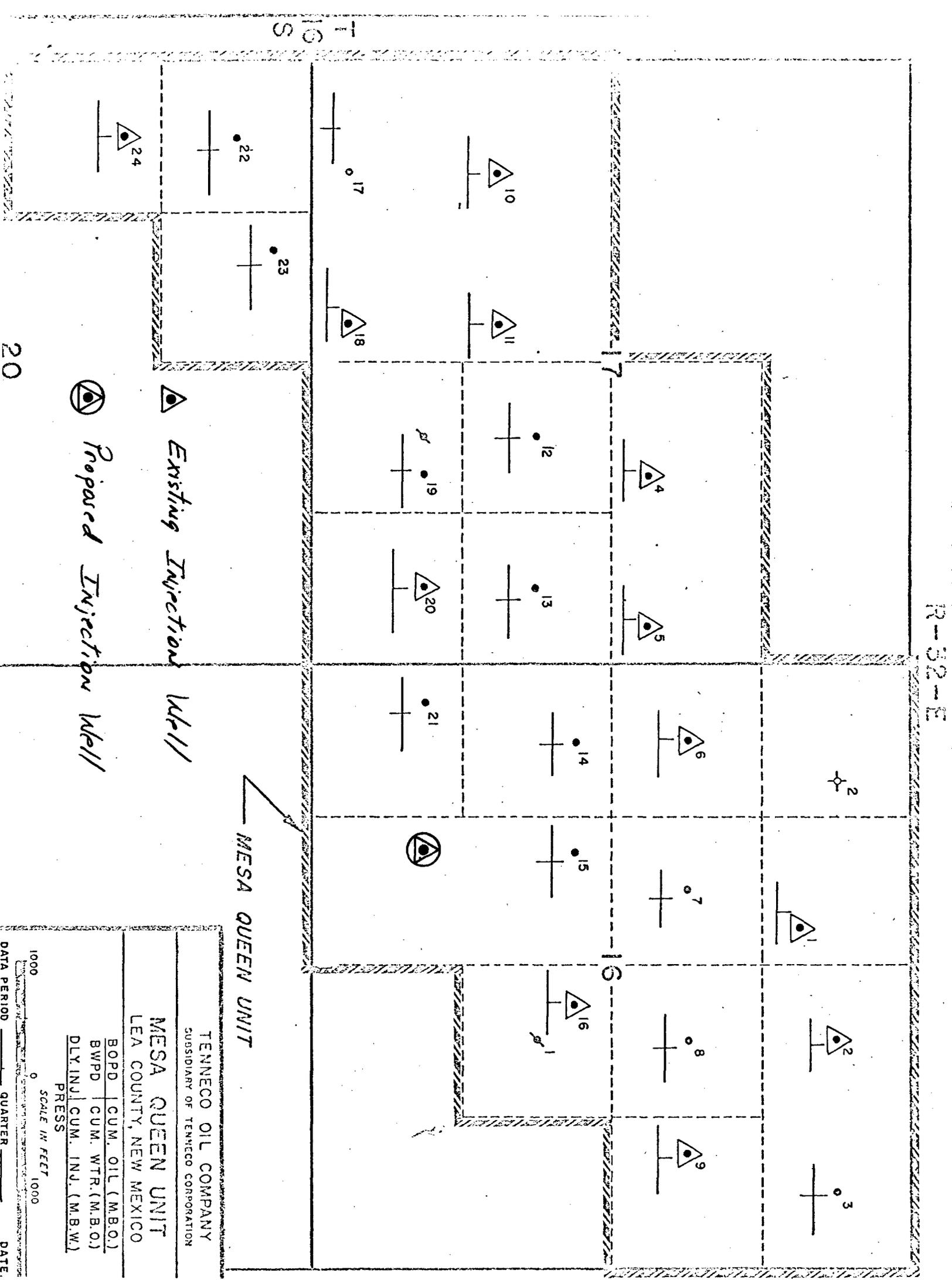
State Engineers Office  
Capitol Building  
Santa Fe, New Mexico 87501

R. A. Dean (offset operator)  
823 Midland Tower  
Midland, Texas 79701

NMOCC  
Box 1980  
Hobbs, New Mexico 88240

110

1970 JUL 15 AM 8 13



T 19 S

 Existing Injection Well  
 Proposed Injection Well

 MESA QUEEN UNIT

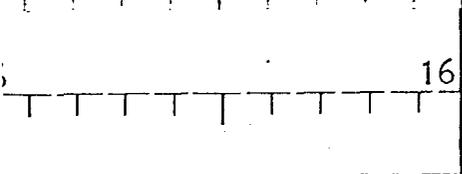
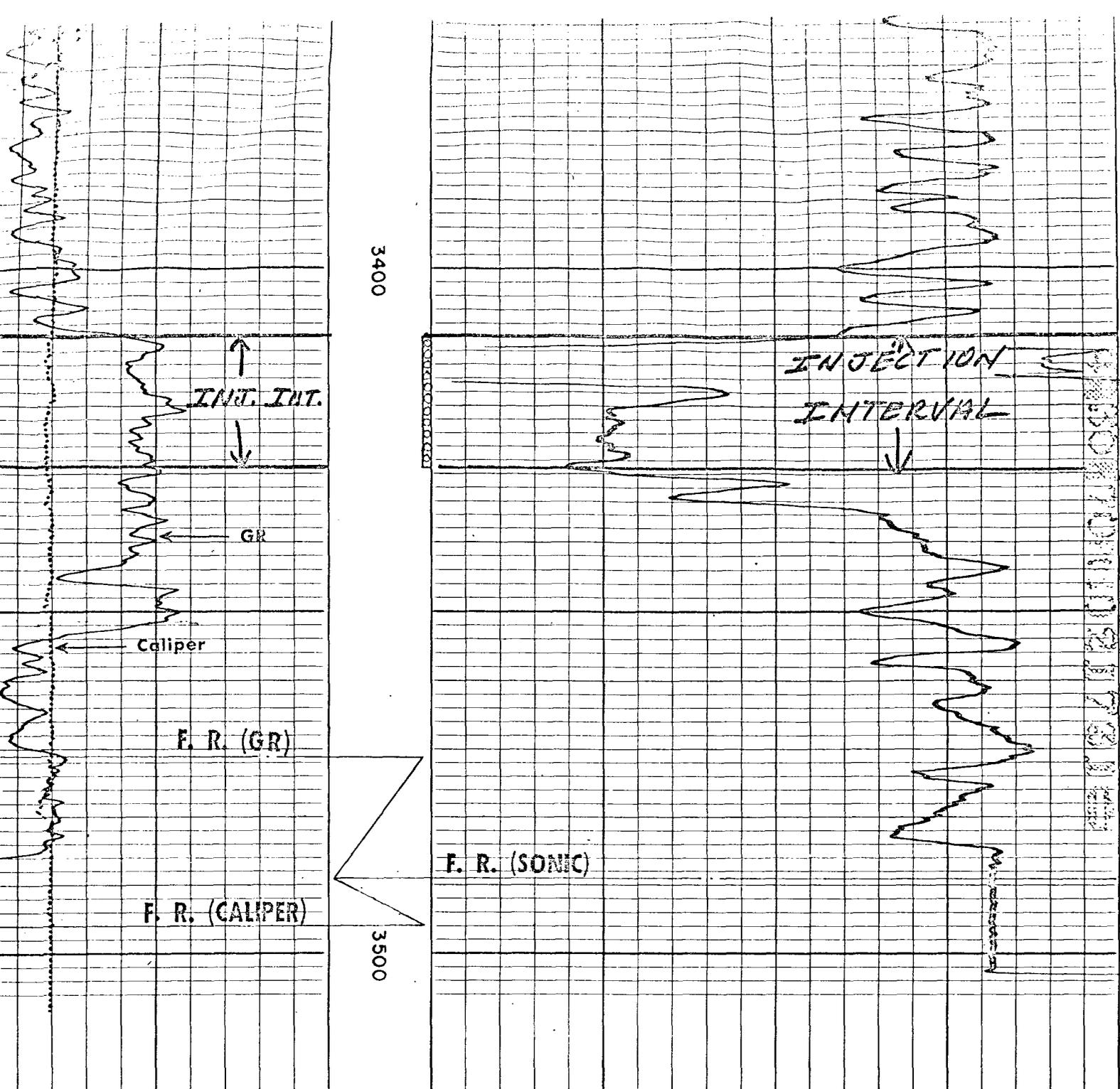
TENNECO OIL COMPANY  
 SUBSIDIARY OF TENNECO CORPORATION  
 MESA QUEEN UNIT  
 LEA COUNTY, NEW MEXICO

BOPD	CUM. OIL (M.B.O.)
BWPD	CUM. WTR. (M.B.O.)
DLX INJ.	CUM. INJ. (M.B.W.)
PRESS	

1000 0 1000 SCALE IN FEET

DATA PERIOD \_\_\_\_\_ QUARTER \_\_\_\_\_ DATE \_\_\_\_\_

20



CALIPER	
HOLE DIAM. IN INCHES	
100	100
200	200

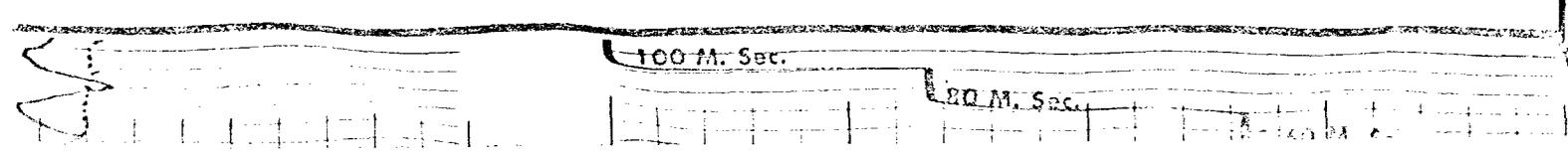
3400
3500
DEPTHS

INTERVAL TRANSIT TIME		
MICROSECONDS PER FOOT		
100	70	40
160	130	100

GAMMA RAY	
API UNITS	

COMPANY TENNECO OIL COMPANY  
 WELL MESA QUEEN UNIT #25  
 FIELD MESA QUEEN  
 COUNTY LEA STATE NEW MEXICO

SCHL. FR 3496  
 SCHL. TD 3498  
 DRLR TD 3500  
 Elev: KB 4355.4  
 DF -  
 GL 4345



**BOREHOLE COMPENSATED  
SONIC LOG - GAMMA RAY**

COUNTY LEA  
 FIELD or LOCATION MESA QUEEN  
 WELL MESA QUEEN  
 COMPANY TENNECO OIL CO.  
 COMPANY TENNECO OIL COMPANY  
 WELL MESA QUEEN UNIT #25  
 FIELD MESA QUEEN  
 COUNTY LEA STATE NEW MEXICO  
 LOCATION 1650' FWL & 990' FSL  
 SEC. 16 TWP. 16-S RGE. 32-E  
 Other Services: NONE

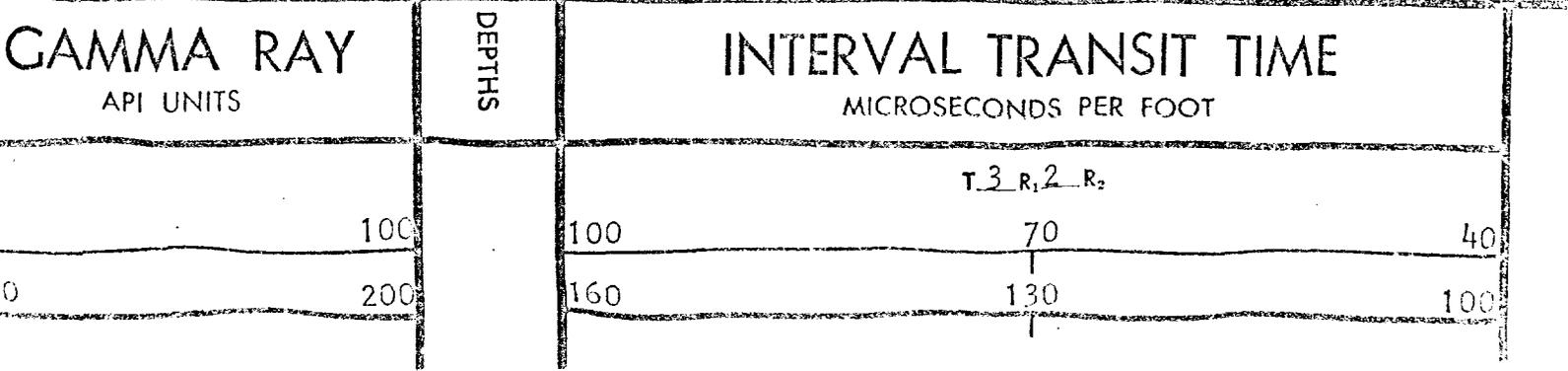
Permanent Datum: G.L. 4345, Elev. 4345  
 Log Measured From K.B., 10.4 Ft. Above Perm. Datum  
 Drilling Measured From K.B. Elev.: K.B. 4355.4  
 D.F. 4345  
 G.L. 4345

Date	4-28-70	Run No.	ONE
Depth—Driller	3500		
Depth—Logger	3498		
Bitm. Log Interval	3496		
Top Log Interval	0		
Casing—Driller	8 5/8 @ 385		@
Casing—Logger	386		@
Bit Size	7 7/8		
Type Fluid in Hole	SALT		
Dens.	10.4	34	
pH	6	12.6ml	ml
Source of Sample	PIT		ml
R <sub>m</sub> @ Meas. Temp.	.052 @ 74°F	@	°F
R <sub>ml</sub> @ Meas. Temp.	.046 @ 74°F	@	°F
R <sub>mc</sub> @ Meas. Temp.	- @ - °F	@	°F
Source: R <sub>mf</sub> R <sub>mc</sub>	M		
R <sub>m</sub> BHT	.042 @ 94°F	@	°F
Time since Circ.	2 HOURS		
Max. Rec. Temp.	94		°F

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

Samples in Mud Type or Additional Samples		Scale Changes					
Sample No.	Type Log	Depth	Scale Up Hole	Scale Down Hole			
Driller							
Fluid in Hole							
Visc.							
Fluid Loss	ml						
Source of Sample							
R <sub>m</sub> Meas. Temp.	.052 @ 75 °F	@	°F				
R <sub>ml</sub> Meas. Temp.	.046 @ 74 °F	@	°F				
R <sub>mc</sub> Meas. Temp.	- @ - °F	@	°F				
R <sub>mf</sub> R <sub>mc</sub>	M						
R <sub>m</sub> BHT	.042 @ 94 °F	@	°F				
R <sub>ml</sub> BHT	@	@	°F				
R <sub>mc</sub> BHT	@	@	°F				
YES S.O.:	SPRING & CALIPER						
Used: CART. No.	SLH-C-96						
PANEL No.	SLP-C-291						
SONDE No.	SLS-H-525						
OPERATION:	BACKGND.	SOURCE	GALV. INCR.	SENS. TAP	SENS. TAP	TIME	RECORDING
	CPS.	CPS.	DIVISIONS	(FOR CAL.)	(RECORD)	CONST.	SPEED (FT./MIN.)
GAMMA RAY:	50	400	82.5	800	400	1	45/60.

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



8 5/8" CSG. AT 385' W/225 SX. CIRCULATED

PRESSURE GAUGE ON ANNULUS

ANNULUS FILLED WITH TREATED PACKER FLUID

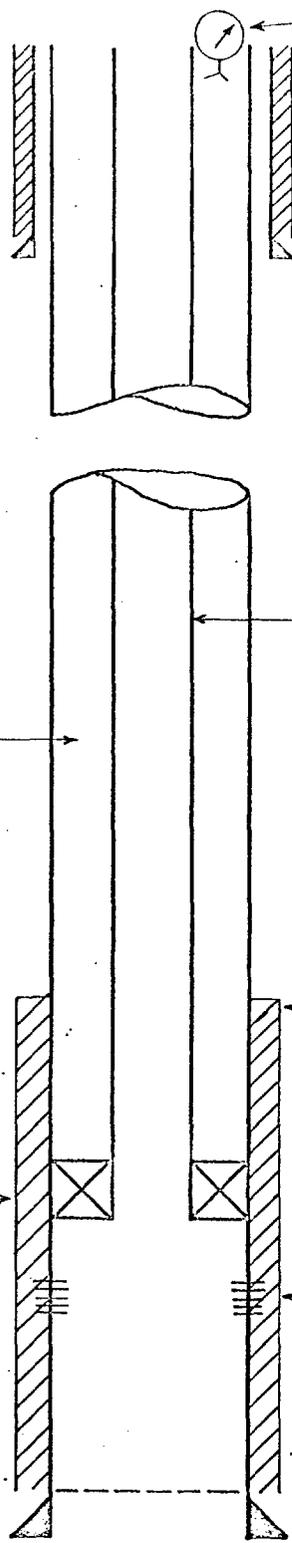
2 3/8" EUE J-55 4.7# TUBING

TOP CEMENT AT 2390'

TENSION PACKER AT 3383'

PERFS. 3410-29

4 1/2" 10.5# J-55 CSG. AT 3498 W/200 SX.



TENNECO OIL COMPANY  
SUBSIDIARY OF TENNECO CORPORATION

MESA QUEEN UNIT  
LEA COUNTY, NEW MEXICO

PROPOSED INJECTION WELL  
NO. 25