



CARDINAL SURVEYS COMPANY

INJECTION PROFILE

COMPANY <u>MEWBOURNE OIL COMPANY</u>	File No. <u>11,506</u>
WELL <u>GOVERNMENT "K" NO. 2</u>	
FIELD <u>QUERECHO PLAINS UPPER BONE SPRINGS</u>	
COUNTY <u>LEA</u> STATE <u>NEW MEXICO</u>	
LOCATION: <u>1950' FSL & 1980' FWL</u>	
SEC <u>23</u> TWP <u>18-S</u> RGE <u>32-3</u>	

Permanent Datum <u>G.L.</u> Elev. <u>3770'</u>	KB <u>3781.3'</u>
Log Measured From <u>K.B. 11.3</u> Ft. Above Perm. Datum	DF <u>N/A</u>
Drilling Measured From <u>K.B.</u>	GL <u>3770'</u>

Date	<u>10-29-92 & 11-27-92</u>
Depth - Driller	<u>8900'</u>
Depth - Plug Back	<u>8780'</u>
Depth - Logger	<u>8780'</u>
Bottom Logged Interval	<u>8780'</u>
Top Logged Interval	<u>8100'</u>
Recorded By	<u>GEUTHER</u>
Witnessed By	<u>JONES/THURMAN</u>
Base Location	<u>ODESSA, TEXAS</u>
Unit No.	<u>8725</u>
Equip. Operator	<u>SANCHEZ</u>

Size Casing	Wgt.	From	To	Type of Well
<u>13 3/8"</u>	<u>48#</u>	<u>SURFACE</u>	<u>700'</u>	<u>INJECTION</u>
<u>8 5/8"</u>	<u>32#</u>	<u>SURFACE</u>	<u>4800'</u>	Status <u>INJECTING</u>
<u>5 1/2"</u>	<u>15.5#</u>	<u>4408'</u>	<u>8900'</u>	Type of Fluid <u>WATER</u>
	<u>& 17#</u>			Fluid Level <u>FULL</u>
Tubing				Injection Rate
<u>2 7/8"</u>	<u>6.5#</u>	<u>SURFACE</u>	<u>8257'</u>	<u>822 BPD</u>
				Surface Pressure <u>1500 PSI</u>
				Surface Temp. _____
				Bottom Hole Temp. <u>133.2°</u>
Borehole <u>NEW MEXICO</u>				
<u>OIL CONSERVATION DIVISION</u>				

EXHIBIT 28

CASE NO. 10761/10762

C.V.R. Base Scale 100 CPS/1" Tool Size 1 3/8" Configuration EJECTOR Serial 286
 Temp. Scale 5° = 1" Type Detector SCINT. I. DETECTOR No. 2108
 Calliper Scale Det. Spacing 5' B. DETECTOR 2121
 CCL 2314
 TEMPERATURE 270

Depth Corrected To: _____
 Perforations: 8343'-49', 60'-63', 8384'-8410', 8412'-15', 54'-56',
 73'-96', 99'-8501', 8507'-15'

SLUG NO.	DETECTOR DEPTH	REACTION TIME (SEC.)	HOLE SIZE	RATE BPD	PERCENTAGE
23	7400	61	5 1/2" LINER	816	100% DROP SHOT
22	8247	N/A	"		PACKER CHECK
21	8300	10	"	937	
20	8310	10	"	937	
19	8310	9	"	1041	100%
18	8320	9	"	1041	
17	8320	9	"	1041	
16	8330	9	"	1041	
15	8325	DO NOT USE	"		UPWD. CHANNEL CK.
14	8358	9	"	1041	100%
13	8380	9	"	1041	
12	8392	10	"	937	100%
11	8410	9	"	1041	
10	8425	10	"	937	93%
9	8452	10	"	937	93%
8	8471	11	"	852	85%
7	8485	11	"	852	85
6	8485	11	"	852	85
5	8485	11	"	852	85
4	8497	15	"	625	62%
3	8505	18	"	520	52%
2	8535	DO NOT USE	"		NO FLOW

* USED TO PLOT PROFILE

CONCLUSION:

REPORTED INJECTION RATE 822 BPD @ 1500 PSI.

CONCLUSION CONTINUED:

AVERAGED SLUG NO'S. 16-21 TO OBTAIN 100% RATE. USED RATE OBTAINED, 1006 BPD, FOR 100% RATE TO CALCULATE VELOCITY PROFILE. USED RUN 2, 2.60 SQUARE INCHES, FOR 100% AREA TO CALCULATE INTENSITY PROFILE.

INTENSITIES INDICATE MOVEMENT DOWN TO 8522'. RUNS 12 & 13.

NO FLOW INSIDE PIPE @ 8523'. SLUG NO. 2, RUNS 15-17.

NO CHANNEL UP FROM TOP OF PERFS INDICATED. SLUG NO. 15, RUN 19.

NO PACKER LEAK INDICATED. SLUG NO. 22.

DOWNWARD CROSSFLOW FROM 8454'-56' TO 8507'-15'. SLUG NO'S. 27 & 28.

7 DAY SHUT IN TEMPERATURE RUN ON 11-27-92.

7 DAY SHUT IN TEMPERATURE INDICATES INJECTION ZONE FROM 8344'-8410' AND 8428'-8544', WITH MAJOR FLUID STORAGE FROM 8515'-44'.

TEMPERATURES INDICATE CHANNEL DOWN TO 8707'.



THIS LOG WAS RUN WITH TRACER TOOL SPACED AS SHOWN BY

NO. 7500-501 S

"COMPROBE INCORPORATED 5" API"

MADE IN U.S.A.

PACKER

1 hr SI Temp

3 hr SI Temp

7 day SI Temp

Gamma Ray

Amplified Gamma Ray

Injection Temperature

INJECTION ZONE

7% % As Determined by Tracers

8%

INJECTION ZONE

23%

10%

5%

27%

52%

8"

13%

NO FLOW INSIDE PIPE @ 8525'

MOVEMENT DOWN TO 8522'

7-DAY SHUT-IN TEMPERATURE INDICATES MAJOR FLUID STORAGE FROM 8515'-44'

