30 January 1990

TO: J.C. Hutton

Subject: Completion of the muzzle drops on the Model 700 Drop Test

Muzzle drop tests, at one and three feet, were completed using the same vertical drop fixture and a Model 700 30.06 rifle, as used in the previous drops. To determine the G acceleration, a PCB-305A04 accelerometer, serial# 8295 with a .000923 volts/g sensitivity, was mounted on the rifle. The final two drop mediums were as follows:

1) 90 durometer mat 4' X 4' X 1" thick placed on concrete floor

2) Maple plank 8" X 38" X 2" thick

In all cases the rifle was dropped with the safe in the off position.

The following page contains a summary of the results of the drop test on the media mentioned above.

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DIGITAL ANALYZER SETTINGS	MEDIUM	DROP NUMBER	PEAK VOLTAGE	G ACCELERATION
Freq. Scan 0 - 25 kHz	90 Durometer Mat	1	.11	120
		2	.11	120
		3	.12	130
Full scale Sensitivity 0.2V	1 foot drops	4	.11	120
		5	.12	130
		Avg.	.114	124
Freq. Scan 0 - 100 kHz	90 Durometer Mat	1	.23	250
		2	.23	250
		3	.23	250
Full scale Sensitivity 0.28V	3 foot drops	4	.24	260
		5	.23	250
		Avg.	.232	251
Freq. Scan 0 - 10 kHz	Maple plank	1	.19	206
		2	.21	228
		3	.18	195
Full scale Sensitivity 0.25V	1 foot drops	4	.19	206
		5	.21	228
		Avg.	.196	212
Freq. Scan 0 - 10 kHz	Maple plank	1	.22	238
		2	.28	303
		3	.30	325
Full scale Sensitivity 0.5V	3 foot drops	4	.27	293
		5	.28	303
		Avg.	.27	293

key:

* following the drop number indicates that the rifle fired on that drop. If there is no indication then the rifle did not fire.