Geological Data
Injection Zones
in the
Proposed Eunice Monument South Unit

Penrose - Approx. depth 3,400'-3,800*, approx. 170 gross feet.

The Penrose is the lower portion of the Queen formation and overlies the Grayburg. The Penrose is composed of alternating layers of hard dolomite and sand lenses. The Penrose is productive of oil and/or gas, depending on structural position.

Grayburg - Approx. depth 3,500'-3,900*, approx. 490 gross feet.

The Grayburg is a massive dolomite with thin stringers of sand interspersed within it. The majority of oil production comes from intercrystalline porosity in the dolomite.

The range in depths to the top of the Grayburg is due to an asymmetrical anticlinal structure running NW to SE through the Eunice-Monument Pool. The structure dips steeply along the western and southern flanks and therefore the Grayburg top runs deeper, approximately 3,700'-3,900'. Along the axis and the gently dipping eastern flank of the anticline the Grayburg depths run at approximately 3,500-3,700 feet.

San Andres - Approx. depth 4,100'-4,500*, approx. 1,130 gross feet.

The San Andres is a massive dolomite with intercrystalline porosity, which lies directly below the Grayburg. The contact between the Grayburg and the San Andres is gradational and there is no clear marker for the top of the San Andres which can be traced across the field. The San Andres contributes very little if any oil production to the field and serves primarily as a source for injection make-up water and as a zone for salt water disposal.

There are no known faults cutting through the San Andres and Grayburg which would act as a conduit for gas, oil or injection water to seep into fresh water horizons above the injection zones in the Grayburg and San Andres.

* Depth depends upon structural position of the well.

EXHIBIT NO. 34a
Case No. 8397
November 7, 1984

WELEX

ACOUSTIC VELOCITY LOG

COMPANY CONTINENTAL OIL COMPANY

WELL MEYER B-4 # 23

FIELD OIL CENTER-BLINEBRY

COUNTY LEA STATE NEW MEXICO

Location 660'FSL 1980'FEL

Other Services: Guard

Sec. 4 Twp. 21-S Rge. 36-E

Permanent Datum: Bradenhead Flg. Elev. 3584

Log Measured From: K. B. 11 Ft. Above Perm. Datum

Drilling Measured From: Kelly Bushing

Elev.: K.B. 3595 D.F. 3594 G.L.

Date	10-30-62			
Run No.	- One -			
Depth - Driller	6350			
Depth - Welex	6362			
Btm. Log Intvl.	6358			
Top Log Intvl.	Surf.			
Casing - Driller	8-5/8" @ 1305	@	@	@
Casing - Welex	-			
Bit Size	7-7/8"			
Type Fluid in Hole	Mud			
Dens. / Visc.	9.2 / 39			
pH / Fluid Loss	6 / 10.2 ml	ml	ml	ml
Source of Sample	Circulated			
R_m @ Meas. Temp.	.16 @ 80 °F	@ °F	@ °F	@ °F
R_{mf} @ Meas. Temp.	.13 @ 70 °F	@ °F	@ °F	@ °F
R_{mc} @ Meas. Temp.	.19 @ 80 °F	@ °F	@ °F	@ °F
Source R_{mf} / R_{mc}	Measured			
R_m @ BHT	.115 @ 112 °F	@ °F	@ °F	@ °F
Time Since Circ.				
Max. Rec. Temp.	112°F @ BH	°F @	°F @	°F @
Equip. / Location	7121 / Hobbs			
Recorded By	L. E. Pharr			
Witnessed By	Mr. Levine			

Fold here

Reproduced By

West Texas Electrical Log Service

Dallas 2, Texas

REFERENCE W2483M

ELSI

16 COMPLETION RECORD

SPUD DATE

COMP DATE

DST RECORD

CASING RECORD

PERFORATING RECORD

EXHIBIT NO. 34b

Case No. 8397

November 7, 1984