NTS Technical Systems Test Report for Ballistic Resistance and Ballistic Limit, V_{50} BL(P) Testing

Project No.: PH00010404 **Tested:** 16 through 20 February 2024 **PO No.:** Signed Quote OH16960

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Further dissemination only as directed by C.I.A. Miguel Caballero S.A.S., 15 March 2024.

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Revision History

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0	Initial Release	15 March 2024

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C.I.A. MIGUEL CABALLERO S.A.S. PROPRIETARY INFORMATION

1 Introduction

C.I.A. Miguel Caballero S.A.S. provided 14 armor samples to NTS-Belcamp for ballistic testing on 16 through 20 February 2024. This is a two-part report, Section 2 is the ballistic resistance test report and Section 3 is the ballistic limit testing, V_{50} BL(P) test report.

2 Ballistic Resistance Testing

Four samples were used for ballistic resistance testing.

2.1 Threats and Instrumentation

*2.1.1 Threats**

- .357 SIG, 125-grain full metal jacket flat nose (FMJ FN) projectiles
- .44-mag, 240-grain semi jacketed hollow point (SJHP) projectiles

*All projectiles were fired from a universal receiver which was fitted with the appropriate barrel and mounted on an NTS-Belcamp mount.

*The threat projectiles were required to have no greater than 3° total yaw. Projectile yaw was measured to ensure that the test impacts were within this constraint by placing a yaw card at the appropriate gun-to-target range during velocity verification shots.

2.1.2 Instrumentation

Projectile velocity measurements were obtained using Oehler Research model No. 57 infrared screens with Y.I.S. Cowden Group Chrono-USB chronographs. A digital caliper was used to measure the post impact deformations observed in the backing clay on Shot No. 1 through 3. Calibration data is presented in Attachment A.

2.2 Details of Test

The objective of this test was to conduct a ballistic resistance test on the armor samples in accordance with NIJ-STD-0101.06 Level IIIA (Modified). Shot spacing between multiple impacts against a single sample was in accordance with the referenced performance standard. Shots against the armor samples were performed at 0.0°, 30.0° or 45.0° obliquity and ambient range temperature (21±1 °C).

Prior to testing, the samples were conditioned to a specific parameter as noted on each data sheet. For each shot, the target was strapped to a 5.5-in clay/plywood backing and clamped to a rigid test fixture. All firings were conducted at 5.243 m from the target. The projectile velocities used for the test were in accordance with the referenced performance standard.

2.3 Summary of Results

The results of the ballistic resistance test are shown in Table 1. The round-by-round ballistic data sheets for all testing performed are provided on the following pages.

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Table 1. Summary of Ballistic Resistance Testing

Project No.	Sample No.	Size	Weight (kg)	Threat	Target Obliq. (deg)	Shot No.	Penetration Data		
							Velocity (m/s)	Result	Def. (mm)
PH00010404-1	609683 Front	Large	0.910	.357 SIG, 125-grain FMJ FN	0.0	1	448.06	None	27.1
						2	449.88	None	25.0
						3	449.28	None	28.5
					30.0	4	450.49	None	NA
					45.0	5	447.75	None	NA
					0.0	6	448.06	None	NA
PH00010404-2	609683 Back	Large	1.090	.357 SIG, 125-grain FMJ FN	0.0	1	448.06	None	26.2
						2	450.8	None	26.3
						3	453.24	None	27.2
					45.0	4	449.88	None	NA
					30.0	5	455.07	None	NA
					0.0	6	456.29	None	NA
PH00010404-3	609686 Front	C-3	0.910	.44-mag, 240-grain SJHP	0.0	1	433.12	None	36.1
						2	439.52	None	37.3
						3	436.47	None	35.7
					30.0	4	433.73	None	NA
					45.0	5	434.34	None	NA
					0.0	6	435.56	None	NA
PH00010404-4	609686 Back	C-3	1.090	.44-mag, 240-grain SJHP	0.0	1	438.3	None	40.0
						2	435.86	None	38.7
						3	431.6	None	35.2
					45.0	4	438.0	None	NA
					30.0	5	433.73	None	NA
					0.0	6	428.85	None	NA

BALLISTIC RESISTANCE TEST

NTS-Belcamp
4603B Compass Point Road
Belcamp, MD 21017

Client: C.I.A. Miguel Caballero S.A.S.
Project No.: PH00010404-1
Test Date: 02/20/2024
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Test Panel

Description: Soft armor. Model: MC-COMFORT-IIIA; Lot #: UP750160-63703.

Manufacturer: C.I.A. Miguel Caballero S.A.S.

Sample No.: (.357 SIG, V0, Wet) 609683 Front

Size: Large	Weight: 0.910 kg	Date Received: 02/12/2024
Avg. Thickness: N/A	Plies/Laminates: N/A	Received Via: FEDEX, Express Saver
Thicknesses: N/A		Returned Via: FEDEX, Express Saver

Setup

Shot Spacing: NIJ-STD-0101.06 Level IIIA (modified)	Primary Vel. Screens (m): 1.980, 2.080, 3.400, 3.510	Range No.: Range 1
Witness Panel: Clay	Primary Vel. Location (m): 2.743	Temp: 20.8 °C
Backing Material: 5.5-in clay/plywood	Range to Target (m): 5.243	BP: 30.2 inHg
Condition: Wet per NIJ-STD-0101.06	Target to Witness (mm): 0.000	RH: 41 %
		Barrel/Gun: CT-3011
		Gunner: Vincent Johnson
		Recorder: Isaiah Lookingbill

Ammunition

Projectile	Lot No.	Manufacturer	Powder
(1) .357 SIG, 125-grain FMJ FN	4362	Speer	Accurate No. 2

Applicable Standards or Procedures

Clay Drop 1 - Drop Time: 9:25 AM; Block No. WC074192; Temp: 91.9 °F; Drop Depths: 17.2 mm, 16.8 mm, 17.4 mm, 16.9 mm, 17.7 mm
(1) NIJ-STD-0101.06 Level IIIA (Modified)

Shot No.	Ammo	Powder/ Seating	Weight (gr)	Time 1 (µs)	Vel. 1 (m/s)	Time 2 (µs)	Vel.2 (m/s)	Avg. Vel. (m/s)	Penetration	Deformation (mm)	Obliq. (°)	Footnotes
1	1	7.2	125.2	3403	447.8	2947	448.1	448.06	None	27.1	0.0	
2	1	7.2	125.3	3390	449.6	2934	450.2	449.88	None	25.0	0.0	
3	1	7.2	125.3	3394	449.0	2939	449.3	449.28	None	28.5	0.0	
4	1	7.2	125.3	3386	450.2	2930	450.8	450.49	None	NA	30.0	
5	1	7.2	125.4	3407	447.4	2947	448.1	447.75	None	NA	45.0	
6	1	7.2	125.4	3403	447.8	2947	448.1	448.06	None	NA	0.0	

Remarks:
Required Velocity: 438.9-457.2 m/s.
Projectile Yaw Check: 0° Yaw on All Impacts.

Footnotes:
N/A

C.I.A. MIGUEL CABALLERO S.A.S. PROPRIETARY INFORMATION

BALLISTIC RESISTANCE TEST

NTS-Belcamp
4603B Compass Point Road
Belcamp, MD 21017

Client: C.I.A. Miguel Caballero S.A.S.
Project No.: PH00010404-2
Test Date: 02/20/2024
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Test Panel

Description: Soft armor. Model: MC-COMFORT-IIIA; Lot #: UP750160-63703.

Manufacturer: C.I.A. Miguel Caballero S.A.S.

Sample No.: (.357 SIG, V0, Wet) 609683 Back

Size: Large	Weight: 1.090 kg	Date Received: 02/12/2024
Avg. Thickness: N/A	Plies/Laminates: N/A	Received Via: FEDEX, Express Saver
Thicknesses: N/A		Returned Via: FEDEX, Express Saver

Setup

Shot Spacing: NIJ-STD-0101.06 Level IIIA (modified)	Primary Vel. Screens (m): 1.980, 2.080, 3.400, 3.510	Range No.: Range 1
Witness Panel: Clay	Primary Vel. Location (m): 2.743	Temp: 21.1 °C
Backing Material: 5.5-in clay/plywood	Range to Target (m): 5.243	BP: 30.2 inHg
Condition: Wet per NIJ-STD-0101.06	Target to Witness (mm): 0.000	RH: 41 %
		Barrel/Gun: CT-3011
		Gunner: Vincent Johnson
		Recorder: Isaiah Lookingbill

Ammunition

Projectile	Lot No.	Manufacturer	Powder
(1) .357 SIG, 125-grain FMJ FN	4362	Speer	Accurate No. 2

Applicable Standards or Procedures

Clay Drop 1 - Drop Time: 9:45 AM; Block No. WC074192; Temp: 91.9 °F; Drop Depths: 17.3 mm, 17.9 mm, 16.8 mm, 17.9 mm, 17.3 mm
(1) NIJ-STD-0101.06 Level IIIA (Modified)

Shot No.	Ammo	Powder/ Seating	Weight (gr)	Time 1 (µs)	Vel. 1 (m/s)	Time 2 (µs)	Vel.2 (m/s)	Avg. Vel. (m/s)	Penetration	Deformation (mm)	Obliq. (°)	Footnotes
1	1	7.2	125.4	3403	447.8	2947	448.1	448.06	None	26.2	0.0	
2	1	7.2	125.4	3381	450.8	2930	450.8	450.8	None	26.3	0.0	
3	1	7.2	125.5	3364	452.9	2913	453.2	453.24	None	27.2	0.0	
4	1	7.2	125.5	3390	449.6	2934	450.2	449.88	None	NA	45.0	
5	1	7.2	125.5	3351	454.8	2900	455.4	455.07	None	NA	30.0	
6	1	7.2	125.5	3342	456.0	2891	456.9	456.29	None	NA	0.0	

Remarks:
Required Velocity: 438.9-457.2 m/s.
Projectile Yaw Check: 0° Yaw on All Impacts.

Footnotes:
N/A

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BALLISTIC RESISTANCE TEST

NTS-Belcamp
4603B Compass Point Road
Belcamp, MD 21017

Client: C.I.A. Miguel Caballero S.A.S.
Project No.: PH00010404-3
Test Date: 02/20/2024
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Test Panel

Description: Soft armor. Model: MC-COMFORT-IIIA; Lot #: UP750160-63703.

Manufacturer: C.I.A. Miguel Caballero S.A.S.

Sample No.: (.44-mag, V0, Wet) 609686 Front

Size: C-3	Weight: 0.910 kg	Date Received: 02/12/2024
Avg. Thickness: N/A	Plies/Laminates: N/A	Received Via: FEDEX, Express Saver
Thicknesses: N/A		Returned Via: FEDEX, Express Saver

Setup

Shot Spacing: NIJ-STD-0101.06 Level IIIA (modified)	Primary Vel. Screens (m): 1.980, 2.080, 3.400, 3.510	Range No.: Range 3
Witness Panel: Clay	Primary Vel. Location (m): 2.743	Temp: 20.2 °C
Backing Material: 5.5-in clay/plywood	Range to Target (m): 5.243	BP: 30 inHg
Condition: Wet per NIJ-STD-0101.06	Target to Witness (mm): 0.000	RH: 34 %
		Barrel/Gun: WC020651
		Gunner: James Jordan
		Recorder: Keivin Guzman

Ammunition

Projectile	Lot No.	Manufacturer	Powder
(1) .44-mag, 240-grain SJHP	4453	Speer	Accurate No. 5

Applicable Standards or Procedures

Clay Drop 1 - Drop Time: 2:55 PM; Block No. WC074180; Temp: 97.1 °F; Drop Depths: 18.1 mm, 17.3 mm, 18.5 mm, 16.9 mm, 19.4 mm
(1) NIJ-STD-0101.06 Level IIIA (Modified)

Shot No.	Ammo	Powder/ Seating	Weight (gr)	Time 1 (µs)	Vel. 1 (m/s)	Time 2 (µs)	Vel.2 (m/s)	Avg. Vel. (m/s)	Penetration	Deformation (mm)	Obliq. (°)	Footnotes
1	1	14.6	241.0	3519	433.1	3048	433.4	433.12	None	36.1	0.0	
2	1	14.6	241.1	3470	439.2	3004	439.5	439.52	None	37.3	0.0	
3	1	14.6	241.1	3490	436.8	3026	436.5	436.47	None	35.7	0.0	
4	1	14.6	241.1	3514	433.7	3046	433.7	433.73	None	NA	30.0	
5	1	14.6	241.2	3509	434.3	3041	434.3	434.34	None	NA	45.0	
6	1	14.6	241.2	3500	435.6	3033	435.6	435.56	None	NA	0.0	

Remarks:
Required Velocity: 435.9 ± 9.1 m/s.
Projectile Yaw Check: 0° Yaw on All Impacts.

Footnotes:
N/A

C.I.A. MIGUEL CABALLERO S.A.S. PROPRIETARY INFORMATION

BALLISTIC RESISTANCE TEST

NTS-Belcamp
4603B Compass Point Road
Belcamp, MD 21017

Client: C.I.A. Miguel Caballero S.A.S.
Project No.: PH00010404-4
Test Date: 02/20/2024
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Test Panel

Description: Soft armor. Model: MC-COMFORT-IIIA; Lot #: UP750160-63703.

Manufacturer: C.I.A. Miguel Caballero S.A.S.

Sample No.: (.44-mag, V0, Wet) 609686 Back

Size: C-3
Avg. Thickness: N/A
Thicknesses: N/A

Weight: 1.090 kg
Plies/Laminates: N/A

Date Received: 02/12/2024
Received Via: FEDEX, Express Saver
Returned Via: FEDEX, Express Saver

Setup

Shot Spacing: NIJ-STD-0101.06 Level IIIA (modified)
Witness Panel: Clay
Backing Material: 5.5-in clay/plywood
Condition: Wet per NIJ-STD-0101.06

Primary Vel. Screens (m): 1.980, 2.080, 3.400, 3.510
Primary Vel. Location (m): 2.743
Range to Target (m): 5.243
Target to Witness (mm): 0.000

Range No.: Range 3
Temp: 20.5 °C
BP: 30 inHg
RH: 33 %
Barrel/Gun: WC020651
Gunner: James Jordan
Recorder: Keivin Guzman

Ammunition

Projectile	Lot No.	Manufacturer	Powder
(1) .44-mag, 240-grain SJHP	4453	Speer	Accurate No. 5

Applicable Standards or Procedures

Clay Drop 1 - Drop Time: 3:15 PM; Block No. WC074180; Temp: 96.9 °F; Drop Depths: 17.7 mm, 19.6 mm, 18.4 mm, 19.1 mm, 19.8 mm
(1) NIJ-STD-0101.06 Level IIIA (Modified)

Shot No.	Ammo	Powder/ Seating	Weight (gr)	Time 1 (µs)	Vel. 1 (m/s)	Time 2 (µs)	Vel.2 (m/s)	Avg. Vel. (m/s)	Penetration	Deformation (mm)	Obliq. (°)	Footnotes
1	1	14.6	241.3	3478	438.3	3014	438.3	438.3	None	40.0	0.0	
2	1	14.6	241.3	3495	436.2	3031	435.9	435.86	None	38.7	0.0	
3	1	14.6	241.3	3531	431.6	3060	431.6	431.6	None	35.2	0.0	
4	1	14.6	241.4	3480	438.0	3016	438.0	438.0	None	NA	45.0	
5	1	14.6	241.4	3514	433.7	3046	433.7	433.73	None	NA	30.0	
6	1	14.6	241.4	3553	428.9	3080	428.9	428.85	None	NA	0.0	

Remarks:
Required Velocity: 435.9 ± 9.1 m/s.
Projectile Yaw Check: 0° Yaw on All Impacts.

Footnotes:
N/A

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3 Protection Ballistic Limit Test, V_{50} BL(P)

Ten armor samples were used for ballistic limit, V_{50} BL(P) testing.

3.1 Threats and Instrumentation

*3.1.1 Threats**

- .357 SIG, 125-grain full metal jacket flat nose (FMJ FN) projectiles
- .44-mag, 240-grain semi jacketed hollow point (SJHP) projectiles
- .22-cal., 17-grain fragment simulating projectiles (FSP)

*The projectiles were fired from a universal receiver which was fitted with the appropriate barrel and mounted on an NTS-Belcamp mount.

The threat projectiles were required to have no greater than 5° total yaw. Projectile yaw was measured to ensure that the test impacts were within this constraint by placing a yaw card at the appropriate gun-to-target range during velocity verification shots.

3.1.2 Instrumentation

Projectile velocity measurements were obtained using Oehler Research model No. 57 infrared screens with Y.I.S. Cowden Group Chrono-USB chronographs. Calibration data is provided in Attachment A.

3.2 Details of Test

The objective of this test was to conduct a ballistic limit, V_{50} performance test on the samples in accordance with NTMD 0225-A5 for PH00010404-A through -H and in accordance with STANAG 2920 Ed 3 AEP 2920 Edition A, Version 2 dated September 2016 for PH00010404-I and -J. Shot spacing between multiple impacts against a single sample was in accordance with the referenced performance standard. Shots against the armor samples were performed at 0.0° obliquity and ambient range temperature (21±1 °C).

For PH00010404-A through -H, the target was strapped to a 5.5-in clay backing and clamped to a rigid test fixture. For PH00010404-I and -J, the target was clamped to a rigid test fixture. A piece of 0.508 mm thick (0.020 in) type 2024 T3 aluminum was mounted along the shotline, approximately 152 mm ±13 mm (6 in ±0.5 in) behind the target, to verify complete penetrations. A complete penetration was scored only when the witness material was perforated (i.e., light was visible through the material). All firings were conducted at a fixed distance (5.243 m for PH00010404-A through -H and 4.572 m for PH00010404-I and -J) from the target. The projectile for the initial shot against each sample in accordance with the customer's request. Velocities for subsequent shots were based on the result of the previous shot. The required ballistic limit (BL(P)) was 599.8 m/s for PH00010404-I and -J.

3.3 Summary of Results

The results of the V_{50} ballistic limit testing are summarized in Table 2. The round-by-round data sheets and scatter plots for all testing performed are provided on the following pages.

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The following is a list of abbreviations used in the test data sheets:

C = Complete penetration (same as CP).
Gap = For V_{50} data, the difference in velocities between the highest partial penetration and the lowest complete penetration when the complete penetration occurs at a higher velocity than the partial penetration.
HP = For V_{50} data, the highest velocity at which a partial penetration occurred.
LC = For V_{50} data, the lowest velocity at which a complete penetration occurred.
P = Partial penetration (same as PP).
ROR = Range of results; for V_{50} data, difference between the highest and lowest velocities.
V_{50} = Statistical velocity at which the threat defeats the armor 50% of the time.
RMR = Range of mixed results; for V_{50} data, the difference in velocities between the highest partial penetration and the lowest complete penetration when the partial penetration occurs at a higher velocity than the complete penetration.
Yes = Round was used in calculating a V_{50} or an approximate V_{50}.
No = Round was not used in calculating a V_{50} or an approximate V_{50}.

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Table 2. Summary of V_{50} Ballistic Limit Test Results

Project No.	Sample No.	Weight (kg)	Size	Threat	Target Obliq. (deg)	Ballistic Limit Data				
						V_{50} (m/s)	No. of Points	RMR (m/s)	GAP (m/s)	ROR (m/s)
PH00010404-A	609684 Front	0.900	Large	.357 SIG, 125-grain FMJ FN	0.0	577.6	6	15.24	NA	24.38
PH00010404-B	609684 Back	1.080	Large	.357 SIG, 125-grain FMJ FN	0.0	583.4	6	19.81	NA	22.25
PH00010404-C	609685 Front	0.910	Large	.357 SIG, 125-grain FMJ FN	0.0	571.8	6	10.36	NA	21.64
PH00010404-D	609685 Back	1.090	Large	.357 SIG, 125-grain FMJ FN	0.0	589.2	6	6.71	NA	11.58
PH00010404-E	609687 Front	0.910	C-3	.44-mag, 240-grain SJHP	0.0	548.6	6	21.95	NA	21.95
PH00010404-F	609687 Back	1.090	C-3	.44-mag, 240-grain SJHP	0.0	544.4	8	14.63	NA	33.83
PH00010404-G	609688 Front	0.910	C-3	.44-mag, 240-grain SJHP	0.0	561.7	8	5.49	NA	35.05
PH00010404-H	609688 Back	1.090	C-3	..44-mag, 240-grain SJHP	0.0	535.5	8	7.62	NA	19.51
PH00010404-I	609689 Front	0.910	Large	.22-cal., 17-grain FSP	0.0	629.1	6	5.18	NA	30.48
PH00010404-J	609689 Back	1.080	Large	.22-cal., 17-grain FSP	0.0	626.4	6	13.11	NA	15.54

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PROTECTION BALLISTIC LIMIT TEST, V_{50} BL(P)

NTS-Belcamp
4603B Compass Point Road
Belcamp, MD 21017

Client: C.I.A. Miguel Caballero S.A.S.
Project No.: PH00010404-A
Test Date: 02/19/2024
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Test Panel

Description: Soft armor. Model: MC-COMFORT-IIIA; Lot #: UP750160-63703.

Manufacturer: C.I.A. Miguel Caballero S.A.S.

Sample No.: (.357 SIG, V50) 609684 Front

Size: Large
Avg. Thickness: N/A
Thicknesses: N/A

Weight: 0.900 kg
Plies/Laminates: N/A
Required BL(P): N/A

Date Received: 02/12/2024
Received Via: FEDEX, Express Saver
Returned Via: FEDEX, Express Saver

Setup

Shot Spacing: NIJ-STD-0101.06 Level IIIA
Witness Panel: Clay
Backing Material: 5.5-in clay
Condition: Ambient

Primary Vel. Screens (m): 1.980, 2.080, 3.400, 3.510
Primary Vel. Location (m): 2.743
Range to Target (m): 5.243
Target to Witness (mm): 0.000

Range No.: Range 1
Temp: 20.8 °C
BP: 30.2 inHg
RH: 42 %
Barrel/Gun: WC066584
Gunner: Vincent Johnson
Recorder: Isaiah Lookingbill

Ammunition

Projectile	Lot No.	Manufacturer	Powder
(1) .357 SIG, 125-grain FMJ FN	4362	Speer	Accurate No. 2

Applicable Standards or Procedures

Clay Drop 1 - Drop Time: 2:15 PM; Block No. WC074201; Temp: 91.9 °F; Drop Depths: 16.9 mm, 18.6 mm, 18.5 mm, 17.1 mm, 16.8 mm
(1) NTMD 0225-A5

Shot No.	Ammo	Powder/ Seating	Weight (gr)	Time 1 (µs)	Vel. 1 (m/s)	Time 2 (µs)	Vel.2 (m/s)	Avg. Vel. (m/s)	Result	Include in V_{50}	Obliq. (°)	Footnotes
1	1	8.1	124.4	3377	451.4	2921	452.0	451.7	P	No	0.0	
2	1	9.1	124.2	3147	484.3	2722	485.2	484.6	P	No	0.0	
3	1	10.1	124.3	2913	523.0	2522	523.6	523.3	P	No	0.0	
4	1	11.1	124.4	2735	557.2	2370	557.2	557.2	P	No	0.0	
5	1	12.1	124.4	2652	574.5	2296	575.2	574.9	C	Yes	0.0	
6	1	11.3	124.5	2739	556.3	2370	557.2	556.9	P	No	0.0	
7	1	11.9	124.5	2687	567.2	2327	567.5	567.2	C	Yes	0.0	
8	1	11.3	124.6	2748	554.7	2379	555.0	554.7	P	No	0.0	
9	1	11.9	124.6	2678	569.1	2318	569.7	569.4	P	Yes	0.0	
10	1	12.5	124.6	2617	582.5	2266	582.8	582.5	P	Yes	0.0	
11	1	13.0	124.6	2578	591.0	2231	591.9	591.6	C	Yes	0.0	
12	1	12.5	124.7	2631	579.1	2279	579.4	579.4	P	Yes	0.0	

Remarks:
Requested Starting Velocity: 448 m/s.
Projectile Yaw Check: 0° Yaw on All Impacts.

Footnotes:
N/A

V_{50} Summary:
No. of Points: 3 and 3
V_{50}: 577.6 m/s
High Partial: 582.5 m/s
Low Complete: 567.2 m/s
Range of Results (ROR): 24.38 m/s
Range of Mix Results (RMR): 15.24 m/s
Gap: N/A

C.I.A. MIGUEL CABALLERO S.A.S. PROPRIETARY INFORMATION

PROTECTION BALLISTIC LIMIT TEST, V_{50} BL(P)

NTS-Belcamp
4603B Compass Point Road
Belcamp, MD 21017

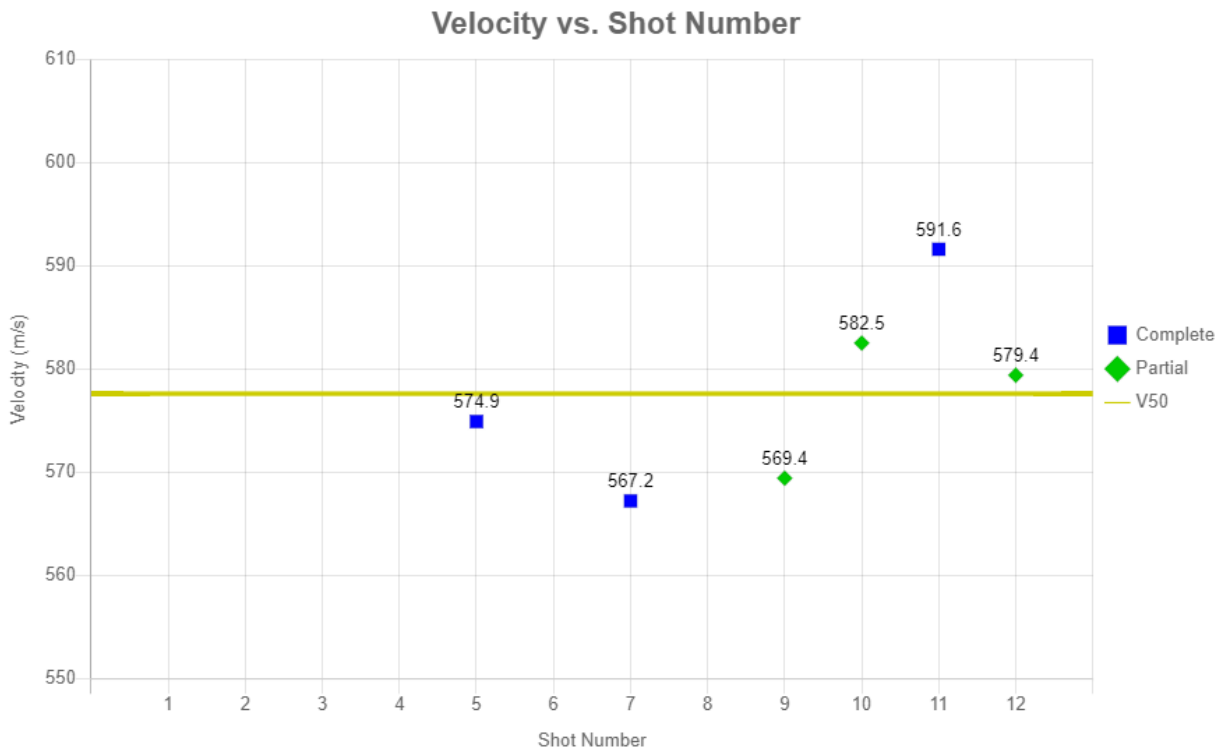
Client: C.I.A. Miguel Caballero S.A.S.
Project No.: PH00010404-A
Test Date: 02/19/2024

Manufacturer: C.I.A. Miguel Caballero S.A.S.

Sample No.: (.357 SIG, V50) 609684 Front

V_{50} Summary:

No. of Points: 3 and 3
V_{50}: 577.6 m/s
High Partial: 582.5 m/s
Low Complete: 567.2 m/s
Range of Results (ROR): 24.38 m/s
Range of Mix Results (RMR): 15.24 m/s
Gap: N/A



C.I.A. MIGUEL CABALLERO S.A.S. PROPRIETARY INFORMATION

PROTECTION BALLISTIC LIMIT TEST, V_{50} BL(P)

NTS-Belcamp
4603B Compass Point Road
Belcamp, MD 21017

Client: C.I.A. Miguel Caballero S.A.S.
Project No.: PH00010404-B
Test Date: 02/19/2024

Test Panel

Description: Soft armor. Model: MC-COMFORT-IIIA; Lot #: UP750160-63703.

Manufacturer: C.I.A. Miguel Caballero S.A.S.

Sample No.: (.357 SIG, V50) 609684 Back

Size: Large
Avg. Thickness: N/A
Thicknesses: N/A

Weight: 1.080 kg
Plies/Laminates: N/A
Required BL(P): N/A

Date Received: 02/12/2024
Received Via: FEDEX, Express Saver
Returned Via: FEDEX, Express Saver

Setup

Shot Spacing: NIJ-STD-0101.06 Level IIIA
Witness Panel: Clay
Backing Material: 5.5-in clay
Condition: Ambient

Primary Vel. Screens (m): 1.980, 2.080, 3.400, 3.510
Primary Vel. Location (m): 2.743
Range to Target (m): 5.243
Target to Witness (mm): 0.000

Range No.: Range 1
Temp: 20.8 °C
BP: 30.2 inHg
RH: 42 %
Barrel/Gun: WC066584
Gunner: Vincent Johnson
Recorder: Isaiah Lookingbill

Ammunition

Projectile	Lot No.	Manufacturer	Powder
(1) .357 SIG, 125-grain FMJ FN	4362	Speer	Accurate No. 2

Applicable Standards or Procedures

Clay Drop 1 - Drop Time: 2:55 PM; Block No. WC074201; Temp: 92.1 °F; Drop Depths: 17.1 mm, 19.6 mm, 18.0 mm, 17.4 mm, 18.5 mm
(1) NTMD 0225-A5

Shot No.	Ammo	Powder/ Seating	Weight (gr)	Time 1 (µs)	Vel. 1 (m/s)	Time 2 (µs)	Vel.2 (m/s)	Avg. Vel. (m/s)	Result	Include in V_{50}	Obliq. (°)	Footnotes
1	1	8.1	124.7	3473	438.9	3002	439.8	439.5	P	No	0.0	
2	1	9.1	124.7	3086	493.8	2670	494.7	494.4	P	No	0.0	
3	1	10.1	124.8	2956	515.4	2557	516.6	516.0	P	No	0.0	
4	1	11.1	124.8	2774	549.2	2401	550.2	549.9	P	No	0.0	
5	1	12.1	124.9	2657	573.6	2301	573.9	573.6	C	Yes	0.0	
6	1	11.3	124.9	2756	552.9	2387	553.2	553.2	P	No	0.0	
7	1	11.9	124.9	2665	571.8	2305	573.0	572.4	P	Yes	0.0	
8	1	12.5	124.9	2604	585.2	2257	585.2	585.2	P	Yes	0.0	
9	1	13.1	125.0	2570	593.1	2223	594.1	593.4	P	Yes	0.0	
10	1	13.7	125.0	2526	603.2	2188	603.5	603.5	C	No	0.0	
11	1	13.1	125.0	2565	594.1	2218	595.6	594.7	C	Yes	0.0	
12	1	12.5	125.0	2622	581.3	2270	581.9	581.6	C	Yes	0.0	

Remarks:
Requested Starting Velocity: 448 m/s.
Projectile Yaw Check: 0° Yaw on All Impacts.

Footnotes:
N/A

V_{50} Summary:
No. of Points: 3 and 3
V_{50}: 583.4 m/s
High Partial: 593.4 m/s
Low Complete: 573.6 m/s
Range of Results (ROR): 22.25 m/s
Range of Mix Results (RMR): 19.81 m/s
Gap: N/A

C.I.A. MIGUEL CABALLERO S.A.S. PROPRIETARY INFORMATION

PROTECTION BALLISTIC LIMIT TEST, V_{50} BL(P)

NTS-Belcamp
4603B Compass Point Road
Belcamp, MD 21017

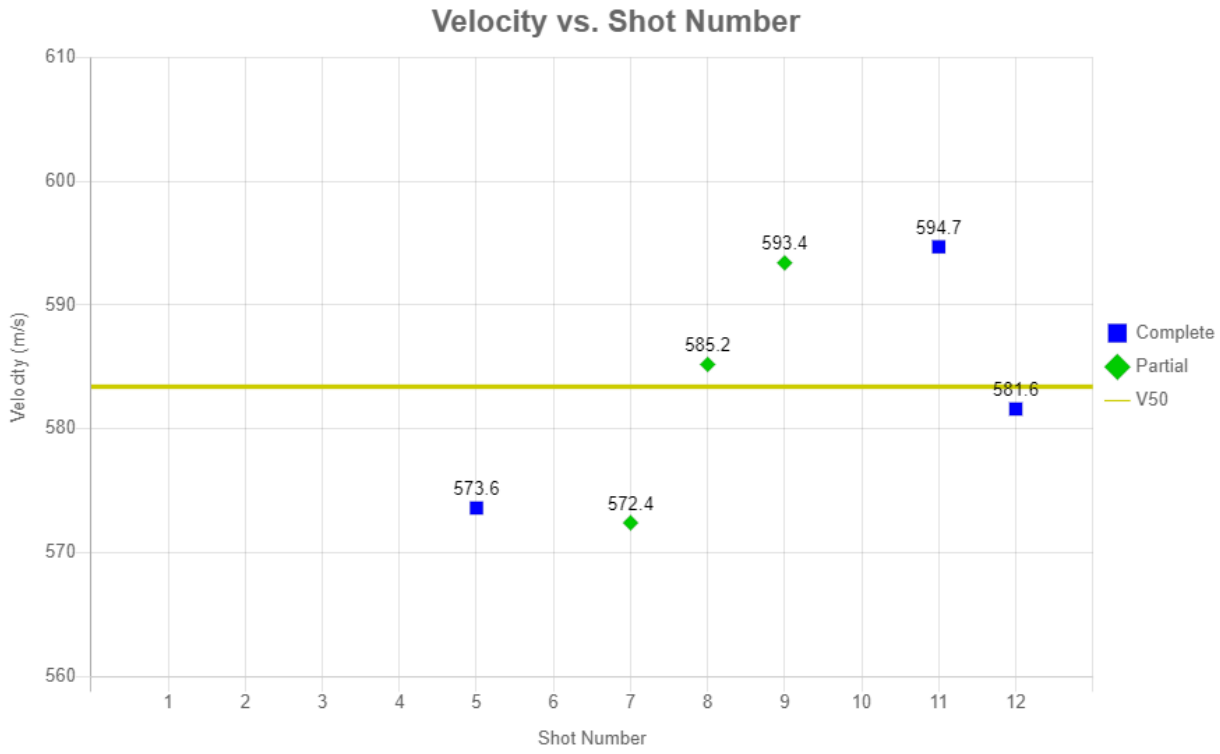
Client: C.I.A. Miguel Caballero S.A.S.
Project No.: PH00010404-B
Test Date: 02/19/2024

Manufacturer: C.I.A. Miguel Caballero S.A.S.

Sample No.: (.357 SIG, V50) 609684 Back

V_{50} Summary:

No. of Points: 3 and 3
V_{50}: 583.4 m/s
High Partial: 593.4 m/s
Low Complete: 573.6 m/s
Range of Results (ROR): 22.25 m/s
Range of Mix Results (RMR): 19.81 m/s
Gap: N/A



C.I.A. MIGUEL CABALLERO S.A.S. PROPRIETARY INFORMATION

PROTECTION BALLISTIC LIMIT TEST, V_{50} BL(P)

NTS-Belcamp
4603B Compass Point Road
Belcamp, MD 21017

Client: C.I.A. Miguel Caballero S.A.S.
Project No.: PH00010404-C
Test Date: 02/20/2024

Test Panel

Description: Soft armor. Model: MC-COMFORT-IIIA; Lot #: UP750160-63703.

Manufacturer: C.I.A. Miguel Caballero S.A.S.

Sample No.: (.357 SIG, V50) 609685 Front

Size: Large
Avg. Thickness: N/A
Thicknesses: N/A

Weight: 0.910 kg
Plies/Laminates: N/A
Required BL(P): N/A

Date Received: 02/12/2024
Received Via: FEDEX, Express Saver
Returned Via: FEDEX, Express Saver

Setup

Shot Spacing: NIJ-STD-0101.06 Level IIIA
Witness Panel: Clay
Backing Material: 5.5-in clay
Condition: Ambient

Primary Vel. Screens (m): 1.980, 2.080, 3.400, 3.510
Primary Vel. Location (m): 2.743
Range to Target (m): 5.243
Target to Witness (mm): 0.000

Range No.: Range 1
Temp: 20.8 °C
BP: 30.2 inHg
RH: 41 %
Barrel/Gun: WC066584
Gunner: Vincent Johnson
Recorder: Isaiah Lookingbill

Ammunition

Projectile	Lot No.	Manufacturer	Powder
(1) .357 SIG, 125-grain FMJ FN	4362	Speer	Accurate No. 2

Applicable Standards or Procedures

Clay Drop 1 - Drop Time: 7:40 AM; Block No. WC074201; Temp: 95 °F; Drop Depths: 17.1 mm, 17.8 mm, 19.1 mm, 17.7 mm, 17.4 mm
(1) NTMD 0225-A5

Shot No.	Ammo	Powder/ Seating	Weight (gr)	Time 1 (µs)	Vel. 1 (m/s)	Time 2 (µs)	Vel.2 (m/s)	Avg. Vel. (m/s)	Result	Include in V_{50}	Obliq. (°)	Footnotes
1	1	8.1	125.1	3329	457.8	2882	458.1	458.1	P	No	0.0	
2	1	10.1	125.2	2930	520.0	2535	520.9	520.6	P	No	0.0	
3	1	11.1	125.3	2813	541.6	2440	541.3	541.6	P	No	0.0	
4	1	12.1	125.3	2696	565.4	2331	566.6	566.0	P	Yes	0.0	
5	1	13.1	125.4	2596	587.0	2249	587.3	587.0	C	Yes	0.0	
6	1	12.3	125.5	2683	568.1	2322	568.8	568.5	C	Yes	0.0	
7	1	11.5	125.5	2787	546.8	2414	547.1	546.8	P	No	0.0	
8	1	12.1	125.6	2696	565.4	2335	565.7	565.4	C	Yes	0.0	
9	1	11.5	125.6	2782	547.7	2409	548.3	548.0	P	No	0.0	
10	1	12.1	125.7	2683	568.1	2322	568.8	568.5	P	Yes	0.0	
11	1	12.7	125.8	2648	575.5	2292	576.1	575.8	P	Yes	0.0	
12	1	13.3	125.8	2561	595.0	2218	595.6	595.3	C	No	0.0	

Remarks:
Requested Starting Velocity: 448 m/s.
Projectile Yaw Check: 0° Yaw on All Impacts.

Footnotes:
N/A

V_{50} Summary:
No. of Points: 3 and 3
V_{50}: 571.8 m/s
High Partial: 575.8 m/s
Low Complete: 565.4 m/s
Range of Results (ROR): 21.64 m/s
Range of Mix Results (RMR): 10.36 m/s
Gap: N/A

C.I.A. MIGUEL CABALLERO S.A.S. PROPRIETARY INFORMATION

PROTECTION BALLISTIC LIMIT TEST, V_{50} BL(P)

NTS-Belcamp
4603B Compass Point Road
Belcamp, MD 21017

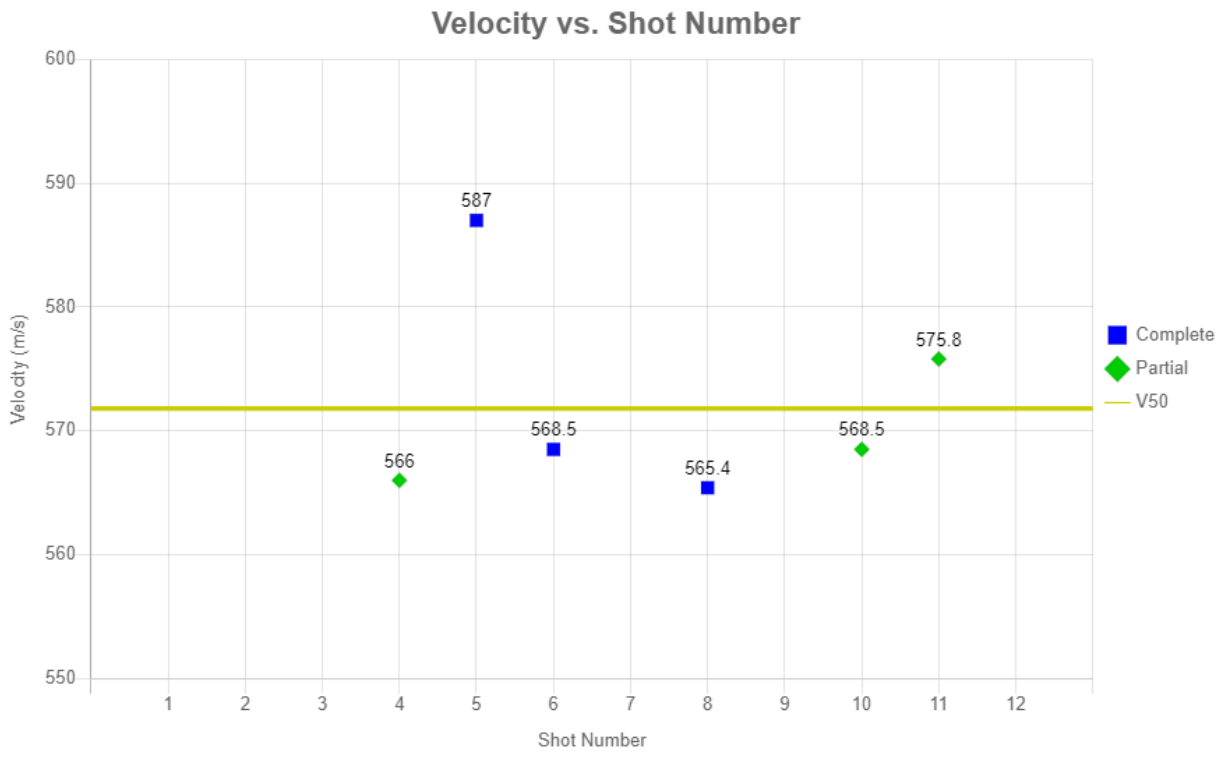
Client: C.I.A. Miguel Caballero S.A.S.
Project No.: PH00010404-C
Test Date: 02/20/2024

Manufacturer: C.I.A. Miguel Caballero S.A.S.

Sample No.: (.357 SIG, V50) 609685 Front

V_{50} Summary:

No. of Points: 3 and 3
V_{50}: 571.8 m/s
High Partial: 575.8 m/s
Low Complete: 565.4 m/s
Range of Results (ROR): 21.64 m/s
Range of Mix Results (RMR): 10.36 m/s
Gap: N/A



C.I.A. MIGUEL CABALLERO S.A.S. PROPRIETARY INFORMATION

PROTECTION BALLISTIC LIMIT TEST, V_{50} BL(P)

NTS-Belcamp
4603B Compass Point Road
Belcamp, MD 21017

Client: C.I.A. Miguel Caballero S.A.S.
Project No.: PH00010404-D
Test Date: 02/20/2024

Test Panel

Description: Soft armor. Model: MC-COMFORT-IIIA; Lot #: UP750160-63703.

Manufacturer: C.I.A. Miguel Caballero S.A.S.

Sample No.: (.357 SIG, V50) 609685 Back

Size: Large
Avg. Thickness: N/A
Thicknesses: N/A

Weight: 1.090 kg
Plies/Laminates: N/A
Required BL(P): N/A

Date Received: 02/12/2024
Received Via: FEDEX, Express Saver
Returned Via: FEDEX, Express Saver

Setup

Shot Spacing: NIJ-STD-0101.06 Level IIIA
Witness Panel: Clay
Backing Material: 5.5-in clay
Condition: Ambient

Primary Vel. Screens (m): 1.980, 2.080, 3.400, 3.510
Primary Vel. Location (m): 2.743
Range to Target (m): 5.243
Target to Witness (mm): 0.000

Range No.: Range 1
Temp: 21.2 °C
BP: 30.2 inHg
RH: 41 %
Barrel/Gun: WC066584
Gunner: Vincent Johnson
Recorder: Isaiah Lookingbill

Ammunition

Projectile	Lot No.	Manufacturer	Powder
(1) .357 SIG, 125-grain FMJ FN	4362	Speer	Accurate No. 2

Applicable Standards or Procedures

Clay Drop 1 - Drop Time: 8:20 AM; Block No. WC074201; Temp: 94.4 °F; Drop Depths: 19.8 mm, 20.5 mm, 20.3 mm, 18.7 mm, 19.8 mm
(1) NTMD 0225-A5

Shot No.	Ammo	Powder/ Seating	Weight (gr)	Time 1 (µs)	Vel. 1 (m/s)	Time 2 (µs)	Vel.2 (m/s)	Avg. Vel. (m/s)	Result	Include in V_{50}	Obliq. (°)	Footnotes
1	1	8.1	124.9	3386	450.2	2930	450.8	450.5	P	No	0.0	
2	1	10.1	124.9	2956	515.4	2557	516.6	516.0	P	No	0.0	
3	1	11.1	124.9	2795	545.3	2422	545.3	545.3	P	No	0.0	
4	1	12.1	125.0	2700	564.5	2335	565.7	565.1	P	No	0.0	
5	1	13.1	125.0	2591	588.3	2244	588.6	588.3	C	Yes	0.0	
6	1	12.3	125.1	2661	572.7	2301	573.9	573.3	P	No	0.0	
7	1	12.9	125.2	2604	585.2	2253	586.1	585.8	C	Yes	0.0	
8	1	12.3	125.2	2696	565.4	2335	565.7	565.4	P	No	0.0	
9	1	12.9	125.2	2609	584.0	2257	585.2	584.6	P	Yes	0.0	
10	1	13.5	125.2	2557	595.9	2214	596.5	596.2	C	Yes	0.0	
11	1	12.9	125.2	2600	586.1	2249	587.3	586.7	P	Yes	0.0	
12	1	13.5	125.2	2574	592.2	2227	593.1	592.5	P	Yes	0.0	

Remarks:
Requested Starting Velocity: 448 m/s.
Projectile Yaw Check: 0° Yaw on All Impacts.

Footnotes:
N/A

V_{50} Summary:
No. of Points: 3 and 3
V_{50}: 589.2 m/s
High Partial: 592.5 m/s
Low Complete: 585.8 m/s
Range of Results (ROR): 11.58 m/s
Range of Mix Results (RMR): 6.71 m/s
Gap: N/A

C.I.A. MIGUEL CABALLERO S.A.S. PROPRIETARY INFORMATION

PROTECTION BALLISTIC LIMIT TEST, V_{50} BL(P)

NTS-Belcamp
4603B Compass Point Road
Belcamp, MD 21017

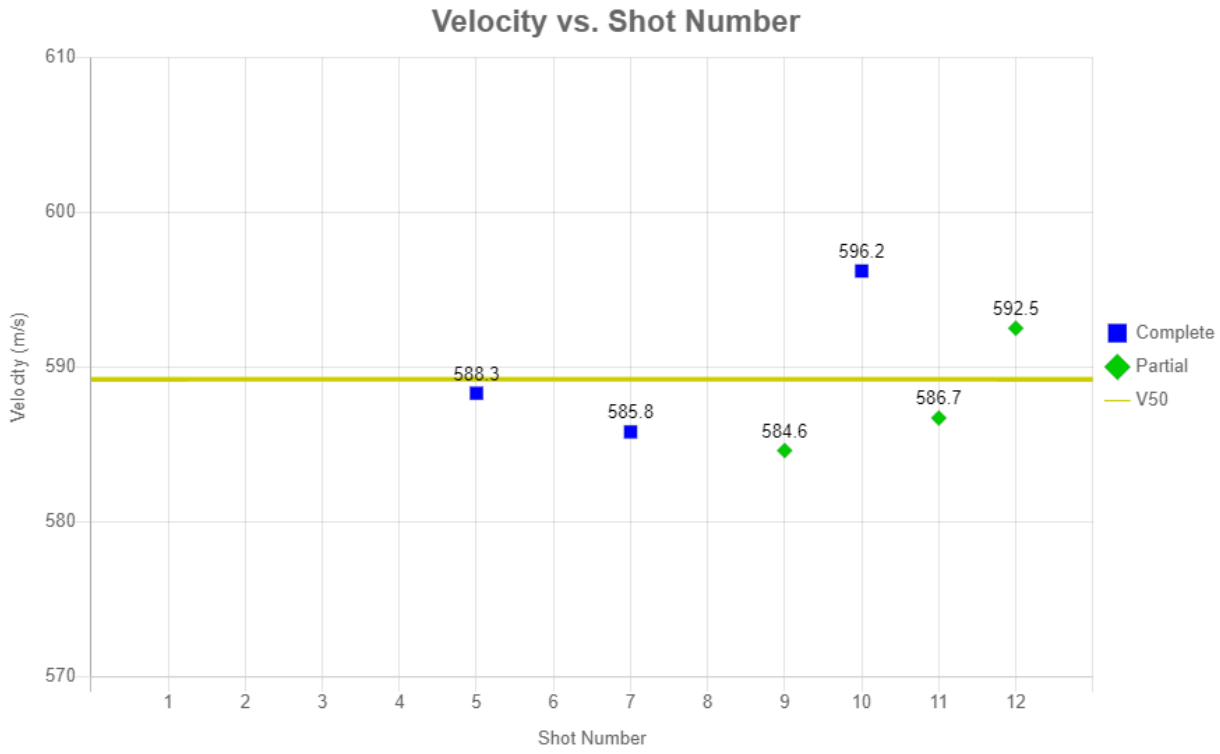
Client: C.I.A. Miguel Caballero S.A.S.
Project No.: PH00010404-D
Test Date: 02/20/2024

Manufacturer: C.I.A. Miguel Caballero S.A.S.

Sample No.: (.357 SIG, V50) 609685 Back

V_{50} Summary:

No. of Points: 3 and 3
V_{50}: 589.2 m/s
High Partial: 592.5 m/s
Low Complete: 585.8 m/s
Range of Results (ROR): 11.58 m/s
Range of Mix Results (RMR): 6.71 m/s
Gap: N/A



C.I.A. MIGUEL CABALLERO S.A.S. PROPRIETARY INFORMATION

PROTECTION BALLISTIC LIMIT TEST, V_{50} BL(P)

NTS-Belcamp
4603B Compass Point Road
Belcamp, MD 21017

Client: C.I.A. Miguel Caballero S.A.S.
Project No.: PH00010404-E
Test Date: 02/20/2024

Test Panel

Description: Soft armor. Model: MC-COMFORT-IIIA; Lot #: UP750160-63703.

Manufacturer: C.I.A. Miguel Caballero S.A.S.

Sample No.: (.44-mag, V50) 609687 Front

Size: C-3
Avg. Thickness: N/A
Thicknesses: N/A

Weight: 0.910 kg
Plies/Laminates: N/A
Required BL(P): N/A

Date Received: 02/12/2024
Received Via: FEDEX, Express Saver
Returned Via: FEDEX, Express Saver

Setup

Shot Spacing: NIJ-STD-0101.06 Level IIIA
Witness Panel: Clay
Backing Material: 5.5-in clay
Condition: Ambient

Primary Vel. Screens (m): 1.980, 2.080, 3.400, 3.510
Primary Vel. Location (m): 2.743
Range to Target (m): 5.243
Target to Witness (mm): 0.000

Range No.: Range 3
Temp: 20.3 °C
BP: 30 inHg
RH: 34 %
Barrel/Gun: WC020651
Gunner: James Jordan
Recorder: Keivin Guzman

Ammunition

Projectile	Lot No.	Manufacturer	Powder
(1) .44-mag, 240-grain SJHP	NA	Speer	Accurate No. 5

Applicable Standards or Procedures

Clay Drop 1 - Drop Time: 11:20 AM; Block No. WC074205; Temp: 96.5 °F; Drop Depths: 18.7 mm, 19.4 mm, 19.8 mm, 17.6 mm, 18.2 mm
(1) NTMD 0225-A5

Shot No.	Ammo	Powder/ Seating	Weight (gr)	Time 1 (µs)	Vel. 1 (m/s)	Time 2 (µs)	Vel.2 (m/s)	Avg. Vel. (m/s)	Result	Include in V_{50}	Obliq. (°)	Footnotes
1	1	14.6	240.0	3497	435.9	3031	435.9	435.9	P	No	0.0	
2	1	16.0	240.0	3277	465.1	2840	465.1	465.1	P	No	0.0	
3	1	17.4	240.0	3099	491.6	2684	491.9	491.9	P	No	0.0	
4	1	18.8	240.0	2923	521.5	2535	520.9	521.2	P	No	0.0	
5	1	20.2	240.1	2775	549.2	2411	547.7	548.3	C	Yes	0.0	
6	1	19.2	240.1	2880	529.1	2496	529.1	529.1	P	No	0.0	
7	1	19.8	240.1	2794	545.6	2421	545.6	545.6	P	Yes	0.0	
8	1	20.4	240.2	2745	555.0	2379	555.0	555.0	C	Yes	0.0	
9	1	19.8	240.3	2819	540.7	2452	538.6	539.5	C	Yes	0.0	
10	1	19.2	240.3	2848	535.2	2467	535.2	535.2	P	No	0.0	
11	1	19.8	240.4	2811	542.2	2435	542.2	542.2	P	Yes	0.0	
12	1	20.4	240.4	2716	561.1	2352	561.4	561.4	P	Yes	0.0	

Remarks:
Requested Starting Velocity: 435.9 m/s.
Projectile Yaw Check: 0° Yaw on All Impacts.

Footnotes:
N/A

V_{50} Summary:
No. of Points: 3 and 3
V_{50}: 548.6 m/s
High Partial: 561.4 m/s
Low Complete: 539.5 m/s
Range of Results (ROR): 21.95 m/s
Range of Mix Results (RMR): 21.95 m/s
Gap: N/A

C.I.A. MIGUEL CABALLERO S.A.S. PROPRIETARY INFORMATION

PROTECTION BALLISTIC LIMIT TEST, V_{50} BL(P)

NTS-Belcamp
4603B Compass Point Road
Belcamp, MD 21017

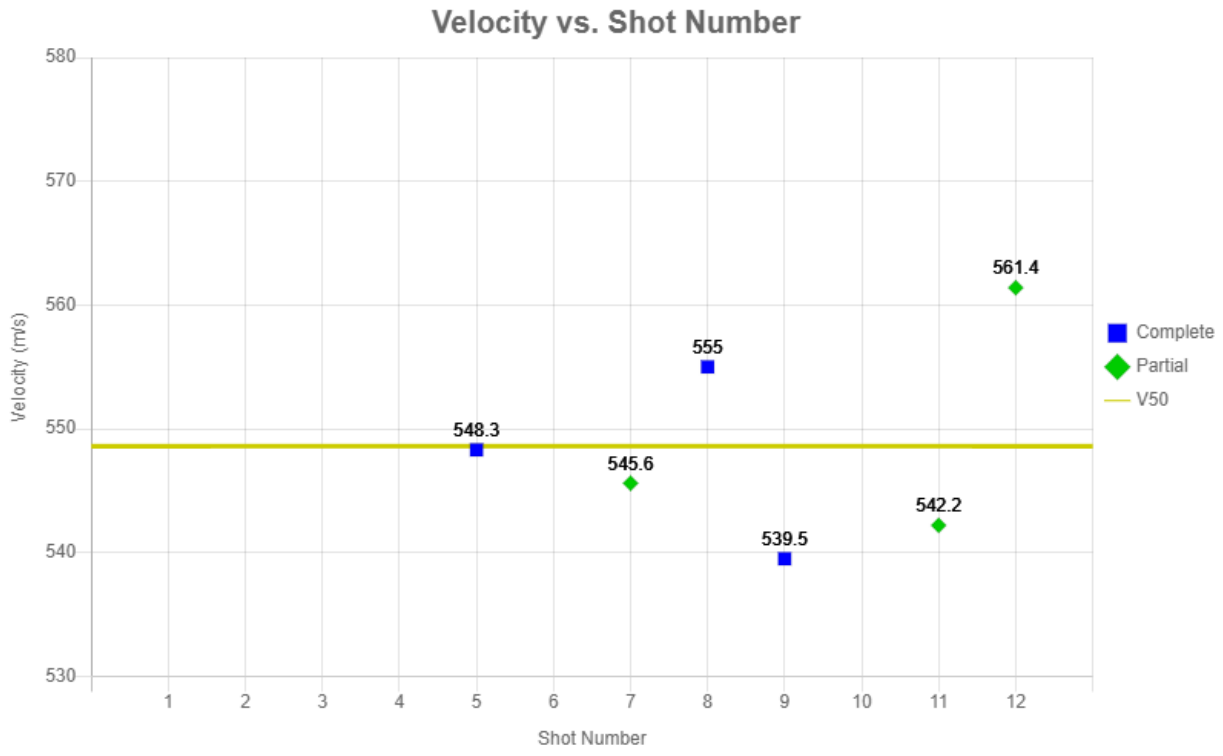
Client: C.I.A. Miguel Caballero S.A.S.
Project No.: PH00010404-E
Test Date: 02/20/2024

Manufacturer: C.I.A. Miguel Caballero S.A.S.

Sample No.: (.44-mag, V50) 609687 Front

V_{50} Summary:

No. of Points: 3 and 3
V_{50}: 548.6 m/s
High Partial: 561.4 m/s
Low Complete: 539.5 m/s
Range of Results (ROR): 21.95 m/s
Range of Mix Results (RMR): 21.95 m/s
Gap: N/A



C.I.A. MIGUEL CABALLERO S.A.S. PROPRIETARY INFORMATION

PROTECTION BALLISTIC LIMIT TEST, V_{50} BL(P)

NTS-Belcamp
4603B Compass Point Road
Belcamp, MD 21017

Client: C.I.A. Miguel Caballero S.A.S.
Project No.: PH00010404-F
Test Date: 02/20/2024

Test Panel

Description: Soft armor. Model: MC-COMFORT-IIIA; Lot #: UP750160-63703.

Manufacturer: C.I.A. Miguel Caballero S.A.S.

Sample No.: (.44-mag, V50) 609687 Back

Size: C-3
Avg. Thickness: N/A
Thicknesses: N/A

Weight: 1.090 kg
Plies/Laminates: N/A
Required BL(P): N/A

Date Received: 02/12/2024
Received Via: FEDEX, Express Saver
Returned Via: FEDEX, Express Saver

Setup

Shot Spacing: NIJ-STD-0101.06 Level IIIA
Witness Panel: Clay
Backing Material: 5.5-in clay
Condition: Ambient

Primary Vel. Screens (m): 1.980, 2.080, 3.400, 3.510
Primary Vel. Location (m): 2.743
Range to Target (m): 5.243
Target to Witness (mm): 0.000

Range No.: Range 3
Temp: 20.2 °C
BP: 30 inHg
RH: 34 %
Barrel/Gun: WC020651
Gunner: James Jordan
Recorder: Keivin Guzman

Ammunition

Projectile	Lot No.	Manufacturer	Powder
(1) .44-mag, 240-grain SJHP	NA	Speer	Accurate No. 5

Applicable Standards or Procedures

Clay Drop 1 - Drop Time: 1:00 PM; Block No. WC074207; Temp: 95.2 °F; Drop Depths: 17.7 mm, 19.6 mm, 18.3 mm, 19.2 mm, 18.0 mm
(1) NTMD 0225-A5

Shot No.	Ammo	Powder/ Seating	Weight (gr)	Time 1 (µs)	Vel. 1 (m/s)	Time 2 (µs)	Vel.2 (m/s)	Avg. Vel. (m/s)	Result	Include in V_{50}	Obliq. (°)	Footnotes
1	1	14.6	238.8	3470	439.2	3009	438.9	438.9	P	No	0.0	
2	1	16.0	239.9	3277	465.1	2840	465.1	465.1	P	No	0.0	
3	1	17.4	239.9	3081	494.7	2666	495.3	495.0	P	No	0.0	
4	1	18.8	240.1	2897	526.1	2511	526.1	526.1	P	Yes	0.0	
5	1	20.2	240.2	2748	554.7	2382	554.4	554.4	P	Yes	0.0	
6	1	21.6	240.2	2609	584.0	2255	585.8	584.9	C	No	0.0	
7	1	20.6	240.3	2721	560.2	2360	559.6	559.9	C	Yes	0.0	
8	1	19.6	240.4	2816	541.3	2443	540.7	541.0	P	Yes	0.0	
9	1	20.2	240.4	2753	553.5	2391	552.3	552.9	C	Yes	0.0	
10	1	19.6	240.4	2775	549.2	2408	548.3	548.9	C	Yes	0.0	
11	1	19.0	240.4	2874	530.4	2486	531.3	530.7	P	Yes	0.0	
12	1	19.6	240.4	2823	539.8	2447	539.8	539.8	C	Yes	0.0	

Remarks:
Requested Starting Velocity: 435.9 m/s.
Projectile Yaw Check: 0° Yaw on All Impacts.

Footnotes:
N/A

V_{50} Summary:
No. of Points: 4 and 4
V_{50}: 544.4 m/s
High Partial: 554.4 m/s
Low Complete: 539.8 m/s
Range of Results (ROR): 33.83 m/s
Range of Mix Results (RMR): 14.63 m/s
Gap: N/A

C.I.A. MIGUEL CABALLERO S.A.S. PROPRIETARY INFORMATION

PROTECTION BALLISTIC LIMIT TEST, V_{50} BL(P)

NTS-Belcamp
4603B Compass Point Road
Belcamp, MD 21017

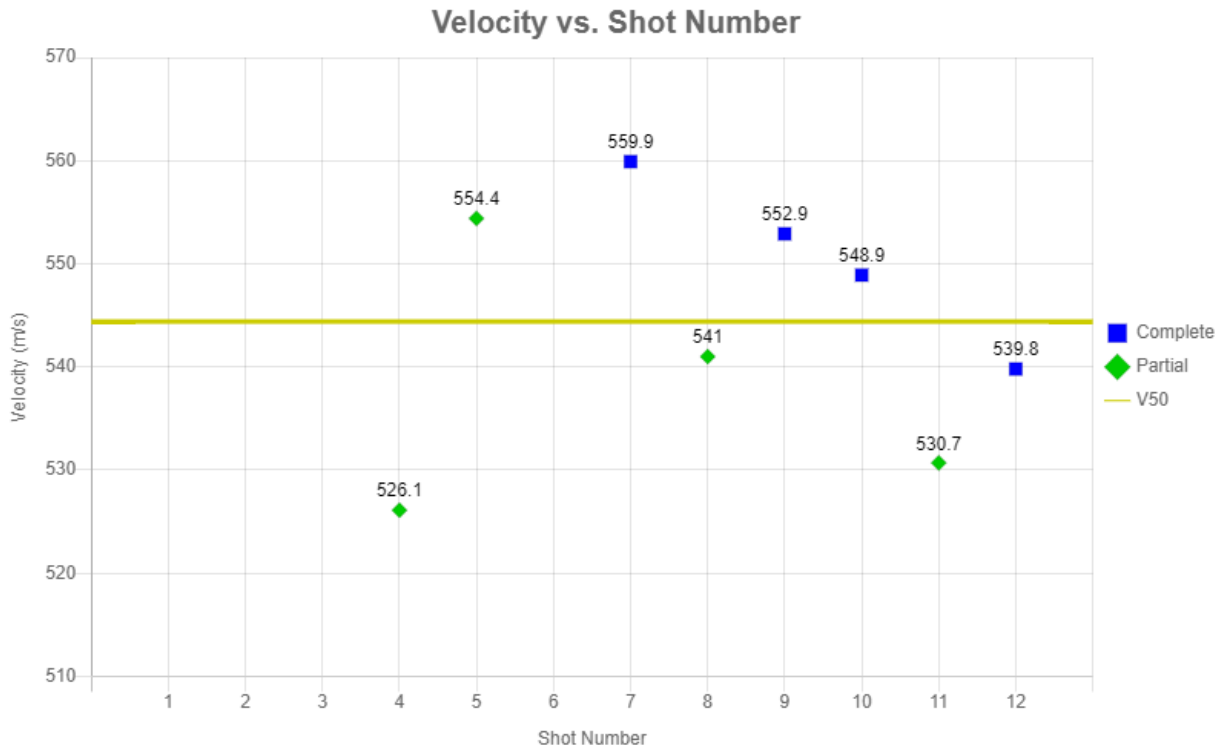
Client: C.I.A. Miguel Caballero S.A.S.
Project No.: PH00010404-F
Test Date: 02/20/2024

Manufacturer: C.I.A. Miguel Caballero S.A.S.

Sample No.: (.44-mag, V50) 609687 Back

V_{50} Summary:

No. of Points: 4 and 4
V_{50}: 544.4 m/s
High Partial: 554.4 m/s
Low Complete: 539.8 m/s
Range of Results (ROR): 33.83 m/s
Range of Mix Results (RMR): 14.63 m/s
Gap: N/A



C.I.A. MIGUEL CABALLERO S.A.S. PROPRIETARY INFORMATION

PROTECTION BALLISTIC LIMIT TEST, V_{50} BL(P)

NTS-Belcamp
4603B Compass Point Road
Belcamp, MD 21017

Client: C.I.A. Miguel Caballero S.A.S.
Project No.: PH00010404-G
Test Date: 02/20/2024

Test Panel

Description: Soft armor. Model: MC-COMFORT-IIIA; Lot #: UP750160-63703.

Manufacturer: C.I.A. Miguel Caballero S.A.S.

Sample No.: (.44-mag, V50) 609688 Front

Size: C-3	Weight: 0.910 kg	Date Received: 02/12/2024
Avg. Thickness: N/A	Plies/Laminates: N/A	Received Via: FEDEX, Express Saver
Thicknesses: N/A	Required BL(P): N/A	Returned Via: FEDEX, Express Saver

Setup

Shot Spacing: NIJ-STD-0101.06 Level IIIA	Primary Vel. Screens (m): 1.980, 2.080, 3.400, 3.510	Range No.: Range 3
Witness Panel: Clay	Primary Vel. Location (m): 2.743	Temp: 20.2 °C
Backing Material: 5.5-in clay	Range to Target (m): 5.243	BP: 30 inHg
Condition: Ambient	Target to Witness (mm): 0.000	RH: 34 %
		Barrel/Gun: WC020651
		Gunner: James Jordan
		Recorder: Keivin Guzman

Ammunition

Projectile	Lot No.	Manufacturer	Powder
(1) .44-mag, 240-grain SJHP	NA	Speer	Accurate No. 5

Applicable Standards or Procedures

Clay Drop 1 - Drop Time: 1:30 PM; Block No. WC074207; Temp: 94.8 °F; Drop Depths: 19.4 mm, 18.3 mm, 18.7 mm, 17.7 mm, 19.6 mm
(1) NTMD 0225-A5

Shot No.	Ammo	Powder/ Seating	Weight (gr)	Time 1 (µs)	Vel. 1 (m/s)	Time 2 (µs)	Vel.2 (m/s)	Avg. Vel. (m/s)	Result	Include in V_{50}	Obliq. (°)	Footnotes
1	1	14.6	240.4	3565	427.6	3089	427.6	427.6	P	No	0.0	
2	1	16.0	240.5	3343	456.0	2899	455.7	455.7	P	No	0.0	
3	1	17.4	240.5	3138	485.5	2718	485.9	485.9	P	No	0.0	
4	1	18.8	240.5	2926	520.9	2535	520.9	520.9	P	No	0.0	
5	1	20.2	240.5	2779	548.3	2416	546.5	547.4	P	Yes	0.0	
6	1	21.6	240.5	2635	578.5	2289	577.0	577.6	C	Yes	0.0	
7	1	20.6	240.5	2738	556.6	2379	555.0	556.0	P	Yes	0.0	
8	1	21.2	240.5	2648	575.5	2299	574.5	574.9	C	Yes	0.0	
9	1	20.6	240.6	2699	564.8	2345	563.3	563.9	P	Yes	0.0	
10	1	21.2	240.6	2657	573.6	2301	573.9	573.6	C	Yes	0.0	
11	1	20.6	240.6	2726	559.0	2369	557.5	558.4	C	Yes	0.0	
12	1	20.0	240.7	2806	543.2	2438	541.6	542.5	P	Yes	0.0	

Remarks:
Requested Starting Velocity: 435.9 m/s.
Projectile Yaw Check: 0° Yaw on All Impacts.

Footnotes:
N/A

V_{50} Summary:
No. of Points: 4 and 4
V_{50}: 561.7 m/s
High Partial: 563.9 m/s
Low Complete: 558.4 m/s
Range of Results (ROR): 35.05 m/s
Range of Mix Results (RMR): 5.49 m/s
Gap: N/A

C.I.A. MIGUEL CABALLERO S.A.S. PROPRIETARY INFORMATION

PROTECTION BALLISTIC LIMIT TEST, V_{50} BL(P)

NTS-Belcamp
4603B Compass Point Road
Belcamp, MD 21017

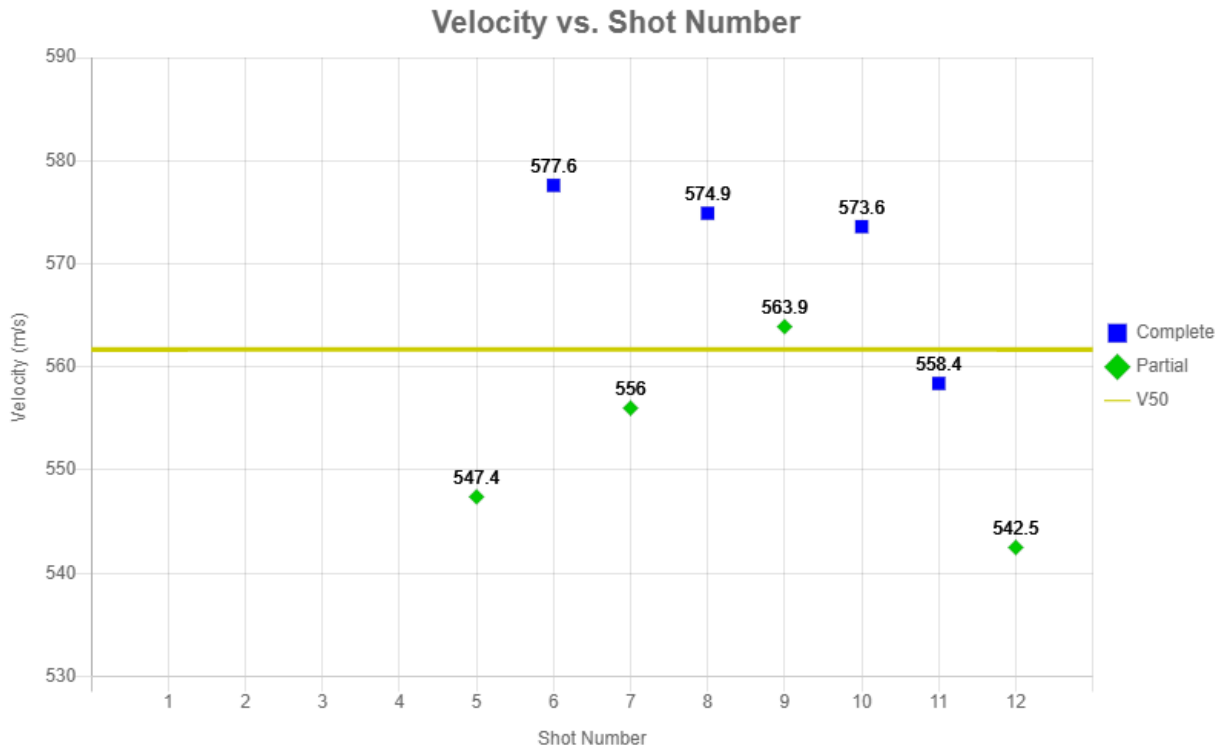
Client: C.I.A. Miguel Caballero S.A.S.
Project No.: PH00010404-G
Test Date: 02/20/2024

Manufacturer: C.I.A. Miguel Caballero S.A.S.

Sample No.: (.44-mag, V50) 609688 Front

V_{50} Summary:

No. of Points: 4 and 4
V_{50}: 561.7 m/s
High Partial: 563.9 m/s
Low Complete: 558.4 m/s
Range of Results (ROR): 35.05 m/s
Range of Mix Results (RMR): 5.49 m/s
Gap: N/A



C.I.A. MIGUEL CABALLERO S.A.S. PROPRIETARY INFORMATION

PROTECTION BALLISTIC LIMIT TEST, V_{50} BL(P)

NTS-Belcamp
4603B Compass Point Road
Belcamp, MD 21017

Client: C.I.A. Miguel Caballero S.A.S.
Project No.: PH00010404-H
Test Date: 02/20/2024

Test Panel

Description: Soft armor. Model: MC-COMFORT-IIIA; Lot #: UP750160-63703.

Manufacturer: C.I.A. Miguel Caballero S.A.S.

Sample No.: (.44-mag, V50) 609688 Back

Size: C-3
Avg. Thickness: N/A
Thicknesses: N/A

Weight: 1.090 kg
Plies/Laminates: N/A
Required BL(P): N/A

Date Received: 02/12/2024
Received Via: FEDEX, Express Saver
Returned Via: FEDEX, Express Saver

Setup

Shot Spacing: NIJ-STD-0101.06 Level IIIA
Witness Panel: Clay
Backing Material: 5.5-in clay
Condition: Ambient

Primary Vel. Screens (m): 1.980, 2.080, 3.400, 3.510
Primary Vel. Location (m): 2.743
Range to Target (m): 5.243
Target to Witness (mm): 0.000

Range No.: Range 3
Temp: 20.2 °C
BP: 30 inHg
RH: 34 %
Barrel/Gun: WC020651
Gunner: James Jordan
Recorder: Keivin Guzman

Ammunition

Projectile	Lot No.	Manufacturer	Powder
(1) .44-mag, 240-grain SJHP	NA	Speer	Accurate No. 5

Applicable Standards or Procedures

Clay Drop 1 - Drop Time: 2:10 PM; Block No. WC074202; Temp: 96.7 °F; Drop Depths: 18.7 mm, 19.3 mm, 18.4 mm, 19.2 mm, 19.8 mm
(1) NTMD 0225-A5

Shot No.	Ammo	Powder/ Seating	Weight (gr)	Time 1 (µs)	Vel. 1 (m/s)	Time 2 (µs)	Vel.2 (m/s)	Avg. Vel. (m/s)	Result	Include in V_{50}	Obliq. (°)	Footnotes
1	1	14.6	240.7	3431	444.1	2975	443.8	444.1	P	No	0.0	
2	1	16.0	240.8	3236	470.9	2806	470.6	470.9	P	No	0.0	
3	1	17.4	240.8	3033	502.6	2628	502.6	502.6	P	No	0.0	
4	1	18.8	240.8	2866	531.9	2481	532.2	532.2	P	Yes	0.0	
5	1	20.2	240.9	2716	561.1	2354	561.1	561.1	C	No	0.0	
6	1	19.2	240.9	2816	541.3	2447	539.8	540.4	P	Yes	0.0	
7	1	19.8	240.9	2797	545.0	2423	545.0	545.0	C	Yes	0.0	
8	1	19.2	241.0	2831	538.3	2452	538.6	538.6	C	Yes	0.0	
9	1	18.6	241.0	2899	525.8	2513	525.5	525.5	P	Yes	0.0	
10	1	19.2	241.0	2855	533.7	2484	531.6	532.8	C	Yes	0.0	
11	1	18.6	241.0	2865	531.9	2491	530.0	531.0	P	Yes	0.0	
12	1	19.2	241.0	2826	539.2	2447	539.8	539.5	C	Yes	0.0	

Remarks:
Requested Starting Velocity: 435.9 m/s.
Projectile Yaw Check: 0° Yaw on All Impacts.

Footnotes:
N/A

V_{50} Summary:
No. of Points: 4 and 4
V_{50}: 535.5 m/s
High Partial: 540.4 m/s
Low Complete: 532.8 m/s
Range of Results (ROR): 19.51 m/s
Range of Mix Results (RMR): 7.62 m/s
Gap: N/A

C.I.A. MIGUEL CABALLERO S.A.S. PROPRIETARY INFORMATION

PROTECTION BALLISTIC LIMIT TEST, V_{50} BL(P)

NTS-Belcamp
4603B Compass Point Road
Belcamp, MD 21017

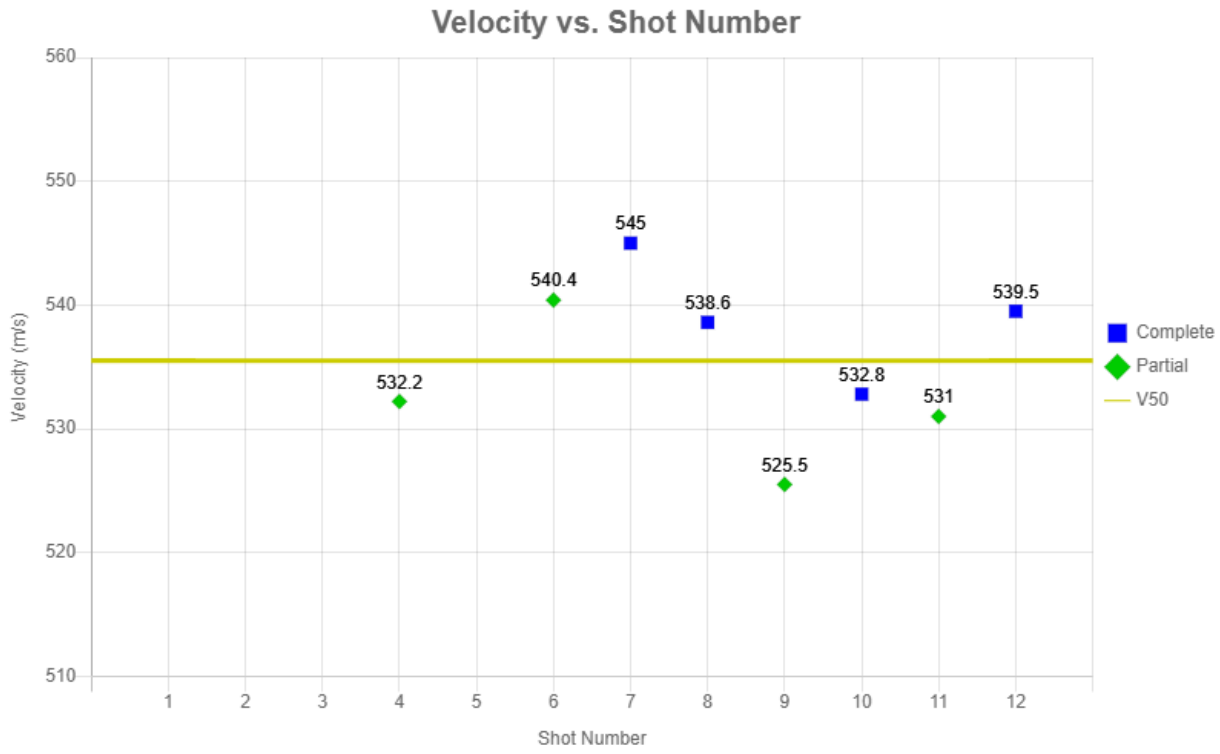
Client: C.I.A. Miguel Caballero S.A.S.
Project No.: PH00010404-H
Test Date: 02/20/2024

Manufacturer: C.I.A. Miguel Caballero S.A.S.

Sample No.: (.44-mag, V50) 609688 Back

V_{50} Summary:

No. of Points: 4 and 4
V_{50}: 535.5 m/s
High Partial: 540.4 m/s
Low Complete: 532.8 m/s
Range of Results (ROR): 19.51 m/s
Range of Mix Results (RMR): 7.62 m/s
Gap: N/A



C.I.A. MIGUEL CABALLERO S.A.S. PROPRIETARY INFORMATION

PROTECTION BALLISTIC LIMIT TEST, V_{50} BL(P)

NTS-Belcamp
4603B Compass Point Road
Belcamp, MD 21017

Client: C.I.A. Miguel Caballero S.A.S.
Project No.: PH00010404-I
Test Date: 02/16/2024
Page 1 of 2

Test Panel

Description: Soft armor. Model: MC-Comfort-IIIA; Lot: UP750160-63703.

Manufacturer: C.I.A. Miguel Caballero S.A.S.

Sample No.: (17gr., V50) 609689 Front

Size: Large	Weight: 0.910 kg	Date Received: 02/12/2024
Avg. Thickness: N/A	Plies/Laminates: N/A	Received Via: FEDEX, Express Saver
Thicknesses: N/A	Required BL(P): 599.8 m/s	Returned Via: FEDEX, Express Saver

Setup

Shot Spacing: STANAG 2920 Ed 3 AEP 2920 Edition A, Version 2	Primary Vel. Screens (m): 1.520, 1.630, 2.950, 3.050	Range No.: Range 1
Witness Panel: 0.02 in 2024-T3 Aluminum	Primary Vel. Location (m): 2.288	Temp: 21.2 °C
Backing Material: N/A	Range to Target (m): 4.572	BP: 30.2 inHg
Condition: Ambient	Target to Witness (mm): 152.400	RH: 47 %
		Barrel/Gun: CT-1006
		Gunner: Vincent Johnson
		Recorder: Isaiah Lookingbill

Ammunition

Projectile	Lot No.	Manufacturer	Powder
(1) .22-cal., 17-grain FSP	1762223	Contra Threat Sciences	Bullseye

Applicable Standards or Procedures

(1) STANAG 2920 Ed 3 AEP 2920 Edition A, Version 2 dated September 2016

Shot No.	Ammo	Powder/ Seating	Weight (gr)	Time 1 (µs)	Vel. 1 (m/s)	Time 2 (µs)	Vel.2 (m/s)	Avg. Vel. (m/s)	Striking Vel. (m/s)	Result	Include in V_{50}	Obliq. (°)	Footnotes
1	1	7.5	17.0	2301	662.3	1993	662.6	662.6	634.3	P	Yes	0.0	
2	1	8.2	17.0	2197	693.7	1901	694.6	694.3	664.5	C	No	0.0	
3	1	7.7	17.0	2309	659.9	2001	659.9	659.9	631.9	P	Yes	0.0	
4	1	8.0	17.0	2240	680.3	1936	682.1	681.2	652.3	C	No	0.0	
5	1	7.7	17.0	2283	667.5	1975	668.7	668.1	639.5	C	Yes	0.0	
6	1	7.5	17.0	2314	658.7	2006	658.4	658.4	630.3	C	Yes	0.0	
7	1	7.3	17.0	2396	636.1	2075	636.4	636.4	609.0	P	Yes	0.0	
8	1	7.6	17.0	2318	657.5	2010	657.1	657.1	629.1	C	Yes	0.0	

Remarks:
Requested Starting Velocity: 630 m/s.
Projectile Yaw Check: 0° Yaw on All Impacts.

Footnotes:
N/A

V_{50} Summary:
No. of Points: 3 and 3
V_{50}: 629.1 m/s
High Partial: 634.3 m/s
Low Complete: 629.1 m/s
Range of Results (ROR): 30.48 m/s
Range of Mix Results (RMR): 5.18 m/s
Gap: N/A

C.I.A. MIGUEL CABALLERO S.A.S. PROPRIETARY INFORMATION

PROTECTION BALLISTIC LIMIT TEST, V_{50} BL(P)

NTS-Belcamp
4603B Compass Point Road
Belcamp, MD 21017

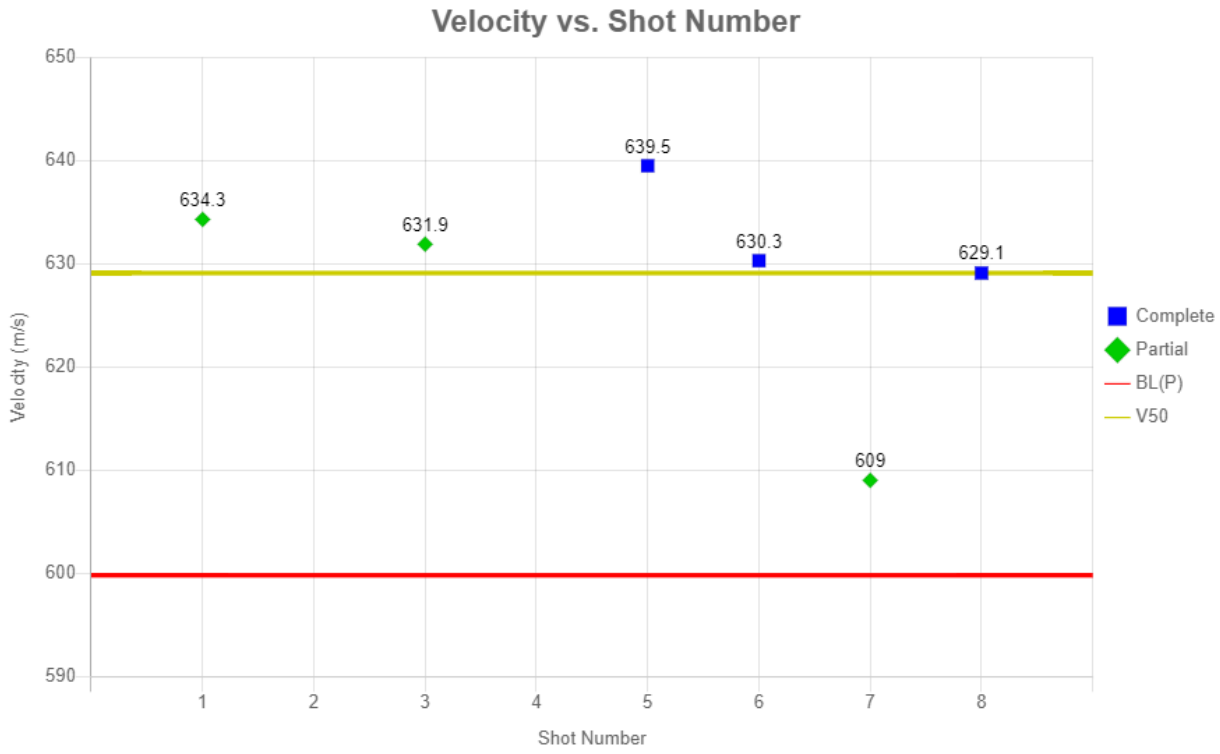
Client: C.I.A. Miguel Caballero S.A.S.
Project No.: PH00010404-I
Test Date: 02/16/2024
Page 2 of 2

Manufacturer: C.I.A. Miguel Caballero S.A.S.

Sample No.: (17gr., V50) 609689 Front

V_{50} Summary:

No. of Points: 3 and 3
V_{50}: 629.1 m/s
High Partial: 634.3 m/s
Low Complete: 629.1 m/s
Range of Results (ROR): 30.48 m/s
Range of Mix Results (RMR): 5.18 m/s
Gap: N/A



C.I.A. MIGUEL CABALLERO S.A.S. PROPRIETARY INFORMATION

PROTECTION BALLISTIC LIMIT TEST, V_{50} BL(P)

NTS-Belcamp
4603B Compass Point Road
Belcamp, MD 21017

Client: C.I.A. Miguel Caballero S.A.S.
Project No.: PH00010404-J
Test Date: 02/16/2024
Page 1 of 2

Test Panel

Description: Soft armor. Model: MC-Comfort-IIIA; Lot: UP750160-63703.

Manufacturer: C.I.A. Miguel Caballero S.A.S.

Sample No.: (17gr., V50) 609689 Back

Size: Large	Weight: 1.080 kg	Date Received: 02/12/2024
Avg. Thickness: N/A	Plies/Laminates: N/A	Received Via: FEDEX, Express Saver
Thicknesses: N/A	Required BL(P): 599.8 m/s	Returned Via: FEDEX, Express Saver

Setup

Shot Spacing: STANAG 2920 Ed 3 AEP 2920 Edition A, Version 2	Primary Vel. Screens (m): 1.520, 1.630, 2.950, 3.050	Range No.: Range 1
Witness Panel: 0.02 in 2024-T3 Aluminum	Primary Vel. Location (m): 2.288	Temp: 21.0 °C
Backing Material: N/A	Range to Target (m): 4.572	BP: 30.2 inHg
Condition: Ambient	Target to Witness (mm): 152.400	RH: 47 %
		Barrel/Gun: CT-1006
		Gunner: Vincent Johnson
		Recorder: Isaiah Lookingbill

Ammunition

Projectile	Lot No.	Manufacturer	Powder
(1) .22-cal., 17-grain FSP	1762223	Contra Threat Sciences	Bullseye

Applicable Standards or Procedures

(1) STANAG 2920 Ed 3 AEP 2920 Edition A, Version 2 dated September 2016

Shot No.	Ammo	Powder/ Seating	Weight (gr)	Time 1 (µs)	Vel. 1 (m/s)	Time 2 (µs)	Vel.2 (m/s)	Avg. Vel. (m/s)	Striking Vel. (m/s)	Result	Include in V_{50}	Obliq. (°)	Footnotes
1	1	7.5	17.0	2348	648.9	2032	649.8	649.5	621.8	P	Yes	0.0	
2	1	8.1	17.0	2214	688.2	1919	688.2	688.2	659.0	C	No	0.0	
3	1	7.6	17.0	2314	658.7	2001	659.9	659.3	631.2	P	Yes	0.0	
4	1	8.0	17.0	2249	677.6	1949	677.6	677.6	648.6	C	No	0.0	
5	1	7.6	17.0	2305	661.1	1993	662.6	662.0	633.7	C	Yes	0.0	
6	1	7.4	17.0	2340	651.4	2027	651.7	651.4	623.6	P	Yes	0.0	
7	1	7.6	17.0	2318	657.5	2010	657.1	657.1	629.1	C	Yes	0.0	
8	1	7.4	17.0	2361	645.6	2045	645.9	645.6	618.1	C	Yes	0.0	

Remarks:
Requested Starting Velocity: 630 m/s.
Projectile Yaw Check: 0° Yaw on All Impacts.

Footnotes:
N/A

V_{50} Summary:
No. of Points: 3 and 3
V_{50}: 626.4 m/s
High Partial: 631.2 m/s
Low Complete: 618.1 m/s
Range of Results (ROR): 15.54 m/s
Range of Mix Results (RMR): 13.11 m/s
Gap: N/A

C.I.A. MIGUEL CABALLERO S.A.S. PROPRIETARY INFORMATION

PROTECTION BALLISTIC LIMIT TEST, V_{50} BL(P)

NTS-Belcamp
4603B Compass Point Road
Belcamp, MD 21017

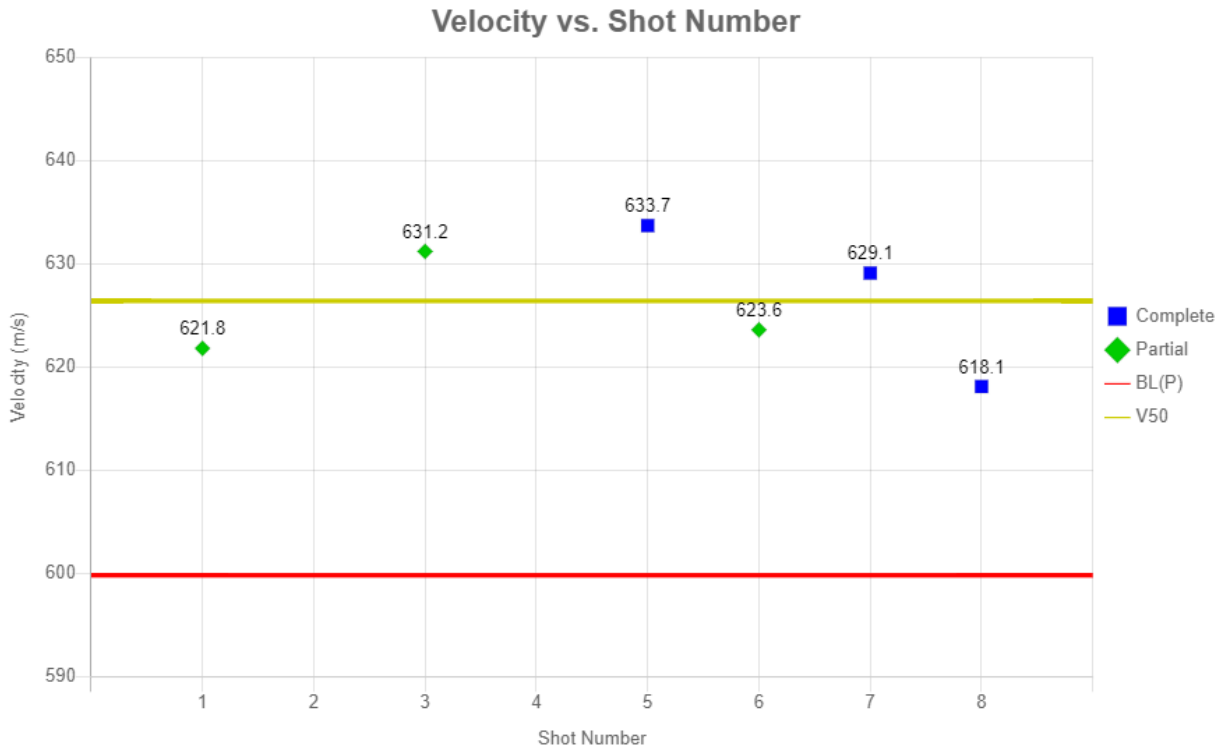
Client: C.I.A. Miguel Caballero S.A.S.
Project No.: PH00010404-J
Test Date: 02/16/2024
Page 2 of 2

Manufacturer: C.I.A. Miguel Caballero S.A.S.

Sample No.: (17gr., V50) 609689 Back

V_{50} Summary:

No. of Points: 3 and 3
V_{50}: 626.4 m/s
High Partial: 631.2 m/s
Low Complete: 618.1 m/s
Range of Results (ROR): 15.54 m/s
Range of Mix Results (RMR): 13.11 m/s
Gap: N/A



C.I.A. MIGUEL CABALLERO S.A.S. PROPRIETARY INFORMATION

ATTACHMENT A
CALIBRATION DATA

NCR = No Calibration Required.

Asset Number	Asset Type	Manufacturer	Model	Calibrated	Due
WC020651	Barrel (gun)	Bill Wiseman & Company	N/A	NCR	NCR
WC027021	Measurement Tools (Angle Gauge)	SPI	91-316-0	07/25/2023	07/25/2024
WC060800	Range (shooting)	N/A	N/A	NCR	NCR
WC064245	Gauge (Depth)	Chesapeake Testing	Bridge Depth Gauge	02/07/2024	05/07/2024
WC064251	Gauge (Depth)	Chesapeake Testing	DG 03	02/01/2024	05/01/2024
WC067323	Scale (Digital Balance)	RCBS	1500	01/11/2024	01/11/2025
WC067383	Monitor (Thermometer/Clock/Humidity)	Control Company	4040	11/10/2023	11/10/2024
WC074192	Block (Clay)	Chesapeake Testing	N/A	02/16/2019	NCR
WC074985	Measurement Tools (Micrometer)	Starrett	798A-6/150	07/27/2023	07/27/2024
WC075067	Measurement Tools (Tape Measure)	Starrett	530-100	11/11/2022	11/11/2024
WC079302	Scale (Floor)	Torbal Scales	BA153C	02/21/2024	02/21/2025
EL00003997	Measurement Tools (Tape Measure)	Craftsman	CMHT37525	11/10/2022	11/10/2024
EL00004009	Measurement Tools (Tape Measure)	Craftsman	CMHT37565	05/11/2023	05/11/2025
EL00004085	Meter (Thermometer)	Control Company	4378,98768-49	09/21/2023	09/21/2025
EL00004089	Gauge (Depth)	Starrett	3753A-6/150	12/13/2023	12/13/2024
EL00004096	Gauge (Depth)	Starrett	3753A-6/150	12/13/2023	12/13/2024
WC079409	Meter (Chronograph)	YIS/Cowden Group, Inc	NA	09/15/2023	09/15/2024
WC079410	Meter (Chronograph)	YIS/Cowden Group, Inc	Chrono-USB	09/15/2023	09/15/2024

C.I.A. MIGUEL CABALLERO S.A.S. PROPRIETARY INFORMATION

END OF REPORT

C.I.A. MIGUEL CABALLERO S.A.S. PROPRIETARY INFORMATION