

MEASUREMENT LAB TEST RESULTS

REQUESTOR: R. Murphy TESTER: P. Conant DATE: 04/23/85
REPORT NO.: 851121 WORK ORDER NO.: C-5004-315
TEST TYPE: Developmental, New Design ,Drop Test

FIREARM STAT'S : MODEL: 700 CAL or GAUGE: _____
BARREL TYPE: _____ PROOFED: YES ____ NO ____

REASON FOR TEST : This test was initiated to find the acceleration a M/700 receiver sees on impact when it is dropped from heights of 1, 2, 3, and 4 feet onto the 90 durometer mat.

EQUIPMENT REQUIRED : M/700 ,243 WIN. rifle, serial no. B64o3926; 90 durometer mat; accelerometer no. pcb-303A025N-4780 with a sensitivity of 10.13 mV/g; charge amp; and scope.

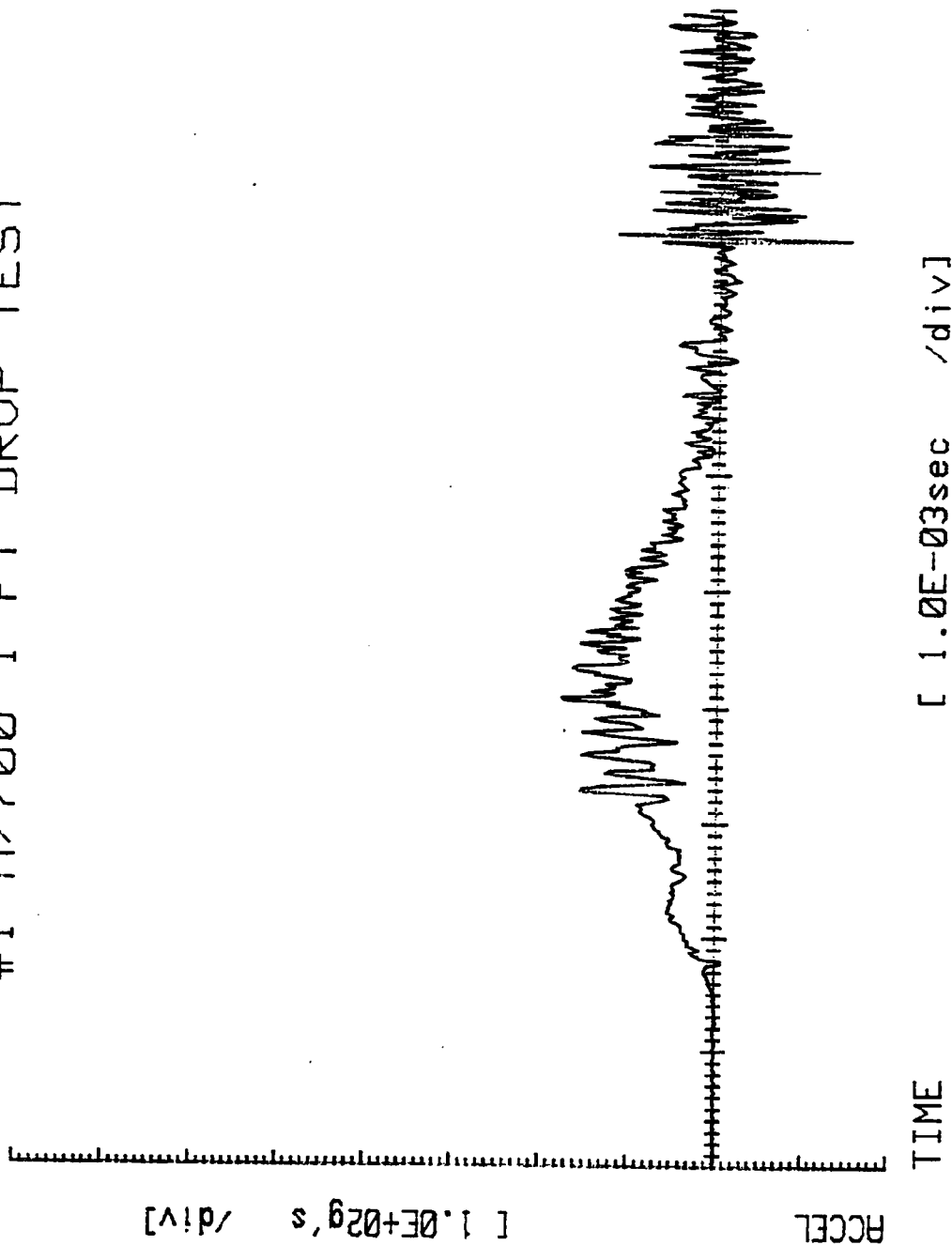
TEST PROCEDURE : The rifle was dropped from heights of 1, 2, 3 and 4 feet a number of times. The waveforms were monitored to make sure that the measurements were consistent. Two waveforms at each height, typical of the observed waveforms, were stored and plotted. The table reflects the actual peak values observed at each drop. The graphs of the actual waveforms also accompany this report.

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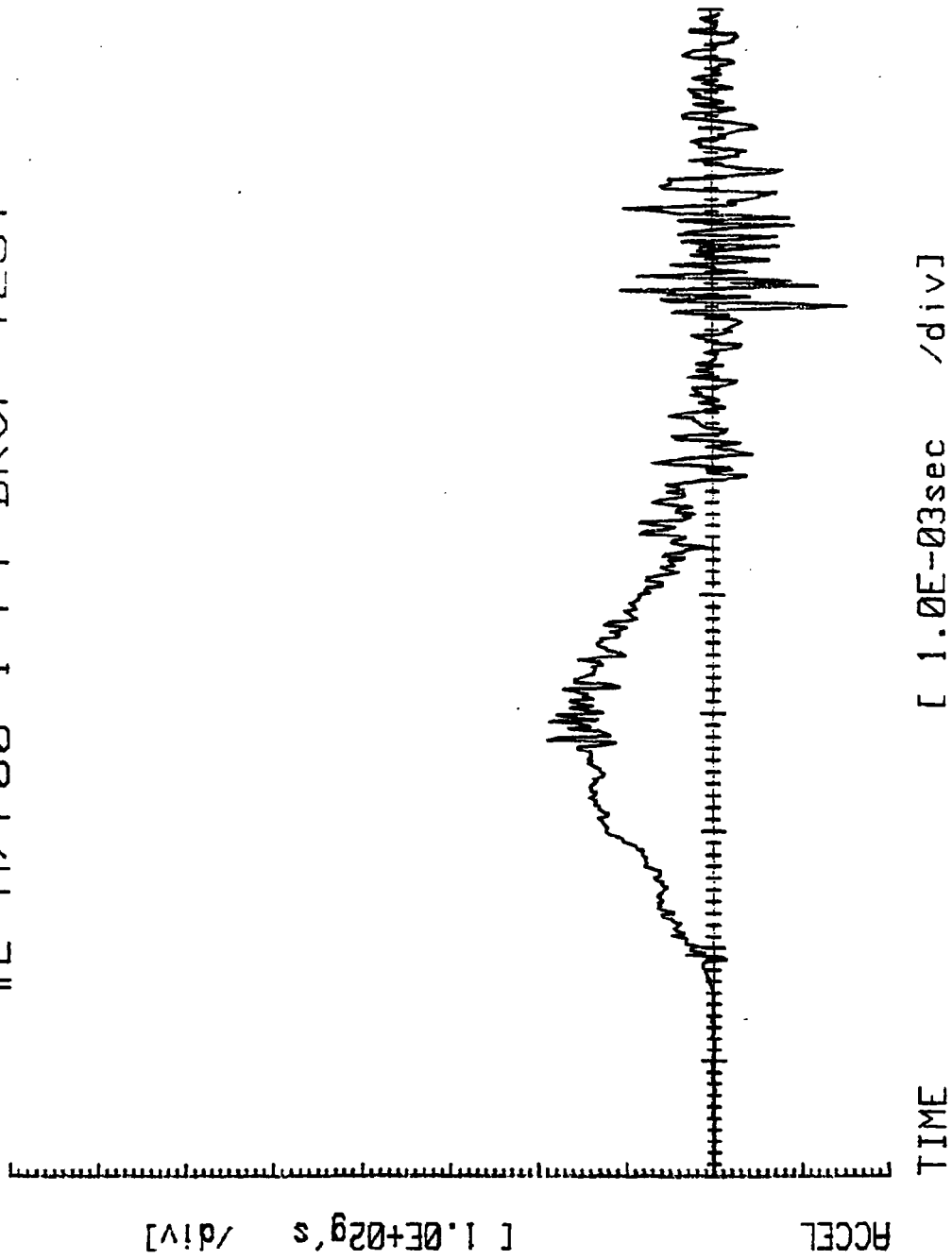
HEIGHT	DROP	ACCELERATION
<u>ft.</u>	<u>NO.</u>	<u>g's</u>
1	1	176
	2	188
2	1	382
	2	323
* 3	1	539
	2	521
* 4	1	620
	2	622

* The accuracy of the drops from 3 and 4 feet are suspect due to the guage limitations of the accelerometer being 500 g's

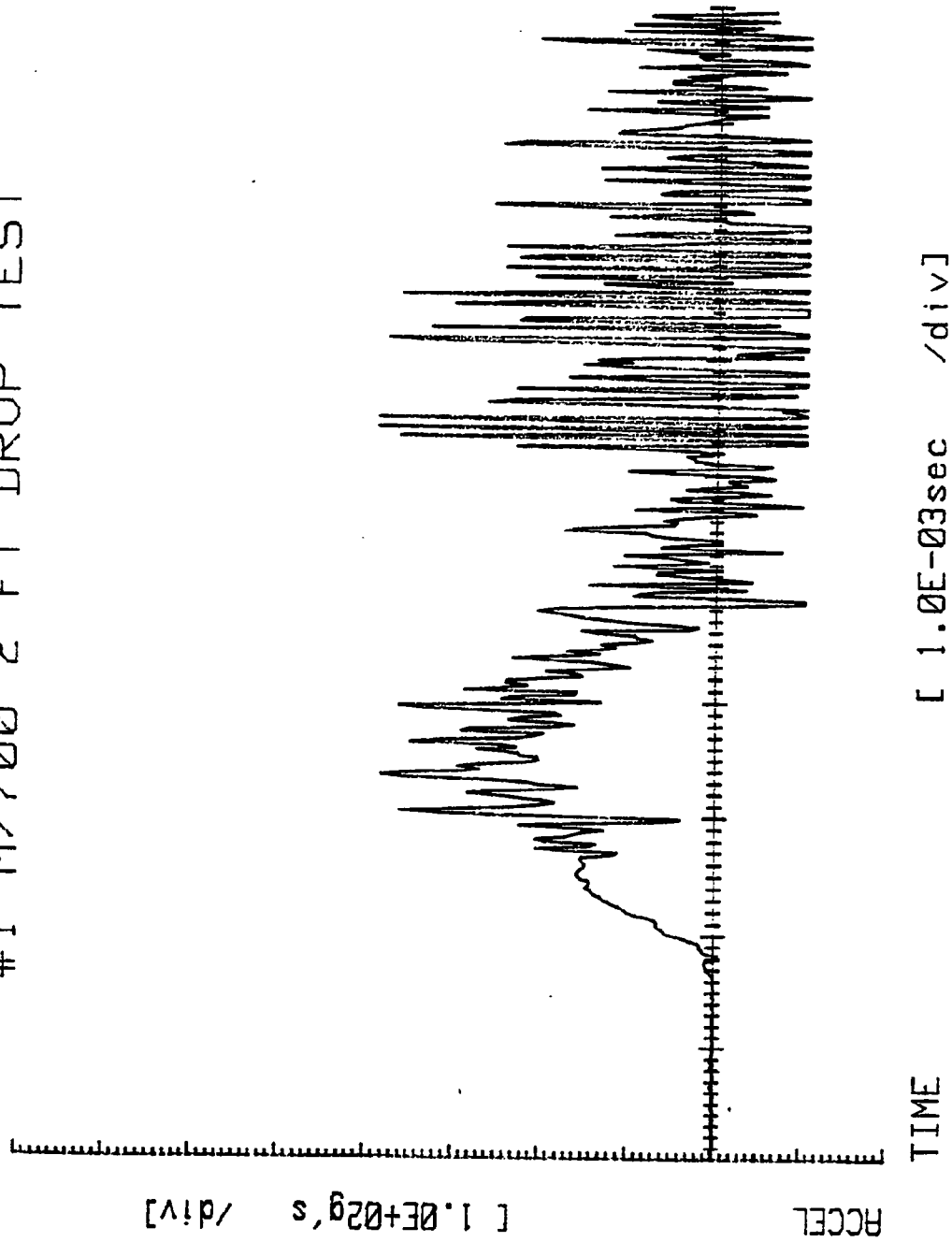
#1 M/700 1 FT DROP TEST



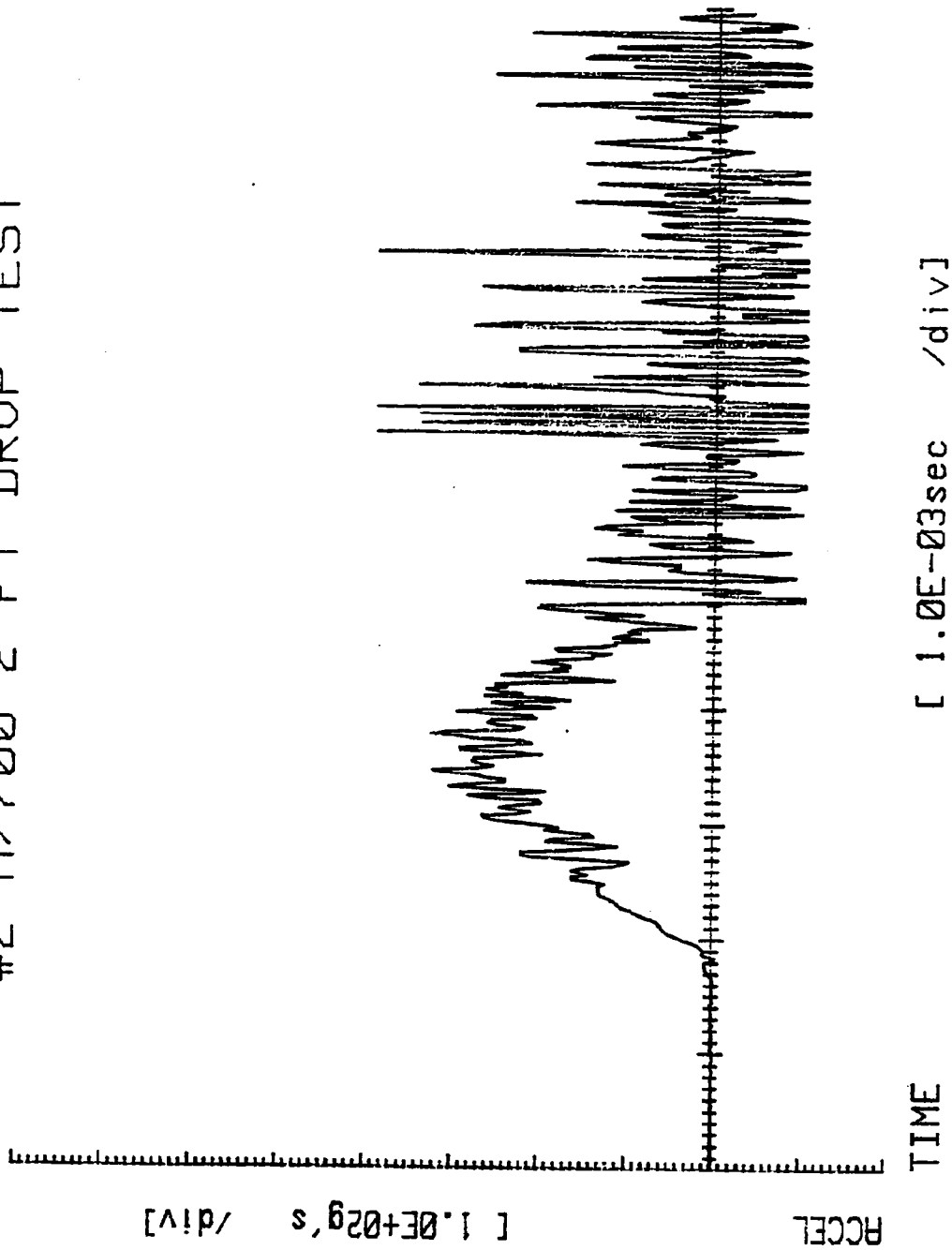
#2 M/700 1 FT DROP TEST



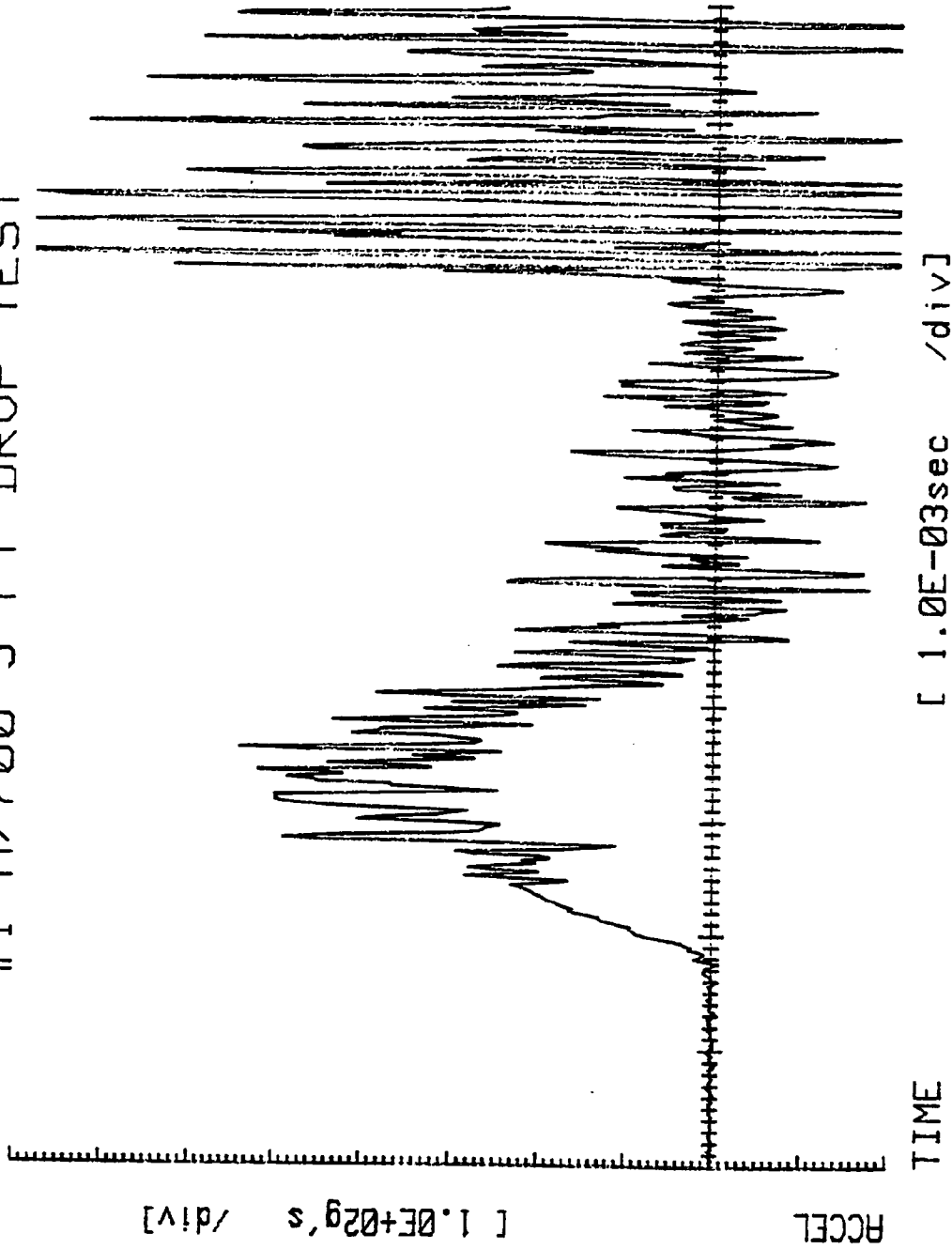
#1 M/700 2 FT DROP TEST



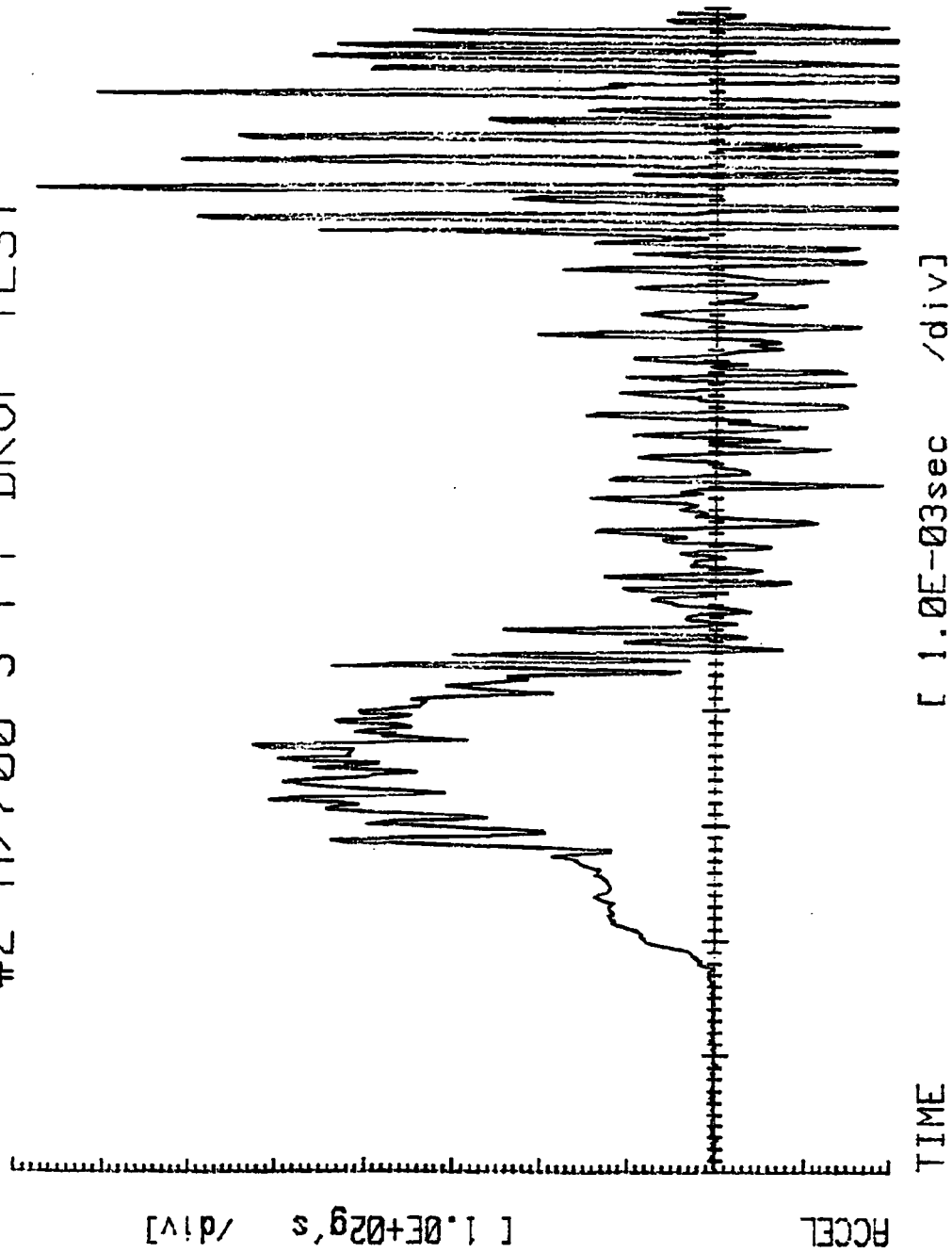
#2 M/700 2 FT DROP TEST



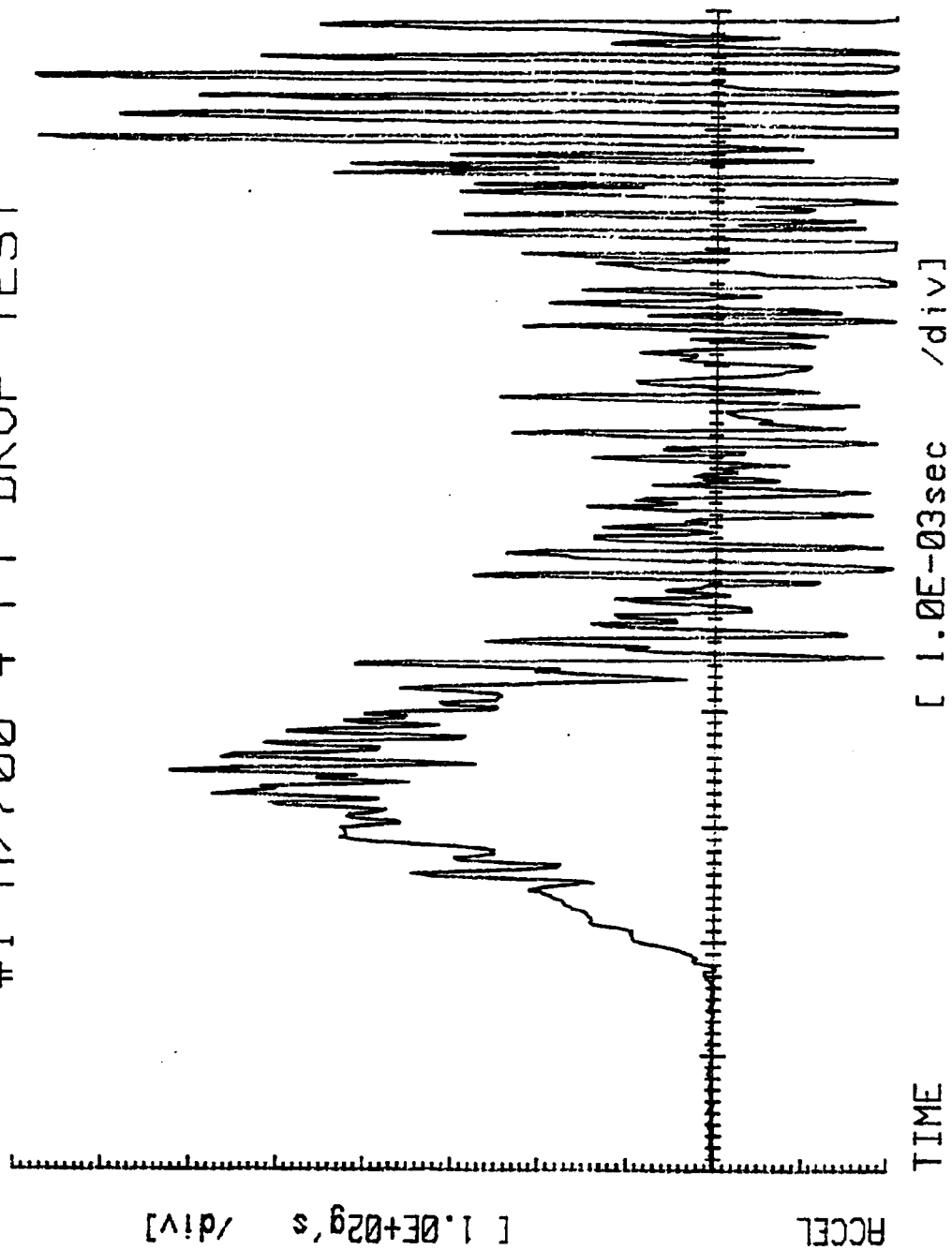
#1 M/700 3 FT DROP TEST



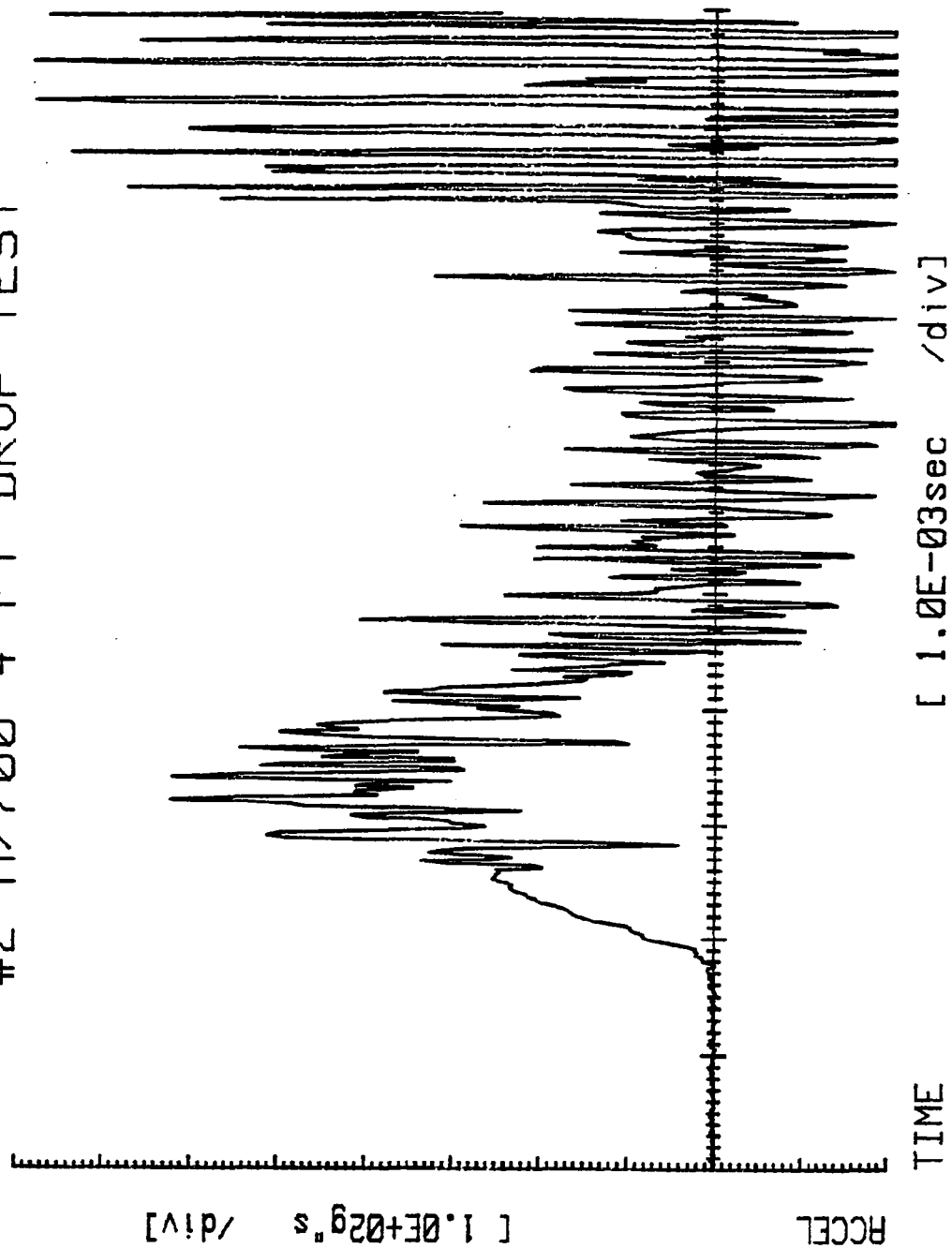
#2 M/700 3 FT DROP TEST



#1 M/700 4 FT DROP TEST



#2 M/700 4 FT DROP TEST



1 FT EXTENDED WAVE

