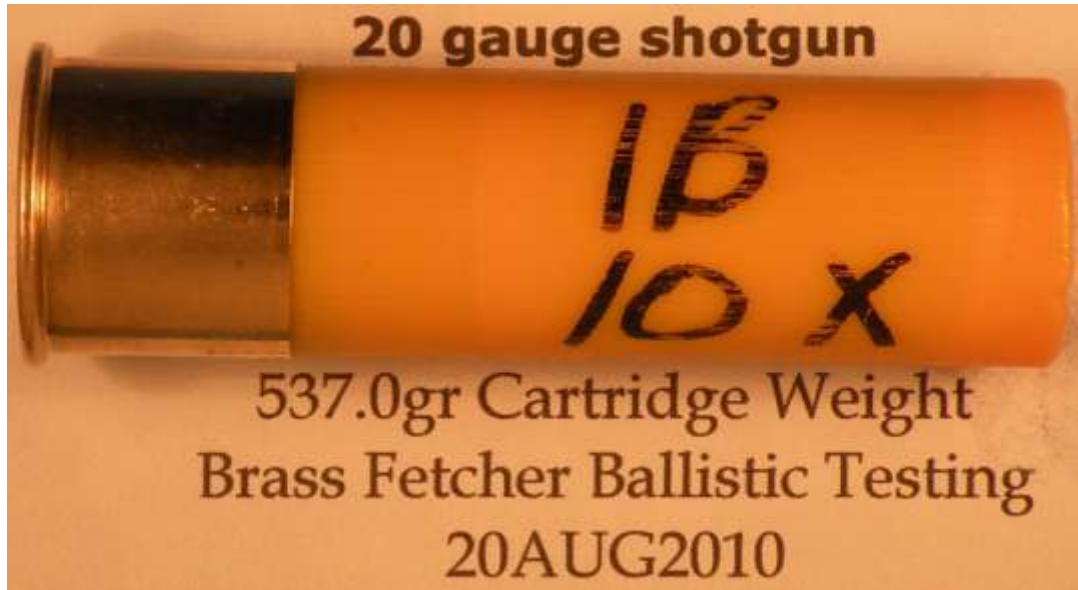


Brass Fetcher Ballistic Testing

20 gauge No Man's Land #1 Buckshot (10 pellet)

Bare 10-percent gelatin



	Shot 1	Shot 2	Shot 3
Calibration depth (Inches, corrected to 590 ft/sec impact velocity) (Ideal gelatin block penetration depth = 3.4")	3.5	3.4	
Impact velocity (Measured at 7ft) (ft/sec)	1251	1288	
Median Penetration Depth (inch)	15.6	14.6	

Notes :

Weapon – Mossberg 20 gauge *Model 500*; 18.5" barrel length, cylinder choke

Distance – 10.0 feet, muzzle to impact face

Shot 1

Block Calibration Velocity (ft/sec)	Block Calibration Depth (inch)	Block Calibration Temperature (Degrees Fahrenheit)	Block Core Temperature (Degrees Fahrenheit)
592	3.6	42.4	41.7

Impact Velocity (ft/sec)	Deepest Penetration Depth (inch)	Maximum Crack Diameter (inch)	Maximum Crack Diameter Location (inch)
1251	17.0	5.2	5.0

Cavitation Depth (inch)	Pellets Recovered Independent of the primary cavity (quantity)	Pellet Combined Surface Area Independent of the primary cavity (square inch)
14.0	10	0.707

Commentary :

All pellets were recovered with significant deformation.

All pellets separated from the cluster and cut independent penetration tracks.

Test site conditions – 68 degrees Fahrenheit, 51% relative humidity

Time out of refrigeration prior to shot impact – 3 minutes

Pellet average diameter – 0.289"

Pellet recovered weight (median over entire load) – 39.0gr

Pellet number	Individual pellet penetration depths (inch)
1	17.0
2	16.4
3	16.3
4	16.0
5	15.6
6	15.6
7	15.5
8	14.1
9	12.0
10	11.3

Figure 1. Side view of **Shot 1** gelatin block

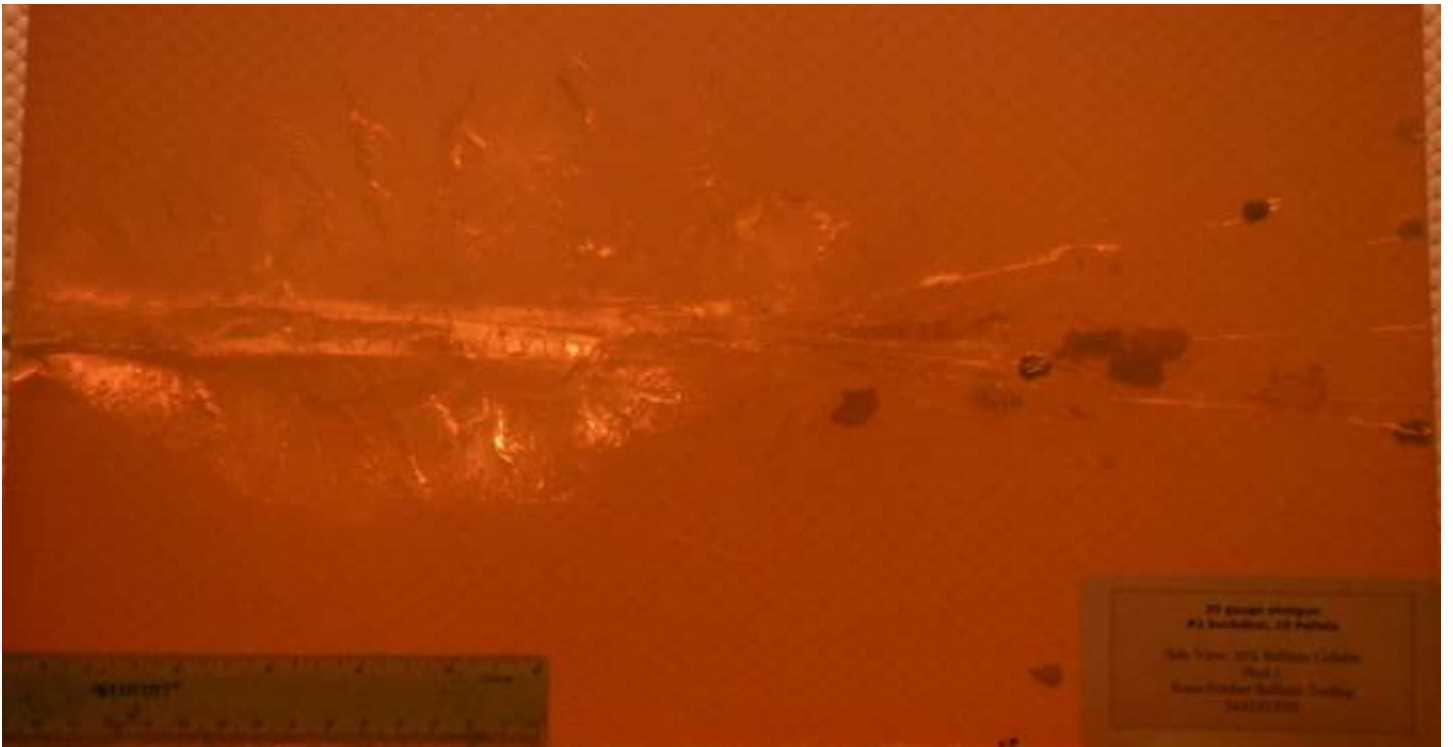


Figure 2. Top view of **Shot 1** gelatin block

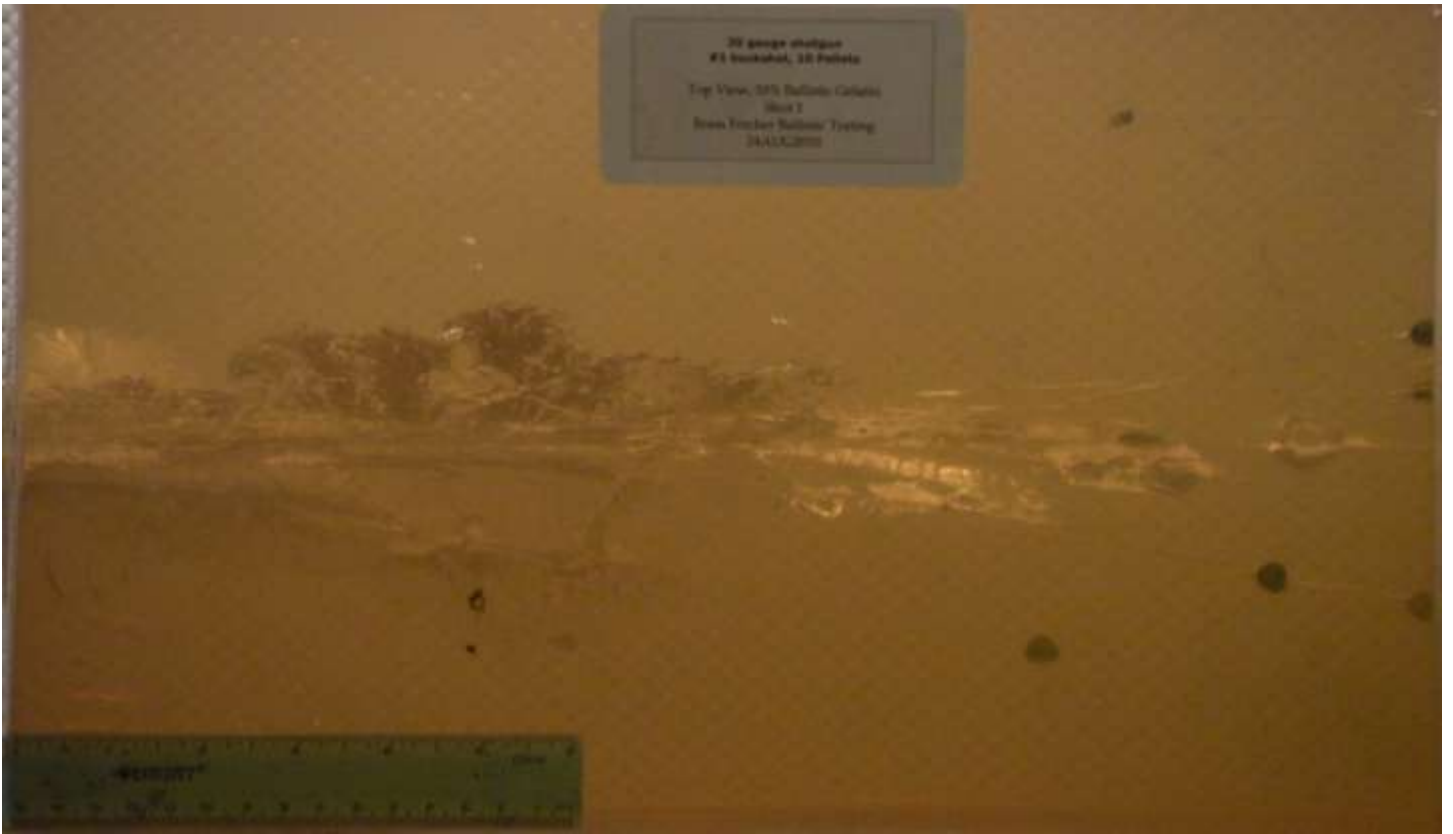
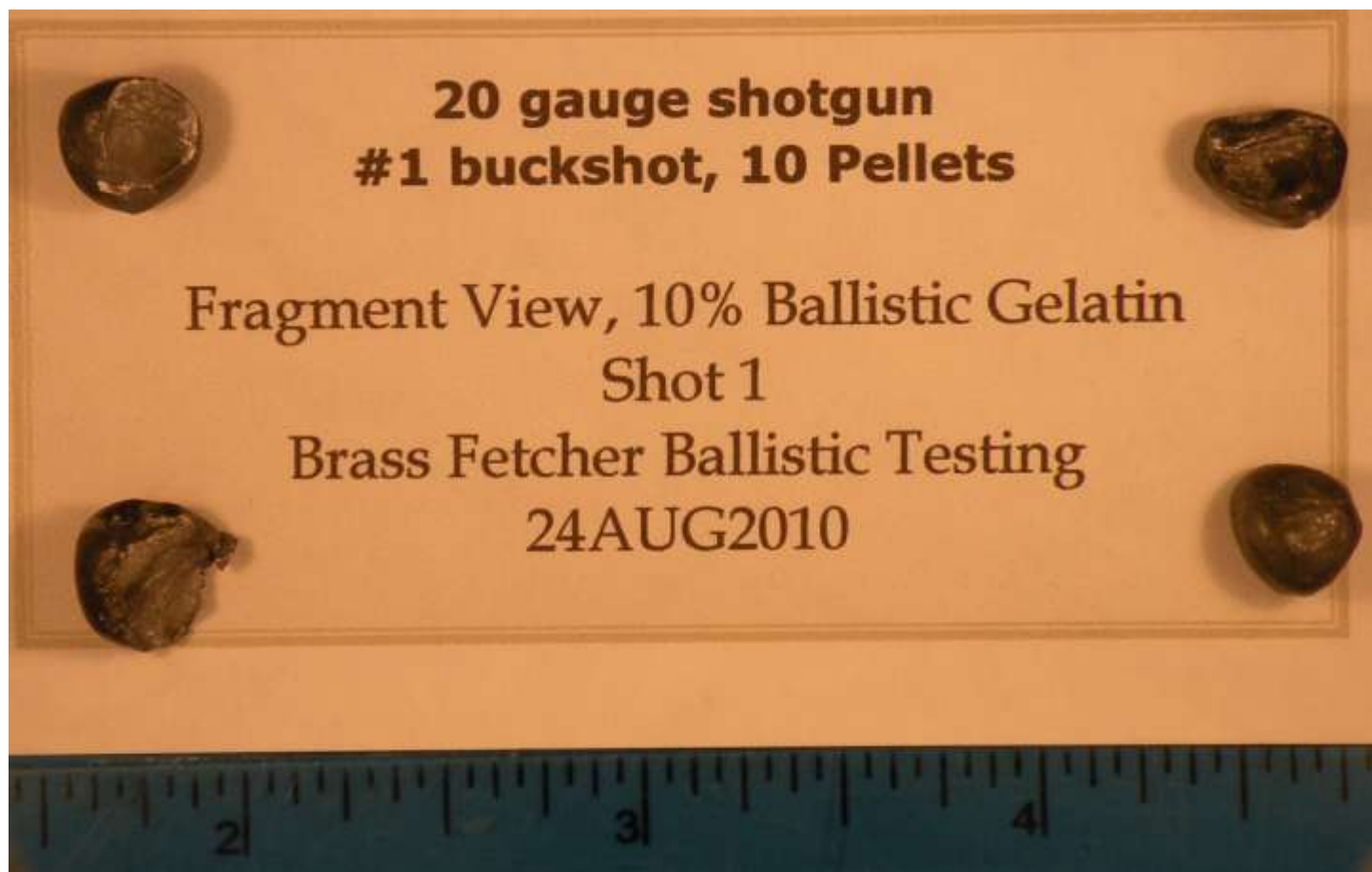


Figure 3. Fragment view of **Shot 1** recovered shot pellets



Shot 2

Block Calibration Velocity (ft/sec)	Block Calibration Depth (inch)	Block Calibration Temperature (Degrees Fahrenheit)	Block Core Temperature (Degrees Fahrenheit)
578	3.2	39.3	39.3

Impact Velocity (ft/sec)	Deepest Penetration Depth (inch)	Maximum Crack Diameter (inch)	Maximum Crack Diameter Location (inch)
1288	19.4	5.5	4.6

Cavitation Depth (inch)	Pellets Recovered Independent of the primary cavity (quantity)	Pellet Combined Surface Area Independent of the primary cavity (square inch)
11.7	10	0.707

Commentary :

Test site conditions – 68 degrees Fahrenheit, 51% relative humidity

Time out of refrigeration prior to shot impact – 3 minutes

Pellet average diameter – 0.295”

Pellet recovered weight (median over entire load) – 38.7gr

Pellet number	Individual pellet penetration depths (inch)
1	19.4
2	18.6
3	18.5
4	16.0
5	14.1
6	14.6
7	14.6
8	11.9
9	13.9
10	14.5

Figure 4. Side view of **Shot 2** gelatin block

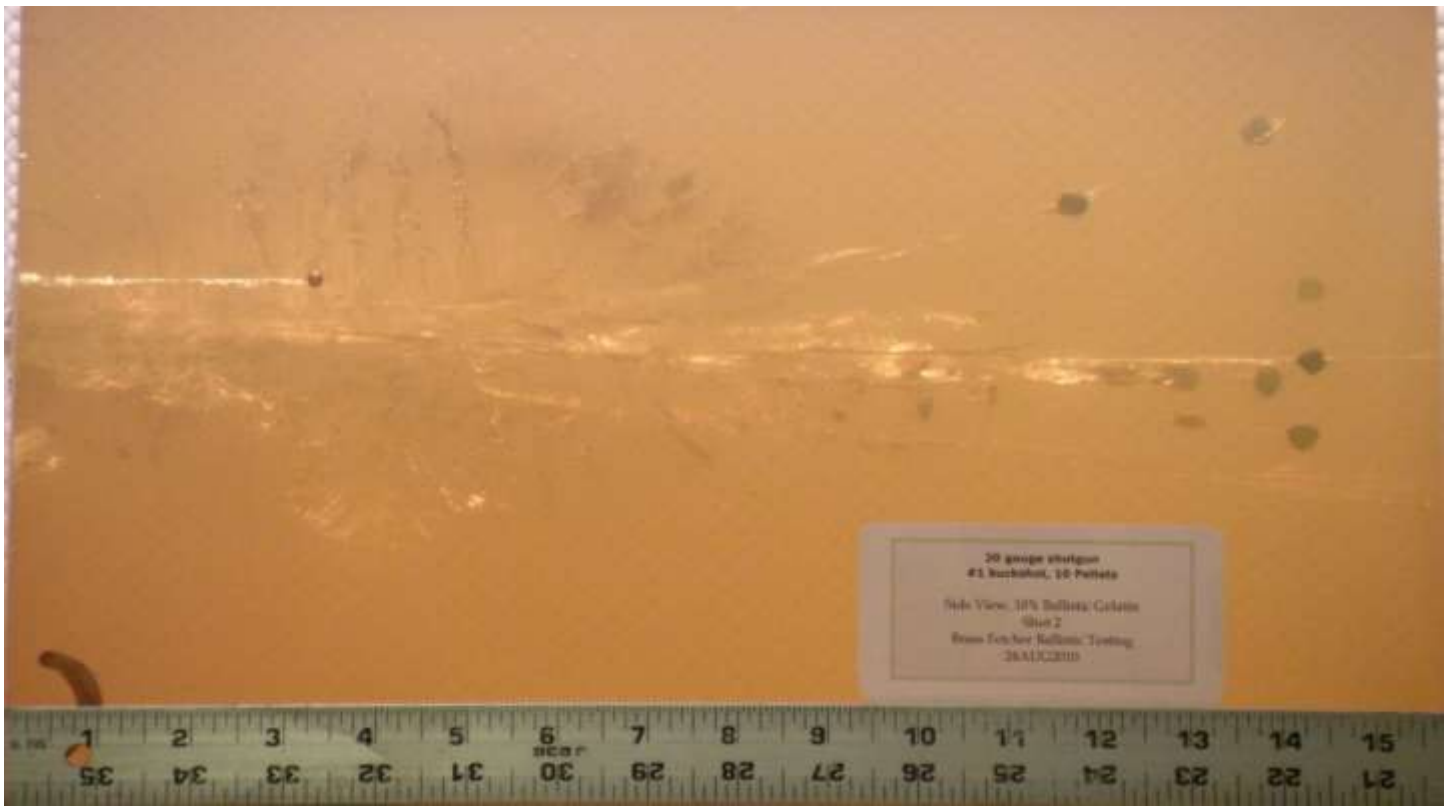


Figure 5. Top view of **Shot 2** gelatin block



Figure 6. Fragment view of **Shot 2** recovered shot pellets

