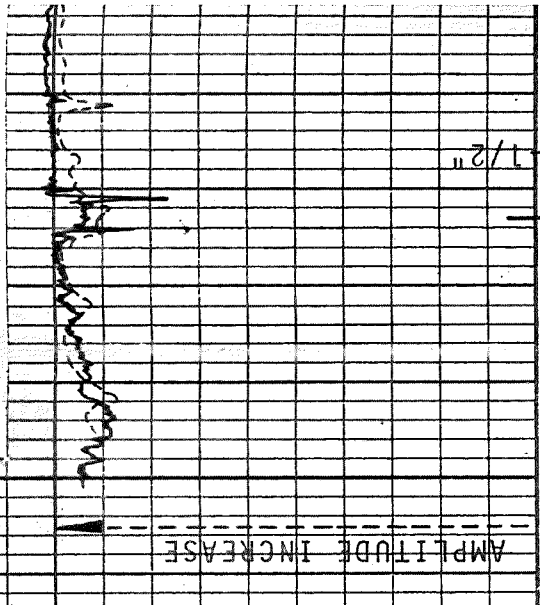


200 MICROSECONDS 120

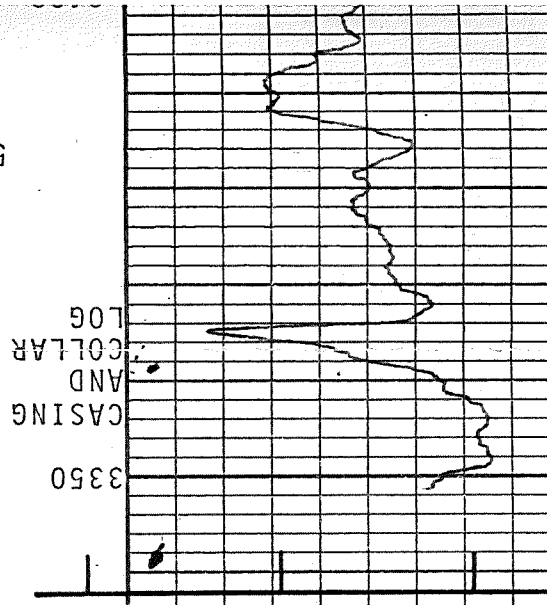


AMPLITUDE INCREASE
10 20 30 40 50 60 70 80 90 100
% BOND

BOND CEMENT CURVE
FORMATION BOND CURVE

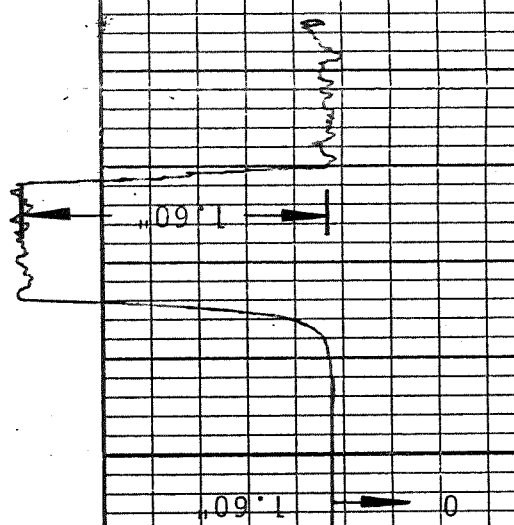
MMA RAY ZERO & STATISTICAL TAKEN AT 3350'

SONIC SEISMOGRAM PLOT

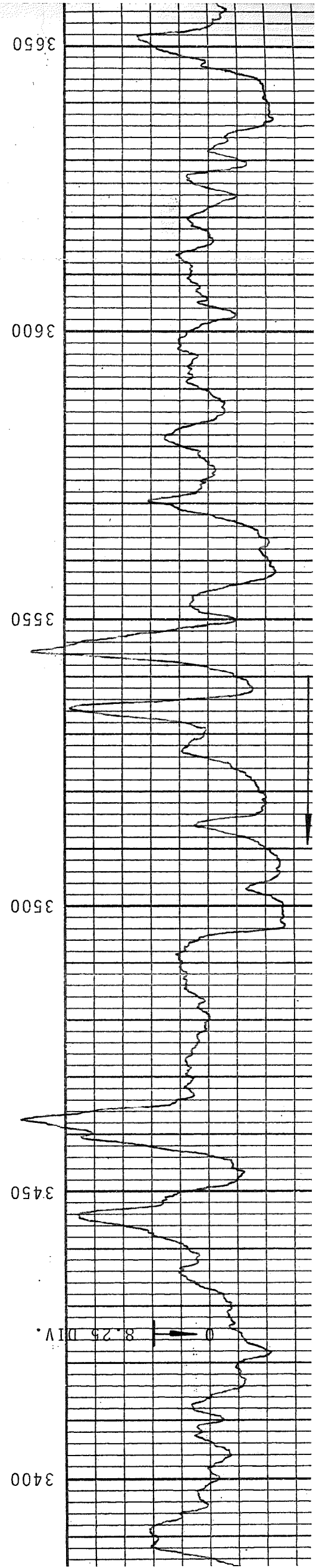
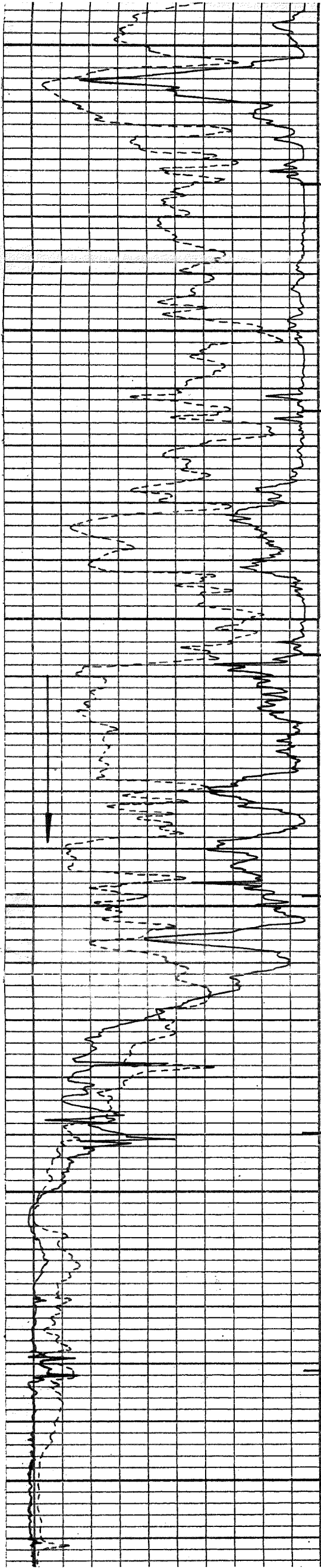
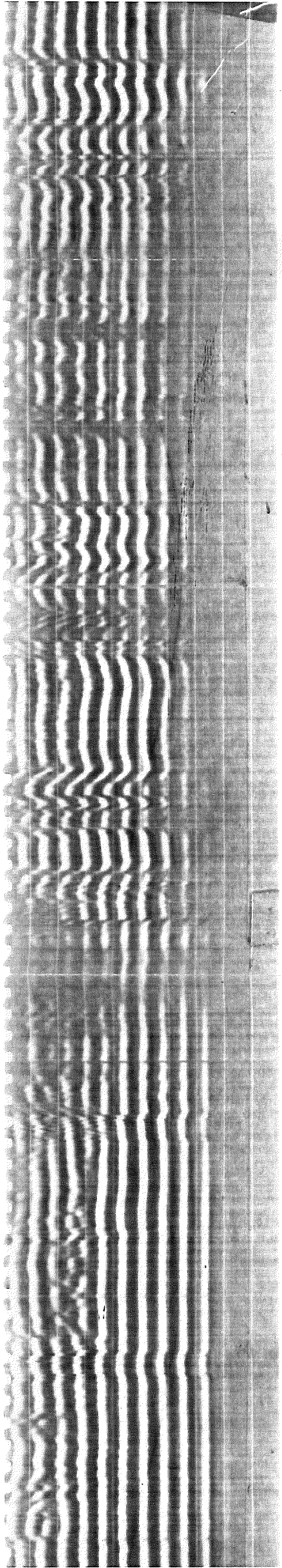


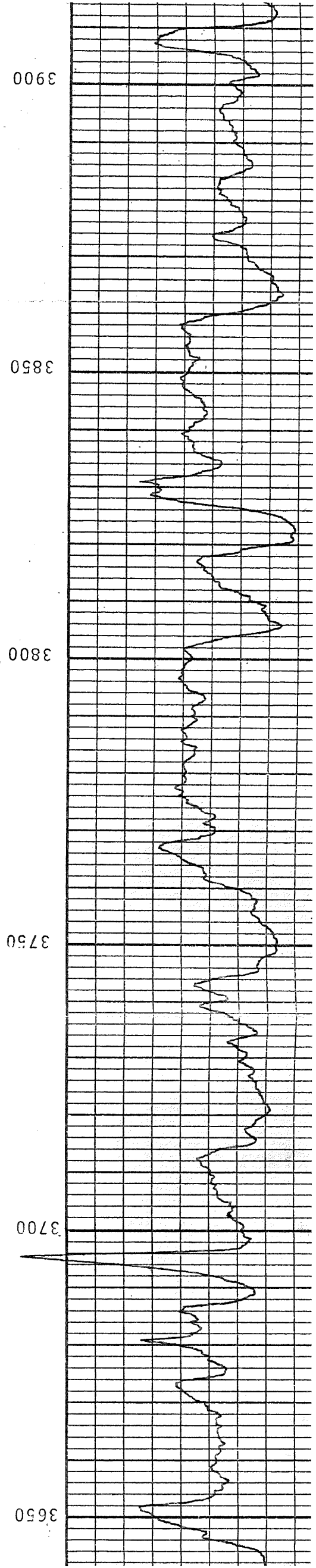
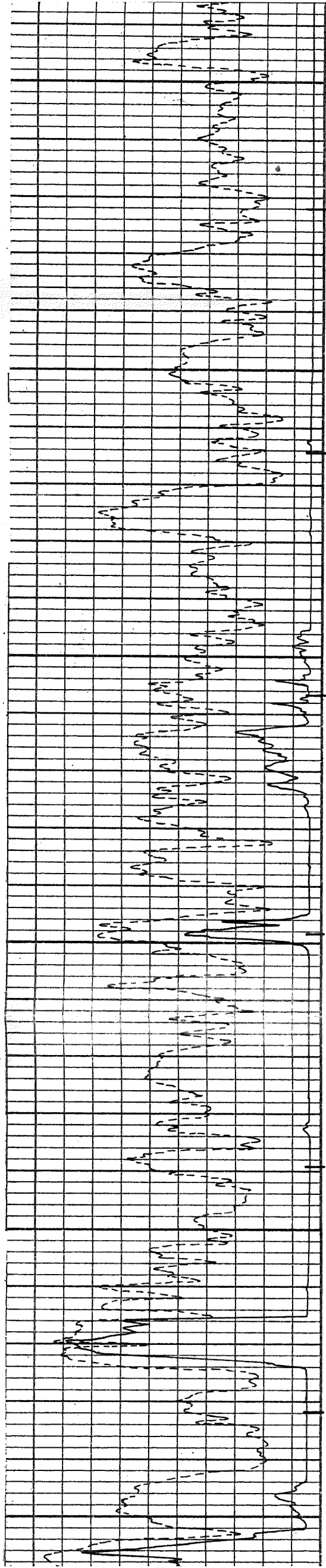
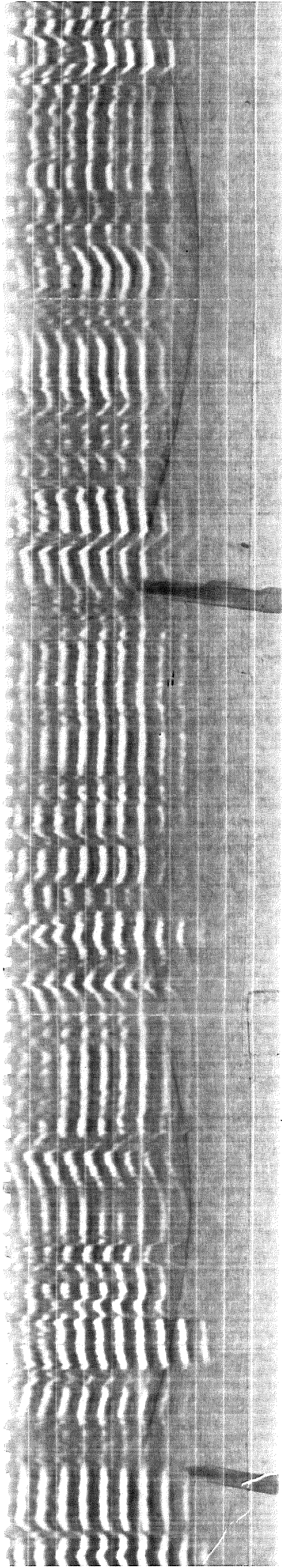
API UNITS
84 168 252

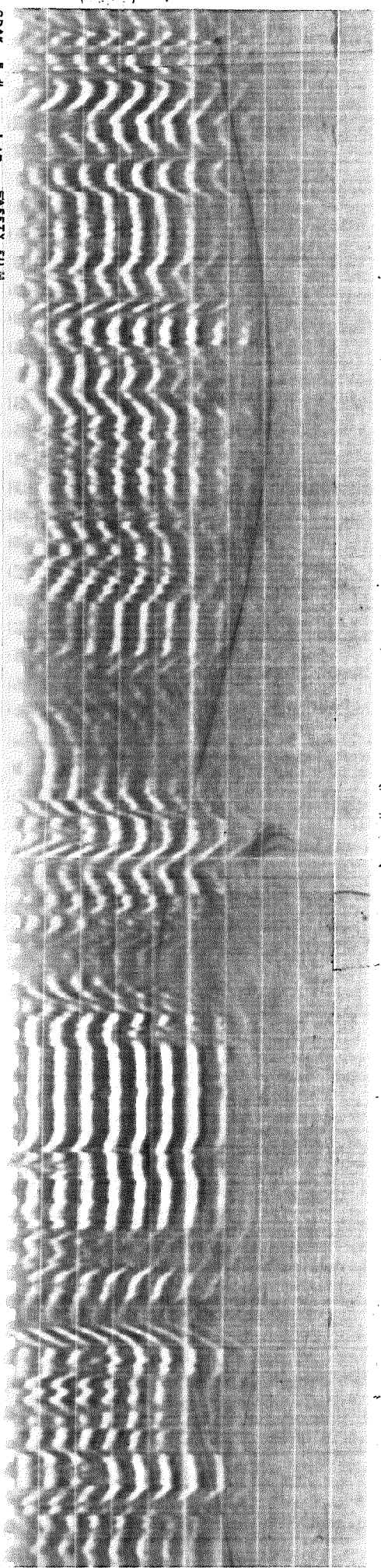
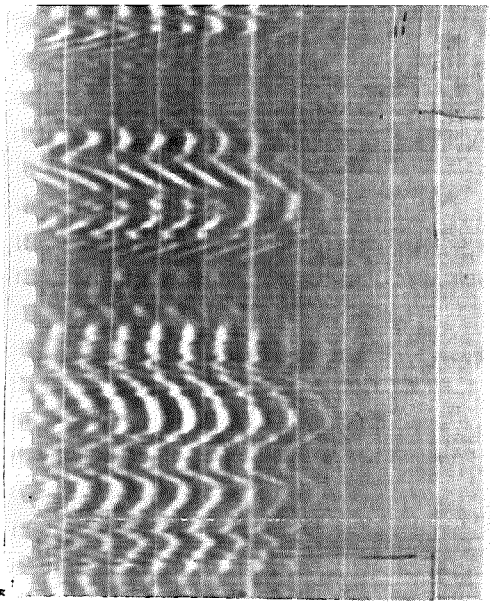
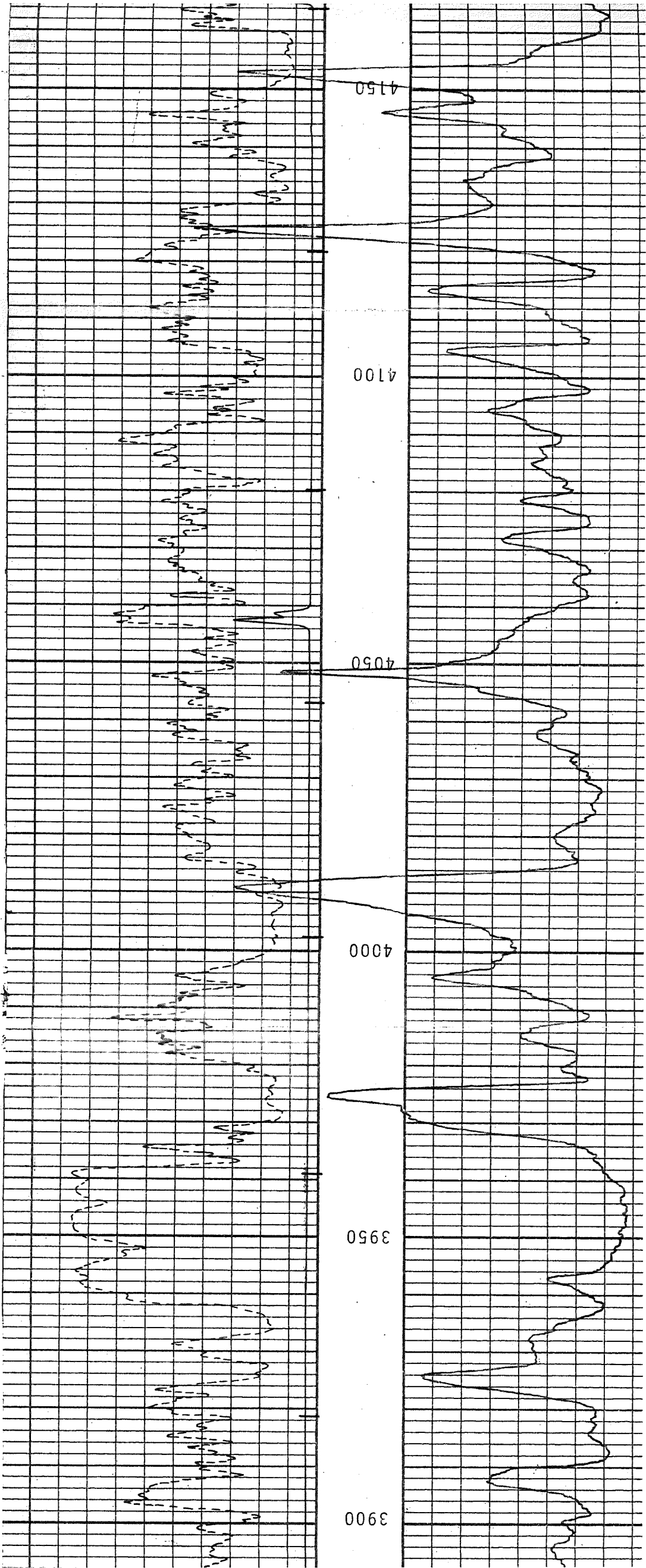
CASING AND COLLAR LOG

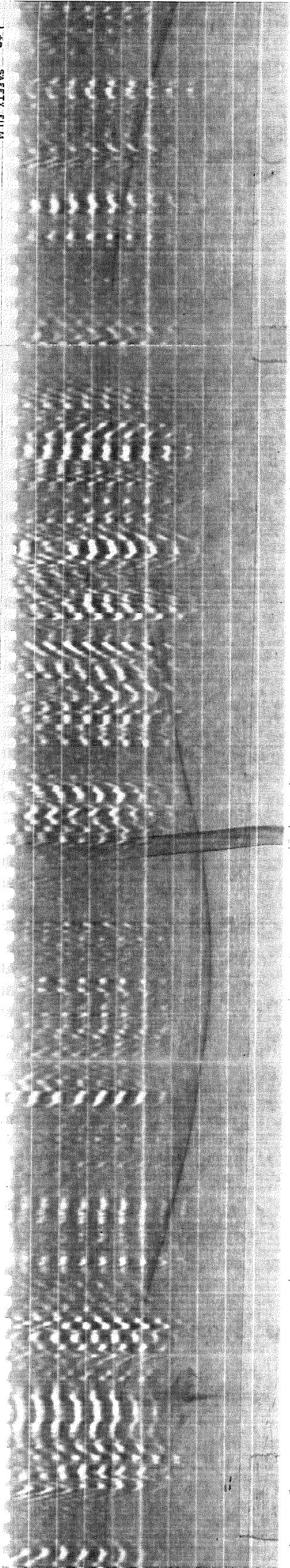


MMA RAY CURVE









1 + 2 SAFETY FILM

