

**WHAT GOM (MIOCENE) SHALE  
LOOKED LIKE TO US IN 1960**

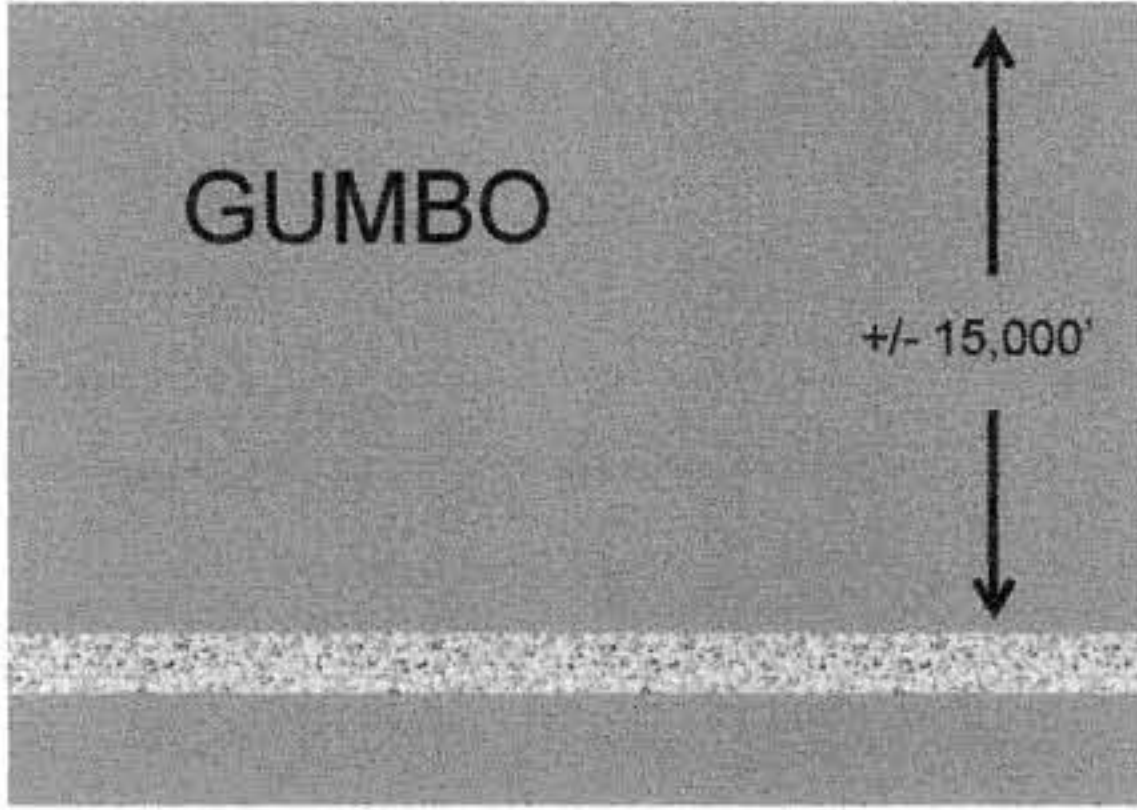


Figure 1

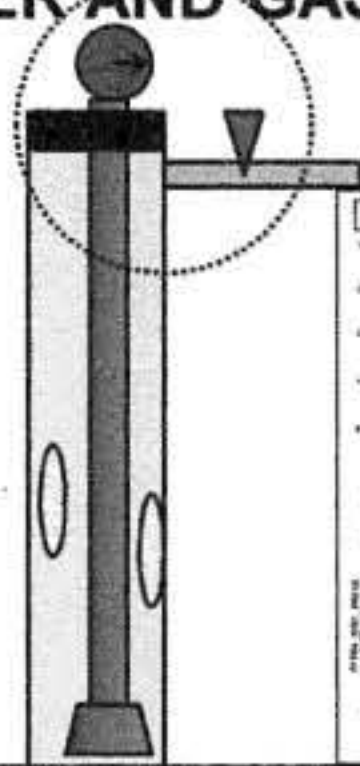
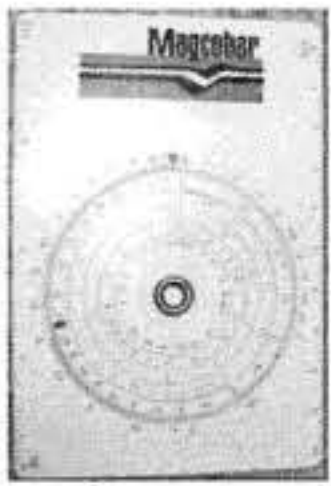
**GULF OF MEXICO  
DRILLING MUD PROGRAM  
1950-1970**

- o 0-12,000' 10-12ppg (1.20-1.45 SpG) Drilling Fluid Density
- o 12,000' Set Casing
- o Change mud system to lime mud
- o 12,000' to TD (12-16,000')  
increase density 1ppg (0.12 SpG) every 1,000'
- o At a TD of 16,000', the fluid density would be:  
12ppg +4ppg=16ppg (1.9SpG)
- o Set casing at TD and cement with 16ppg cement
- o This worked out pretty well, some of the time

Figure 2

**WE LEARNED TO CONTROL  
SALT WATER AND GAS FLOWS**

CONFIDENCE  
MINIMUM LOST TIME



FACTORY CONTROL SHEET	
ITEM	QUANTITY
1. SEALANT	100
2. SEALANT	100
3. SEALANT	100
4. SEALANT	100
5. SEALANT	100
6. SEALANT	100
7. SEALANT	100
8. SEALANT	100
9. SEALANT	100
10. SEALANT	100

Figure 3

RESISTIVITY CONDUCTIVITY  
SHORT NORMAL 4000 2000 0

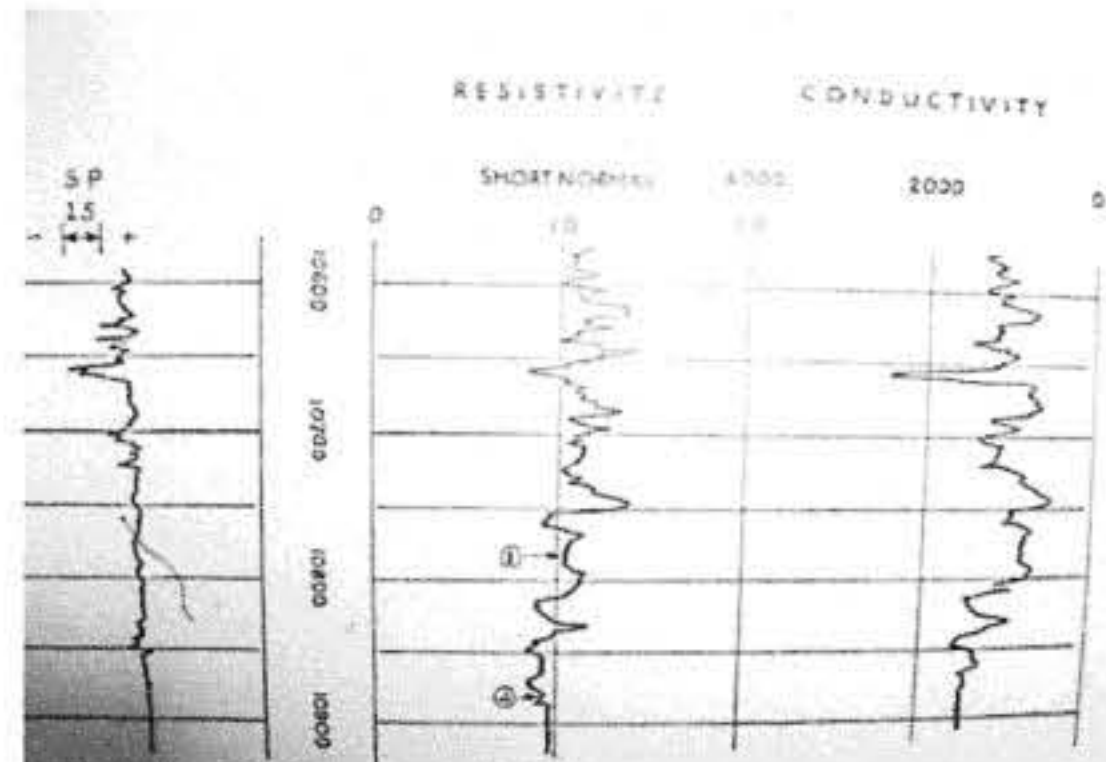


Figure 4  
Typical 1960 IES Log

"dc" PLOT OF  
SEALAND  
FOLLOWING  
PRESSURE  
INCREASE

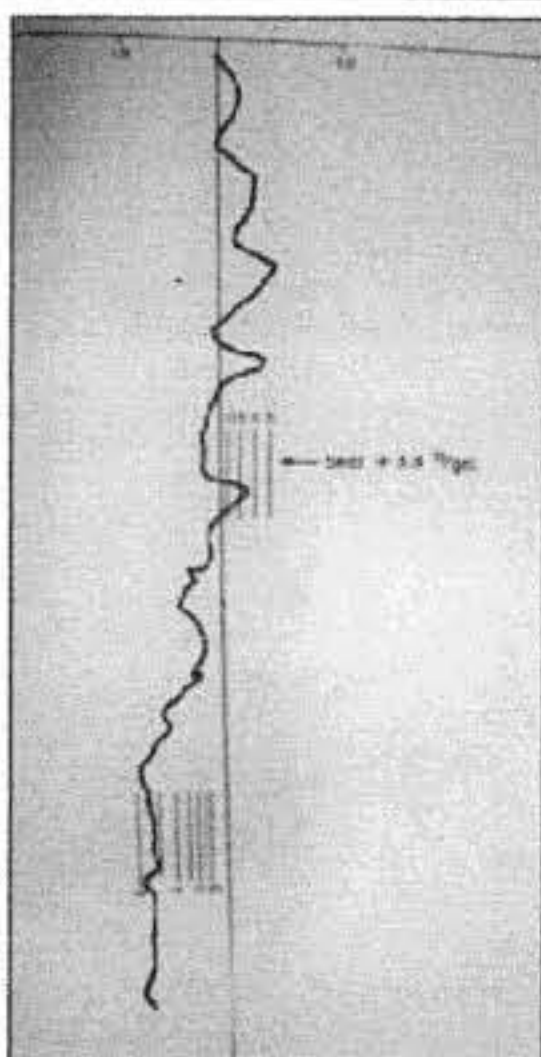


Figure 5  
"d" Solution Plot

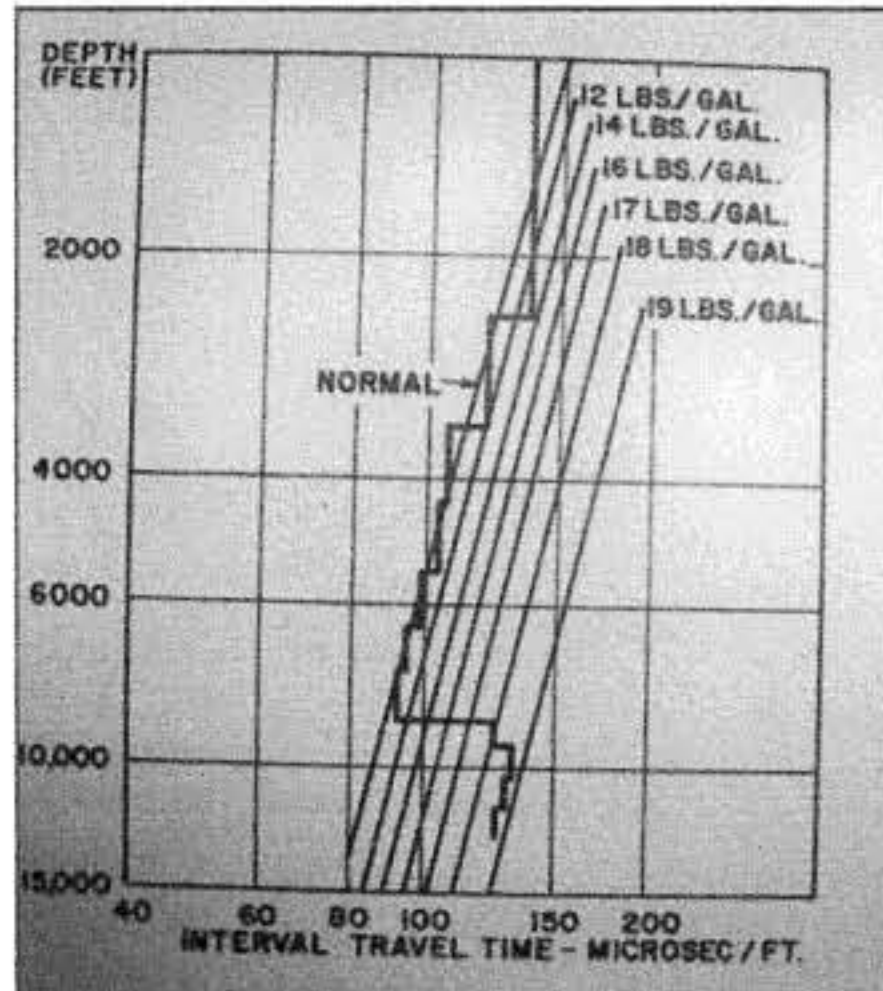


Figure 6  
'Sonic' Log Pressure Plot