



August 30, 2019

Stealth Armor Systems
Allan Bain
1306 RM 1092 Ste 508
Missouri City, TX 77459
U.S.A.

Dear Mr. Bain,

In accordance with your instructions, National Technical Systems, Inc. conducted Ballistic Resistance Testing of Body Armor submitted by **Stealth Armor Systems Test ID # MC03163** which were received on August 15th, 2019. Testing was witnessed by Allan Bain, a representative of the manufacturer.

Ballistic resistance testing was authorized by the National Law Enforcement and Corrections Technology Center (NLECTC) Body Armor Compliance Testing Program (BA CTP), a program of the National Institute of Justice (NIJ) and was conducted in accordance with the requirements of: **NIJ Standard-0101.06, Ballistic Resistance Testing of Body Armor, July 2008 in accordance with NIJ BA CTP Administrative Clarification CTP 2015: 03, May 18, 2015**, including all clarifications, verbal and written, authorized by the NIJ BA CTP prior to the date of testing. The results of this test are used by the CTP to determine compliance of armor intended for use by Law Enforcement Officers. National Technical Systems, Inc. is not empowered to issue or deny compliance status; however, the attached data indicates that this sampling of **Test ID # MC03163** **did satisfy** the ballistic requirements of **NIJ Standard-0101.06 for Threat Level III Stand Alone** a prerequisite to issuance of a compliance status by the CTP.

The prospective model designation for this testing is: **Hexar Titan**

Ballistic test results have been recorded on the most current version of the Compliance Test Report (CTR) provided by the CTP.

As required, two complete test samples (two plates) along with the CTR have been shipped to the CTP via **Fed Ex Ground Tracking No.: 776121402432**. The remaining samples will be held at our laboratory until they are released by the CTP.

Please refer to **NTS Report Number SAS19-001-III-SA** for test details.

Sincerely,

A handwritten signature in black ink, appearing to read "Jake Crawford", written over a horizontal line.

Jake Crawford
Operations Manager

NATIONAL INSTITUTE OF JUSTICE HARD ARMOR COMPLIANCE TEST REPORT



Report Identification Number:	SAS19-001-III-SA
Issue/Revision Number:	Initial Issue
Report Date:	8/29/2019

200818-0 NVLAP Lab Code

Test Laboratory Name:	National Technical Systems-Wichita Division
Address:	7447 West 33rd Street North
	Wichita, KS 67205
	U.S.A.

Customer:	Stealth Armor Systems
	1306 RM 1092 Ste 508
Address:	Missouri City, TX 77459
	U.S.A.

Conditioning Laboratory Name:	National Technical Systems-Wichita Division
Address:	7447 West 33rd Street North
	Wichita, KS 67205
	U.S.A.

Prospective Model Designation:	Hexar Titan
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This test report and the results herein are to be used solely for the purpose of determining compliance to the NIJ 0101.06 Body Armor Standard. The test data should not be used to compare the relative performance characteristics between different models of body armor.

Reproduction of this test report is prohibited except in full.

This test report may not be used to claim product certification, approval, or endorsement by NVLAP, NIST or any agency of the Federal Government.

Test results relate only to the items tested.

Authorized Signatory:	Jake Crawford
Function/Position:	Operations Manager

Signature:	
Date:	8/29/19

NATIONAL INSTITUTE OF JUSTICE HARD ARMOR COMPLIANCE TEST REPORT

NVLAP Lab Code: <u>200818-0</u>	Test Laboratory Name: <u>National Technical Systems-Wichita Division</u>
	Report Identification Number: <u>SAS19-001-III-SA</u>
	Issue / Revision Number: <u>Initial Issue</u>

COMPLIANCE TESTING INFORMATION

Test Start Date: 08/16/19 Report Date: 08/29/19
 End Date: 08/29/19

RANGE INFORMATION:

Range Length: 50.00 ft Velocity 1: 5.000 ft. 1.524 m Velocity Measurement Units: time
 Velocity 2: 4.085 ft. 1.245 m Chronographs will report the time of flight.
 Data should be entered in μ s (10^{-6} s).

ARMOR DESCRIPTION:

Manufacturer: Stealth Armor Systems

Date Rec'd: 8/15/19 via FedEx Test ID: MC03163 NIJ Armor Type: 3
 Style: Stand-Alone/Flexible

SHOT-TO-EDGE REQUIREMENTS:

Threat 1: <u>2.50 - 3.0</u> Inches	Labels legible and adhered after wear tests?: <u>Yes</u> (Yes/No)
Threat 2: <u>N/A</u> Inches	Labels legible and adhered after conditioning protocol?: <u>Yes</u> (Yes/No)
	Labels meet the requirements of 4.1.5.3

ARMOR CONSTRUCTION:

Armor Test Configuration: Planar

Plate	In Conjunction With Panel (if applicable)
Number of Layers: <u>64</u>	Front Closure (Y/N): <u> </u>
Individual Layer Description: Layer 1: Flex woven aramid fiber (28x28) Layer 2: Foam (0.10" thick) Layer 3: Flex woven aramid fiber (28x28) Layer 4: Ceramic (20mm hexagonal tiles, 6.75mm thick) Layer 5: Flex woven / laminated aramid / polyester hybrid fiber Layer 6: Foam rubber (0.10" thick) Layers 7-33: Smooth flex polyethylene film (6-ply) Layers 34-60: Smooth flex polyethylene film (6-ply) Layers 61-62: Aramid felt Layer 63: Flex woven aramid fiber (28x28) Layer 64: Flex woven aramid fiber (28x28) Notes: *Black heat sealed nylon fabric outer plate cover	Number of Layers: <u> </u>
Description of Stitching: Layers 7-33: (2) perimeter stitches (0.50" and 1.0" from the edge); 3.0" diagonal bar tack at each corner; 12.0" vertical stitch at center including a 1" x 12" adhesive coated strip of flex woven aramid fiber (28x28) adhered to strike face and body side Layers 34-60: (1) perimeter stitch (1.0" from the edge); 2.50" diagonal bar tack at each corner Layers 61-62: Full length "X" stitch at center; (1) perimeter stitch (0.25" from the edge)	

Remarks and Revision History: Project Manager: Crawford Range Technician(s): Nold

Compliance Test Report revision NIJ0101.06 - CTR Hard Armor 01-14 (2012-05-22) / MS Excel version 14.0 / Operating System version Windows (32-bit) NT 6.01

**NATIONAL INSTITUTE OF JUSTICE
HARD ARMOR COMPLIANCE TEST REPORT**

Use this space to enter any necessary supplemental information

Test Remarks / Notes / Revision History:

- 1) See attached photos
- 2) Allan Bain (Stealth Armor Systems) was present to witness testing
- 3) Customer specified a shot-to-edge distance of 2.50" - 3.0"

Strapping Method (Section 7.7.2.1):

(a) Default Strapping Method: Two vertical and three horizontal straps
(Figure A.) Standard Strapping Arrangement for Smaller Samples

Hard Armor Conditioning / Testing Protocol Timeline:

- 1) **8/15/19:** (9) Stand-Alone plates were received and allowed to acclimate for 24 hours at pretest conditions prior to starting the conditioning protocol per Section 6.
- 2) **8/16/19:** (9) plates entered chamber for Uniform Thermal Exposure Conditioning IAW Section 6, Table 2. (10-Days)
- 3) **8/26/19:** (9) plates removed from chamber and inspected
- 4) **8/26/19:** (9) plates entered chamber for Thermal Cycle Exposure Conditioning IAW Section 6, Table 3. (24-Hour)
- 5) **8/27/19:** (9) plates removed from chamber and allowed to return to pretest conditions for a minimum of 12 hours prior to Mechanical Durability (Drop Testing) and Ballistic Testing.
- 6) **8/28/19:** (8 of 9) plates subjected to Mechanical Durability Testing (Drop Testing) IAW Section 6.
- 7) **8/29/19:** (8 of 9) plates subjected to ballistic testing IAW Section 7.
- 8) **8/29/19:** Spare Sample / Plate #9 (S/N: 12343) used to test Label Durability and Permanency IAW Section 4.1.5.3

CTR Pages Omitted:

Page 6 of 12: Handloads

Samples Sent to NIJ BA CTP:

- 1) (Unshot / Spare Sample): Sample / Plate #9 (S/N: 12343)
- 2) (P-BFS Sample with Highest BFS): Sample / Plate #1 (S/N: 12335)

*The following samples / plates listed below will be held at NTS until released by the NIJ BA CTP:

Sample / Plate #2 (S/N: 12336)
Sample / Plate #3 (S/N: 12337)
Sample / Plate #4 (S/N: 12338)
Sample / Plate #5 (S/N: 12339)
Sample / Plate #6 (S/N: 12340)
Sample / Plate #7 (S/N: 12341)
Sample / Plate #8 (S/N: 12342)

**NATIONAL INSTITUTE OF JUSTICE
HARD ARMOR COMPLIANCE TEST REPORT**

NVLAP Lab Code: <u>200818-0</u>	Test Laboratory Name: National Technical Systems-Wichita Division
	Report Identification Number: <u>SAS19-001-III-SA</u>
	Issue / Revision Number: <u>Initial Issue</u>

Penetration and BFS Summary Data

Test ID: MC03163
 Manufacturer: Stealth Armor Systems
 Ammunition: 7.62mm 147/FMJ

Report Date: 08/29/19

Test Velocity:	847.3	±9.1 m/s
	(2780)	±30 ft/s

Sample Information						Shot Number	Avg. Vel. (ft/s)	Perf (Y=1/N=0)	BFS (mm)	Note
Sample Number	Soft Armor Panel		Hard Armor Plate		Gross Weight (lbs)					
	Lot Number	Serial Number	Lot Number	Serial Number	(lbs)					
1			21523	12335	6.29	1	2755	0	39.44	Shot Location: Top Left
1			21523	12335	6.29	2	2848	0	28.83	Shot Location: Bottom Right
1			21523	12335	6.29	3	2796	0		Shot Location: Top Right
1			21523	12335	6.29	4	2843	0		Shot Location: Middle Right
1			21523	12335	6.29	5	2801	0		Shot Location: Middle Left
1			21523	12335	6.29	6	2816	0		Shot Location: Bottom Left
2			21523	12336	6.327	7	2776	0	36.83	Shot Location: Top Right
2			21523	12336	6.327	8	2769	0	33.31	Shot Location: Bottom Left
2			21523	12336	6.327	9	2769	0		Shot Location: Top Left
2			21523	12336	6.327	10	2761	0		Shot Location: Middle Left
2			21523	12336	6.327	11	2816	0		Shot Location: Middle Right
2			21523	12336	6.327	12	2831	0		Shot Location: Bottom Right
3			21523	12337	6.333	13	2807	0	32.98	Shot Location: Middle Left
3			21523	12337	6.333	14	2822	0	32.39	Shot Location: Top Right
3			21523	12337	6.333	15	2751	0		Shot Location: Top Left
3			21523	12337	6.333	16	2767	0		Shot Location: Middle Right
3			21523	12337	6.333	17	2771	0		Shot Location: Bottom Right
3			21523	12337	6.333	18	2801	0		Shot Location: Bottom Left
4			21523	12338	6.325	19	2804	0	30.43	Shot Location: Middle Right
4			21523	12338	6.325	20	2810	0	31.75	Shot Location: Top Left
4			21523	12338	6.325	21	2835	0		Shot Location: Top Right
4			21523	12338	6.325	22	2759	0		Shot Location: Middle Left
4			21523	12338	6.325	23	2830	0		Shot Location: Bottom Left
4			21523	12338	6.325	24	2803	0		Shot Location: Bottom Right
5						25				
5						26				
5						27				
5						28				
5						29				
5						30				

Armor Information	
Plate Subjected to hard armor conditioning	
Soft armor Panel Size (If used)	Plate Size
C-2	10 x 12
NIJ Armor Type:	
3	
Shots Per Plate (Type IV only):	

Summary:	Perforations: 0	Maximum BFS: 39.44 mm	BFS Statistics: Count: 8		
Pass - No BFS greater than 44 mm					

Overall P-BFS Summary

Perforations: This requirement is for all P-BFS tested samples
 0 This armor model meets the perforation performance requirements of NIJ Standard-0101.06 Section 7.8.8.

Backface Signature: This requirement is for all hard armor plate models
Maximum BFS: 39.44 mm
 This armor model meets the BFS performance requirements of NIJ Standard-0101.06 Section 7.8.8 Item a.

NATIONAL INSTITUTE OF JUSTICE
HARD ARMOR COMPLIANCE TEST REPORT

NVLAP Lab Code: 200818-0	Test Laboratory Name: National Technical Systems-Wichita Division
	Report Identification Number: SAS19-001-III-SA
	Issue / Revision Number: Initial Issue
Report Date: 8/29/2019	

Ballistic Limit Summary Data

Test ID:	MC03163
Manufacturer:	Stealth Armor Systems
Ammunition:	7.62mm 147/FMJ

Test Velocity:	847.3 ±9.1 m/s
	(2780) ±30 ft/s

Sample Information					Shot Number	Avg. Vel. (ft/s)	Perf (Y=1/N=0)	Remarks	
Sample Number	Soft Armor Panel		Hard Armor Plate						Gross Weight (lbs)
	Lot Number	Serial Number	Lot Number	Serial Number					
1			21523	12339	6.302	1	2789	0	Top Left
1			21523	12339	6.302	2	2901	0	Top Right
1			21523	12339	6.302	3	2934	0	Middle Right
1			21523	12339	6.302	4	2986	0	Middle Left
1			21523	12339	6.302	5	3060	0	Bottom Left
1			21523	12339	6.302	6	3119	0	Bottom Right
2			21523	12340	6.314	7	3377	0	Top Left
2			21523	12340	6.314	8	3445	0	Top Right
2			21523	12340	6.314	9	3570	1	Middle Right
2			21523	12340	6.314	10	3486	1	Middle Left
2			21523	12340	6.314	11	3441	0	Bottom Left
2			21523	12340	6.314	12	3519	1	Bottom Right
3			21523	12341	6.316	13	2907	0	Top Left
3			21523	12341	6.316	14	3099	0	Top Right
3			21523	12341	6.316	15	3164	0	Middle Right
3			21523	12341	6.316	16	3288	0	Middle Left
3			21523	12341	6.316	17	3345	0	Bottom Left
3			21523	12341	6.316	18	3486	0	Bottom Right
4			21523	12342	6.323	19	3591	0	Top Left
4			21523	12342	6.323	20	3695	1	Top Right
4			21523	12342	6.323	21	3607	1	Middle Right
4			21523	12342	6.323	22	3538	1	Middle Left
4			21523	12342	6.323	23	3431	0	Bottom Left
4			21523	12342	6.323	24	3520	1	Bottom Right
5			21523	12343	6.315	25			
5			21523	12343	6.315	26			
5			21523	12343	6.315	27			
5			21523	12343	6.315	28			
5			21523	12343	6.315	29			
5			21523	12343	6.315	30			

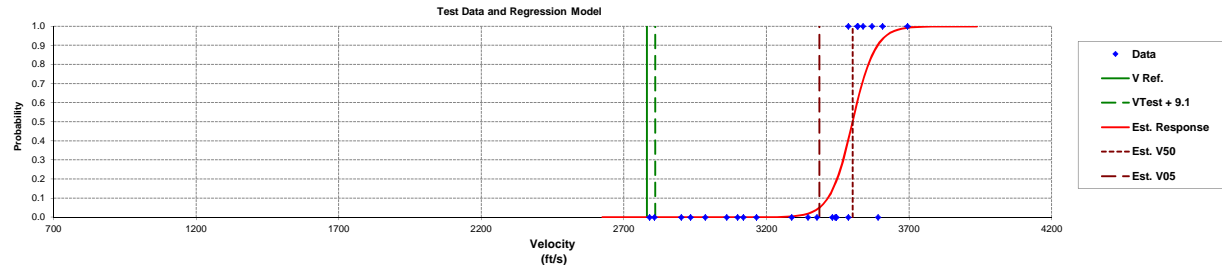
Key to Remarks:
 a - Too close to edge
 b - Too close to prior impact
 c - Impact on seam

Armor Information	
Plate Subjected to hard armor conditioning	
Soft armor Panel Size (If used)	Plate Size
C-2	10 x 12
NIJ Armor Type: 3	
Shots Per Plate (Type IV only):	

Regression Analysis	
Estimated V05:	1031.8 m/s (3385) ft/s
Estimated V50:	1067.3 m/s 3502 ft/s
Probability of perforation at NIJ reference velocity: 847.3 m/sec (2780 ft/s)	
0.0% Acceptable	
NIJ Reference Velocity	847.3 m/s (2780 ft/s)
Offset	+ 9.1 m/s + (30 ft/s)
	856.4 m/s (2810 ft/s)
Perforations below 856.4 m/s (2810 ft/s):	
0 Acceptable	

Total Usable Shots:	24	Acceptable
Perforations (Complete Penetrations):	7	
Stops (Partial Penetrations):	17	

Regression Model
Logistic



Overall Ballistic Limit Summary	
Perforations below Vref + 9.1 m/sec:	0
This armor model meets the low performance velocity performance requirements of NIJ Standard-0101.06 Section 7.9.5.	
Probability of perforation at the P-BFS reference velocity	0.0%
This armor model meets the estimated V05 performance requirements of NIJ Standard-0101.06 Section 7.9.5.	

Compliance Test Report revision Hard Armor 1-11 (2012-03-30) / MS Excel version 14.0 / Operating System version Windows (32-bit) NT 6.01

NATIONAL INSTITUTE OF JUSTICE
HARD ARMOR COMPLIANCE TEST REPORT

Shot Number	PRE-TEST CLAY VALIDATION:											Initial Test Conditions	
	Block ID	Test Date	Time of Day HH:mm AM/PM	Clay Temp °F	Drop Number Depth of Indent (mm)					Avg.	Requirements	Ambient Temp F	Rel. Humidity %
					1	2	3	4	5		Pass		
1	13	8/29/19	8:30 AM	102.6	20.03	19.48	17.09	19.84	18.9	19.07	Yes	71.3	46
2											-		
3											-		
4											-		
5											-		
6											-		
7	13	8/29/19	9:00 AM	101.9	20.37	19.61	18.29	19.74	19.31	19.46	Yes	72.5	46
8											-		
9											-		
10											-		
11											-		
12											-		
13	13	8/29/19	9:25 AM	100.7	20.37	18.66	17.58	18.94	18.77	18.86	Yes	72.2	46
14											-		
15											-		
16											-		
17											-		
18											-		
19	13	8/29/19	9:55 AM	100.2	20.17	18.44	17.14	18.81	19.21	18.75	Yes	72.2	48
20											-		
21											-		
22											-		
23											-		
24											-		
25											-		
26											-		
27											-		
28											-		
29											-		
30											-		

NATIONAL INSTITUTE OF JUSTICE HARD ARMOR COMPLIANCE TEST REPORT

Penetration and B's Firing Data

Report Number: SAS19-001-III-SA _____

Report Date: 08/29/19 _____

Manufacturer: Stealth Armor Systems _____

Lab Technician(s)
Crawford
Noid

TEST DIMENSIONS					
Range Length	50.00	ft.	Velocity 1:	5,000	ft.
				1,524	m
Laboratory Range #	3		Velocity 2:	4,095	ft.
				1,245	m

Armor Information		
Conditioning	Plate Subjected to hard armor conditioning	
	Soft armor Panel	
	(If used)	Plate
Size	C-2	10 x 12
NIJ Armor Type:		3
Shots Per Plate (Type IV only):		

Test Description	
Test Condition:	Wet
Threat Ammunition:	7.62mm
Bullet (grain/type):	147/FMJ
Test Velocity (ft/s):	2780

Threat Description	
Bullet Manufacturer:	U.S. Military
Bullet Lot/Product Number:	N/A
Test Barrel Manufacturer:	Bill Wiseman & Company
Test Barrel Length (in):	26" .308 Winchester Barrel (WC023884) w/ Varget Powder

Armor Information					Armor Submersion			Firing Sequence																					
Sample Number	Soft Armor Panel		Hard Armor Plate		Gross Weight (lbs)	Start Time HH:mm AM/PM	End Time HH:mm AM/PM	Duration: min	Start: HH:mm AM/PM	Time 1 (µs)	Vel. 1 (ft/s)	Time 2 (µs)	Vel. 2 (ft/s)	Vel. Avg. (ft/s)	Fair (Y/N)	Perforate (Y=1/N=0)	Note	BFS (mm)	Comments	Error Check	End HH:mm	Duration min							
	Lot Number	Serial Number	Lot Number	Serial Number																									
1			21523	12335	6.29	8:00 AM	8:30 AM	30	8:40 AM	1816	2753	1482	2756	2755	Yes	0		39.44	Shot Location: Top Left		8:41 AM								
1			21523	12335	6.29				8:43 AM	1756	2847	1434	2849	2848	Yes	0		28.83		Shot Location: Bottom Right		8:44 AM							
1			21523	12335	6.29				8:47 AM	1789	2795	1460	2798	2796	Yes	0					Shot Location: Top Right		8:48 AM						
1			21523	12335	6.29				8:49 AM	1758	2844	1437	2843	2843	Yes	0						Shot Location: Middle Right		8:50 AM					
1			21523	12335	6.29				8:52 AM	1786	2800	1458	2802	2801	Yes	0						Shot Location: Middle Left		8:53 AM					
1			21523	12335	6.29				8:54 AM	1776	2815	1450	2817	2816	Yes	0						Shot Location: Bottom Left		8:55 AM	0:15				
2			21523	12336	6.327				8:25 AM	8:55 AM	30	9:05 AM	1802	2775	1471	2777	2776	Yes	0		36.83	Shot Location: Top Right		9:06 AM					
2			21523	12336	6.327							9:09 AM	1806	2769	1475	2769	2769	Yes	0		33.31		Shot Location: Bottom Left		9:10 AM				
2			21523	12336	6.327							9:12 AM	1806	2769	1475	2769	2769	Yes	0					Shot Location: Top Left		9:13 AM			
2			21523	12336	6.327							9:14 AM	1811	2761	1480	2760	2761	Yes	0						Shot Location: Middle Left		9:15 AM		
2			21523	12336	6.327							9:16 AM	1776	2815	1450	2817	2816	Yes	0						Shot Location: Middle Right		9:17 AM		
2			21523	12336	6.327							9:18 AM	1766	2831	1443	2831	2831	Yes	0						Shot Location: Bottom Right		9:19 AM	0:14	
3			21523	12337	6.333							8:50 AM	9:20 AM	30	9:30 AM	1782	2806	1455	2808	2807	Yes	0		32.98	Shot Location: Middle Left		9:31 AM		
3			21523	12337	6.333										9:34 AM	1772	2822	1447	2823	2822	Yes	0		32.39		Shot Location: Top Right		9:35 AM	
3			21523	12337	6.333										9:38 AM	1817	2752	1485	2751	2751	Yes	0					Shot Location: Top Left		9:39 AM
3			21523	12337	6.333	9:40 AM	1809	2764							1475	2769	2767	Yes	0						Shot Location: Middle Right		9:41 AM		
3			21523	12337	6.333	9:42 AM	1805	2770							1474	2771	2771	Yes	0						Shot Location: Bottom Right		9:43 AM		
3			21523	12337	6.333	9:44 AM	1786	2800							1458	2802	2801	Yes	0						Shot Location: Bottom Left		9:45 AM	0:15	
4			21523	12338	6.325	9:20 AM	9:50 AM	30							10:00 AM	1784	2803	1456	2806	2804	Yes	0		30.43	Shot Location: Middle Right		10:01 AM		
4			21523	12338	6.325										10:03 AM	1780	2809	1453	2811	2810	Yes	0		31.75		Shot Location: Top Left		10:04 AM	
4			21523	12338	6.325										10:07 AM	1764	2834	1441	2835	2835	Yes	0					Shot Location: Top Right		10:08 AM
4			21523	12338	6.325				10:09 AM	1813	2758				1480	2760	2759	Yes	0						Shot Location: Middle Left		10:10 AM		
4			21523	12338	6.325				10:11 AM	1767	2830				1443	2831	2830	Yes	0						Shot Location: Bottom Left		10:12 AM		
4			21523	12338	6.325				10:14 AM	1784	2803				1457	2804	2803	Yes	0						Shot Location: Bottom Right		10:15 AM	0:15	
5																									<i>*Shot Locations are from the shooter's perspective.</i>				
5																													
5																													
5																													
5																													

**NATIONAL INSTITUTE OF JUSTICE
HARD ARMOR COMPLIANCE TEST REPORT**

Final Test Conditions		Post-TEST CLAY VALIDATION:									
Ambient Temp	ReL. Humidity	Time of Day	Clay Temp	Drop Number Depth of Indent (mm)						Requirements	
F	%	HH:mm	°F	1	2	3	4	5	Avg.	Pass	
										-	
										-	
										-	
										-	
72.5	46									-	
										-	
										-	
										-	
72.5	46									-	
										-	
										-	
										-	
72.2	47									-	
										-	
										-	
										-	
72.2	47	10:20 AM	99.5	19.03	17.98	17.55	18.06	18.41	18.21	Yes	
										-	
										-	
										-	
										-	
										-	

**NATIONAL INSTITUTE OF JUSTICE
HARD ARMOR COMPLIANCE TEST REPORT**

Shot Number	PRE-TEST CLAY VALIDATION:										Initial Test Conditions		
	Block ID	Test Date	Time of Day	Clay Temp	Drop Number Depth of Indent (mm)					Avg.	Requirements All drops: 19 ± 3 mm Average: 19 ± 2 mm	Ambient Temp	Rel. Humidity
					1	2	3	4	5				
1	12	8/29/2019	10:40 AM	101.8	21.13	20.54	19.66	20.41	19.33	20.21	Yes	72.2	49
2											-		
3											-		
4											-		
5											-		
6											-		
7											-		
8											-		
9											-		
10											-		
11											-		
12											-		
13	12	8/29/2019	11:45 AM	100.4	21.37	21.12	20.55	20.68	19.82	20.71	Yes	72.5	48
14											-		
15											-		
16											-		
17											-		
18											-		
19											-		
20											-		
21											-		
22											-		
23											-		
24											-		
25											-		
26											-		
27											-		
28											-		
29											-		
30											-		

NATIONAL INSTITUTE OF JUSTICE HARD ARMOR COMPLIANCE TEST REPORT

Ballistic Limit Firing Data

Report Number: SAS19-001-III-SA

Report Date: 08/29/19

Manufacturer: Stealth Armor Systems

Lab Technician(s)
Crawford
Nold

TEST DIMENSIONS					
Range Length:	50.00	ft.	Velocity 1:	5,000	ft.
Laboratory Range #	3		Velocity 2:	4,085	ft.
				1,524	m
				1,245	m

Armor Information			
Plate Subjected to hard armor conditioning			
Soft armor Panel (If used)			
Plate	10 x 12		
Size	C-2		
NIJ Armor Type:	3		
Shots Per Plate (Type IV only):			

Test Description	
Test Condition:	I/Wet
Threat Ammunition:	7.62mm
Bullet (grain/type):	147/FMJ
Test Velocity (ft/s):	2780 ±30 ft/s

Threat Description	
Bullet Manufacturer:	U.S. Military
Bullet Lot/Product Number:	N/A
Test Barrel Manufacturer:	Bill Wiseman & Company
Test Barrel Length (in):	26".300 Weatherby Magnum w/ IMR 4064 Powder

Armor Information					
Sample Number	Soft Armor Panel		Hard Armor Plate		Gross Weight (lbs)
	Lot Number	Serial Number	Lot Number	Serial Number	
1			21523	12339	6.302
1			21523	12339	6.302
1			21523	12339	6.302
1			21523	12339	6.302
1			21523	12339	6.302
1			21523	12339	6.302
2			21523	12340	6.314
2			21523	12340	6.314
2			21523	12340	6.314
2			21523	12340	6.314
2			21523	12340	6.314
2			21523	12340	6.314
3			21523	12341	6.316
3			21523	12341	6.316
3			21523	12341	6.316
3			21523	12341	6.316
3			21523	12341	6.316
3			21523	12341	6.316
4			21523	12342	6.323
4			21523	12342	6.323
4			21523	12342	6.323
4			21523	12342	6.323
4			21523	12342	6.323
4			21523	12342	6.323
5			21523	12343	6.315
5			21523	12343	6.315
5			21523	12343	6.315
5			21523	12343	6.315
5			21523	12343	6.315
5			21523	12343	6.315

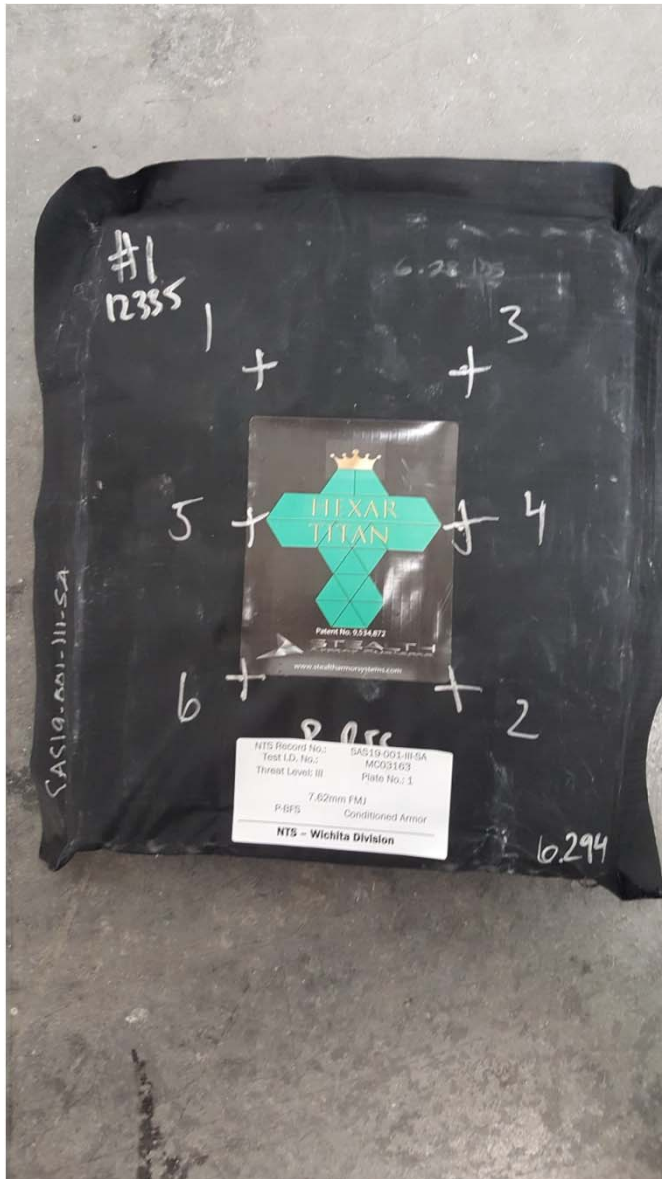
Firing Sequence													
Start:	Charge Weight	Time 1	Vel. 1	Time 2	Vel. 2	Vel. Avg.	Result		Used	Remarks	Error Check	End:	Duration:
HH:mm AM/PM	(mg)	(µs)	(ft/s)	(µs)	(ft/s)	(ft/s)	Perf (CP)	Stop (PP)	(Y/N)			HH:mm	min
11:00 AM	57.6	1793	2789	1464	2790	2789		X	Y	Top Left		11:01 AM	
11:03 AM	59.3	1723	2902	1409	2899	2901		X	Y	Top Right		11:04 AM	
11:05 AM	60.3	1705	2933	1392	2935	2934		X	Y	Middle Right		11:06 AM	
11:07 AM	62.0	1675	2985	1368	2986	2986		X	Y	Middle Left		11:08 AM	
11:09 AM	65.0	1635	3058	1334	3062	3060		X	Y	Bottom Left		11:10 AM	
11:11 AM	68.0	1603	3119	1310	3118	3119		X	Y	Bottom Right		11:12 AM	0:12
11:20 AM	71.0	1480	3378	1210	3376	3377		X	Y	Top Left		11:22 AM	
11:24 AM	74.0	1452	3444	1185	3447	3445		X	Y	Top Right		11:25 AM	
11:26 AM	77.0	1400	3571	1145	3568	3570	X		Y	Middle Right		11:27 AM	
11:28 AM	75.0	1435	3484	1171	3488	3486	X		Y	Middle Left		11:29 AM	
11:30 AM	73.0	1453	3441	1187	3441	3441		X	Y	Bottom Left		11:31 AM	
11:32 AM	75.0	1421	3519	1161	3519	3519	X		Y	Bottom Right		11:33 AM	0:13
11:50 AM	57.6	1782	2806	1455	2808	2807		X	Y	Top Left		11:51 AM	
11:53 AM	60.0	1614	3098	1318	3099	3099		X	Y	Top Right		11:54 AM	
11:55 AM	63.0	1580	3165	1291	3164	3164		X	Y	Middle Right		11:56 AM	
11:57 AM	66.0	1521	3287	1242	3289	3288		X	Y	Middle Left		11:58 AM	
11:59 AM	69.0	1495	3344	1221	3346	3345		X	Y	Bottom Left		12:00 PM	
12:01 PM	72.0	1435	3484	1171	3488	3486		X	Y	Bottom Right		12:02 PM	0:12
12:12 PM	75.0	1393	3589	1137	3593	3591		X	Y	Top Left		12:13 PM	
12:15 PM	78.0	1354	3693	1105	3697	3695	X		Y	Top Right		12:16 PM	
12:17 PM	76.0	1387	3605	1132	3609	3607	X		Y	Middle Right		12:18 PM	
12:19 PM	74.0	1414	3536	1154	3540	3538	X		Y	Middle Left		12:20 PM	
12:21 PM	72.0	1458	3429	1190	3433	3431		X	Y	Bottom Left		12:22 PM	
12:23 PM	74.0	1421	3519	1160	3522	3520	X		Y	Bottom Right		12:24 PM	0:12

Count: 24 7 17 24

- Remarks:
- a - Too close to edge
 - b - Too close to prior impact
 - c - Impact on seam

**NATIONAL INSTITUTE OF JUSTICE
HARD ARMOR COMPLIANCE TEST REPORT**

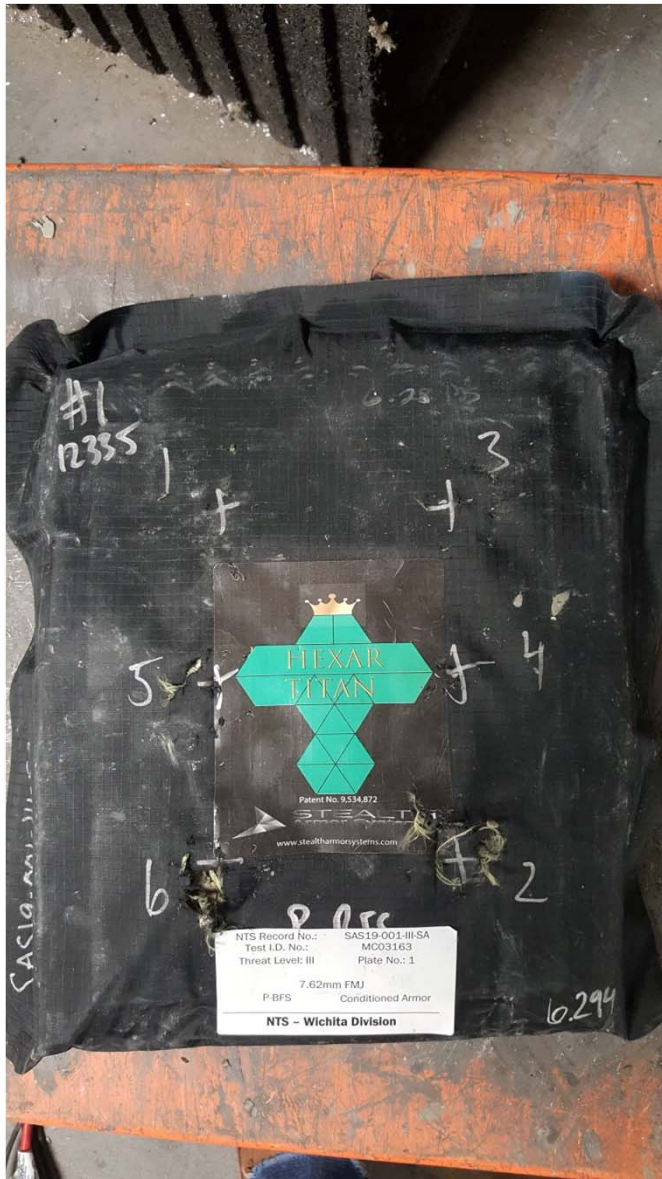
Final Test Conditions	
Ambient Temp:	Rel. Humidity:
F	%
72.8	49
72.5	48
72.9	48
72.9	47



1-P-BFS Plate #1_SF_Pre-Test



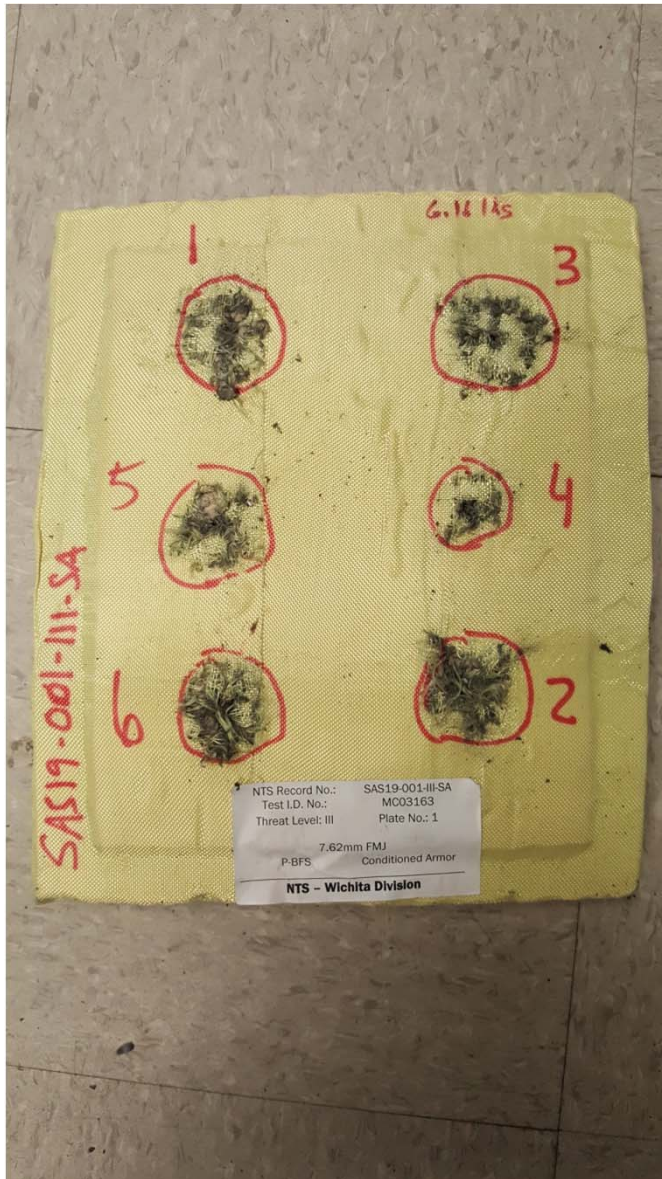
2-P-BFS Plate #1_Body Side_Pre-Test



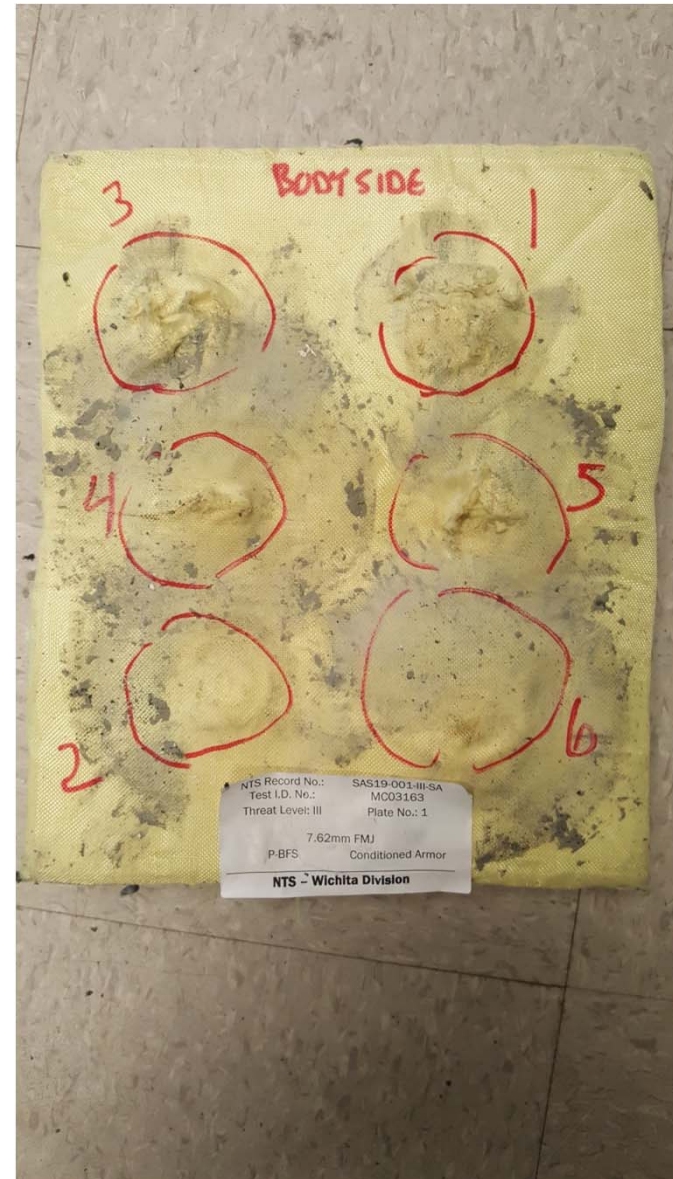
3-P-BFS Plate #1_SF_Post-Test



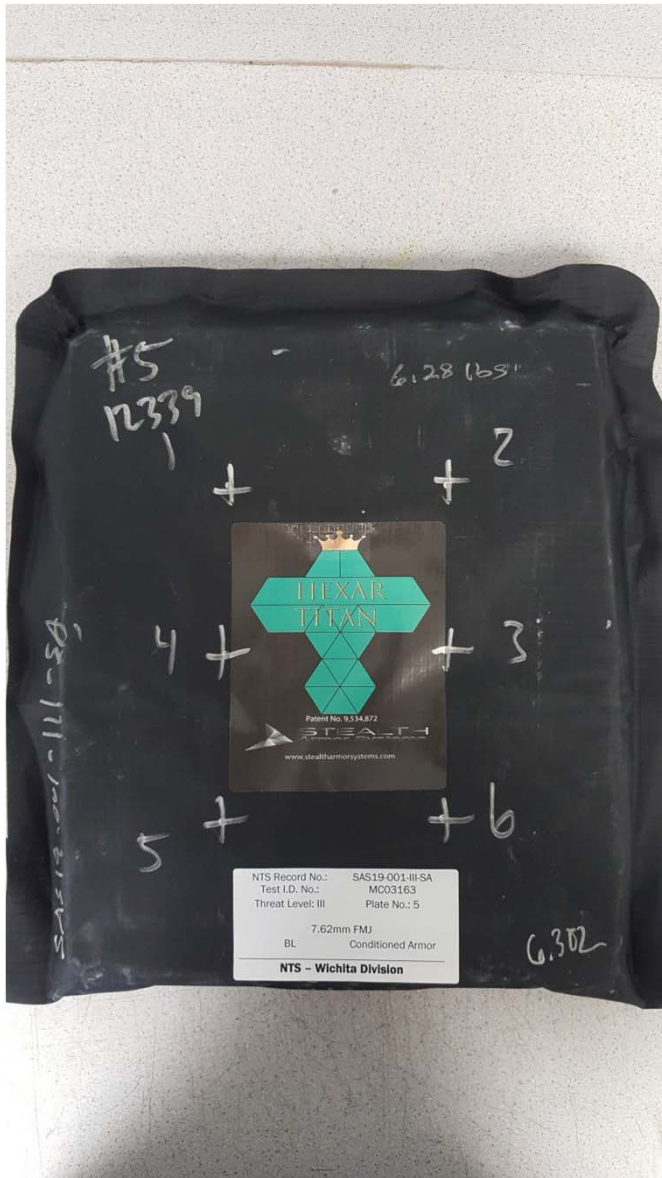
4-P-BFS Plate #1_Body Side_Post-test



5-P-BFS Plate #1_SF_Post-Test_No Cover



6-P-BFS Plate #1_Body Side_Post-Test_No Cover



7-BL Plate #5_SF_Pre-Test



8-BL Plate #5_Body Side_Pre-Test