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AUTHORITY
USA/FSTC ltr, 8 Nov 1979; USA/FSTC ltr, 8 Nov 1979

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DEVELOPMENT AND [redacted]CES
ABERDEEN PROVING GROUND, MARYLAND
FIRING RECORD

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OBJECT OF TEST: To Obtain Fragment Velocities with Related Masses, and Spatial Distribution of Fragments of Shell, HE, Soviet, 122mm, Models OF-471N, O-462A, and OF-462.

DATES OF TEST: FROM: 12 June 1952
TO: 27 April 1954

FIRING RECORD NO. B-11822, SHEET 1 of 5

AUTHORITY: MEMO, Chief, Library and Museum Branch, 4 March 1952

M.O. NO. 962-05-00-3

DEVELOPMENT: Project No. TB-3-0035

ehc

AMMUNITION 27 Apr 54

298p.

SHELL: Three each, HE, 122mm, Soviet, Model OF-471N, Filler TNT. (see photograph No. A78159, Incl. 5).

Three each, HE, 122mm, Soviet, Model O -462A, Filler - 90% Ammonium Nitrate, 10% TNT. (see photograph No. A78158, Incl. 5).

Three each, HE, 122mm, Soviet, Model OF-462, Filler - 80% Ammonium Nitrate, 20% TNT. (see photograph No. A78157, Incl. 5).

DETONATOR: Nine each, Detonator, Electric, M36.
Nine each, Detonator, M18.

GROUP 3
DOWNGRADED AT 12 YEAR INTERVALS
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TABULATION OF AMMUNITION WEIGHTS

RD NO.	DATE FIRED	LOADING	LOADED SHELL w/o FUZE (lbs)	COMPOSITION C_3 BOOSTER (lbs)	TETRYL PELLET (lbs)	SHELL AS FIRED (lbs)
		MODEL OF-471N				
14	14 April 53	TNT	54.50	0.15	0.013	54.66
15	24 April 53	TNT	54.61	0.15	0.013	54.77
16	21 May 53	TNT	54.77	0.16	0.013	54.94
		MODEL O-462A				
11	12 June 52	AT/90	46.06	0.15	0.013	46.22
17	4 June 53	AT/90	46.05	0.18	0.013	46.24
20	31 July 53	AT/90	46.18	0.16	0.013	46.35
		MODEL OF-462				
13	8 Oct 52	AT/80	45.64	0.11	0.013	45.76
18	30 June 53	AT/80	46.41	0.13	0.013	46.55
19	15 July 53	AT/80	45.66	0.18	0.013	45.85

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FACILITIES

A. TEST SET UP:

1. Board Panels: The facilities for obtaining spatial distribution were two panels, 9.00 feet in height, constructed on concentric, 180 degree arcs of 30 and 60 feet radii and positioned so that the panels include 360 degrees. Panel boards were one inch, dressed ponderosa pine (one inch dressed boards measure 25/32 inch). The panels were gridded and numbered in accordance with "Layout of Panels for Number and Distribution of Fragments" on pages 32 thru 40 of O.P.M. 40-23.

2. Ricochet Stop: A ricochet stop was provided for both radii midway from the center of the setup to each panel. Each forming an arc of 180°, and constructed to prevent richocheting fragments from impinging on the board panel.

3. Velicity Fragment Recovery: A recovery box 8' X 4' X 6', filled with a quantity of composition wallboard, each 48" X 96" X ½", and faced with a flash target of duralumin (.020 inch thick), was placed on its side approximately 23 feet from the center of the setup.

B. FRAGMENT VELOCITY MEASUREMENT:

A high speed motion picture camera, operating at approximately 8,000 frames per second, was used to photograph the flash target. The camera utilizes an electronic circuit, employing a frequency standard and a neon lamp, which causes exposed pips to appear on the film strip at time intervals of 0.001 second. Detonation of the shell is recorded on the film strip by reflection of the shell detonation flash from a mirror placed adjacent to the flash target; and or by the detonation flash of a small tetryl charge, placed so as to be visible by the camera, initiated electrically through a circuit in parallel with the composition C3 booster. The shell fragments perforating the flash target cause subjsequent individual flashes to appear. The intervals between the initial and each subsequent flash are converted to time intervals through the film calibration. The distance from the shell surface to the flash screen is used with the time intervals to compute the average velocity for each of the individual fragments. The flash target was placed so that the center was perpendicular to the shell axis at the center of gravity of each shell. Fragments perforating the flash target were recovered from the composition wallboard and identified as to weight and velocity. The recovered fragments are shown in photograph No. A97557 and No. A97558, Incl 5.

C. SHELL POSITION:

Each shell was horizontally suspended at a height of 4.50 feet (from the bottom of the panels), with the panel axis passing through the center of gravity of the shell. The nose end of the shell was oriented toward panels number one, with the projected shell axis in a radial plane containing the initial edge of panels number one.

[redacted]

[redacted]

D. STATIC DETONATION:

An M36 electric detonator and an M18 detonator were used with a 90 grain tetryl pellet and a composition C3 charge molded into the fuze booster cavity. Initiation was accomplished by energizing the firing line with the charge from a 120 volt firing line condenser.

E. RECORDING DATA:

Perforations and penetrations of the panel were measured and recorded as the numerators of the fractional dimensions in sixteenths of an inch. Perforations or penetrations having any dimension less than one sixteenth inch were not recorded. The spatial distribution of hits are represented by a plot on a gridded form. (Panel A, APG 11876-15 PR; Panel B, APG 11876-14 PR; both dated 27 October 1944).

ROUND-BY-ROUND DATA

Contained in Each Round:

1. Cover Sheet - Shell markings.
2. Velocities and Related Masses.
3. Measurements of Perforations and Penetrations.
4. Plot Sheets of Spatial Distribution.

Army Materiel Command
Foreign Science & Technology Center
Munitions Bldg. Washington 25, D.C.

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FIRING RECORD NO. B-11822
SHEET 4 of 5

SUMMARY

Table I

VELOCITY FRAGMENTS				HITS IN PANELS					
				30 ft RADIUS			60 ft RADIUS		
RD NO.	SAMPLE SIZE	AVG WT (grs)	AVG VEL (fps)	PERFS	PENS	% PERFS	PERFS	PENS	% PERFS
			MODEL OF-471N, TNT						
14	75	127.9	2805	127	366	25.8	40	163	19.7
15	74	116.0	2932	187	532	26.0	94	189	33.2
16	61	119.6	2985	114	260	30.5	55	149	27.0
AVG	70	121.3	2903	143	386	27.0	63	167	27.4
			MODEL O-462A, AT/90						
11	149	35.2	2393	319	1515	17.4	101	640	13.6
17	239	19.5	2565	387	1404	21.6	130	509	20.3
20	334	18.2	2376	426	2056	17.2	134	743	15.3
AVG	241	22.1	2444	377	1659	18.5	122	631	16.2
			MODEL OF-462, AT/80						
13	60	99.6	2968	185	279	39.9	97	84	53.6
18	71	106.4	2751	110	170	39.3	55	84	39.6
19	72	94.3	3044	124	216	36.5	54	75	41.9
AVG	68	100.1	2928	140	222	38.7	69	81	46.0

Table II

Average Density of Fragments In Panel Setup Per Square Yard

		30 ft RADIUS			60 ft RADIUS		
SHELL NUMBER	FILLER	PERFS	PENS	TOTAL	PERFS	PENS	TOTAL
14, 15 & 16	TNT	1.52	4.10	5.61	0.33	0.89	1.22
11, 17 & 20	AT/90	4.00	17.60	21.60	0.65	3.35	4.00
13, 18 & 19	AT/80	1.49	2.36	3.84	0.37	0.43	0.80

The panel boards were of one inch dressed ponderosa pine.

The velocities were measured over an average of approximately 22.75 feet.

[redacted]

FIRING RECORD NO. B-11822
SHEET 5 of 5

OBSERVATIONS

The Test Results Indicate That:

Shell, 122mm, Soviet, Model OF-471N, Filler TNT, will produce an average side fragment of 121.3 grains, with an initial velocity of 3106 fps, producing an average casualty range of approximately 83 feet. In the panel of 30 foot radius, 5.61 hits per square yard were inflicted, 1.52 of which were perforating. In the panel of 60 foot radius, 1.22 hits per square yard were obtained, 0.33 of which were perforating. The main fragment spray fell between 77 and 103 degrees from the nose of the shell.

Shell, 122mm, Soviet, Model O-462A, Ammonium Nitrate 90% - TNT 10%, will produce an average side fragment of 22.1 grains, with an initial velocity of 2762 fps, producing an average casualty range of approximately 75 feet. In the panel of 30 foot radius, 21.60 hits per square yard were inflicted, 4.00 of which were perforating. In the panel of 60 foot radius 4.00 hits per square yard were obtained, 0.65 of which were perforating. The main fragment spray fell between 77 and 106 degrees from the nose of the shell.

Shell, 122mm, Soviet, Model OF-462 , Ammonium Nitrate 80% - TNT 20%, will produce an average side fragment of 100.1 grains, with an initial velocity of 3069 fps, producing an average casualty range of approximately 82 feet. In the panel of 30 foot radius, 3.84 hits per square yard were inflicted, 1.49 of which were perforating. In the panel of 60 foot radius, 0.90 hits per square yard were obtained, 0.37 of which were perforating. The main fragment spray fell between 83 and 106 degrees from the nose of the shell.

NOTE: A perforation of the pine board panel is considered a casualty. A casualty producing fragment is considered as such, if, upon reaching the panel, the potential energy is 58 ft/lbs or greater (see TM 9-1907).

APPROVED:

BENJAMIN S. GOODWIN
Chief,
Arms & Am Div

CLAUDE E. BROWN
Chief, Bomb and
Fragmentation Branch

ORION L. ROGERS
Engineering Aide

FIRING RECORD NO. B-11822
INCLOSURE NO. 1

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FIRING RECORD NO. B-11822
INCLOSURE 2

AUTHORITY

Office Memorandum

Chief, Library and Museum Branch
4 March 1952 with one inclosure

B-11,922

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OFFICE MEMORANDUM:

TO : Chief, A&A Div. D&PS [redacted] DATE: 03Jarrett/mle/3296
4 March 1952

FROM : Chief, Library & Museum Branch

SUBJECT : Shell Fragment Identification

1. Attention is invited to the attached correspondence. This office has contacted the Director's office for permission to instigate this program. It is requested that Mr. Willan detonate possibly eight soviet projectiles to obtain velocities and patterns of the fragments. The Director's office says that this can be done on an inbetween basis by Mr. Willan, that he can give us the information as it becomes available.

2. If your office concurs we will appreciate such expeditious effort as is consistant with the present work load. Mr. Reed at extension 3296 will furnish the information as Mr. Willan requests it. Mr. Willan can discuss further details with the writer or Mr. Kempf.

/s/ Jarrett
G. B. JARRETT

1 Incl
1-ltr from EUSAK

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B-11822

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HEADQUARTERS
EIGHTH UNITED STATES ARMY KOREA (EUSAK)
Office of the Ordnance Officer
APO 301

KODP 386.3 12 February 1952

SUBJECT: Shell Fragment Identification.

APG 386.3/174

TO : Commanding General
Aberdeen Proving Ground
Maryland

1. EUSAK OTID teams have been using the draft copies of "Ready Reference Manual for the Identification of Soviet Shells and Shell Fragments" for the past three months. They report that the information contained in the manual has been of great assistance and value in their work. There are, however, additional features which they all agree should be included in the final version of the manual.

a. U.S. Shell and Shell Fragments. OTID personnel are frequently called upon to identify fragments of U.S. shells which have been fired by the enemy. Our combat troops are reluctant to accept such identification unless they can be shown the direct similarity between the fragments and either U.S. shell or drawings thereof. Accordingly, it seems highly desirable to include in the identification manual as a section, or prepare as a combination manual, appropriate discussion, drawings, and photographs pertaining to U.S. shells.

b. Seat Keying Indentations. Although keying indentations of rotating band seats appear on drawing sheets in the present manual, they are of reduced size and not suitable for use in the field. In a majority of cases in which OTID personnel are called on for fragment identification, on-the-spot identification is desired and time does not permit the use of mathematical computations. Therefore, a definite requirement exists for including in the manual full-scale, dimensioned drawings of keying indentations.

c. Fragment Radii. OTID personnel are frequently queried regarding the casualty-producing radius and the maximum fragment effectiveness areas of Soviet shells. All agree that data on these characteristics should be included in the manual.

2. Pending publication and issue of a revised manual which may include the additional features discussed above, it is requested that this office be furnished:

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B-118-2

a. Reproducible full-scale drawings of the keying indentations in the rotating band seats of all U.S. and Soviet artillery projectiles.

b. Data on the casualty-producing radius and the maximum fragment effectiveness areas of all Soviet high explosive shells.

FOR THE ORDNANCE OFFICER:

JOHN H. WEBER
Col, Ord Corps
Deputy Ord Officer

FIRING RECORD NO. B-11822

INCLOSURE NO. 3

ROUND-BY-ROUND DATA

FIRING RECORD NO. B-11822
INCLOSURE 3

ROUND NO. 14

CONFIDENTIAL

14 April 1953

SHELL, HE, 122mm, Soviet
MODEL, OF - 471N, (TNT)

SHELL MARKINGS

OBVERSE

H
635
32-45
122
++

REVERSE

T
OØ - 471H

BASE

179
79 45

Weight of Shell w/o Components- 54.50 lbs.
As Fired- 54.66 lbs.

Distance from Shell to the center of the 0.020" duralumin flash target- 22.67 ft.

Shell before firing is shown in APG Photograph No. A78159.

Recovered fragments with their respective weights and velocities are shown in APG Photograph No. A97558.

[redacted]

12

ORDBG-1109
Rev 12 Aug 52

B-11822

FRAGMENT VELOCITY DATA

[redacted]

Test of Shell, HE, Soviet, 122mm, TNT Side Recovery Box Data

Proof Director Mr. O. L. Rogers Date Fired 14 April 1953

Distance from detonation point to target 22.67 feet. Round No. 14

Round statically detonated and velocity obtained by Photographic Methods.

Fragment No.	Weight, Grains	Velocity, f/s	Fragment No.	Weight, Grains	Velocity, f/s	Fragment No.	Weight, Grains	Velocity, f/s
1	N.R.		17	N.R.	3276	33	0+	
2	151	2954	18	13	3276	34	2	
3	N.R.		19	15		35	1	
4	22		20	6		36	18	
5	398(2)	2983	21	2		37	93	2061
6	2		22	51	3173	38	N.R.	2498
7	7		23	98(2)	3173	39	956	3075
8	2		24	59	2351	40	225	2983
9	1		25	538	3123	41	57(2)	
10	55	2630	26	599	3173	42	496	2221
11	2	2856	27	812	2082	43	27	3075
12	110	2530	28	65	1886	44	55	2856
13	305	2897	29	11		45	439	2297
14	N.R.	3028	30	1		46	9	
15	25	2815	31	2		47	49	
16	1089	3123	32	3		48	407(3)	2562

Average velocity 2805 ft/sec.
NV - no velocity recorded.
NR - not recovered.

(2) - total weight of two pieces.
(n) - total weight of n pieces.

Individual velocity inaccuracies are less than ± 3.2 % for the highest velocity and ± 2.9 % for the lowest velocity.

Sheet ~~2~~ 1 of ~~16~~ 2

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[redacted]

ARMY - OD - ABERDEEN PROVING GROUND NO 354

ORDBG-11(C)
Rev 17 Aug 52

B-11822

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FRAGMENT VELOCITY DATA

Test of Shell, HE, Soviet, 122mm Side Recovery Box Data

Proof Director Mr. O. L. Rogers Date Fired 14 April 1953

Distance from detonation point to target 22.67 feet. Round No. 14

Round statically detonated and velocity obtained by Photographic Methods.

Fragment No.	Weight, Grains	Velocity, f/s	Fragment No.	Weight, Grains	Velocity, f/s	Fragment No.	Weight, Grains	Velocity, f/s
49	2		65	202	3507			
50	462		66	1				
51	47		67	19(2)				
52	5	2613	68	2				
53	4		69	5				
54	4		70	139(2)				
55	2		71	2				
56	705	2613	72	7				
57	3	3042						
58	9							
59	5							
60	326							
61	3	1979						
62	144	3224						
63	1	3224						
64	18(2)	3028						

Average velocity 2805 ft/sec.
NV - no velocity recorded.
NR - not recovered.

(2) - total weight of two pieces.
(n) - total weight of n pieces.

Individual velocity inaccuracies are less than ± 3.2 % for the highest velocity and ± 2.9 % for the lowest velocity. 2 2

Sheet ~~3~~ of ~~26~~

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ARMY - OR - ABERDEEN PROVING GROUND MD 354

B-11822

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ORDBB-737 19 FEB 48
FORMERLY SPOTZ-F-201

PENETRATIONS OF SHELLS IN PANELS

ACT NUM
FIRING ROCKET NUMBER
PRIORITY NUMBER
DATE 14 Apr 53
XXXXXXXXX Sheet 1 of 13
XXXXXXXXX Round No. 14
ROCKET NUMBER

PENETRATIONS OF SHELL 122mm, OF-471N LOADED TNT
Soviet
IN PANELS WITH RADII OF 30' AND FEET

PANEL NUMBERS	PERFORATIONS LENGTH	PERFORATIONS WIDTH	PENETRATIONS LENGTH	PENETRATIONS WIDTH	PENETRATIONS DEPTH
8			1	1	1
			1	1	1
			1	1	1
Total					3
9			7	5	2
Total					1
12			2	1	1
Total					1
14			1	1	1
Total					1
16			1	1	3
Total					1
21			1	1	1
Total					1
			1	1	2
			1	1	1
Total					2
	3	2	2	1	2
			3	2	4
			1	1	1
		1			3
			1	1	1
			1	1	3
					2

PANEL NUMBERS	PERFORATIONS LENGTH	PERFORATIONS WIDTH	PENETRATIONS LENGTH	PENETRATIONS WIDTH	PENETRATIONS DEPTH
25	3	1	4	3	6
			2	2	2
			2	1	1
Total		1			3
26	6	4	1	1	1
	4	4	2	1	3
	8	2	2	2	4
			6	3	7
Total		3			4
27	21	12	2	1	2
	2	1	2	1	1
	13	6	6	2	3
	9	4	3	2	9
	6	3	1	1	1
	4	3			
	24	10			
	24	6			
	10	5			
	3	2			
	4	3			
Total		11			5
28	14	4	3	2	4
	5	4	6	2	4
	6	3	2	1	1
	35	10	1	1	1
	11	6	3	2	4
Total		5			5
29	9	5	1	1	1
	10	6	1	1	1
	14	4	4	2	4

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B-11822

ORDBG-737 10 FEB 48
FORMERLY SPOTZ-F-291

PENETRATIONS OF SHELLS IN PANELS

DATE 14 Apr 53

FIRING R[illegible] NUMBER

PRIORITY NUMBER

XXXXXXXX Sheet 2 of 13

XXXXXXXX Round No. 14

ROCKET NUMBER

PENETRATIONS OF SHELL 122mm, OF-471N LOADED TNT

IN PANELS WITH RADII OF Soviet 30' AND FEET

PANEL NUMBERS	PERFORATIONS		PENETRATIONS		
	LENGTH	WIDTH	LENGTH	WIDTH	DEPTH
29	4	3	1	1	1
Total		4			4
30	50	10	1	1	2
	64	16	5	3	4
	4	3	2	2	2
Total		3			3
31	4	3	1	1	1
	8	2	1	1	1
	3	2	1	1	1
	17	7	4	2	6
Total		4			4
32	4	3	2	1	3
	8	3	2	1	2
	14	9	4	1	4
	15	8			
	10	4			
	5	3			
	6	4			
	4	4			
	24	9			
	13	11			
	10	5			
	9	5			
	12	8			
	5	4			
Total		14			
33	4	3	4	3	5
	8	6	1	1	4
	7	3	2	1	2
	11	7	1	1	1

PANEL NUMBERS	PERFORATIONS		PENETRATIONS		
	LENGTH	WIDTH	LENGTH	WIDTH	DEPTH
33	10	16	2	1	2
	10	5	2	1	1
	5	2	2	1	1
	10	5	3	2	4
	29	7	2	1	1
	6	4			
	9	7			
Total		11			9
34	22	12	1	1	1
	14	8	1	1	1
	11	6	2	1	1
	45	10	3	1	1
	15	8	1	1	1
	12	6	5	1	4
	11	6	5	3	4
	12	5			
	9	7			
	4	4			
	32	8			
	54	18			
	20	9			
Total		13			7
35	6	4	3	2	2
	24	8	6	4	6
	8	6	8	4	5
	12	7	3	1	1
	22	8	2	2	6
	26	6	1	1	1
	8	6	1	1	1
	4	2	6	2	2
	7	3	1	1	1
	[redacted]	4	1	1	1

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ORDBG-737 19 FEB 45
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PENETRATIONS OF SHELLS IN PANELS

LOT NUMBER
FIRING RECORD NUMBER
PRIORITY NUMBER
XXXXXXXX Sheet 3 of 13
XXXXXXXXX Round No. 14
ROCKET NUMBER

DATE 14 Apr 53

PENETRATIONS OF SHELL 122mm, OF-471N LOADED TNT
Soviet
IN PANELS WITH RADII OF 30' AND FEET

PANEL NUMBERS	PERFORATIONS LENGTH	PERFORATIONS WIDTH	PENETRATIONS LENGTH	PENETRATIONS WIDTH	PENETRATIONS DEPTH
Total		10			10
36	7	5	1	1	1
	8	4	4	2	5
	5	4	1	1	1
	5	5	2	2	5
			1	1	1
			3	2	5
			4	2	9
Total		4			7
37	16	11	2	2	2
	4	3	5	3	5
	17	12	3	1	4
Total		3			3
38	20	10	1	1	1
	8	6	2	1	1
			1	1	1
Total		2			3
39	24	8	2	1	2
	20	16	1	1	1
			2	1	2
			7	3	4
			1	1	1
Total		2			5
40	6	4	2	1	2
	6	6	3	1	1
			1	1	1
			2	1	1
			2	1	1
			2	1	1

PANEL NUMBERS	PERFORATIONS LENGTH	PERFORATIONS WIDTH	PENETRATIONS LENGTH	PENETRATIONS WIDTH	PENETRATIONS DEPTH
			3	1	1
Total		2			7
41	8	4	2	1	3
			3	2	4
			1	1	1
			2	1	1
Total		1			4
42			2	1	2
			2	2	1
Total					2
43			2	1	1
			4	2	3
			1	1	1
			1	1	1
			1	1	1
Total					5
44	6	4	3	1	2
			3	2	2
			4	1	1
			2	1	1
			1	1	1
			2	1	1
			6	4	7
			3	1	2
			2	1	1
			1	1	1
Total		1			10
					17

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ARMY—OB—ABERDEEN PROVING GROUND MD—445

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ORDBG-737 19 FEB 49
FORMERLY SPOTZ-F-291

PENETRATIONS OF SHELLS IN PANELS

LOG NUMBER | DATE 14 Apr 53
FIRING ROUND NUMBER
PRIORITY NUMBER
XXXXXXXX Sheet 4 of 13
XXXXXXXXX Round No. 14
ROCKET NUMBER

PENETRATIONS OF SHELL 122mm, OF-471N LOADED TNT
IN PANELS WITH RADII OF Soviet 30' AND FEET

PANEL NUMBERS	PERFORATIONS LENGTH	PERFORATIONS WIDTH	PENETRATIONS LENGTH	PENETRATIONS WIDTH	PENETRATIONS DEPTH
45	6	4	1	1	1
			4	3	2
			2	2	1
			1	1	1
			2	1	1
			7	4	4
			4	2	3
			2	1	2
			1	1	1
			2	1	2
			1	1	1
			1	1	1
			3	2	2
			2	1	2
			2	1	1
			1	1	1
			4	4	2
			2	1	1
			2	1	1
			1	1	1
Total		1			20
46	4	3	2	1	1
	8	4	3	1	1
			2	1	2
			3	1	1
			1	1	1
			4	1	3
			3	2	1
			1	1	1
			4	1	2
			4	1	3
			2	1	1
			1	1	2

PANEL NUMBERS	PERFORATIONS LENGTH	PERFORATIONS WIDTH	PENETRATIONS LENGTH	PENETRATIONS WIDTH	PENETRATIONS DEPTH
46 cont			2	1	1
			2	1	2
			1	1	1
			1	1	1
			1	1	2
			2	1	2
			3	1	5
Total		2			19
47	8	5	4	4	3
	8	4	2	1	2
			4	2	1
			4	2	2
			3	2	1
			2	1	1
			3	2	2
			1	1	1
			5	1	2
			2	1	1
			1	1	1
			3	2	3
			1	1	1
			4	3	4
			5	3	1
			1	1	1
Total		2			16
48	7	3	1	1	1
	12	7	3	2	4
			2	1	1
			1	1	1
			1	1	1
[redacted]			2	1	1
			3	2	2

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ARMY—OD—ABERDEEN PROVING GROUND, MD. 445

ORDBG-737 19 FEB 48
FORMERLY SPOTS-F-291

PENETRATIONS OF SHELLS IN PANELS

DATE 14 Apr 53

PENETRATIONS OF SHELL 122mm, OF-471N LOADED TNT

IN PANELS WITH RADII OF Soviet 30' AND FEET

XXXXXXX Sheet 5 of 13
XXXXXXX Round No. 14

PANEL NUMBERS	PERFORATIONS		PENETRATIONS		
	LENGTH	WIDTH	LENGTH	WIDTH	DEPTH
			2	1	1
			1	1	1
Total		2			9
49	4	2	2	1	4
			3	1	2
			2	1	1
			1	1	1
			2	1	1
			4	2	8
Total		1			6
50			3	2	3
			4	2	2
			2	1	2
			2	1	2
			1	1	1
			5	4	2
Total					6
51			4	2	4
			1	1	1
			2	1	2
			1	1	1
			1	1	1
			4	2	2
			2	1	2
			1	1	1
Total					8
52			2	2	2
			3	2	1
			2	2	1
			2	1	1

PANEL NUMBERS	PERFORATIONS		PENETRATIONS		
	LENGTH	WIDTH	LENGTH	WIDTH	DEPTH
52			1	1	1
			2	1	1
			2	1	2
			4	2	8
			4	2	4
			2	1	2
			2	1	1
			3	1	2
			5	3	5
			6	4	5
			4	3	4
			2	1	1
			1	1	1
			3	2	2
			1	1	1
Total					19
53	5	2	1	1	1
			1	1	1
			4	1	3
			2	1	1
			2	1	1
			5	2	4
			2	1	1
			1	1	1
			2	1	1
			4	2	4
			4	3	2
			3	1	2
			1	1	1
			1	1	1 19
Total		1			14

ARMY-OB-ABERDEEN PROVING GROUND MD 444

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ORDBG-737 19 FEB 49
FORMERLY SPOTS-F-281

PENETRATIONS OF SHELLS IN PANELS

DATE 14 Apr 53

FIRING REQUEST NUMBER

PRIORITY NUMBER

XXXXXXXX Sheet 6 of 13

XXXXXXXX Round No. 14

ROCKET NUMBER

PENETRATIONS OF SHELL 122mm, OF-471N LOADED TNT

IN PANELS WITH RADII OF Soviet 30' AND FEET

PANEL NUMBERS	PERFORATIONS LENGTH	PERFORATIONS WIDTH	PENETRATIONS LENGTH	PENETRATIONS WIDTH	PENETRATIONS DEPTH
54			2	2	2
			2	1	1
			1	1	1
			2	1	2
			2	1	3
			8	3	4
			1	1	1
			5	1	2
Total					8
55			1	1	1
			2	1	1
			4	2	1
			2	1	2
			1	1	1
			1	1	1
			4	3	6
Total					7
56	8	4	1	1	1
			3	2	1
			1	1	1
			4	3	2
			16	4	2
			6	1	2
Total		1			6
57			2	1	1
			1	1	1
			1	1	1
			1	1	1
			1	1	1
			4	3	3
Total					6

PANEL NUMBERS	PERFORATIONS LENGTH	PERFORATIONS WIDTH	PENETRATIONS LENGTH	PENETRATIONS WIDTH	PENETRATIONS DEPTH
58.1			2	1	3
			3	2	4
			2	1	1
Total					3
58.2			3	1	1
			1	1	1
Total					2
58.3			3	2	1
			3	4	4
			1	1	1
Total					3
58.4			3	2	2
			1	1	1
Total					2
58.5			1	1	1
Total					1
58.6			4	2	4
Total					1
59.1			2	1	1
Total					1
59.2			2	1	1
			4	1	1
			4	1	2
Total					3
					20
[redacted]					

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ARMY-OB ABERDEEN PROVING GROUND MD 445

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ORDBG-737 10 FEB 48
FORMERLY ORDTZ-F-201

PENETRATIONS OF SHELLS IN PANELS

LOT NUMBER | DATE 14 Apr 53
FIRING REC[illegible] NUMBER
PRIORITY NUMBER
~~xxxxxxxx~~ Sheet 7 of 13
~~xxxxxxxx~~ Round No. 14
ROCKET NUMBER

PENETRATIONS OF SHELL 122mm, OF-471N LOADED TNT
Soviet
IN PANELS WITH RADII OF 30' AND FEET

PANEL NUMBERS	PERFORATIONS		PENETRATIONS		
	LENGTH	WIDTH	LENGTH	WIDTH	DEPTH
59.3			4	2	2
Total					1
59.4	7	3	2	1	2
Total		1			1
59.6	9	5			
Total		1			
60.1			3	2	2
			1	1	1
Total					2
60.2			4	2	1
			2	2	2
			1	1	1
Total					3
60.3			1	1	1
			3	1	1
			1	1	1
			1	1	1
			2	1	2
Total					5
60.4	16	16	2	1	2
Total		1			1
60.6			4	2	5
			5	3	4
			1	1	1
Total					3

PANEL NUMBERS	PERFORATIONS		PENETRATIONS		
	LENGTH	WIDTH	LENGTH	WIDTH	DEPTH
61.1	6	3	1	1	1
	3	3	5	2	4
			1	1	1
			1	1	1
Total		2			4
61.2	30	21	4	2	2
			1	1	1
			4	2	2
Total		1			3
61.3	16	10	2	2	2
	6	4	1	1	1
			4	4	6
			2	1	1
Total		2			4
61.5			3	2	4
			3	1	2
			5	3	2
Total					3
61.6	24	6	1	1	1
	20	14	1	1	1
			1	1	1
Total		2			3
62.1	5	4			
Total		1			
62.2			4	1	2
			1	1	1
			2	2	2
			1	1	1

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ARMY-OLL-ABERDEEN PROVING GROUND MD 744

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ORDBG-737 1st FEB 48
FORMERLY SPOTZ-P-281

PENETRATION OF SHELLS IN PANELS

LOG NUMBER

FIRING NUMBER

PRIORITY NUMBER

DATE 14 Apr 53

XXXXXXX Sheet 8 of 13

XXXXXXX Round No. 14

ROCKET NUMBER

PENETRATIONS OF SHELL 122mm, OF-471N LOADED TNT

IN PANELS WITH BACK OF Soviet 30' AND FEET

PANEL NUMBERS	PERFORATIONS		PENETRATIONS		
	LENGTH	WIDTH	LENGTH	WIDTH	DEPTH
62.2					
Total					4
62.3	12	10	5	2	4
			2	1	2
			1	1	1
Total		1			3
62.4			6	2	4
			2	1	1
			1	1	1
			2	2	2
			6	4	2
			2	2	1
			2	1	1
Total					7
62.5	8	4	1	1	1
			4	2	2
			1	1	1
Total		1			3
62.6			3	2	1
			5	3	4
Total					2
63.1	7	4	8	3	5
			2	1	3
			1	1	1
Total		1			3

PANEL NUMBERS	PERFORATIONS		PENETRATIONS		
	LENGTH	WIDTH	LENGTH	WIDTH	DEPTH
63.2	14	5	1	1	1
	9	2	6	4	4
	23	14	1	1	1
	21	21	4	2	3
			2	2	3
			1	1	1
			3	2	3
			1	1	1
			4	4	2
			5	3	4
			2	1	2
			1	1	1
Total		4			12
63.3	4	2	1	1	1
			2	1	1
			1	1	1
			4	3	3
			3	2	3
Total		1			8
63.4	25	21	23	3	2
	6	5	1	1	1
			1	1	1
			4	1	3
			3	1	1
			2	1	1
			12	5	4
Total		2			7
63.5			2	1	1
			2	1	1
			4	4	3
			1	1	1

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ORDBG-737 10 FEB 46
FORMERLY SPOTZ-F-294

PENETRATIONS OF SHELLS IN PANELS

DATE 14 Apr 53

PENETRATIONS OF SHELL 122mm, OF-471N LOADED TNT

IN PANELS WITH RADII OF Soviet 30' AND FEET

Sheet 9 of 13

Round No. 14

PANEL NUMBERS	PERFORATIONS		PENETRATIONS		
	LENGTH	WIDTH	LENGTH	WIDTH	DEPTH
63.5					
Total					4
63.6	20	13	3	2	1
			1	1	1
			5	3	4
			1	1	1
			2	2	2
Total		1			5
	TOTALS				
30' Radius		127			366

PANEL NUMBERS	PERFORATIONS		PENETRATIONS		
	LENGTH	WIDTH	LENGTH	WIDTH	DEPTH

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[redacted]

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ORDBG-737 10 FEB 48
FORMERLY SPOTS-F-291

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PENETRATIONS OF SHELLS IN PANELS

SHOT NUMBER	DATE 14 Apr 53
FIRING RECORD NUMBER	
PRIORITY NUMBER	
XXXXXXXXX Sheet 10 of 13	
XXXXXXXXX Round No. 14	
ROCKET NUMBER	

PENETRATIONS OF SHELL 122mm, OF-471N LOADED TNT

IN PANELS WITH RADII OF Soviet 60' AND FEET

PANEL NUMBERS	PERFORATIONS LENGTH	PERFORATIONS WIDTH	PENETRATIONS LENGTH	PENETRATIONS WIDTH	PENETRATIONS DEPTH
1.2			1	1	1
Total					1
2.2			2	1	1
Total					1
4.1			3	1	1
Total					1
7			1	1	1
Total					1
14			1	1	1
Total					1
15			2	1	2
Total					1
17			5	2	1
Total					1
20			1	1	1
Total					1
21			2	1	2
			2	1	2
Total					2
25			2	1	1
			2	1	1
Total					2
26			2	1	1
Total					1

PANEL NUMBERS	PERFORATIONS LENGTH	PERFORATIONS WIDTH	PENETRATIONS LENGTH	PENETRATIONS WIDTH	PENETRATIONS DEPTH
27			3	1	1
			2	1	1
			2	1	4
Total					3
28			5	3	6
			3	2	3
			1	1	1
			2	2	2
			2	1	1
			1	1	1
			1	1	1
Total					7
29	30	11	1	1	1
	8	6	3	2	1
			1	1	1
Total		2			3
30	44	14	8	3	2
			1	1	1
			1	1	1
			10	3	2
			12	3	5
			4	2	3
			1	1	1
			4	4	8
			2	1	1
			5	4	5
			5	3	3
			3	2	4
Total		1			12
[redacted]					

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ARMY-OD-ABERDEEN PROVING GROUND MD 445

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ORDSG-737 10 FEB 46
FORMERLY SPOTZ-F-281

PENETRATIONS OF SHELLS IN PANELS

CONFIDENTIAL

TEST NUMBER	DATE 14 Apr 53
FIRING RANGE NUMBER	
PRIORITY NUMBER	
XXXXXXXX Sheet 11 of 13	
XXXXXXXXXX Round No. 14	
ROCKET NUMBER	

PENETRATIONS OF SHELL 122mm, OF-471N LOADED TNT

IN PANELS WITH RADII OF Soviet 60' AND FEET

PANEL NUMBERS	PERFORATIONS LENGTH	PERFORATIONS WIDTH	PENETRATIONS LENGTH	PENETRATIONS WIDTH	PENETRATIONS DEPTH
31	14	6	1	1	1
	21	6	12	8	3
			4	3	2
			4	3	2
			1	1	1
Total		2			5
32	40	11	4	3	3
			1	1	1
			1	1	1
			4	2	2
			2	2	2
			1	1	1
Total		1			6
33	5	2	7	4	8
	8	7	9	4	4
			1	1	1
			12	4	5
			7	4	6
			1	1	1
			1	1	1
			1	1	1
Total		2			8
34	5	4	3	3	2
	11	8	5	3	3
	9	6	6	4	6
	8	2	4	4	5
	6	5	4	3	3
	34	6	2	1	1
	38	20	4	3	8
			1	1	1
			4	3	3

PANEL NUMBERS	PERFORATIONS LENGTH	PERFORATIONS WIDTH	PENETRATIONS LENGTH	PENETRATIONS WIDTH	PENETRATIONS DEPTH
34			4	3	2
			2	1	1
			2	2	2
			3	2	2
			1	1	1
Total		7			14
35	24	10	1	1	1
	6	4	4	3	2
	8	5	1	1	1
	8	4	1	1	1
	12	5	2	1	1
	12	4	1	1	1
	11	5	1	1	1
			2	2	2
			3	2	4
Total		7			9
36	9	6	3	2	2
	6	3	3	2	1
	16	12	3	2	2
	8	3	1	1	1
	14	8	2	2	2
	22	14	5	1	1
			1	1	1
			2	2	1
			2	1	1
Total		6			9
37			1	1	1
			2	2	1
			2	2	1
Total					3

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ORDBG-737 10 FEB 49
FORMERLY SPOTZ-F-281

PENETRATIONS OF SHELLS IN PANELS

SHOT NO. [redacted] DATE 14 Apr 53
FIRING RECORD NUMBER
PRIORITY NUMBER
[redacted] Sheet 12 of 13
[redacted] Round No. 14
ROCKET NUMBER

PENETRATIONS OF SHELL 122mm, OF-471N LOADED TNT
IN PANELS WITH RADII OF Soviet 60' AND FEET

PANEL NUMBERS	PERFORATIONS LENGTH	PERFORATIONS WIDTH	PENETRATIONS LENGTH	PENETRATIONS WIDTH	PENETRATIONS DEPTH
38			7	3	6
Total					1
40			7	5	7
			3	2	2
Total					2
42			6	5	10
			6	2	2
Total					2
44			4	2	3
Total					1
45	6	5			
	6	4			
Total		2			
48	12	8	2	1	1
			2	1	1
			3	1	2
			4	2	1
			3	1	1
Total		1			5
48			1	1	1
			3	2	2
			2	2	1
			2	2	2
Total					4
50			4	2	2
			1	1	1
			1	1	1

PANEL NUMBERS	PERFORATIONS LENGTH	PERFORATIONS WIDTH	PENETRATIONS LENGTH	PENETRATIONS WIDTH	PENETRATIONS DEPTH
50			1	1	1
Total					4
51			4	2	4
			1	1	1
			4	2	5
Total					3
52			1	1	1
			3	2	2
Total					2
53			6	3	3
Total					1
54	5	4	6	2	1
			2	1	1
Total		1			2
55			2	2	2
Total					1
56			1	1	1
Total					1
57			7	4	3
Total					1
58.2			2	2	2
Total					1
58.3			6	3	3
Total					1

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R-11252

ORDBB-787 10 FEB 48
FORMERLY SPOTZ-F-291

PENETRATIONS OF SHELLS IN PANELS

LOT NUMBER | DATE 14 Apr 53
FIRING RECORD NUMBER
PRIORITY NUMBER
XXXXXXX Round No. 14
XXXXXXX Sheet 13 of 13
ROCKET NUMBER

PENETRATIONS OF SHELL 122mm, OF-471N LOADED TNT
IN PANELS WITH RADII OF Soviet 60' AND FEET

PANEL NUMBERS	PERFORATIONS LENGTH	PERFORATIONS WIDTH	PENETRATIONS LENGTH	PENETRATIONS WIDTH	PENETRATIONS DEPTH
59.1			4	4	1
			1	1	1
Total					2
59.3			6	2	1
			1	1	2
Total					2
60.2	24	14			
Total		1			
60.3	12	10			
Total		1			
61.2	16	10			
Total		1			
61.3			4	3	6
			5	3	4
			4	3	2
			4	4	3
			1	1	1
			2	1	1
Total					6
62.1			2	2	1
Total					1
62.2	8	5	7	4	2
			2	2	1
Total		1			2
62.3			3	2	2
			1	1	1

PANEL NUMBERS	PERFORATIONS LENGTH	PERFORATIONS WIDTH	PENETRATIONS LENGTH	PENETRATIONS WIDTH	PENETRATIONS DEPTH
62.3			2	2	1
			1	1	1
			2	2	2
			2	2	2
			1	1	1
			1	1	1
			2	2	2
Total					9
63.1	19	14	1	1	1
	17	8	4	3	3
			2	1	1
			2	1	1
Total		2			4
63.2	8	3	2	1	1
	24	20	3	1	3
			4	2	2
			1	1	1
			5	2	3
			5	3	3
			5	3	3
			2	1	1
			2	1	1
Total		2			9
63.3			2	1	1
			7	3	7
			2	2	1
			2	1	1
Total					4
TOTALS					
60' Radius		40			163

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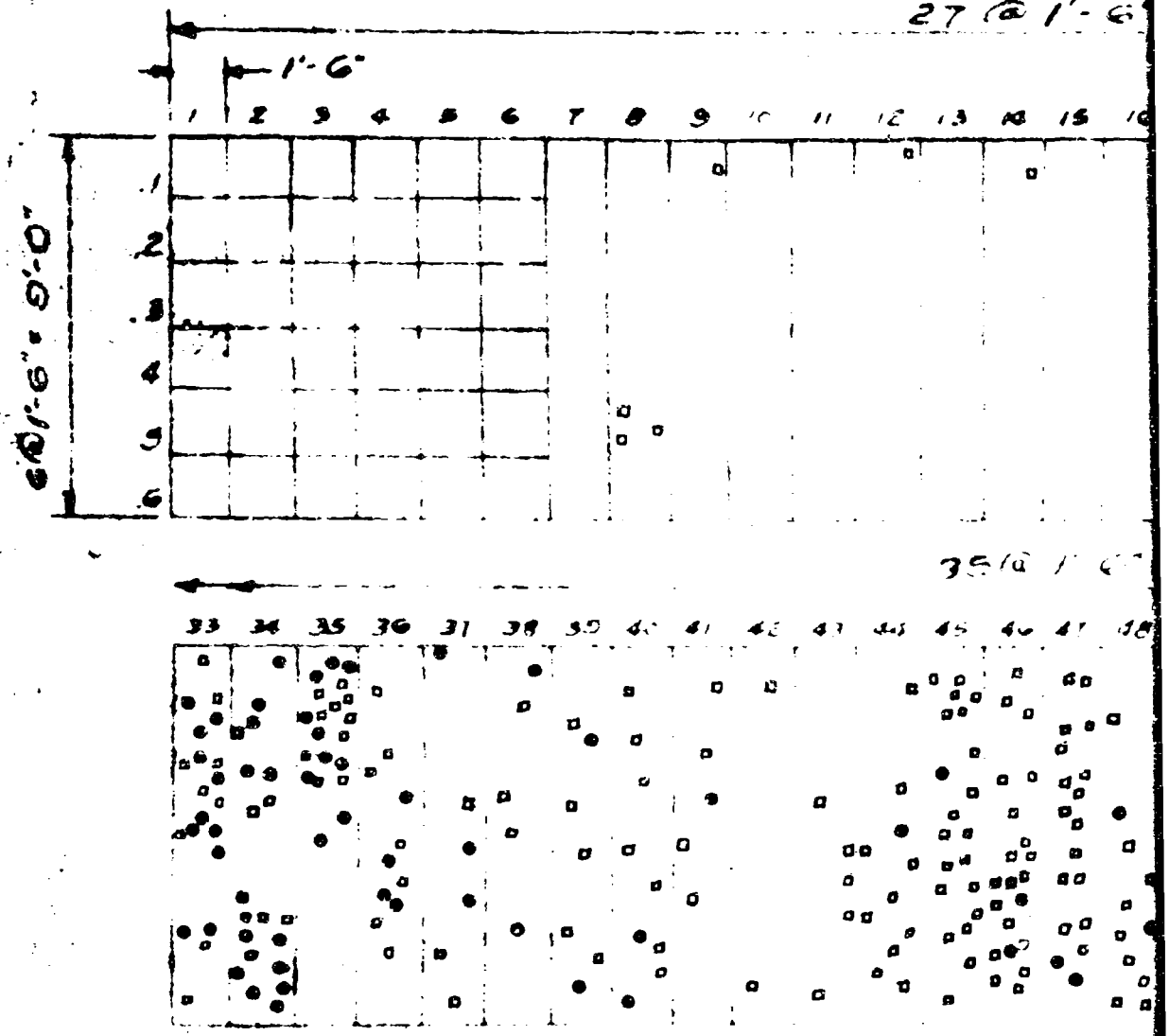
1

CONFIDENTIAL PANEL

30 FT RADIUS



1" NO. 3 PINE BOARDS (DRESSED) PL

DATE 4-14-53 RD.NO. 14 PERFORATIONS

SHELL 122 MM SOVIET PENETRATIONS

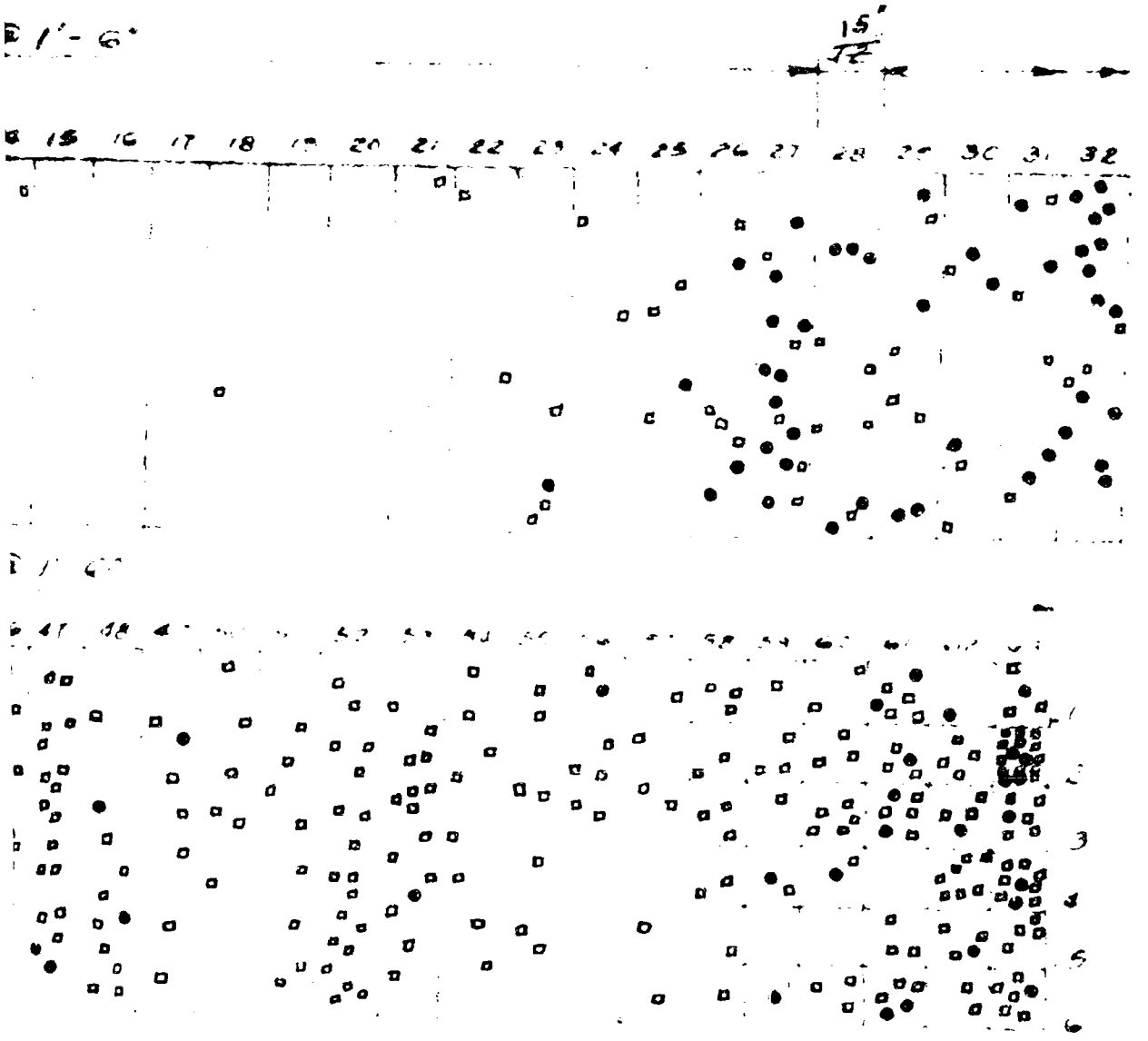
SUSPENSION HORIZONTAL

CONFIDENTIAL

2

NEL A

ADIUS 180° ARC



PLACED VERTICALLY

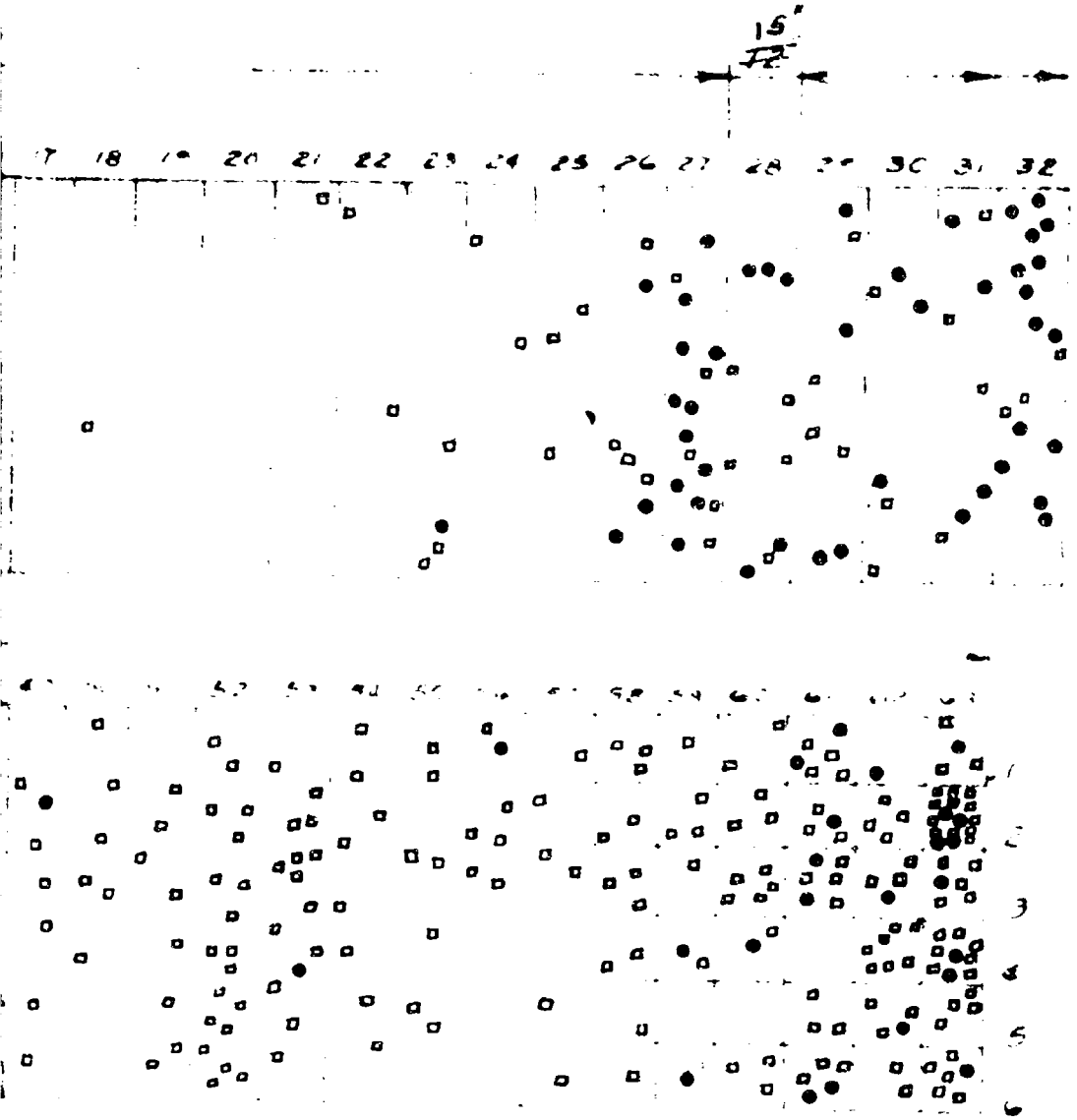
IONS 127 ●

IONS 366 □

RANGE OPERATIONS SECTION

LAYOUT OF PANELS
FOR
NUMBER AND DISTRIBUTION
OF FRAGMENTS
(30 FT RADIUS)

180° ARC



127 ●

366 □

RANGE OPERATIONS SECTION

[illegible] OF [illegible]NELS

FOR

NUMBER AND DISTRIBUTION

OF FRAGMENTS

([illegible] FT [illegible])

[illegible]

[illegible]

3

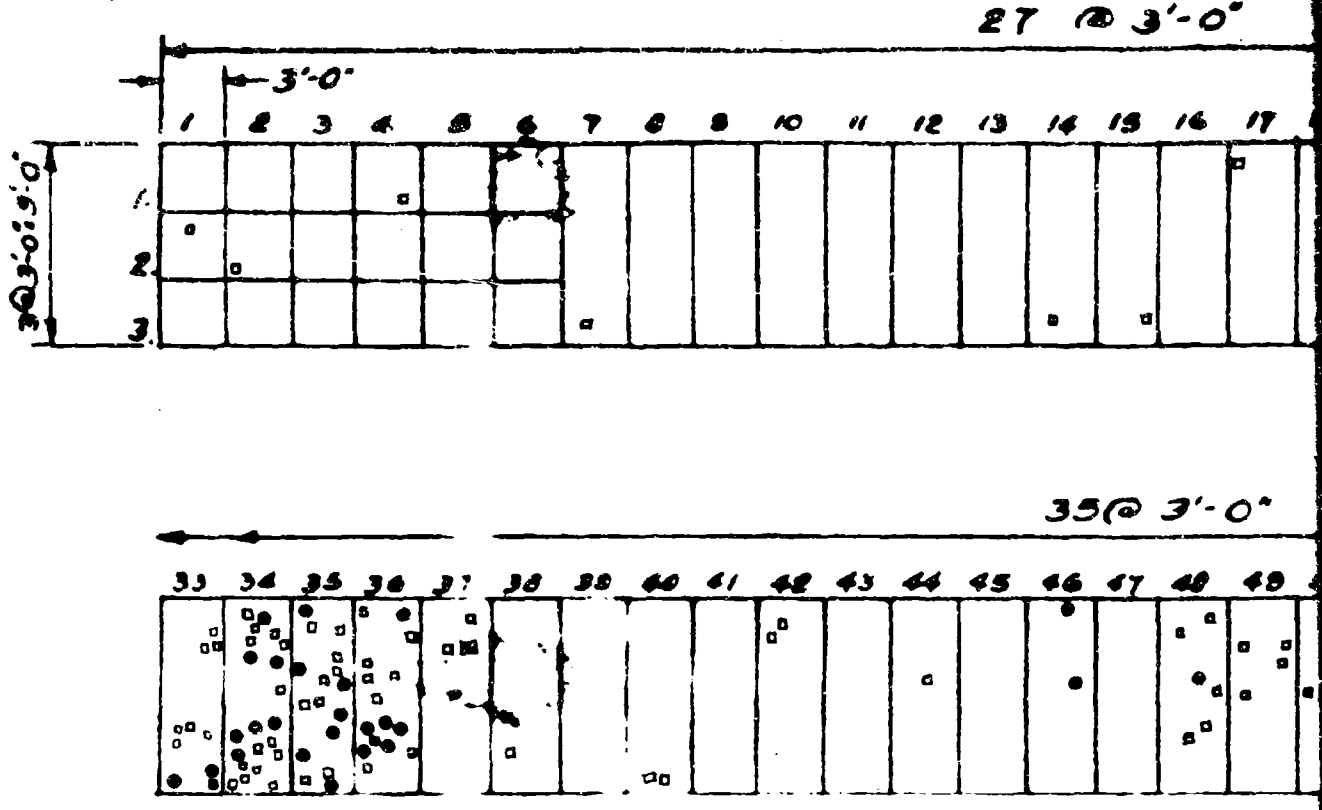
14 B

B-11822

1

[redacted] PANEL B

80 FT. RADIUS K



1" NO. 3 PINE BOARDS (DRESSED) PLACE

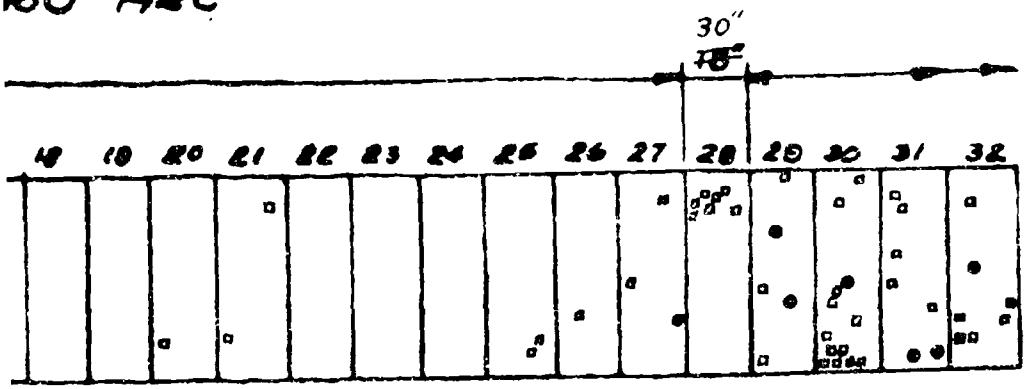
DATE 4-14-53 RD. NO. 14 PERFORATIONS 40

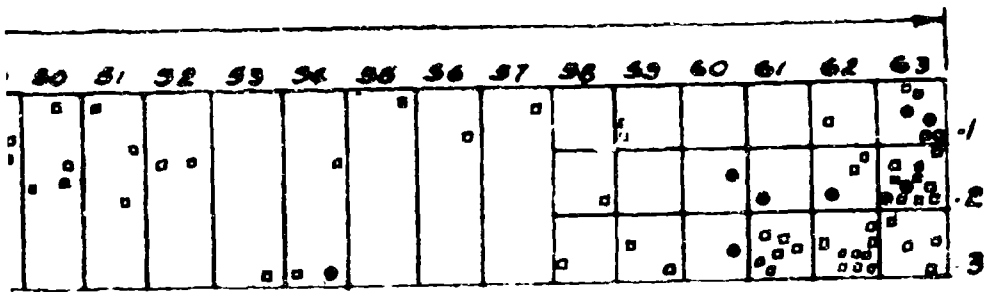
SHELL 122 MM SOVIET PENETRATIONS 163

SUSPENSION HORIZONTAL

CONFIDENTIA

180° ARC





2

ED VERTICALLY.

RANGE OPERATIONS SECTION

LAYOUT OF PANELS
FOR
NUMBER AND DISTRIBUTION
OF FRAGMENTS
(60 FT. RADIUS)

27B

ABERDEEN PROVING GROUND, MD.
OCT 27, 1944 APG 11876-14 PR

[illegible] NO. B-11822
[illegible] 3

ROUND NO. 15

24 April 1953

SHELL, HE, 122mm, Soviet
MODEL, OF - 471N, ([illegible])

SHELL [illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

Weight of Shell w/o [illegible] - [illegible] lbs.
[illegible] - [illegible] lbs.

Distance from Shell [illegible] in flash target - [illegible] ft.

Shell before [illegible]

Recovery [illegible] their [illegible] and velocities are shown in
AFG [illegible]

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[redacted]

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FRAGMENT VELOCITY DATA

Test of Shell, HE, Soviet, 122mm .TNT Side Recovery Box Data

Proof Director Mr. O. L. Rogers Date Fired 24 April 1953

Distance from detonation point to target 22.67 feet, Round No. 15

Round statically detonated and velocity obtained by Photographic Methods.

Fragment No.	Weight, Grains	Velocity, f/s	Fragment No.	Weight, Grains	Velocity, f/s	Fragment No.	Weight, Grains	Velocity, f/s
1	3		17	N.R.		33	N.R.	
2	N.R.		18	1	2781	34	25	
3	3	2997	19	54	3245	35	433	2076
4	24		20	22	3115	36	183	2105
5	277	3245	21	180	2257	37	173	2105
6	27		22	2	2938	38	744	2257
7	4		23	24	3115	39	N.R.	2938
8	N.R.	3245	24	586	3313	40	2	
9	4		25	24	3313	41	N.R.	
10	3		26	04		42	N.R.	
11	N.R.	3054	27	60	3313	43	517(2)	2105
12	316	3115	28	2	3313	44	60	2022
13	13		29	N.R.	3245	45	3	
14	82	3386	30	24	2995	46	50	
15	11	3313	31	67(2)	3178	47	N.R.	
16	183	3313	32	52		48	N.R.	

Average velocity 2932 ft/sec.
NV - no velocity recorded.
NR - not recovered.
(2) - total weight of two pieces.
(n) - total weight of n pieces.

Individual velocity inaccuracies are less than ± 4.2 % for the highest velocity and ± 3.3 % for the lowest velocity.

Sheet 1 of 2

21

[redacted]

ORDBG-1109
Rev 17 Aug 53

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FRAGMENT VELOCITY DATA [redacted]

Test of Shell, HE, Soviet, 122mm Side Recovery Box Data

Proof Director Mr. O. L. Rogers Date Fired 24 April 1953

Distance from detonation point to target 22.67 feet. Round No. 15

Round statically detonated and velocity obtained by Photographic Methods.

Fragment No.	Weight, Grains	Velocity, f/s	Fragment No.	Weight, Grains	Velocity, f/s	Fragment No.	Weight, Grains	Velocity, f/s
49	1		65	51	2639	81	23	3115
50	N.R.		66	18		82	0+	2938
51	N.R.		67	4		83	3	
52	1		68	1		84	1	
53	122		69	9		85	N.R.	
54	22	2371	70	2		86	517(2)	3241
55	N.R.		71	3				
56	2		72	32				
57	4		73	96				
58	N.R.		74	548(2)				
59	82		75	7				
60	823(2)		76	N.R.	3313			
61	58		77	15				
62	41		78	1651(2)	3245			
63	8		79	62	3054			
64	136		80	N.R.	3178			

Average velocity 2932 ft/sec.
NV - no veloc[illegible] recorded.
NR - not recovered.

(2) - total weight of two pieces.
(n) - total weight of n pieces.

Individual velocity inaccuracies are less than ± 4.2 % for the highest velocity and ± 3.3 % for the lowest velocity.

Sheet ~~5~~ 1 of ~~26~~ 2

CONFIDENTIAL 3

[redacted]

CONFIDENTIAL

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ORDBG-737 10 FEB 48
FORMERLY SPOTZ-F-281

PENETRATIONS OF SHELLS IN PANELS

DATE 24 Apr 53

FIRING RECORD NUMBER

PROPERTY NUMBER

Sheet 1 of 18

Round No. 15

HOPPER NUMBER

PENETRATIONS OF SHELL 122mm, OF-471 LOADED TNT

IN PANELS WITH BACK OF Soviet 30' AND FEET

PANEL NUMBERS	PERFORATIONS		PENETRATIONS			PANEL NUMBERS	PERFORATIONS		PENETRATIONS		
	LENGTH	WIDTH	LENGTH	WIDTH	DEPTH		LENGTH	WIDTH	LENGTH	WIDTH	DEPTH
1.1			1	1	1	6.5	1	1	2	1	2
Total					1	Total		1			1
3.1			1	1	1	7			1	1	1
Total					1				1	1	2
									1	1	3
4.1			2	1	2	Total					3
			2	1	1						
Total					2	8			1	1	2
									2	1	3
4.4			2	1	1				1	1	4
Total					1	Total					3
4.5			1	1	1	9			2	2	2
Total					1				1	1	2
									2	1	2
4.6			1	1	2				6	9	3
Total					1	Total					4
5.2			1	1	1	10			1	1	2
			1	1	1				1	1	2
			2	1	3	Total					2
Total					3						
						11			2	2	5
5.3			1	1	1	Total					1
Total					1						
						13			4	3	2
5.6			1	1	3				1	1	2
Total					1				1	1	3
						Total					3
6.4	1	1									
Total		1				[redacted]					

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ORDSG-737-19 FEB 48
FORMERLY SPOTZ-F-291

PENETRATIONS OF SHELLS IN PANELS

LOT NUMBER

DATE 24 Apr 53

FIRING RECORD NUMBER

PRIORITY NUMBER

XXXXXXXX Sheet 2 of 18

XXXXXXXX Round No. 15

ROCKET NUMBER

PENETRATIONS OF SHELL 122mm, OF-471 LOADED TNT

Soviet

IN PANELS WITH RADII OF 30' AND FEET

PANEL NUMBERS	PERFORATIONS LENGTH	PERFORATIONS WIDTH	PENETRATIONS LENGTH	PENETRATIONS WIDTH	PENETRATIONS DEPTH
14			3	2	2
Total					1
15			2	1	5
Total					1
16	2	1	2	2	4
			4	2	3
Total		1			2
17			2	2	3
			2	1	2
			2	1	3
			2	1	7
			3	2	9
			4	1	11
			4	2	4
			1	1	4
Total					8
18			1	1	5
			1	1	2
			1	1	3
			1	1	1
			4	2	8
			1	1	1
			2	1	4
Total					7
19			1	1	2
			2	2	2
Total					2

PANEL NUMBERS	PERFORATIONS LENGTH	PERFORATIONS WIDTH	PENETRATIONS LENGTH	PENETRATIONS WIDTH	PENETRATIONS DEPTH
20			1	1	2
			2	1	3
			4	2	2
			20	8	5
Total					4
22	2	1	4	1	7
			2	1	9
			1	1	7
			1	1	1
Total		1			4
23			1	1	1
			1	1	3
Total					2
24			3	1	8
			1	1	2
Total					2
25	3	3	2	2	4
	7	5	1	1	2
	7	3	3	2	4
	11	9			
Total		4			3
26	3	3	2	2	2
	8	6	1	1	2
			2	2	2
			2	1	1
			1	1	1
Total		2			5
[redacted]					

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ORDBG-737 15 FEB 48
FORMERLY SPOTZ-P-201

PENETRATIONS OF SHELLS IN PANELS

LOT NUMBER

DATE 24 Apr 53

FIRING RECORD NUMBER

PROJECTILE NUMBER

Round No. 15

Sheet 3 of 18

PENETRATIONS OF SHELL 122-mm, OF-471 LOADED TNT

Soviet

IN PANELS WITH RADII OF 30 FEET AND FEET

PANEL NUMBERS	PERFORATIONS		PENETRATIONS			PANEL NUMBERS	PERFORATIONS		PENETRATIONS		
	LENGTH	WIDTH	LENGTH	WIDTH	DEPTH		LENGTH	WIDTH	LENGTH	WIDTH	DEPTH
27	4	2	1	1	3	28	16	5			
	5	2	1	1	2		10	7			
			1	1	3	Total		12			9
			2	2	7						
			2	1	6	30	3	3	2	1	3
			4	2	7		7	4	1	1	4
			3	2	4		3	2	1	1	4
			4	3	3		12	5	2	1	2
			1	1	1		4	4	1	1	2
			2	2	10		20	15	2	2	7
Total		2			10		12	4	2	2	2
							5	3			
26	7	4	2	1	4		3	2			
	3	3	3	3	7		16	4			
	8	5	2	1	2		32	10			
	4	3	1	1	2		20	8			
	4	2	1	1	3		12	8			
	6	3	1	1	1		25	24			
	5	2	2	1	2		7	2			
	12	4	3	2	4		3	2			
	4	3	2	1	1	Total		16			7
			3	3	7						
Total		9			10	31	4	3	2	1	1
							7	5	2	2	4
29	22	6	1	1	2		21	7	5	2	3
	4	2	1	1	4		3	3	1	1	3
	16	6	3	2	10		16	9	2	1	7
	12	4	1	1	1				1	1	2
	8	3	2	1	4				1	1	2
	36	9	3	1	5				1	1	3
	4	4	1	1	1	Total		5			8
	7	5	1	1	1						
	7	2	1	1	5						
	14	5									

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CRDBC-737 10 FEB 46
FORMERLY SPOTZ F-281

PENETRATIONS OF SHELLS IN PANELS

TEST NUMBER | DATE 24 Apr 63
FIRING RECORD NUMBER
PRIORITY NUMBER
XXXXXXXXX Round No. 15
XXXXXXXXXXX Sheet 4 of 18
ROCKET NUMBER

PENETRATIONS OF SHELL 122mm, OF-471 LOADED TNT
Soviet
IN PANELS WITH RADII OF 30' AND FEET

PANEL NUMBERS	PERFORATIONS LENGTH	PERFORATIONS WIDTH	PENETRATIONS LENGTH	PENETRATIONS WIDTH	PENETRATIONS DEPTH
32	3	3	3	1	7
	6	6	3	2	4
	9	8	1	1	2
	8	2	1	1	3
	6	3	3	1	2
	2	1	3	1	6
	20	8	3	1	3
	6	3	2	1	3
	6	4	1	1	2
			1	1	1
			1	1	1
			2	1	1
			3	2	5
			2	2	5
			4	2	2
Total		9			15
33	4	3	4	2	3
	7	7	1	1	1
	32	12	1	1	2
	14	7	1	1	3
	8	6	3	1	2
	7	3	4	4	3
	3	3	1	1	1
	24	7	1	1	1
	4	3	1	1	1
	7	3	2	1	2
	4	4	4	2	10
	17	8	2	2	5
	7	5	2	1	1
	9	5	2	2	3
	6	3	1	1	4
	9	4	1	1	2
	7	5	2	1	2

PANEL NUMBERS	PERFORATIONS LENGTH	PERFORATIONS WIDTH	PENETRATIONS LENGTH	PENETRATIONS WIDTH	PENETRATIONS DEPTH
33	48	14	1	1	2
	2	2			
Total		19			18
34	21	10	1	1	6
	8	7	1	1	2
	5	3	2	2	5
	4	2	1	1	1
	15	7	2	1	8
	6	4	3	1	6
	32	14	1	1	2
	1	1	5	3	6
	42	8	1	1	1
	64	16	2	1	6
	33	8			
	12	4			
	4	4			
	4	3			
Total		14			10
35	6	3	1	1	2
	3	1	1	1	2
	12	8	1	1	3
	4	3	3	1	1
	17	9	4	1	4
	17	6	3	1	2
	42	12	2	2	1
	4	3	3	1	5
	3	1	1	1	1
	12	5	1	1	1
	15	9	5	1	3
	18	11	1	1	1
	12	7	1	1	2
	5	4	2	2	5

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ARMY-OS-ABERDEEN PROVING GROUND, MD 445

ORDSG-737 10 FEB 48
FORMERLY SPOTZ-F-281

PENETRATIONS OF SHELLS IN PANELS

LOT NUMBER

FIRING RECORD NUMBER

PRIORITY NUMBER

DATE 24 Apr 56

XXXXXXX Sheet 5 of 18

XXXXXXX Round No. 15

PENETRATIONS OF SHELL 122mm, OF-471 Soviet LOADED TNT

IN PANELS WITH RADII OF 30' AND FEET

HOBART NUMBER

PANEL NUMBERS	PERFORATIONS		PENETRATIONS			PANEL NUMBERS	PERFORATIONS		PENETRATIONS		
	LENGTH	WIDTH	LENGTH	WIDTH	DEPTH		LENGTH	WIDTH	LENGTH	WIDTH	DEPTH
35	7	3	1	1	1	36	7	4			
	11	7	3	2	7		5	2			
	16	9	2	1	1		4	4			
	8	2	4	2	7		26	12			
	7	3	5	4	5	Total		30			11
	32	16	3	1	3						
	8	2	1	1	4	37	5	3	3	2	4
	2	2	2	2	2		12	4	1	1	2
			1	1	3		17	5	6	1	3
			1	1	3		4	4	1	1	2
			1	1	1				1	1	1
			1	1	3				1	1	2
			1	1	3				2	1	2
			1	1	2				4	4	4
			2	1	3				1	1	1
			1	1	1				2	2	2
Total		22			30				1	1	2
						Total		4			11
36	26	10	1	1	2						
	19	9	1	1	4	38			2	1	2
	5	3	6	3	3				1	1	1
	5	3	1	1	2				2	2	2
	14	5	2	1	3				2	2	3
	25	8	5	2	8				1	1	2
	7	4	3	1	4				3	1	3
	4	2	3	1	2				2	1	2
	19	7	1	1	2	Total					7
	8	6	1	1	1						
	7	3	1	1	1	39	12	8	2	1	2
	31	8					18	7	3	2	5
	7	7				Total		2			2
	8	4									6
	11	7									
	24	11									

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ORDBS-737 10 FEB 48
FORMERLY 6POTZ-F-291

PENETRATIONS OF SHELLS IN PANELS

LOT NUM
FIRING RECORD NUMBER
PRIORITY NUMBER
Sheet 6 of 18
Round No. 15
ROCKET NUMBER
DATE 24 Apr 53

PENETRATIONS OF SHELL 122mm, OF-471 LOADED TNT
IN PANELS WITH RADII OF Soviet 30' AND FEET

PANEL NUMBERS	PERFORATIONS		PENETRATIONS			PANEL NUMBERS	PERFORATIONS		PENETRATIONS		
	LENGTH	WIDTH	LENGTH	WIDTH	DEPTH		LENGTH	WIDTH	LENGTH	WIDTH	DEPTH
40	16	12	1	1	1				4	3	5
	12	5	3	1	2				1	1	4
			2	2	2				2	1	2
			3	3	5				2	1	1
			3	2	2				1	1	2
			1	1	1				2	2	2
Total		2			6				1	1	2
									3	2	2
41	4	3	1	1	1	Total		1			14
	14	12	2	1	2						
	13	12	1	1	3	45	5	4	3	2	6
Total		3			3		4	4	2	1	2
									4	3	2
42	5	3	4	3	7				3	2	2
			2	1	1				2	2	1
			1	1	1				3	1	1
			2	1	1				5	3	2
			1	1	2				1	1	1
			2	1	3				1	1	1
Total		1			6				2	2	1
									1	1	2
43			2	1	5				1	1	2
			2	1	4	Total		2			12
			1	1	1						
			3	2	3	46			3	2	3
			2	2	2				2	1	1
Total					5				2	1	1
									3	2	1
44	6	4	2	1	1				1	1	2
			4	2	7				1	1	3
			1	1	1				1	1	2
			5	3	3				4	4	4
			3	3	2	Total					8
			2	1	1						

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ORDBB-737 18 FEB 48
FORMERLY SPOTZ-F-201

PENETRATIONS OF SHELLS IN PANELS

SHOT NO. | DATE 24 Apr 63
FIRING RECORD NUMBER
PRIORITY NUMBER
XXXXXXX Sheet 7 of 18
XXXXXXX Round No. 15
ROCKET NUMBER

PENETRATIONS OF SHELL 122mm, OF-471 Soviet LOADED TNT
IN PANELS WITH RADII OF 30' AND FEET

PANEL NUMBERS	PERFORATIONS		PENETRATIONS		
	LENGTH	WIDTH	LENGTH	WIDTH	DEPTH
47	8	4	4	1	2
			1	1	1
			2	2	2
			1	1	1
			1	1	1
			4	3	2
			1	1	1
			2	1	1
Total		1			8
48			2	2	2
			1	1	1
			5	1	2
			1	1	1
			2	1	1
			2	1	1
			1	1	1
			3	3	7
			1	1	2
			1	1	2
			1	1	1
			2	2	3
			1	1	1
			1	1	1
			3	2	6
			4	2	2
			2	2	1
Total					17
49			1	1	2
			3	3	3
			3	2	5
			2	1	1
			2	2	4

PANEL NUMBERS	PERFORATIONS		PENETRATIONS		
	LENGTH	WIDTH	LENGTH	WIDTH	DEPTH
			2	2	3
			2	1	1
			3	2	2
			2	1	1
			2	2	2
			1		2
			1	1	2
			2	1	2
			2	2	2
Total					14
50	14	7	2	1	2
			1	1	1
			3	3	3
			1	1	1
			2	2	1
			2	2	3
			1	1	1
			2	1	1
			3	2	5
			1	1	1
			1	1	1
			1	1	1
			1	1	2
			1	1	1
			2	2	3
			1	1	1
			2	1	2
Total		1			17
51	9	5	1	1	1
	5	3	2	2	2
			2	2	3
			3	3	2

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ORDBG-737 10 FEB 46
FORMERLY SPOTE-P-291

PENETRATIONS OF SHELLS IN PANELS

DATE 24 Apr 53

PENETRATIONS OF SHELL 122mm, OF-471 LOADED TNT

Soviet

IN PANELS WITH RADII OF 30' AND FEET

Round No. 15

Sheet 8 of 18

PANEL NUMBERS	PERFORATIONS		PENETRATIONS		
	LENGTH	WIDTH	LENGTH	WIDTH	DEPTH
51 cont			1	1	2
			3	2	6
			2	2	1
			3	1	4
			4	4	3
			1	1	1
			3	2	2
			1	1	1
			2	2	2
			5	2	3
			3	1	1
			1	1	3
			1	1	1
			2	2	1
			2	1	1
			1	1	1
			2	1	1
			1	1	1
			1	1	1
			2	1	1
			1	1	1
			1	1	1
			2	2	1
			1	1	1
			3	1	2
Total		2			29
52	4	3	2	2	3
			2	2	2
			2	1	1
			2	1	1
			2	1	1
			2	2	2
			1	1	1

PANEL NUMBERS	PERFORATIONS		PENETRATIONS		
	LENGTH	WIDTH	LENGTH	WIDTH	DEPTH
			3	3	5
			1	1	1
			1	1	1
			6	4	6
			2	2	2
			2	1	1
			5	5	4
			1	1	1
			2	2	2
			1	1	2
			1	1	1
			1	1	1
			5	2	5
			2	1	3
			1	1	1
Total		1			22
53	14	8	1	1	3
	4	3	2	2	2
			2	2	2
			2	2	2
			2	2	6
			6	2	6
			1	1	2
			2	2	2
			1	1	1
			3	2	4
			1	1	2
			2	1	2
			1	1	1
			1	1	2
			5	4	3
			2	2	1
Total		2			16

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FORMERLY SPOTZ-7-291

PENETRATIONS OF SHELLS IN PANELS

LOT NUMBER | DATE 24 Apr 53
FIRING RECORD NUMBER
PRIORITY NUMBER
XXXXXXXXX Sheet 9 of 18
XXXXXXXXX Round No. 15
ROCKET NUMBER

PENETRATIONS OF SHELL 122mm, OF-471 LOADED TNT
Soviet
IN PANELS WITH RADII OF 30' AND FEET

PANEL NUMBERS	PERFORATIONS		PENETRATIONS		
	LENGTH	WIDTH	LENGTH	WIDTH	DEPTH
54	8	7	2	1	3
	3	2	3	1	6
	3	1	1	1	1
			1	1	1
			2	2	2
			1	1	2
			2	1	1
			3	1	2
			1	1	1
			1	1	2
			1	1	1
			3	1	1
			1	1	2
			1	1	2
			2	2	11
			2	2	1
			4	3	2
			3	1	7
			4	3	3
			1	1	1
			1	1	2
			1	1	1
			1	1	2
			1	1	1
			3	3	5
			2	2	1
			2	1	2
Total		3			27
55			3	2	2
			1	1	1
			1	1	2
			2	2	3
			1	1	2

PANEL NUMBERS	PERFORATIONS		PENETRATIONS		
	LENGTH	WIDTH	LENGTH	WIDTH	DEPTH
			4	2	2
			1	1	2
			5	2	5
Total					8
56			1	1	1
			2	2	1
			6	3	6
			1	1	1
			3	2	3
			2	1	1
Total					6
57			1	1	2
			2	1	2
			2	2	2
			1	1	1
Total					4
58.1			1	1	1
			4	2	2
			1	1	2
Total					3
58.3			1	1	1
Total					1
58.4			4	2	6
Total					1
58.5			2	1	2
			1	1	3
			1	1	1
			3	2	8

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ORDBG-737 10 FEB 48
FORMERLY SPOTZ-F-281

PENETRATIONS OF SHELLS IN PANELS

LOT NUM [redacted] DATE 24 Apr 53
FIRING RECORD NUMBER
PRIORITY NUMBER
[redacted] Sheet 10 of 18
[redacted] Round No. 15
ROCKET NUMBER

PENETRATIONS OF SHELL 122mm, OF-471 LOADED TNT
IN PANELS WITH RADII OF Soviet. 30' AND FEET

PANEL NUMBERS	PERFORATIONS		PENETRATIONS		
	LENGTH	WIDTH	LENGTH	WIDTH	DEPTH
58.5					
Total					4
59.1			1	1	2
Total					1
59.2	1	1	1	1	1
			2	2	2
Total		1			2
59.3	5	3	3	2	4
			1	1	1
Total		1			2
59.4			3	2	9
Total					1
59.5			1	1	1
			1	1	1
Total					2
59.6	9	5	1	1	2
Total		1			1
60.1			2	1	2
			1	1	1
			2	1	1
Total					3
60.2	22	14	2	2	3
			2	2	2
			1	1	2
			1	1	2
Total		1			4

PANEL NUMBERS	PERFORATIONS		PENETRATIONS		
	LENGTH	WIDTH	LENGTH	WIDTH	DEPTH
60.3	5	2	4	2	5
	9	7	3	1	3
			1	1	2
Total		2			3
60.4			1	1	2
			1	1	1
Total					2
60.6			2	1	2
Total					1
61.1	5	4	1	1	1
Total		1			1
61.2			1	1	1
			5	4	9
			1	1	2
			1	1	1
Total					4
61.3	7	5	2	2	2
			2	2	2
Total		1			2
61.4	21	20	3	1	2
			1	1	2
			1	1	2
Total		1			3
61.5			1	1	3
			6	2	6
Total					2

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ORDBS-737 10 FEB 48
FORMERLY SPOTS-P-291

PENETRATIONS OF SHELLS IN PANELS

DATE 24 Apr 53

PENETRATIONS OF SHELL 122mm, OF-471 LOADED TNT

IN PANELS WITH Soviet SET OF 30' AND FEET

xxxxxxxx Sheet 11 of 18

xxxxxxxx Round No. 15

PANEL NUMBERS	PERFORATIONS		PENETRATIONS		
	LENGTH	WIDTH	LENGTH	WIDTH	DEPTH
51.6	11	6	3	2	3
Total		1			1
62.1			5	1	2
			4	3	2
			1	1	1
Total					3
62.2	2	1	1	1	2
			3	3	7
			1	1	1
Total		1			3
62.3	15	9	4	2	9
	25	3	1	1	2
	10	7	1	1	1
			1	1	2
Total		3			4
62.4			2	1	3
			1	1	2
Total					2
62.5	12	10	4	2	10
			2	2	2
			1	1	1
			1	1	1
			5	2	2
Total		1			5
62.6	3	3	3	2	7
	12	8	5	3	2
	24	10	2	2	1
Total		3			3

PANEL NUMBERS	PERFORATIONS		PENETRATIONS		
	LENGTH	WIDTH	LENGTH	WIDTH	DEPTH
63.1	5	3	3	1	2
			1	1	1
Total		1			2
63.2			3	2	1
			2	2	2
			3	2	3
			1	1	2
			7	7	3
			1	1	1
Total					6
63.3	23	8	1	1	1
	7	2	2	1	2
			3	2	1
			1	1	2
			1	1	1
			1	1	1
			1	1	1
			2	2	7
Total		2			9
63.4	6	5	6	2	5
	14	4	2	2	2
			1	1	1
			6	3	8
			2	1	1
Total		2			5
63.5	30	16	1	1	1
			1	1	1
			1	1	1
			1	1	1

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[redacted]

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ORDBG-737 10 FEB 48
FORMERLY SPOTZ-F-291

PENETRATIONS OF SHELLS IN PANELS

LOT NUMBER

DATE 24 Apr 53

FIRING RECORD NUMBER

PRIORITY NUMBER

XXXXXXXX Sheet 12 of 18

S XXXXXXXX Round No. 15

ROCKET NUMBER

PENETRATIONS OF SHELL 122mm, OF -471 LOADED TNT

Soviet

IN PANELS WITH RADII OF 30' AND FEET

PANEL NUMBERS	PERFORATIONS LENGTH	PERFORATIONS WIDTH	PENETRATIONS LENGTH	PENETRATIONS WIDTH	PENETRATIONS DEPTH	PANEL NUMBERS	PERFORATIONS LENGTH	PERFORATIONS WIDTH	PENETRATIONS LENGTH	PENETRATIONS WIDTH	PENETRATIONS DEPTH
63.5											
Total		1			4						
63.6			1	1	3						
			2	2	2						
Total					2						
	TOTALS										
30' Radius		187			532						

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[redacted]

ARMY-OB-ABERDEEN PROVING GROUND MD 445

ORDBS-737 15 FEB 48
FORMERLY SPOTS-F-281

PENETRATIONS OF SHELLS IN PANELS

DATE 24 Apr 53

FIRING RECORD NUMBER

PRIORITY NUMBER

Sheet 13 of 18

Round No. 15

PENETRATIONS OF SHELL 122mm, OF-471 Soviet LOADED TNT

IN PANELS WITH RADII OF 60' AND FEET

PANEL NUMBERS	PERFORATIONS		PENETRATIONS		
	LENGTH	WIDTH	LENGTH	WIDTH	DEPTH
1.1			4	1	2
Total					1
1.2			3	1	1
			1	1	1
Total					2
2.2			2	1	1
			1	1	1
			1	1	1
Total					3
2.3			1	1	2
Total					1
3.1			1	1	1
Total					1
3.2			2	1	3
			1	1	1
			1	1	1
			1	1	1
			1	1	2
Total					5
3.3			1	1	2
			1	1	1
			1	1	1
Total					3
4.2			5	2	1
Total					1

PANEL NUMBERS	PERFORATIONS		PENETRATIONS		
	LENGTH	WIDTH	LENGTH	WIDTH	DEPTH
4.3			1	1	1
Total					1
6.2			1	1	1
			1	1	1
			2	1	1
Total					3
7			4	1	1
Total					1
9			4	3	3
			2	2	1
			1	1	1
			1	1	1
Total					4
10			1	1	2
Total					1
16			3	1	2
			2	1	1
Total					2
17			1	1	1
Total					1
18			2	1	1
Total					1
20			1	1	1
			2	1	2
Total					2

ORDBG-737 10 FEB 48
FORMERLY SPOTZ-P-281

PENETRATIONS OF SHELLS IN PANELS

DATE 24 Apr 53

PENETRATIONS OF SHELL 122mm, OF-471 LOADED TNT

IN PANELS WITH RADII OF SOVIET 60' AND FEET

Sheet 14 of 18

Round No. 15

PANEL NUMBERS	PERFORATIONS		PENETRATIONS		
	LENGTH	WIDTH	LENGTH	WIDTH	DEPTH
21			7	2	1
Total					1
23			1	1	2
			4	2	3
Total					2
25			3	2	2
			2	1	2
			1	1	1
Total					3
26			3	2	2
			1	1	1
			4	3	2
			2	1	1
			3	2	1
Total					5
27	13	2	5	3	5
			4	2	1
			4	2	3
			3	2	2
			4	3	6
			5	3	2
			4	3	4
			2	2	2
Total		1			8
28	9	6	1	1	1
			3	2	5
			4	1	1
Total		1			3

PANEL NUMBERS	PERFORATIONS		PENETRATIONS		
	LENGTH	WIDTH	LENGTH	WIDTH	DEPTH
29	36	6	5	3	2
			3	2	2
			2	2	2
Total		1			3
30	3	2	2	1	1
	13	3	3	1	1
	8	4	5	4	6
	10	5	2	1	2
	10	4	3	2	2
			3	2	1
Total		5			6
31	35	7	4	2	2
	7	4	6	2	1
	22	7	1	1	1
	7	3			
	12	9			
	43	7			
	8	6			
	30	11			
	4	3			
Total		9			3
32	4	3	3	2	2
	9	4	1	1	1
			4	2	2
			3	2	3
			2	1	3
Total		2			5
33	10	5	2	1	1
	48	10	3	2	1
	26	7	4	3	2

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ORDBG-737 19 FEB 48
FORMERLY SPOTZ-F-201

PENETRATIONS OF SHELLS IN PANELS

LOT NUMBER | DATE 24 Apr 53
FIRING RECORD NUMBER
PRIORITY NUMBER
xxxxxxxx Sheet 15 of 18
SHELL NUMBER Round No. 15
ROCKET NUMBER

PENETRATIONS OF SHELL 122mm, OF-471 LOADED TNT
Soviet
IN PANELS WITH RADII OF 60' AND FEET

PANEL NUMBERS	PERFORATIONS LENGTH	PERFORATIONS WIDTH	PENETRATIONS LENGTH	PENETRATIONS WIDTH	PENETRATIONS DEPTH
	8	3	8	3	5
	9	7	5	4	3
	3	2	1	1	1
	6	5	3	2	1
	8	6	3	1	1
	7	5	16	5	4
Total		9			9
34	62	16	2	2	1
	15	9	3	1	2
	10	5	2	2	2
	16	13	2	1	1
	5	4	3	1	2
	5	3	1	1	1
	14	9	5	3	5
	7	4	2	2	6
	18	14			
	24	8			
Total		10			8
35	20	8	2	2	3
	24	11	5	3	6
	8	6	3	2	1
	9	6	8	2	3
	5	4	1	1	1
	7	3	2	2	2
	8	7	4	3	6
	4	4			
	23	8			
	32	27			
	21	9			
	8	5			
Total		12			7
			[redacted]		

PANEL NUMBERS	PERFORATIONS LENGTH	PERFORATIONS WIDTH	PENETRATIONS LENGTH	PENETRATIONS WIDTH	PENETRATIONS DEPTH
36	10	4	3	2	1
	12	5	4	2	3
	8	7	4	4	6
	15	9	4	2	2
	9	4	4	2	3
	12	5	2	1	2
			4	3	2
Total		6			7
37	16	6	1	1	1
			3	2	2
			4	2	1
			3	1	1
			3	1	1
Total		1			5
38	12	10	12	10	6
	10	5	4	2	2
			3	2	3
			1	1	1
			8	3	10
Total		2			5
39	9	5	4	3	4
			12	8	6
			4	3	7
			5	3	2
Total		1			4
40	12	11	3	2	2
	11	6	1	1	1
	8	4	3	3	4
	12	10			4
Total		4			3

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ARMY—OB—ABERDEEN PROVING GROUND MD. 446

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ORDBG-787 10 FEB 46
FORMERLY SPOTZ-F-281

PENETRATIONS OF SHELLS IN PANELS

SHOT NUMBER

DATE 24 Apr 53

FIRING RECORD NUMBER

PRIORITY NUMBER

PENETRATIONS OF SHELL 122mm, OF-471 LOADED TNT

IN PANELS WITH RACK OF Soviet 60' AND FEET

xxxxxxxxxx Sheet 16 of 18

xxxxxxxxx Round No. 15

ROCKET NUMBER

PANEL NUMBERS	PERFORATIONS		PENETRATIONS		
	LENGTH	WIDTH	LENGTH	WIDTH	DEPTH
41	8	5	4	2	2
			7	4	7
Total		1			2
42			5	4	4
Total					1
43			4	2	3
			4	3	2
			5	4	2
Total					3
44			1	1	1
			2	1	2
			2	1	1
			5	4	2
Total					4
45			5	3	1
			1	1	1
			2	1	1
			5	4	2
Total					4
46			4	2	2
Total					1
47	9	5	3		1
Total		1			1
48	12	9	2	1	1
			2	2	1
			4	3	1
			4	2	[redacted]

PANEL NUMBERS	PERFORATIONS		PENETRATIONS		
	LENGTH	WIDTH	LENGTH	WIDTH	DEPTH
			4	2	3
			3	2	2
Total		1			6
49	6	4	3	2	1
			2	1	1
Total		1			2
50	10	9	3	2	2
	7	4	4	3	3
			3	2	2
Total		2			3
51	9	3	5	2	3
	3	5	4	2	3
			2	1	2
Total		2			3
52			5	4	4
			3	2	2
			5	1	6
			2	2	1
			2	1	2
Total					5
53			2	3	2
			3	3	3
			5	2	2
			2	2	2
Total					4
54			7	3	2
			1	1	1
Total					2

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ORDBG-737 19 FEB 48
FORMERLY SPOTZ-F-201

PENETRATIONS OF SHELLS IN PANELS

LOT NUMBER | DATE 24 Apr 53
FIRING RECORD NUMBER
PRIORITY NUMBER
XXXXXXXX Sheet 17 of 18
SERIES Round No. 15
ROCKET NUMBER

PENETRATIONS OF SHELL 122mm, OF-471 LOADED TNT
IN PANELS WITH RADII OF Soviet 60' AND FEET

PANEL NUMBERS	PERFORATIONS		PENETRATIONS		
	LENGTH	WIDTH	LENGTH	WIDTH	DEPTH
55	12	6	5	5	7
			2	1	4
Total		1			2
57			4	4	2
Total					1
58.1	8	4			
	4	4			
Total		2			
59.1	10	7	5	4	4
Total		1			1
59.2			4	2	2
Total					1
59.3	5	3			
Total		1			
60.3			4	3	2
			2	1	2
			1	1	1
			5	3	3
			4	2	3
Total					5
61.1	23	14	1	1	1
			2	1	1
			2	1	1
			1	1	1
Total		1			4

PANEL NUMBERS	PERFORATIONS		PENETRATIONS		
	LENGTH	WIDTH	LENGTH	WIDTH	DEPTH
61.2	7	5			
Total		1			
61.3	14	10	2	1	2
	26	16			
	10	10			
Total		3			1
62.1	10	6	2	1	2
	14	10			
Total		2			1
62.2			2	1	1
			5	3	2
			2	1	2
			4	2	2
			1	1	1
Total					5
62.3			2	1	1
			2	1	2
Total					2
63.1	5	3	3	2	9
	6	3	2	2	2
	12	9	9	2	3
	16	9	1	1	1
	20	17			
	21	14			
Total		6			4

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ORDBC-737 10 FEB 48
FORMERLY SPOTZ-F-201

PENETRATIONS OF SHELLS IN PANELS

LOT NUMBER

DATE 24 Apr 53

FIRING RECORD NUMBER

PRIORITY NUMBER

XXXXXXXX Sheet 18 of 18

XXXXXXXX Round No. 15

ROCKET NUMBER

PENETRATIONS OF SHELL 122mm, OF-471 Soviet LOADED TNT

IN PANELS WITH RADII OF 60' AND FEET

PANEL NUMBERS	PERFORATIONS		PENETRATIONS			PANEL NUMBERS	PERFORATIONS		PENETRATIONS		
	LENGTH	WIDTH	LENGTH	WIDTH	DEPTH		LENGTH	WIDTH	LENGTH	WIDTH	DEPTH
63.2			2	2	3						
Total					1						
63.3	10	5									
	8	6									
	18	7									
	9	9									
Total		4									
	TOTALS										
60' Radius		94			189						

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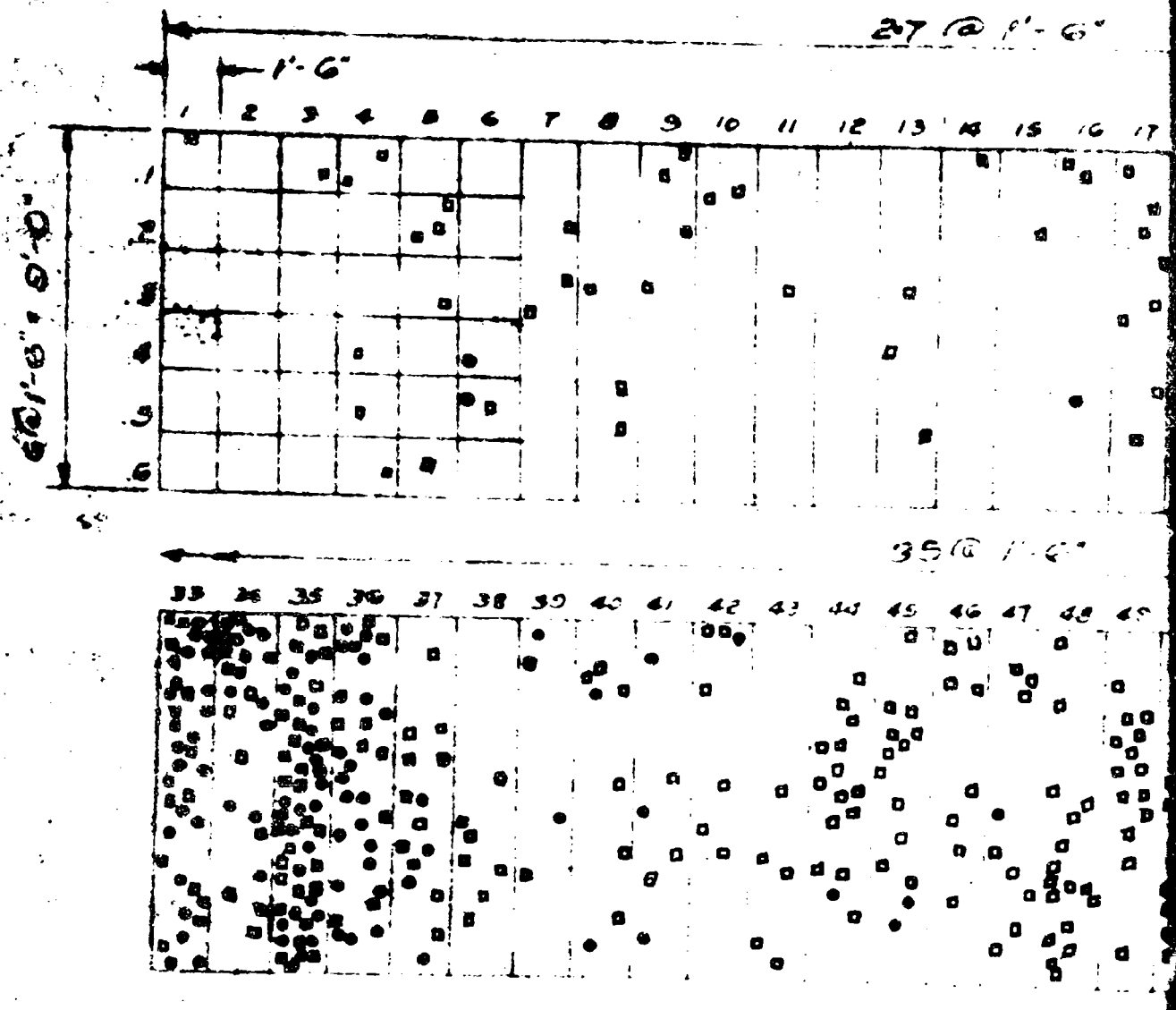
CONFIDENTIAL PANEL A

30 FT RADIUS



1" NO. 3 PINE BOARDS (DRESSED) PLACE

DATE 4-24-53 RD. NO. 15

SHELL, 122 MM, SOVIET

SUSPENSION: HORIZONTAL

PERFORATI

PENETRATI

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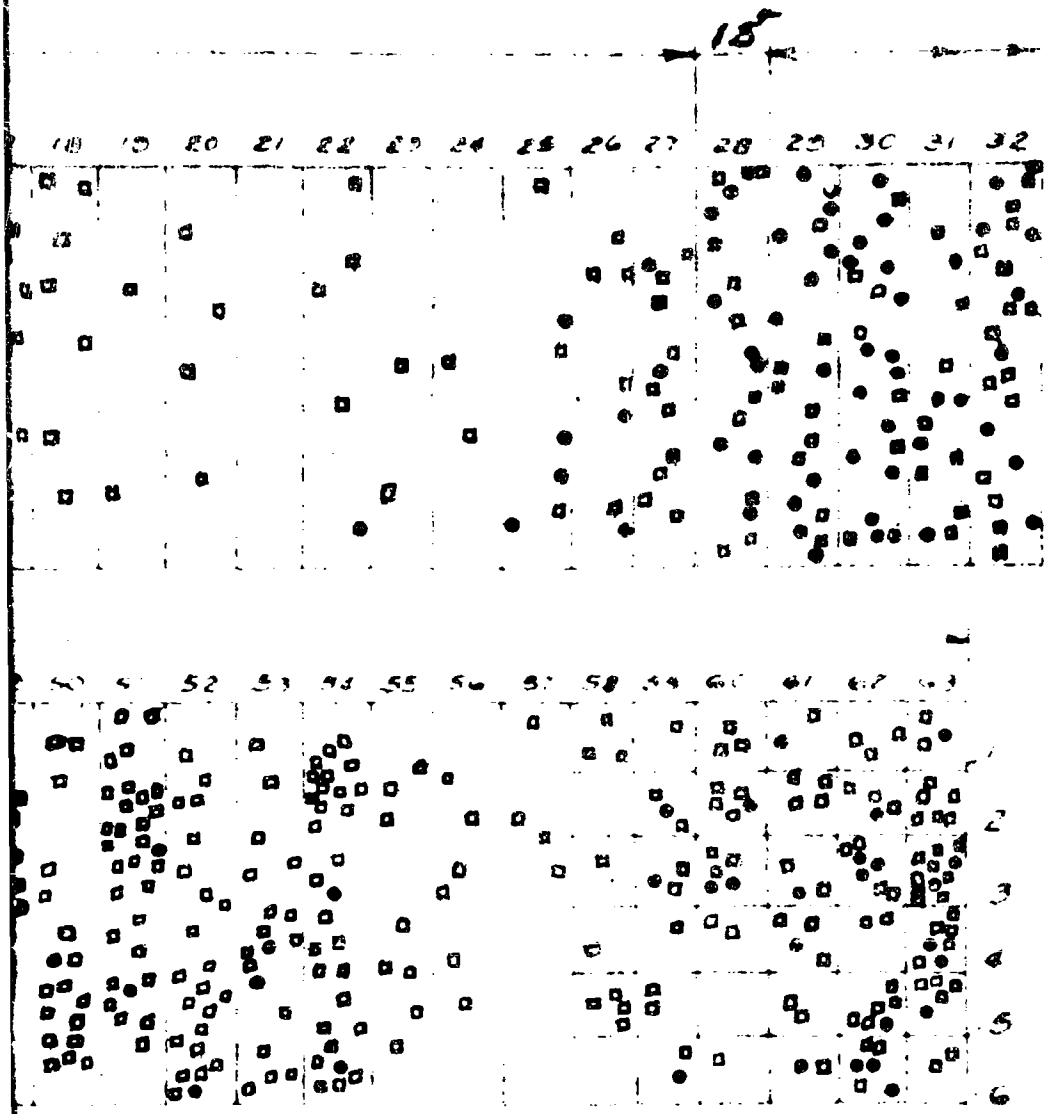
180° ARC



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IONS 187

TIONS 532

RANGE OPERATIONS SECTION

LAYOUT OF PANELS
FOR
NUMBER AND DISTRIBUTION
OF FRAGMENTS
(30 FT RADIUS)

ABERDEEN PROVING GROUND, MD

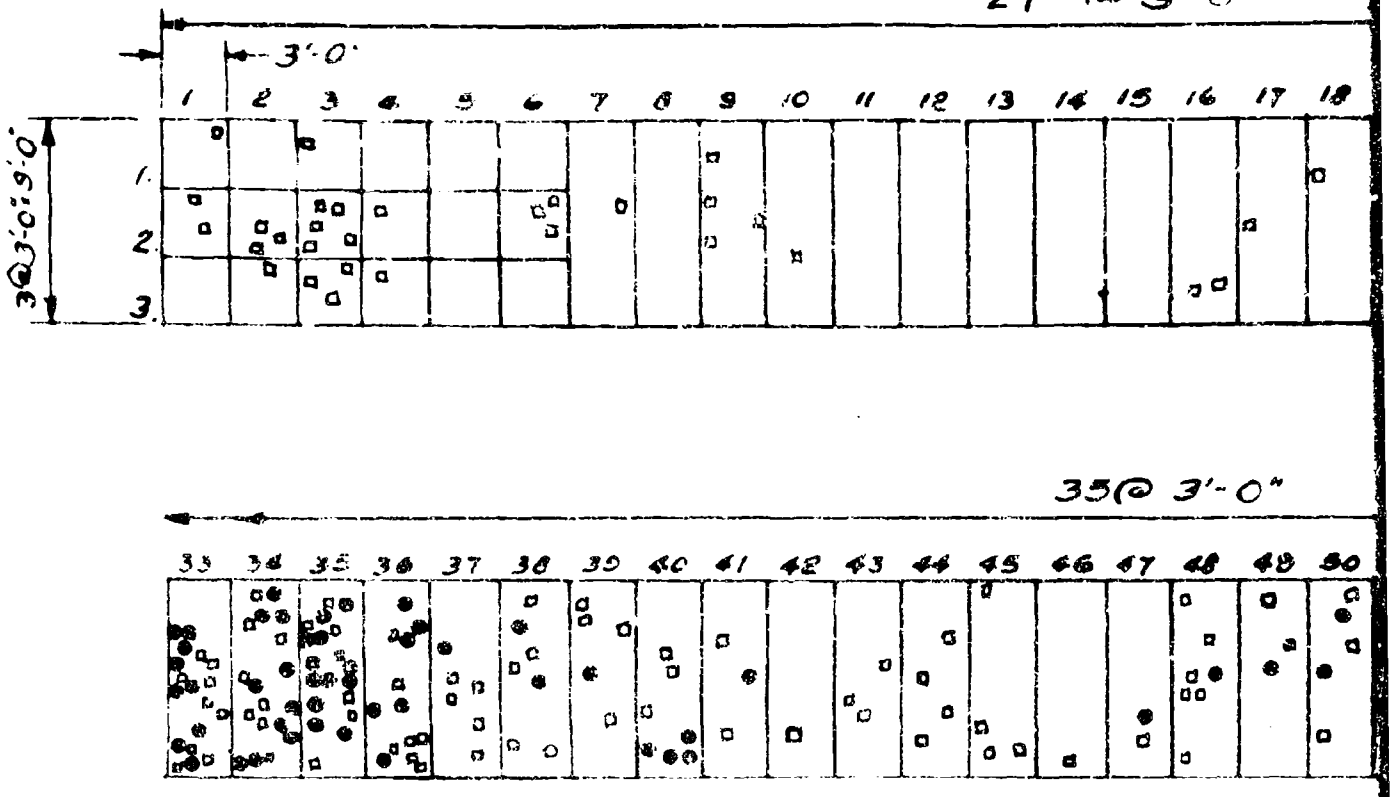
OCT 27 1944 ACC 1876-15 PR

15 6

B-11822

[redacted] PANEL B

60 FT. RADIUS 180



1" NO. 3 PINE BOARDS (DRESSED) PLACED

DATE: 4-24-53 RD. NO. 15

SHELL, 122 MM, SOVIET

SUSPENSION: HORIZONTAL

PERFORATI

PENETRATI

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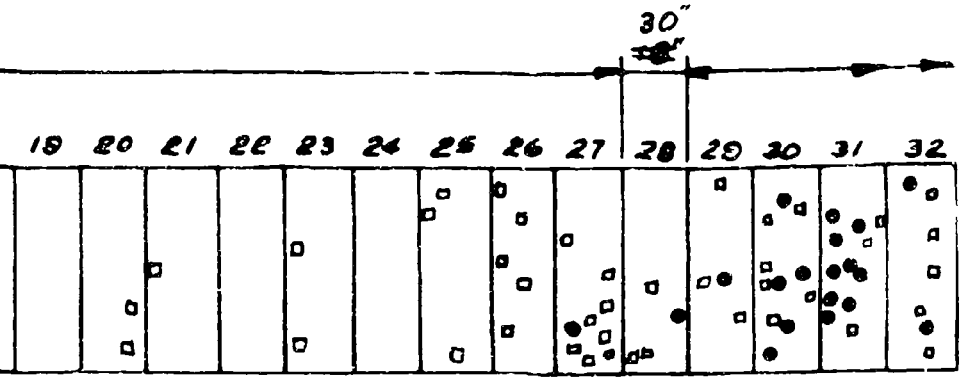

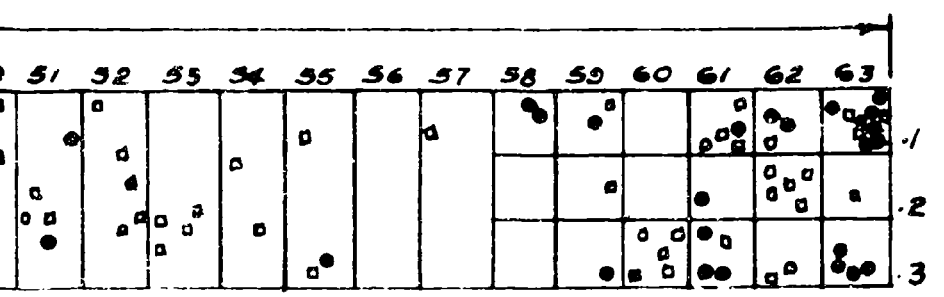

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IONS 94

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RANGE OPERATIONS SECTION

LAYOUT OF PANELS
FOR
NUMBER AND DISTRIBUTION
OF FRAGMENTS
(60 FT. RADIUS)

ABERDEEN PROVING GROUND, M
OCT. 27, 1944 APG 11876-14 PB

[illegible]
[illegible] 3

[illegible] NO. 26

21 May 195[illegible]

[illegible]

SHELL [illegible]

[illegible]

[illegible]
32-[illegible]
[illegible]

[illegible]

[illegible]
[illegible]

[illegible]

[illegible]
[illegible]

Weight of Shell w/o Components- [illegible] lbs.
[illegible] - [illegible] lbs.

Distance from Shell to the center of the [illegible] duralumin flash target- [illegible] ft.

Shell before firing is [illegible] in AFB Photograph No. [illegible].

Recovered fragments with their respective weights and velocities are shown in AFB Photograph No. [illegible].

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[redacted]

FRAGMENT VELOCITY DATA

Test of Shell, HE, Soviet, 122mm, TNT Side Recovery Box Data

Proof Director Mr. O. L. Rogers Date Fired 21 May 1953

Distance from detonation point to target 22.87 feet. Round No. 16

Round statically detonated and velocity obtained by Photographic Methods.

Fragment No.	Weight, Grains	Velocity, f/s	Fragment No.	Weight, Grains	Velocity, f/s	Fragment No.	Weight, Grains	Velocity, f/s
1	310	2854	17	114		33	N.R.	3393
2	416	2905	18	1		34	N.R.	
3	74	2905	19	459	3274	35	N.R.	
4	13	2957	20	22		36	N.R.	
5	83	2465	21	9	3127	37	60	3544
6	30		22	N.R.	3393	38	35	
7	653(2)	2957	23	21	3393	39	321	
8	7		24	42	3190	40	22	
9	1		25	N.R.		41	9	
10	N.R.		26	14		42	10	
11	11		27	112	3323	43	6	
12	N.R.	3127	28	36	3009	44	216	2093
13	17	3274	29	1		45	34	
14	N.R.		30	16		46	N.R.	
15	102		31	N.R.	2093	47	406	1969
16	140		32	8		48	44	2278

Average velocity 2985 ft/sec.
NV - no velocity recorded.
NR - not recovered.

(2) - total weight of two pieces.
(n) - total weight of n pieces.

Individual velocity inaccuracies are less than ± 4.2 % for the highest velocity and ± 3.2 % for the lowest velocity. 1 2

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Sheet ~~6~~ of ~~26~~

[redacted]

FRAGMENT VELOCITY DATA [redacted]

Test of Shell, HE, Soviet, 122mm — Side Recovery Box Data

Proof Director Mr. O. L. Rogers — Date Fired 21 May 1953

Distance from detonation point to target 22.67 feet. Round No. 16

Round statically detonated and velocity obtained by Photographic Methods.

Fragment No.	Weight, Grains	Velocity, f/s	Fragment No.	Weight, Grains	Velocity, f/s	Fragment No.	Weight, Grains	Velocity, f/s
49	0+		65	447				
50	N.R.		66	N.R.				
51	N.R.		67	N.R.				
52	1		68	7				
53	N.R.		69	N.R.	3190			
54	13		70	N.R.	3190			
55	12		71	178	3190			
56	N.R.		72	N.R.				
57	56		73	1	3009			
58	N.R.	3067	74	99	3067			
59	806		75	3				
60	24		76	3				
61	10		77	N.R.				
62	22		78	184	3127			
63	533	3190	79	N.R.				
64	939(3)		80	81(2)				

Average velocity 2985 ft/sec.
NV - no velocity recorded.
NR - not recovered.

(2) - total weight of two pieces.
(n) - total weight of n pieces.

Individual velocity inaccuracies are less than ± 4.2 % for the highest velocity and ± 3.2 % for the lowest velocity.

Sheet 2 of 2

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[redacted]

ORDBK 137 10 FEB 48
FORMERLY SPOTK-F-201

PENETRATIONS OF SHELLS IN PANELS

DATE 21 May 53

PRIORITY NUMBER

XXXXXXXXX Sheet 1 of 11

XXXXXXXXX Round No. 16

POCKET NUMBER

PENETRATIONS OF SHELL 122mm, OF-471N LOADED TNT

Soviet

IN PANELS WITH RADII OF 30' AND FEET

PANEL NUMBERS	PERFORATIONS LENGTH	PERFORATIONS WIDTH	PENETRATIONS LENGTH	PENETRATIONS WIDTH	PENETRATIONS DEPTH
2.2			5	1	2
Total					1
3.3			1	1	1
Total					1
4.3			4	2	3
Total					1
5.3			1	1	1
Total					1
8			7	3	7
Total					1
11			3	2	8
Total					1
13			3	3	7
Total					1
14			3	2	1
Total					1
18			2	2	3
Total					1
19			2	2	3
Total					1
20			1	1	1
Total					1

PANEL NUMBERS	PERFORATIONS LENGTH	PERFORATIONS WIDTH	PENETRATIONS LENGTH	PENETRATIONS WIDTH	PENETRATIONS DEPTH
22			2	1	1
Total					1
23			2	1	7
Total					1
24			1	1	1
Total					1
25			4	3	7
			1	1	1
Total					2
26	7	3	7	2	8
Total		1			1
27	12	5	3	2	3
			2	1	2
			3	2	6
			1	1	1
			4	2	2
			6	2	4
Total		1			6
28	5	4	1	1	1
	18	6	3	2	5
	10	6	1	1	1
	5	4			
Total		4			3
29	28	5	2	1	1
	16	6	2	1	1
	40	8	3	1	1
	4	3			

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[redacted]

ARMY-OR-ABERDEEN PROVING GROUND MD 445

PENETRATIONS OF SHELLS IN PANELS

21 Mar 55

122mm, OF-471N LOADED TNT
Soviet
XXXXXXX Round No. 16
XXXXXXX Sheet 2 of 11
AT 30' AND FEET

PANEL NUMBERS	PERFORATIONS LENGTH	PERFORATIONS WIDTH	PENETRATIONS LENGTH	PENETRATIONS WIDTH	PENETRATIONS DEPTH
	8	3			
		5			3
	4	3	3	2	7
	6	2	2	1	1
	4	3	4	3	6
	10	4	3	1	2
	22	9	2	1	1
	46	13			
	8	4			
	3	2			
Total		8			5
	16	4			
	2	1			
	33	8			
	30	7			
	6	6			
	9	4			
		6			
	8	5	2	1	2
		3	2	2	4
	3	4	2	1	2
	7	3	3	1	1
			2	1	2
			3	1	2
			3	2	6
			1	1	2
			1	1	4
			1	1	1
		4			10

PANEL NUMBERS	PERFORATIONS LENGTH	PERFORATIONS WIDTH	PENETRATIONS LENGTH	PENETRATIONS WIDTH	PENETRATIONS DEPTH
33	25	11	5	1	6
	3	2	2	2	2
	46	12	4	1	5
	6	4	4	1	4
	5	5	2	2	2
	54	10	1	1	1
	8	5	3	2	5
	18	8	2	1	1
			3	2	2
			2	1	4
			1	1	1
Total		8			11
34	18	4	3	2	2
	55	9	3	2	5
	9	6	2	1	1
	21	8	1	1	1
	5	3	2	1	1
	11	5	3	2	5
	2	2	4	3	5
	28	10	2	1	1
	11	4	4	2	4
	16	8	3	2	6
	5	4			
	7	4			
	7	6			
	4	2			
	14	9			
Total		15			10
35	21	20	1	1	1
	6	4	13	5	5
	5	3	2	1	1
	33	8	1	1	1

[redacted]

ORDOG 737 15 FEB 46
FORMERLY SPOTZ F 201

PENETRATIONS OF SHELLS IN PANELS

DATE 21 May 5[illegible]

FIRING RECORD NUMBER

PRIORITY NUMBER

XXXXXXXX Sheet 3 of 11

XXXXXXXXX Round No. 16

ROCKET NUMBER

PENETRATIONS OF SHELL 122mm, OF-471N LOADED TNT
Soviet

IN PANELS WITH RADII OF 30' AND FEET

PANEL NUMBERS	PERFORATIONS LENGTH	PERFORATIONS WIDTH	PENETRATIONS LENGTH	PENETRATIONS WIDTH	PENETRATIONS DEPTH
35	4	3	3	2	2
	33	11	2	1	1
	22	12	5	2	3
	7	3	2	1	2
	7	4	4	3	2
	22	8	3	1	1
	12	3	1	1	1
	4	3			
	4	4			
	7	4			
	4	4			
	7	4			
	4	3			
	26	13			
Total		18			11
36	6	4	2	1	3
	5	4	2	2	2
	6	4	3	2	6
	4	3	2	1	1
	3	2	1	1	1
	22	13	3	1	1
	4	3	1	1	1
	16	10			
	18	10			
	5	4			
	21	14			
	3	1			
	3	12			
Total		13			7
37	24	16	1	1	1
	5	4	1	1	1
	7	5	1	1	1

PANEL NUMBERS	PERFORATIONS LENGTH	PERFORATIONS WIDTH	PENETRATIONS LENGTH	PENETRATIONS WIDTH	PENETRATIONS DEPTH
			5	2	2
			1	1	2
			6	3	6
			1	1	1
Total		3			7
38			1	1	1
			1	1	1
			4	2	2
Total					3
39	13	9	1	1	2
	12	6	7	3	7
	28	11	2	2	4
	8	4			
Total		4			3
40	19	12	2	2	4
			2	1	1
			1	1	1
			2	1	2
			4	2	4
Total		1			5
41	8	6	1	1	1
			6	3	6
			4	2	3
			4	3	8
			1	1	2
			1	1	1
			3	2	2
Total		1			7
[redacted]					

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ARMY-OB-ABERDEEN PROVING GROUND, MD.

ORDBG-737 10 FEB 48
FORMERLY SPOTX-F-381

PENETRATIONS OF SHELLS IN PANELS

21 May 53

PENETRATIONS OF SHELL 12[illegible], CF-471N LOADED TNT
Soviet

IN PANELS WITH RADII OF 30' AND FEET

PRIORITY NUMBER
XXXXXXXX Sheet 4 of 11
XXXXXXXXXX Round No. 16
ROCKET NUMBER

PANEL NUMBERS	PERFORATIONS LENGTH	PERFORATIONS WIDTH	PENETRATIONS LENGTH	PENETRATIONS WIDTH	PENETRATIONS DEPTH
42			2	2	1
			3	2	1
Total					2
43			3	1	1
Total					1
44	6	4	2	1	1
			2	1	1
			5	3	2
Total		1			3
45	5	4	3	1	2
	5	4	1	1	1
			3	2	2
			2	1	1
			4	3	2
			1	1	2
			2	1	3
			6	4	7
Total		2			8
46	8	5	5	3	7
			2	1	1
			1	1	1
			1	1	1
			1	1	1
			3	2	3
			3	2	2
			2	1	1
			3	2	2
Total		1			9
47	4	3	1	1	1

PANEL NUMBERS	PERFORATIONS LENGTH	PERFORATIONS WIDTH	PENETRATIONS LENGTH	PENETRATIONS WIDTH	PENETRATIONS DEPTH
			5	4	5
			5	3	1
			1	1	1
			5	3	3
			2	1	1
			3	2	1
			3	2	2
			1	1	1
Total		1			9
48	8	6	1	1	1
			1	1	1
			2	1	1
			1	1	1
			2	1	1
			5	4	8
			2	1	1
			1	1	1
Total		1			8
49			1	1	1
			2	2	1
			4	2	3
			3	2	2
			2	1	1
			1	1	1
Total					6
50			5	4	5
			4	3	4
			2	1	1
			2	1	1
			2	1	1
			3	2	1

ARMY OF ABERDEEN PROVING GROUND MD

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ORDBG-737 19 FEB 46
FORMERLY SPOTZ-F-281

PENETRATIONS OF SHELLS IN PANELS

LOT NUM
FIRING NUMBER
PRIORITY NUMBER
XXXXXXXX Sheet 5 of 11
XXXXXXXX Round No. 16
ROCKET NUMBER

DATE 21 May 53

PENETRATIONS OF SHELL 122mm, OF-471N Soviet LOADED TNT

IN PANELS WITH RADII OF 30' AND FEET

PANEL NUMBERS	PERFORATIONS LENGTH	PERFORATIONS WIDTH	PENETRATIONS LENGTH	PENETRATIONS WIDTH	PENETRATIONS DEPTH
50			1	1	1
			1	1	1
			3	3	2
			1	1	1
Total					10
51			1	1	1
			1	1	1
			1	1	1
			2	1	1
			2	1	1
			2	1	1
			2	2	1
			1	1	1
			2	1	1
			3	1	1
			1	1	1
			2	1	2
			2	1	1
Total					13
52	14	12	3	2	4
			5	2	5
			1	1	1
			2	1	1
			3	1	2
			3	2	2
			2	1	1
			3	3	6
			3	2	1
			3	2	1
			1	1	1
			3	1	2
			1	1	1

PANEL NUMBERS	PERFORATIONS LENGTH	PERFORATIONS WIDTH	PENETRATIONS LENGTH	PENETRATIONS WIDTH	PENETRATIONS DEPTH
			2	1	1
			3	2	2
			3	2	2
			3	3	3
			2	1	1
Total		1			18
53			4	2	2
			1	1	1
			1	1	1
			1	1	1
			1	1	1
			3	3	6
			1	1	1
			2	1	1
			1	1	1
			2	1	1
			1	1	1
			3	2	2
			1	1	1
Total					13
54	12	5	3	2	2
			2	1	1
			2	1	1
			1	1	1
			1	1	1
			1	1	1
			3	2	1
			3	2	2
Total		1			8

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ARMY OR ABERDEEN PROVING GROUND MD 445

ORDBG-737 18 FEB 48
FORMERLY SPOTS-F-201

PENETRATIONS OF SHELLS IN PANELS

LOT NUMBER | DATE 21 May 58
FIRING RECORD NUMBER
PROJECTILE NUMBER XXXXXXXX Sheet 6 of 11
GUNNER NUMBER XXXXXXXX Round No. 16

PENETRATIONS OF SHELL 122mm, OF-471K Soviet LOADED TNT

IN PANELS WITH RADII OF 30' AND FEET

PANEL NUMBERS	PERFORATIONS		PENETRATIONS		
	LENGTH	WIDTH	LENGTH	WIDTH	DEPTH
55			3	2	1
Total					1
56			1	1	1
			1	1	1
Total					2
57	7	4	1	1	1
			3	2	1
			4	3	3
Total		1			3
58.2			4	1	1
Total					1
58.4			3	2	3
Total					1
58.5	11	6	5	2	2
Total		1			1
59.1			4	1	1
Total					1
59.3	10	6	2	1	1
Total		1			1
60.2	24	17	2	1	1
Total		1			1
60.3			2	2	2
			2	1	1
			3	2	2

PANEL NUMBERS	PERFORATIONS		PENETRATIONS		
	LENGTH	WIDTH	LENGTH	WIDTH	DEPTH
Total 60.3					3
60.4	5	4	1	1	1
			3	2	1
Total		1			2
60.5	27	12	1	1	1
Total		1			1
60.6	3	2	1	1	1
Total		1			1
61.1	20	9			
Total		1			
61.2			1	1	1
Total					1
61.4			3	1	2
Total					1
61.5	3	2	1	1	1
			3	2	6
			5	3	7
Total		1			3
61.6			5	2	2
			1	1	1
Total					2
[redacted]					

ORDBG-737 10 FEB 48
FORMERLY SPOTZ-F-201

PENETRATIONS OF SHELLS IN PANELS

DATE 21 May 53

FIRING REPORT NUMBER

PRIORITY NUMBER

XXXXXXX Sheet 7 of 11

XXXXXXX Round No. 16

ROCKET NUMBER

PENETRATIONS OF SHELL 122mm, OF-471N Soviet LOADED TNT

IN PANELS WITH RADII OF 30' AND FEET

PANEL NUMBERS	PERFORATIONS		PENETRATIONS		
	LENGTH	WIDTH	LENGTH	WIDTH	DEPTH
62.2			2	1	1
			3	2	3
			5	2	3
			1	1	1
Total					4
62.3	7	5	8	2	6
Total		1			1
62.4			1	1	1
Total					1
62.5			1	1	1
			1	1	1
Total					2
63.1			3	2	2
			3	2	4
			1	1	1
Total					3
63.2	6	6	3	1	1
			1	1	1
Total		1			2
63.3	34	6	1	1	1
			1	1	1
Total		1			2
63.4	28	20			
	8	6			
Total		2			

PANEL NUMBERS	PERFORATIONS		PENETRATIONS		
	LENGTH	WIDTH	LENGTH	WIDTH	DEPTH
63.5			3	1	2
			3	1	2
Total					2
63.6			2	1	1
Total					1
TOTALS					
30' Radius	114				260

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ORDBC-737 10 FEB 48
FORMERLY SPOTS-P-201

PENETRATIONS OF SHELLS IN PANELS

LOT NO. 0 | DATE 21 May 53
FIRING REPORT NUMBER
PRIORITY NUMBER XXXXXXXXX Sheet 8 of 11
XXXXXXXXXX Round No. 15
ROCKET NUMBER

PENETRATIONS OF SHELL 122mm, OF-471N Soviet LOADED TNT
IN PANELS WITH RADII OF 60' AND FEET

PANEL NUMBERS	PERFORATIONS LENGTH	PERFORATIONS WIDTH	PENETRATIONS LENGTH	PENETRATIONS WIDTH	PENETRATIONS DEPTH
5.1			4	2	4
Total					1
9			4	2	3
Total					1
12			4	2	2
Total					1
17			4	2	2
Total					1
22			2	1	1
Total					1
25	12	5	10	2	4
			5	4	3
Total		1			2
26	5	3	5	1	1
Total		1			1
27			1	1	1
Total					1
28			2	1	1
Total					1
29	15	4	1	1	1
	13	9	12	3	4
			5	3	7
			1	1	1
			1	1	1
			2	1	1

PANEL NUMBERS	PERFORATIONS LENGTH	PERFORATIONS WIDTH	PENETRATIONS LENGTH	PENETRATIONS WIDTH	PENETRATIONS DEPTH
29			3	1	1
Total		2			7
30	14	4	2	1	3
	14	3	5	3	3
	37	9			
Total		3			2
31	36	13	3	2	1
	5	3	3	2	2
			8	3	4
			2	2	1
			3	1	1
Total		2			5
32	11	5	1	1	1
Total		1			1
33	5	4	5	1	2
	23	9	4	4	4
	22	11	2	1	1
	8	3	3	1	1
			2	1	1
			3	1	1
Total		4			6
34	21	9	5	3	2
	7	3			
	5	4			
	15	6			
	34	9			
Total		5			1

[redacted]

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ORDBG-737 10 FEB 48
FORMERLY SPOTZ-P-781

PENETRATIONS OF SHELLS IN PANELS

DATE 21 May 53

FIRING [illegible] NUMBER

PRIORITY NUMBER

XXXXXXXXX Sheet 9 of 11

XXXXXXXXX Round No. 16

ROCKET NUMBER

PENETRATIONS OF SHELL 122mm, OF-471N Soviet LOADED TNT

IN PANELS WITH RADII OF 60' AND FEET

PANEL NUMBERS	PERFORATIONS		PENETRATIONS		
	LENGTH	WIDTH	LENGTH	WIDTH	DEPTH
35	6	6	1	1	1
	5	3	1	1	2
	9	5			
	38	16			
	38	8			
Total		5			2
36	21	13	6	3	7
	16	11	2	1	1
	9	6	7	3	7
	11	6	3	2	2
	28	9	2	1	2
	4	4			
Total		6			5
37	26	12	2	1	1
			4	3	7
			2	2	3
			2	1	1
			1	1	1
Total		1			5
38	14	9	2	1	1
			1	1	1
			2	1	1
			1	1	1
Total		1			4
39	7	4	3	2	3
	7	5	4	3	3
	9	6	2	1	1
			2	2	1
Total		3			4

PANEL NUMBERS	PERFORATIONS		PENETRATIONS		
	LENGTH	WIDTH	LENGTH	WIDTH	DEPTH
40			7	3	4
			2	1	1
Total					2
41			2	1	7
			2	1	1
			1	1	1
			6	3	2
			1	1	1
			2	2	2
Total					6
42	10	10	3	1	1
			2	2	2
Total		1			2
43			2	1	1
			2	2	2
			1	1	1
Total					3
44	6	4	4	1	1
			2	2	1
			3	1	1
			6	4	2
			2	1	1
Total		1			5
45			4	1	1
			2	1	1
			3	2	1
Total					3

CRDBG-737 10 FEB 48
FORMERLY SPOTZ-F-201

PENETRATIONS OF SHELLS IN PANELS

DATE 21 May 50

FIRING ROOM NUMBER

PRIORITY NUMBER

XXXXXXXX Sheet 10 of 11

XXXXXXXX Round No. 16

ROCKET NUMBER

PENETRATIONS OF SHELL 122mm, OF-471N LOADED TNT

IN PANELS WITH RADII OF Soviet AND FEET

PANEL NUMBERS	PERFORATIONS		PENETRATIONS		
	LENGTH	WIDTH	LENGTH	WIDTH	DEPTH
46			3	2	2
			1	1	1
			2	1	1
Total					3
47			1	1	1
			2	1	1
			1	1	1
			3	2	1
			3	1	1
			1	1	1
Total					6
48			2	1	2
			1	1	1
			2	1	1
			1	1	1
			4	2	3
			3	2	1
Total					6
49			5	2	2
			4	3	2
Total					2
50			3	3	1
			3	2	1
			2	1	1
			2	1	1
			1	1	1
Total					5
51	6	6	2	2	1
			3	1	2
			1	1	1
			3	2	1
			3	1	2
			1	1	1
Total		1			6
52			3	2	2
			3	2	1
			1	1	1
			1	1	1
			2	1	1
Total					5
53			2	1	1
			3	2	1
			5	2	3
			4	2	1
			4	2	1
			1	1	1
			2	1	1
Total					7
54			3	2	2
			3	1	2
			2	2	1
			3	1	1
			3	1	1
			3	2	4
Total					6
55	11	8	1	1	1
			4	4	2
			3	2	1
			2	1	1

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ORDNG-737 10 FEB 48
FORMERLY SPOTZ-F-701

PENETRATIONS OF SHELLS IN PANELS

DATE 21 May 53

PENETRATIONS OF SHELL 122mm, OF-471N LOADED TNT
Soviet

IN PANELS WITH RADII OF 60' AND FEET

XXXXXXX Sheet 11 of 11
XXXXXXXX Round No. 16

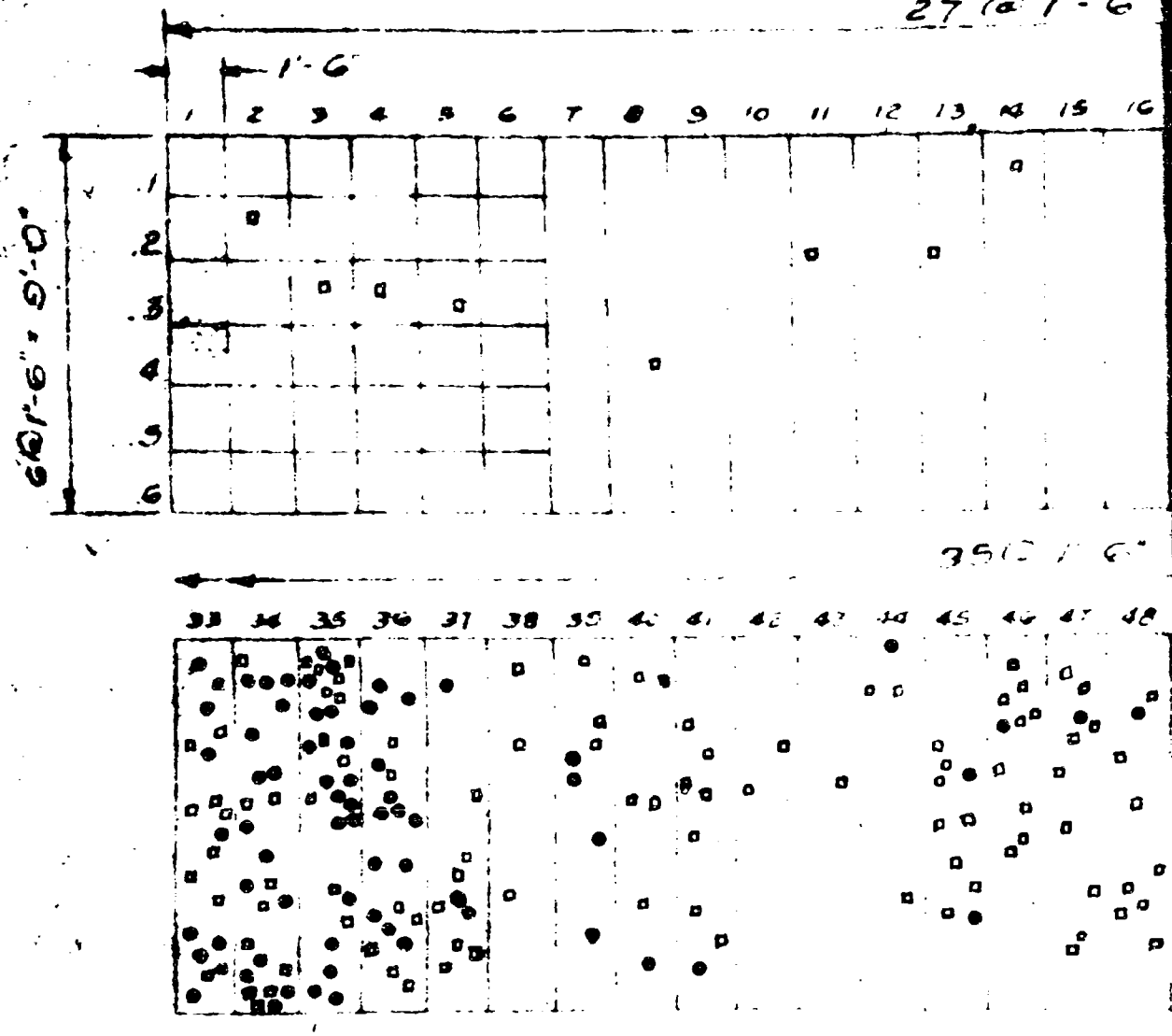
PANEL NUMBERS	PERFORATIONS		PENETRATIONS		
	LENGTH	WIDTH	LENGTH	WIDTH	DEPTH
Total 55		1			4
56			4	2	2
			2	1	1
			3	1	2
Total					3
56.3			8	5	2
Total					1
59.1	12	8	1	1	1
			1	1	1
Total		1			2
59.2			3	1	1
			3	1	1
Total					2
60.1			5	5	2
Total					1
60.2	17	9	3	2	2
	6	5			
	13	12			
Total		3			1
60.3			1	1	1
			2	2	2
Total					2
61.1	15	10	3	1	1
	6	4	3	2	2
Total		2			2

PANEL NUMBERS	PERFORATIONS		PENETRATIONS		
	LENGTH	WIDTH	LENGTH	WIDTH	DEPTH
61.2	10	5	3	2	2
	11	6	3	2	2
			4	2	3
Total		2			3
61.3	7	7	4	2	4
			2	1	1
Total		1			2
62.1	5	4	2	1	1
	18	18	2	1	1
Total		2			2
62.2			1	1	1
Total					1
62.3			10	3	6
Total					1
63.1	20	16	8	3	7
Total		1			1
63.2	7	6			
	10	6			
	7	3			
Total		3			
63.3	20	18	3	2	3
			2	1	1
Total		1			2
TOTALS					
60' Radius		55			149

B-11822

CONFIDENTIAL PANEL

30 FT RADIUS



1" NO. 3 PINE BOARDS (DRESSED) PL

DATE: 5-21-53, RD.NO. 16. **PERFOR**

SHELL: 122 MM. SOVIET. **PENETR**

SUSPENSION: HORIZONTAL.

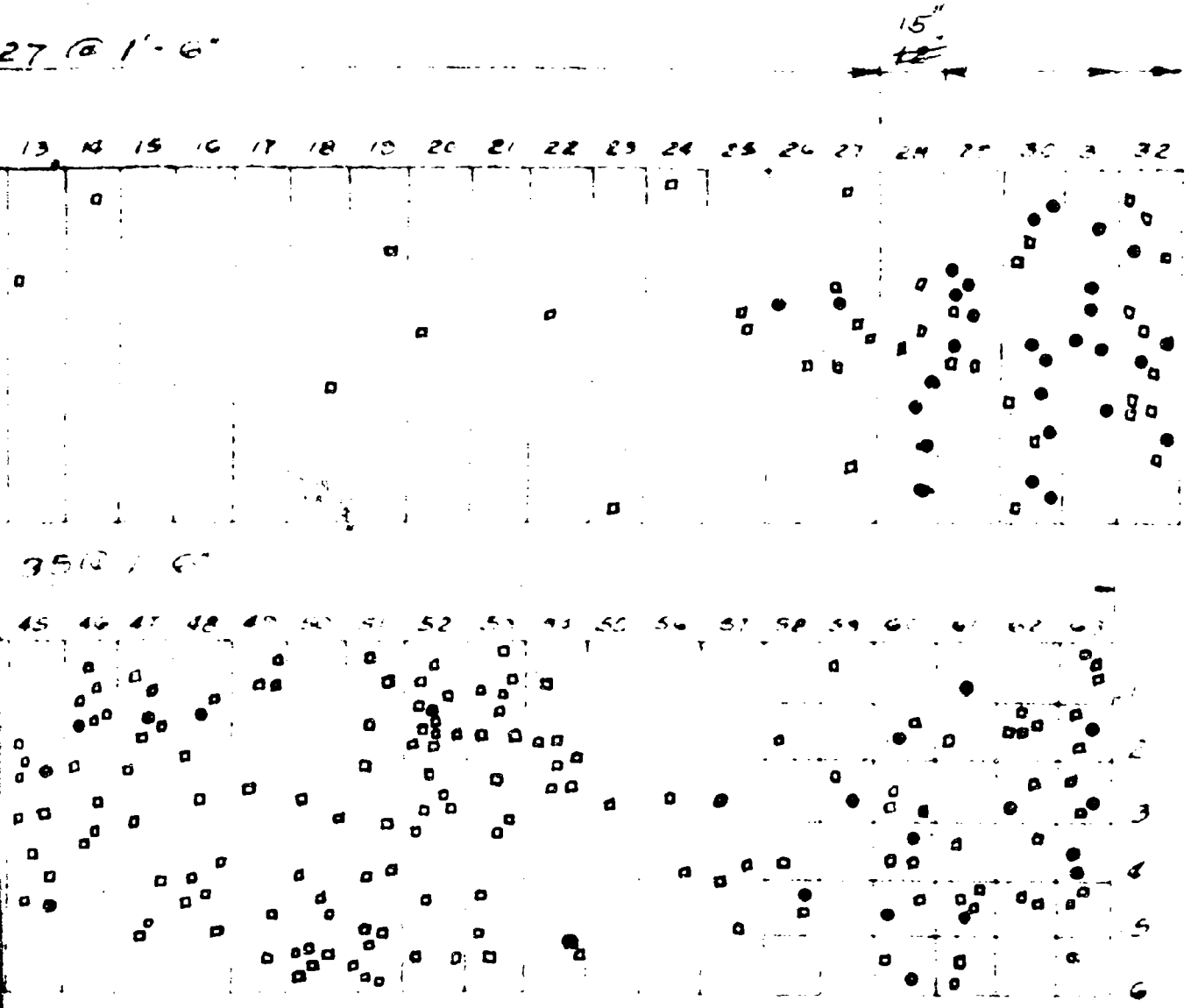
CONFIDE

1

2

ANEL A

RADIUS 180° ARC



SED) PLACED VERTICALLY

PERFORATIONS, 114. —●

PENETRATIONS, 260. —□

RANGE OPERATIONS SECTI

LAYOUT OF PANELS

FOR

NUMBER AND DISTRIBUT

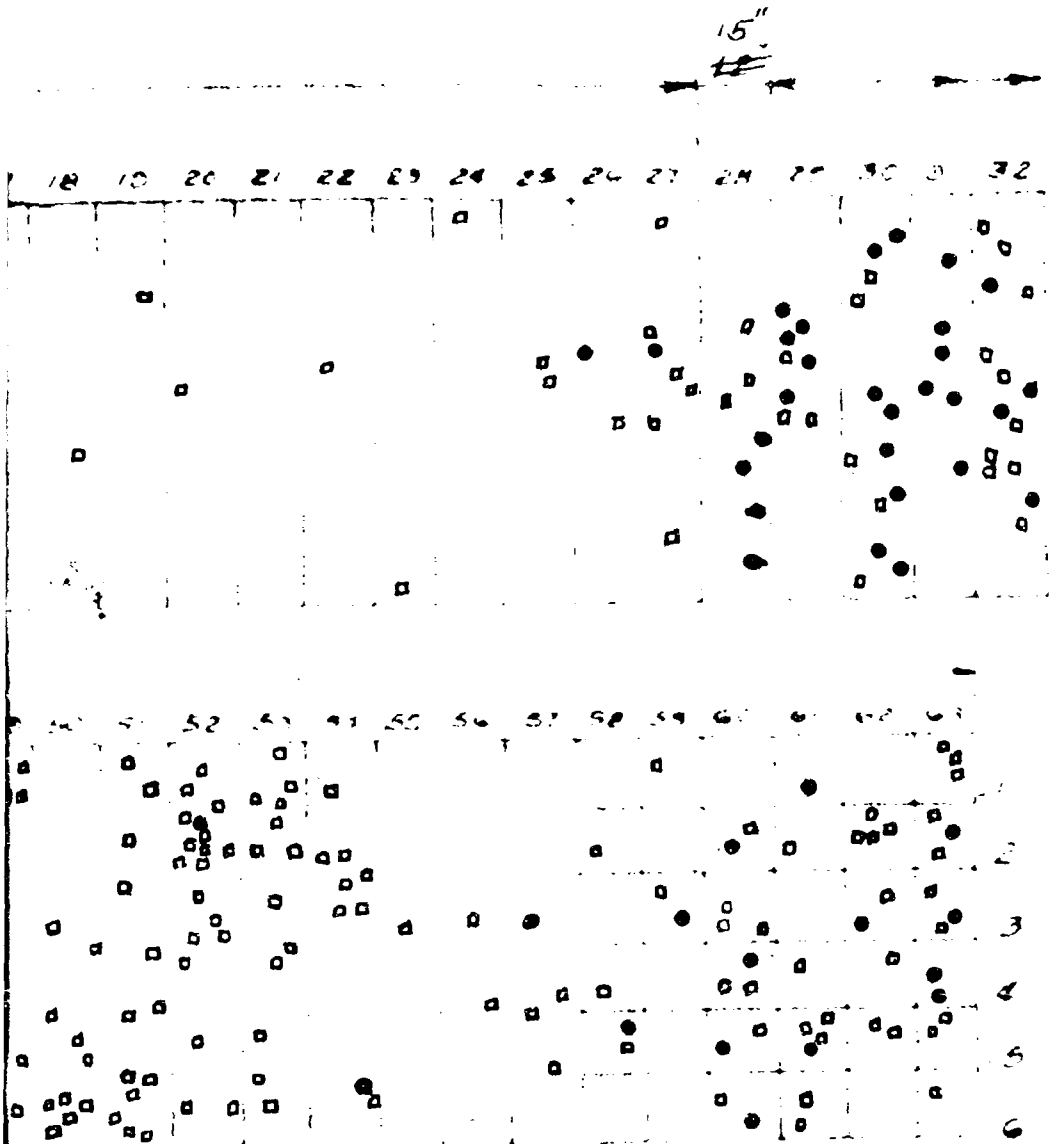
OF FRAGMENTS

(30 FT RADIUS)

ABERDEEN PROVING GROUND

FIDENTIAL

180° ARC



3

CED VERTICALLY

TIONS, 114. —●
TIONS, 260. —□

RANGE OPERATIONS SECTION

LAYOUT OF PANELS
FOR
NUMBER AND DISTRIBUTION
OF FRAGMENTS
(AT RADIUS)

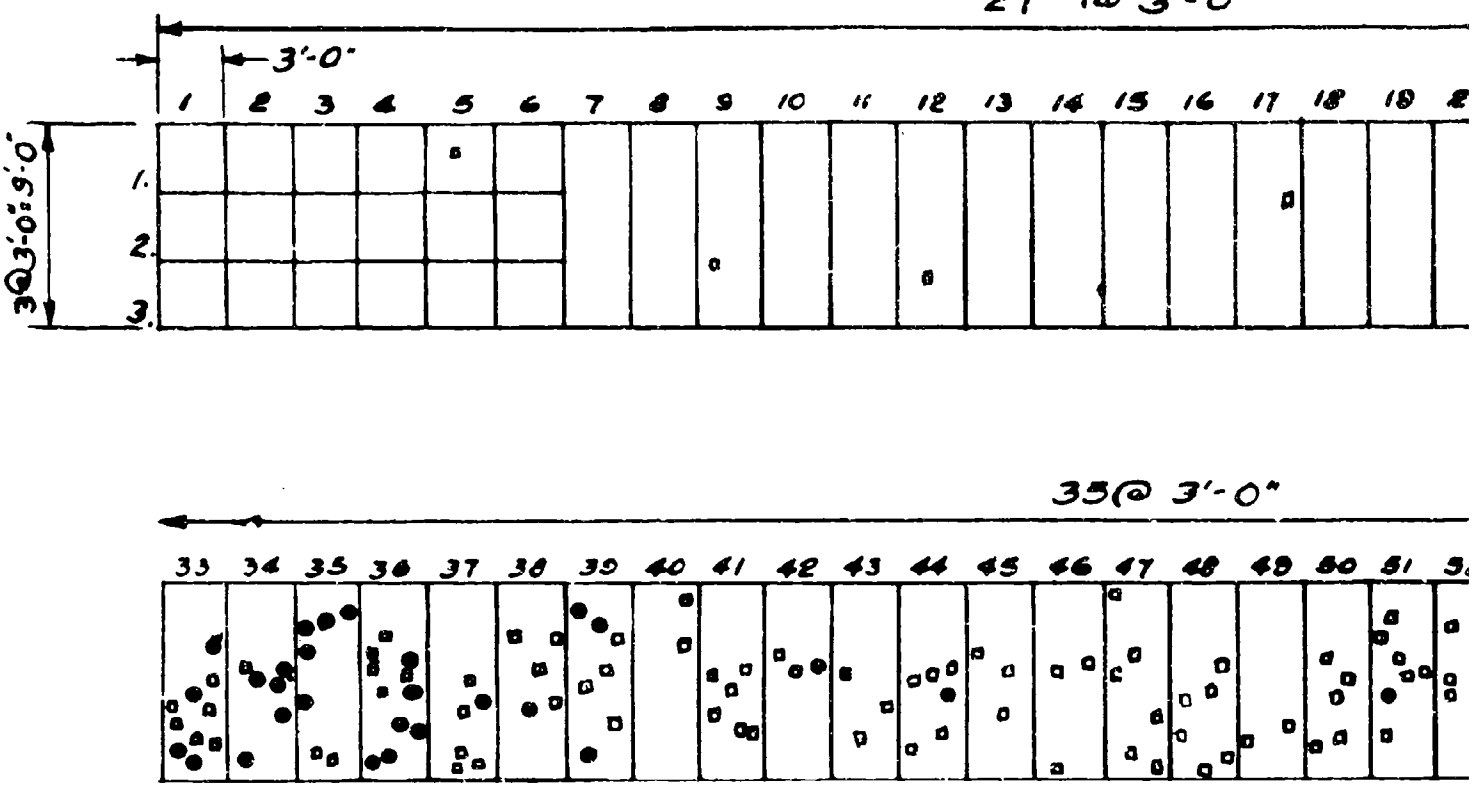
ABERDEEN PROVING GROUND, MD.
OCT 27 1942

B-11822

1

CONFIDENTIAL PANEL B

60 FT. RADIUS 180° AR



1" NO. 3 PINE BOARDS (DRESSED) PLACED VE

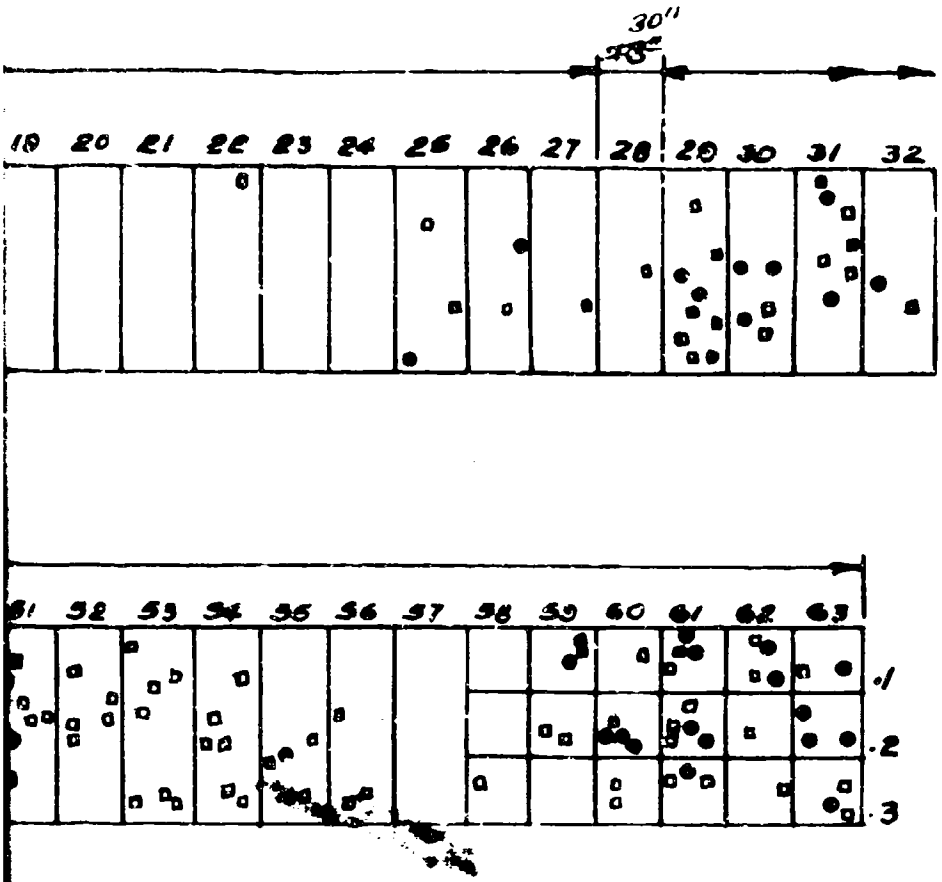
DATE: 5-21-53, RD. NO. 16. PERFORATIONS, 55

SHELL: 122 MM. SOVIET. PENETRATIONS, 14

SUSPENSION: HORIZONTAL.

CONFIDENTIAL

ARC



VERTICALLY.

55. -●

149. -□

RANGE OPERATIONS SECTION

LAYOUT OF PANELS
FOR
NUMBER AND DISTRIBUTION
OF FRAGMENTS
(60 FT. RADIUS)

623

ABERDEEN PROVING GROUND, MD.
OCT. 27, 1944 APG 11876-14 PR

[illegible] RECORD NO. B-11[illegible]
ENCLOSURE 3

ROUND NO. 11

12 June 1952

SHELL, [illegible], [illegible], Soviet
[illegible], [illegible], Ammonium Nitrate 90% - TNT 10%

SHELL MARKINGS

OBVERSE

515
4-45
122

REVERSE

(none)

BASE

Machined Rough

Shell has one split rotating band.

Weight of Shell w/o Components- [illegible] lbs.
As Fired - [illegible] lbs.

Distance from Shell to the center of the [illegible] duralumin flash target- 22.[illegible] ft.

Shell [illegible] firing is shown in [illegible] Photograph No. [illegible].

[illegible] weights and [illegible] in [illegible] Photograph No. [illegible].

[redacted]

FRAGMENT VELOCITY DATA

Test of Shell, H.E., 122MM, Soviet, AT/90 Side Velocity Box Data

Proof Director Mr. O. L. Rogers Date Fired 12 June 1952

Distance from detonation point to target 221' 7" feet. Round No. 11

Round statically detonated and velocity obtained by Photographic Methods.

Fragment No.	Weight, Grains	Velocity, f/s	Fragment No.	Weight, Grains	Velocity, f/s	Fragment No.	Weight, Grains	Velocity, f/s
1	96		17	N.R.		33	N.R.	
2	26		18	N.R.		34	N.R.	
3	N.R.		19	N.R.		35	2	
4	N.R.		20	1		36	26	
5	N.R.		21	8		37	21	
6	264		22	144		38	N.R.	
7	21		23	N.R.		39	N.R.	
8	13		24	12	2043	40	20	
9	8		25	25	2157	41	10	
10	8		26	34		42	62	
11	113(3)		27	1		43	N.R.	
12	N.R.		28	N.R.		44	4	
13	8		29	3		45	8	
14	176	2258	30	61		46	15	
15	11		31	N.R.		47	59	
16	20(2)		32	12		48	78	

Average velocity 2322 ft/sec.

NV - no velocity recorded.

NR - not recovered.

(2) - total weight of two pieces.

(n) - total weight of n pieces.

Individual velocity inaccuracies are less than ± 3.4 % for the highest velocity and ± 3.1 % for the lowest velocity.

CONFIDENTIAL

FRAGMENT VELOCITY DATA [redacted]

Test of Shell, H.E. 122MM, Soviet Side Velocity Box Data

Proof Director Mr. O. L. Rogers Date Fired 12 June 1952

Distance from detonation point to target 321' 7" feet. Round No. 11

Round statically detonated and velocity obtained by Photographic Methods.

Fragment No.	Weight, Grains	Velocity, f/s	Fragment No.	Weight, Grains	Velocity, f/s	Fragment No.	Weight, Grains	Velocity, f/s
[illegible]	7		65	15		81	8	
[illegible]	N.R.		66	N.R.		82	69	2368
[illegible]	115		67	15		83	79	
[illegible]	3		68	213(2)		84	273	
[illegible]	N.R.		69	N.R.		85	10	2157
[illegible]	N.R.		70	9	2368	86	305	2231
[illegible]	3		71	N.R.		87	81	2231
[illegible]	N.R.		72	N.R.		88	N.R.	
[illegible]	2		73	N.R.		89	N.R.	
[illegible]	88		74	41		90	7	
[illegible]	N.R.		75	26		91	3	
[illegible]	72	2397	76	N.R.		92	84	
[illegible]	[illegible]		77	N.R.		93	41	
[illegible]	198		78	N.R.		94	5(2)	2043
[illegible]	N.R.	2311	79	N.R.		95	10	2087
[illegible]	53		80	3		96	2	

Average velocity 2332 ft/sec.
NV - no velocity recorded.
NR - not recovered.

(2) - total weight of two pieces.
(n) - total weight of n pieces.

Individual velocity inaccuracies are less than ± 3.4 % for the highest velocity and ± 3.2 % for the lowest velocity.

CONFIDENTIAL

[redacted]

ARMY DA ABERDEEN PROVING GROUND MD 354

FRAGMENT VELOCITY DATA [redacted]

Test of Shell, H.E. 122mm, Soviet — Side Velocity Box Data

Proof Director Mr. O. L. Rogers — Date Fired 12 June 1952

Distance from detonation point to target 221' 7" feet. Round No. 11

Round statically detonated and velocity obtained by Photographic Methods.

Fragment No.	Weight, Grains	Velocity, f/s	Fragment No.	Weight, Grains	Velocity, f/s	Fragment No.	Weight, Grains	Velocity, f/s
97	5		113	34		129	4	
98	2	2182	114	39		130	15	
99	4	2368	115	N.R.		131	N.R.	
100	9		116	9		132	N.R.	
101	12(3)		117	39		133	12	
102	N.R.	2311.	118	N.R.		134	34	2489
103	N.R.		119	96		135	N.R.	
104	16	2157	120	37		136	16	
105	N.R.	2427	121	5		137	N.R.	
106	N.R.		122	N.R.		138	N.R.	
107	46		123	N.R.		139	N.R.	
108	106	2437	124	1		140	82	2555
109	18	2182	125	3	2489	141	N.R.	
110	25		126	N.R.		142	80(2)	2555
111	7	2555	127	N.R.		143	N.R.	2521
112	18		128	N.R.		144	N.R.	

Average velocity 2393 ft/sec.
NV - no velocity recorded.
NR - not recovered.

(2) - total weight of two pieces.
(n) - total weight of n pieces.

Individual velocity inaccuracies are less than ± 3.4 % for the highest velocity and ± 3.1 % for the lowest velocity.

CONFIDENTIAL

[redacted]

Ordnance 1199
Rev 13 Aug 53

FRAGMENT VELOCITY DATA

CONFIDENTIAL

Test of Shell, H.E. 122mm, Soviet — Side Velocity Box Data

Proof Director Mr. O. L. Rogers — Date Fired 12 June 1952

Distance from detonation point to target 22' 7" feet. Round No. 11

Round statically detonated and velocity obtained by Photographic Methods.

Fragment No.	Weight, Grains	Velocity, f/s	Fragment No.	Weight, Grains	Velocity, f/s	Fragment No.	Weight, Grains	Velocity, f/s
145	38	2458	161	N.R.		177	155	2427
146	7	2555	162	46		178	N.R.	2427
147	N.R.	2489	163	21		179	46	
148	26		164	10		180	04	
149	61	2555	165	3		181	2	2521
150	N.R.		166	6(2)		181	79(2)	2555
151	N.R.		167	11		183	47	2588
152	64		168	N.R.		184	N.R.	2427
153	16		169	30		185	N.R.	
154	N.R.		170	N.R.		186	1	
155	2	2311	171	N.R.		187	39	2521
156	N.R.		172	N.R.		188	N.R.	
157	12	2427	173	13		189	N.R.	
158	N.R.		174	8	2489	190	N.R.	
159	N.R.		175	3(2)		191	19	
160	N.R.		176	7	2458	192	35	

Average velocity 2393 ft/sec.
NV - no velocity recorded.
NR - not recovered.

(2) - total weight of two pieces.
(n) - total weight of n pieces.

Individual velocity inaccuracies are less than ± 3.4 % for the highest velocity and ± 3.1 % for the lowest velocity.

CONFIDENTIAL

[redacted]

GPEG-1179
Rev 12 Aug 52

FRAGMENT VELOCITY DATA

Test of Shell, H.E., 122mm, Soviet — Side Velocity Box Data

Proof Director Mr. O. L. Rogers — Date Fired 12 June 1952

Distance from detonation point to target 22' 7" feet. Round No. 11

Round statically detonated and velocity obtained by Photographic Methods.

Fragment No.	Weight, Grains	Velocity, f/s	Fragment No.	Weight, Grains	Velocity, f/s	Fragment No.	Weight, Grains	Velocity, f/s
193	N.R.		209	N.R.				
194	N.R.		210	N.R.				
195	N.R.		211	N.R.				
196	9		212	N.R.				
197	15		213	9	2507			
198	N.R.		214	258	2539			
199	N.R.		215	1				
200	30		216	34				
201	3		217	N.R.	2658			
202	5		218	6	2572			
203	N.R.		219	8				
204	N.R.		220	2				
205	11	2330	221	N.R.				
206	N.R.		222	1				
207	16	2507	223	7				
208	N.R.		224	6				

Average velocity 2393 ft/sec.
NV - no velocity recorded.
NR - not recovered.

(2) - total weight of two pieces.
(n) - total weight of n pieces.

Individual velocity inaccuracies are less than ± 3.4 % for the highest velocity and ± 3.1 % for the lowest velocity.

[redacted]

ORDBG-737 19 FEB 48
FORMERLY SPOTZ-F-281

PENETRATIO[illegible] SHELLS IN PANELS

LOT NUMBER
DATE 12 June 52
FIRING RECORD NUMBER
PRIORITY NUMBER
XXXXXXXXX Sheet 1 of 37
XXXXXXXXX Round No. 11
ROCKET NUMBER

PENETRATIONS OF SHELL 122mm, 0-462A LOADED AT/90
Soviet
IN PANELS WITH RADII OF 30' AND FEET

PANEL NUMBERS	PERFORATIONS LENGTH	PERFORATIONS WIDTH	PENETRATIONS LENGTH	PENETRATIONS WIDTH	PENETRATIONS DEPTH
2.5			1	1	1
Total					1
3.3			2	1	1
Total					1
5.1			2	1	1
Total					1
8			1	1	1
Total					1
9			1	1	1
			2	2	2
			1	1	1
			2	1	2
			1	1	1
Total					5
11			1	1	1
			2	1	1
			1	1	1
			1	1	1
Total					4
12			2	2	2
			2	2	3
			2	2	1
Total					3
13	4	2	2	2	6
Total		1			1
14			2	2	2

PANEL NUMBERS	PERFORATIONS LENGTH	PERFORATIONS WIDTH	PENETRATIONS LENGTH	PENETRATIONS WIDTH	PENETRATIONS DEPTH
Total					1
15			3	1	1
			1	1	1
Total					2
16			1	1	1
			2	2	2
Total					2
17			3	2	6
			2	1	3
			7	3	8
Total					3
18			2	1	4
Total					1
20			1	1	1
Total					1
21			2	1	1
			1	1	1
Total					2
22	4	3	1	1	1
			2	1	3
			1	1	1
			1	1	1
Total		1			4
23	16	7	3	2	4
			2	1	2
			2	1	3

CONFIDENTIAL

[redacted]

ARMY-OD ABERDEEN PROVING GROUND MD-446

ORDBG-737 10 FEB 48
FORMERLY SPOTZ-P-291

PENETRATION OF SHELLS IN PANELS

DATE 12 June 52

FIRING NUMBER

PRIORITY NUMBER

XXXXXXXX Sheet 2 of 37

XXXXXXXXX Round No. 11

ROCKET NUMBER

PENETRATIONS OF SHELL 122mm, O-462A LOADED AT/90

IN PANELS WITH RADII OF Soviet 30' AND FEET

PANEL NUMBERS	PERFORATIONS		PENETRATIONS		
	LENGTH	WIDTH	LENGTH	WIDTH	DEPTH
			1	1	1
			2	1	6
			1	1	1
Total		1			6
24	3	3	1	1	2
			2	1	2
			1	1	1
			3	2	7
			3	3	6
Total		1			5
25	4	2	3	3	4
	4	3	2	1	4
	6	3	2	1	4
	3	2	1	1	4
	4	3	2	2	10
	4	4	1	1	1
	6	3	1	1	3
			1	1	3
			3	2	3
			3	2	4
			2	2	4
			1	1	2
			1	1	2
			2	1	1
			3	3	3
			2	1	5
Total		7			16
26	5	3	2	2	4
	3	2	3	2	9
	2	1	1	1	2
	5	2	1	1	1

PANEL NUMBERS	PERFORATIONS		PENETRATIONS		
	LENGTH	WIDTH	LENGTH	WIDTH	DEPTH
	4	3	3	2	8
	3	3	2	2	3
	5	2	2	1	2
	5	4	1	1	3
			1	1	2
			2	1	2
			2	1	2
			1	1	1
			1	1	2
			2	2	6
			2	2	4
			2	1	6
			1	1	1
Total		8			17
27	5	4	2	2	4
	4	3	1	1	1
	4	3	1	1	2
	5	5	1	1	2
	6	3	1	1	1
	4	3	1	1	1
	13	5	1	1	3
	3	3	3	3	6
	19	5	1	1	1
	3	2	3	3	6
	4	3	1	1	2
	4	3	2	1	1
			2	2	5
			1	1	3
			1	1	2
			1	1	2
			2	2	6
			3	2	2
			3	2	5

CONFIDENTIAL

[redacted]

ARMY-OR ABERDEEN PROVING GROUND MD 446

ORDBG-737 10 FEB 48
FORMERLY SPOTZ-F-201

PENETRATIONS OF SHELLS IN PANELS

DATE 12 June 52

PENETRATIONS OF SHELL 122mm, O-462A LOADED AT/90

IN PANELS WITH Soviet 30' AND FEET

XXXXXXXX Sheet 3 of 37

XXXXXXXXX Round No. 11

PANEL NUMBERS	PERFORATIONS		PENETRATIONS		
	LENGTH	WIDTH	LENGTH	WIDTH	DEPTH
			1	1	1
			1	1	1
			2	2	6
			2	2	3
Total		12			23
23	7	4	3	2	5
	3	2	2	1	1
	11	7	3	1	3
	7	3	2	2	6
	9	4	3	3	5
	6	4	1	1	4
	6	4	1	I	1
	7	5	3	2	3
	7	4	1	1	3
	3	2	2	2	3
	6	4	3	2	6
			2	2	5
			1	1	6
			1	1	3
			1	1	1
			1	1	1
			2	2	4
			1	1	1
			1	1	2
			2	2	8
			1	1	6
Total		11			21
29	4	3	3	2	5
	7	4	1	1	5
	4	3	1	1	1
	6	3	1	1	1
	5	3	2	1	5

PANEL NUMBERS	PERFORATIONS		PENETRATIONS		
	LENGTH	WIDTH	LENGTH	WIDTH	DEPTH
	5	3	2	1	2
	6	3	2	1	2
	30	5	3	2	5
	3	2	2	1	7
	3	3	2	2	10
	8	5	1	1	3
	3	2	3	2	9
	2	2	1	1	1
	7	4	3	2	8
	3	2	2	2	2
			1	1	1
			2	1	3
			1	1	3
			2	2	10
			1	1	2
			1	1	5
			1	1	2
			2	2	8
			1	1	1
			1	1	1
Total		15			25
30	16	6	3	2	6
	8	4	1	1	1
	5	3	2	2	4
	14	6	4	2	4
	10	9	1	1	1
	13	7	2	1	2
	9	5	1	1	1
	12	4	4	2	7
	11	4	2	2	6
	6	2	1	1	1
	4	3	1	1	4
	5	4	3	2	6

CONFIDENTIAL

[redacted]

ARMY-OB-ABERDEEN PROVING GROUND MD 640

B 11822

ORDBG-737 18 FEB 46
FORMERLY SPOTZ-F-291

PENETRATION OF SHELLS IN PANELS

LOT NUMBER
FIRING [illegible] NUMBER
PRIORITY NUMBER
DATE 12 June 52

PENETRATIONS OF SHELL 122mm, O-462A LOADED AT/90
Soviet
IN PANELS WITH RADII OF 30' AND FEET

XXXXXXXX Sheet 4 of 37
XXXXXXXXX Round No. 11
ROCKET NUMBER

PANEL NUMBERS	PERFORATIONS LENGTH	PERFORATIONS WIDTH	PENETRATIONS LENGTH	PENETRATIONS WIDTH	PENETRATIONS DEPTH
	3	2	2	2	3
	10	9	1	1	1
	4	3	3	2	7
	10	3	1	1	2
	9	4	3	3	2
	4	3	1	1	1
	8	8	3	2	6
	7	4	1	1	1
			3	2	8
			1	1	1
			2	1	2
			1	1	1
			4	3	7
			1	1	1
			1	1	1
			3	2	5
			2	1	3
			2	1	2
			2	2	1
			1	1	3
			1	1	2
			2	1	8
			2	1	2
Total		20			35
31	4	3	3	2	1
	4	3	2	2	2
	3	2	2	1	2
	11	4	1	1	1
	3	2	3	2	8
	6	3	1	1	2
	5	5	2	2	5
	7	5	3	2	8
	4	3	1	1	1

PANEL NUMBERS	PERFORATIONS LENGTH	PERFORATIONS WIDTH	PENETRATIONS LENGTH	PENETRATIONS WIDTH	PENETRATIONS DEPTH
	5	4	2	1	3
	8	4	1	1	1
			2	2	3
			1	1	2
			1	1	1
			2	1	3
			2	2	7
			2	2	4
			3	1	2
			2	2	6
			1	1	1
			2	1	2
			1	1	1
			2	2	9
			3	1	2
			2	1	1
			2	2	4
			4	2	4
			1	1	1
			3	3	5
			2	1	4
Total		11			30
32	6	4	1	1	1
	5	3	1	1	1
	13	6	2	2	2
	5	4	2	2	5
	8	8	4	3	10
	3	2	1	1	1
	7	5	3	2	4
	5	3	1	1	1
	3	2	2	2	5
	11	5	1	1	2
	4	2	2	1	6

[redacted]

ARMY OF ABERDEEN PROVING GROUND MD 44K

ORDBB-737 19 FEB 48
FORMERLY SPOTZ-F-281

PENETRATION OF SHELLS IN PANELS

DATE 12 June 52

PENETRATIONS OF SHELL 122mm, O-462A LOADED AT/90

IN PANELS WITH RAD Soviet 30° AND FEET

XXXXXXX Sheet 5 of 37

XXXXXXX Round No. 11

PANEL NUMBERS	PERFORATIONS		PENETRATIONS		
	LENGTH	WIDTH	LENGTH	WIDTH	DEPTH
cont 32			3	2	4
			3	2	3
			4	2	7
			2	1	3
			1	1	1
			1	1	2
			3	1	8
			3	2	4
			1	1	2
			1	1	1
			1	1	1
Total		11			22
33	11	5	2	1	1
	11	6	1	1	1
	5	4	2	1	3
	5	2	2	1	2
	23	8	2	1	1
	3	2	2	1	1
	6	4	4	2	5
	4	4	2	1	1
	17	6	3	2	3
	6	2	2	1	2
	4	2	2	2	3
	16	8	2	1	2
	4	3	1	1	1
	6	2	1	1	1
	10	5	3	2	7
	5	5	5	2	3
	7	3	1	1	2
	5	2	3	2	4
			3	1	3
			1	1	1
			1	1	[redacted]

PANEL NUMBERS	PERFORATIONS		PENETRATIONS		
	LENGTH	WIDTH	LENGTH	WIDTH	DEPTH
			3	2	3
			2	1	1
			2	1	6
			1	1	1
			1	1	1
			2	1	3
			2	1	2
			2	1	2
			3	2	10
			4	2	5
			3	3	9
			2	1	3
			2	1	1
			3	2	3
			3	2	4
			3	1	1
			4	2	1
Total		18			38
34	4	2	2	1	1
	10	8	1	1	1
	9	5	2	1	2
	5	2	2	2	2
	10	5	3	2	4
	4	2	2	1	1
	11	5	1	1	1
	9	7	2	1	1
	4	4	3	2	5
	14	7	1	1	1
	5	3	4	2	9
	6	5	1	1	2
	10	6	1	1	1
	14	6	1	1	1
	[redacted]	5	3	2	4

CONFIDENTIAL

ORDBG-737 15 FEB 48
FORMERLY SPOTE-P-101

PENETRATION OF SHELLS IN PANELS

LOT NUMBER

DATE 12 June 52

FIRING NUMBER

PRIORITY NUMBER

XXXXXXXX Sheet 6 of 37

XXXXXXXX Round No. 11

ROCKET NUMBER

PENETRATIONS OF SHELL 122mm, O-462A LOADED AT/90

IN PANELS WITH RADII OF Soviet 30' AND FEET

PANEL NUMBERS	PERFORATIONS		PENETRATIONS		
	LENGTH	WIDTH	LENGTH	WIDTH	DEPTH
cont 34	8	3	2	2	8
	4	4	3	2	6
	8	5	1	1	1
	13	5	2	1	1
	5	3	3	2	2
	12	8	3	3	3
	11	11	2	2	3
	7	3	3	2	6
	5	5	4	3	6
	11	6	3	2	3
	8	3	2	1	2
	12	6	5	4	5
	3	2	1	1	1
	8	5	3	2	1
	24	6	1	1	2
	8	4	3	1	5
	12	5	3	2	6
	32	8	1	1	2
	9	3	1	1	2
	7	3	2	1	1
			1	1	3
			2	1	2
			3	3	4
			1	1	1
			3	2	4
			1	1	3
			2	1	5
			4	2	4
			1	1	1
			3	2	3
			1	1	1
			3	2	3
			1	1	1
			3	2	1

PANEL NUMBERS	PERFORATIONS		PENETRATIONS		
	LENGTH	WIDTH	LENGTH	WIDTH	DEPTH
			2	1	1
			1	1	1
			2	1	1
			1	1	1
Total		35			53
35	10	9	1	1	1
	8	3	1	1	1
	20	8	2	1	6
	5	3	1	1	1
	14	8	1	1	1
	12	5	1	1	2
	7	4	2	1	1
	22	7	3	2	4
	10	4	2	2	2
	13	7	2	2	1
	12	11	1	1	1
	9	6	1	1	1
	15	7	1	1	1
	9	3	1	1	4
	4	3	1	1	1
	6	3	2	1	1
	15	6	2	1	2
	16	7	1	1	1
	5	3	1	1	1
	24	10	2	1	1
	4	3	1	1	2
	14	12	6	4	7
	3	2	3	2	2
	9	6	6	4	10
	3	2	1	1	2
	13	8	2	1	2
	15	4	2	1	1
	12	6	3	2	1

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B-1722

ORDBG-137 16 FEB 48
FORMERLY SPOTZ-F-291

PENETRATION SHELLS IN PANELS

POT NUMBER
DATE 12 June 52
FIRING RECORD NUMBER
PRIORITY NUMBER
XXXXXXXXX Sheet 7 of 37
XXXXXXXXX Round No. 11
ROCKET NUMBER

PENETRATIONS OF SHELL 122mm, 0-462A LOADED AT/90
Soviet
IN PANELS WITH RADII OF 30' AND FEET

PANEL NUMBERS	PERFORATIONS LENGTH	PERFORATIONS WIDTH	PENETRATIONS LENGTH	PENETRATIONS WIDTH	PENETRATIONS DEPTH	PANEL NUMBERS	PERFORATIONS LENGTH	PERFORATIONS WIDTH	PENETRATIONS LENGTH	PENETRATIONS WIDTH	PENETRATIONS DEPTH
35 cont	7	3	3	2	7				2	1	1
	8	4	1	1	1				3	2	3
	7	5	1	1	1				12	6	9
	10	5	1	1	1				1	1	1
	11	5	1	1	2				4	3	5
	15	9	4	2	3				3	2	3
	4	2	5	2	2				1	1	1
	4	4	1	1	1				3	2	4
	10	6	3	2	1				1	1	1
	9	8	2	1	1				1	1	1
	21	11	1	1	1				2	1	1
			4	3	3				6	4	7
			7	3	5				3	2	3
			3	2	4				2	1	3
			4	3	3				2	1	1
			2	1	2				4	1	3
			2	1	2				1	1	3
			1	1	1	Total		39			79
			3	2	4						
			5	3	8	36	6	2	3	3	7
			2	1	2		7	4	1	1	3
			2	1	3		6	4	4	2	3
			2	1	1		6	4	3	2	5
			1	1	2		14	6	5	3	5
			1	1	1		10	4	3	2	6
			3	2	3		10	6	1	1	1
			1	1	1		5	3	2	1	1
			1	1	1		16	6	1	1	1
			3	3	7		8	6	3	2	5
			3	2	4		7	4	3	2	4
			1	1	1		5	4	1	1	1
			2	1	3		5	3	3	2	7
			1	1	1		13	6	2	1	2
			4	3	5		8	5	2	2	3

ORDBG-737 10 FEB 48
FORMERLY SPOTZ-F-261

PENETRATIONS OF SHELLS IN PANELS

LOT NUMBER

DATE 12 June 52

FIRING [illegible] NUMBER

PRIORITY NUMBER

PENETRATIONS OF SHELL 122mm, O-462A LOADED AT/90

XXXXXXX Sheet 8 of 37

IN PANELS WITH BACK OF Soviet 30° AND FEET

XXXXXXXXX Round No. 11

ROCKET NUMBER

PANEL NUMBERS	PERFORATIONS		PENETRATIONS			PANEL NUMBERS	PERFORATIONS		PENETRATIONS		
	LENGTH	WIDTH	LENGTH	WIDTH	DEPTH		LENGTH	WIDTH	LENGTH	WIDTH	DEPTH
	11	5	3	3	7				2	2	2
	5	5	3	3	4				3	3	5
	10	9	4	3	8				2	1	1
	20	6	1	1	1				2	1	1
	15	9	1	1	1				3	2	6
	10	4	1	1	2				3	2	1
	8	4	3	3	8				1	1	3
	7	6	2	1	1				1	1	1
	4	3	1	1	1				3	2	3
	9	5	1	1	1				3	3	7
	5	3	3	1	5				2	1	1
	19	10	2	2	2				1	1	1
	4	3	1	1	1				2	2	2
	21	10	1	1	1				1	1	1
	9	8	3	2	3				3	2	4
	5	3	3	3	8				1	1	1
	4	3	6	3	5				1	1	1
	7	3	3	2	2				1	1	1
	7	4	1	1	1				1	1	1
	6	3	3	2	3				3	3	7
	6	3	2	1	1				2	1	8
	6	3	1	1	1	Total		38			70
	10	4	1	1	1						
			2	1	2	37	7	3	2	1	1
			1	1	1		5	5	2	2	4
			2	1	1		9	5	4	2	3
			2	1	1		7	6	2	2	2
			2	1	1		8	5	3	3	3
			3	2	1		4	3	4	2	2
			4	3	3		5	4	2	1	2
			2	2	3		4	3	4	3	2
			2	2	3		8	6	2	2	2
			1	1	1		11	4	2	2	2
			2	1	1		12	5	1	1	1

[redacted]

ARMY-OBD-ABERDEEN PROVING GROUND MD 4-46

ORDBG-737 10 FEB 48
FORMERLY SPOTZ-F-201

PENETRATION OF SHELLS IN PANELS

TOT NUMBER | DATE 12 June 52
FIRING [illegible] NUMBER
PRIORITY NUMBER
XXXXXXX Sheet 9 of 37
XXXXXXXX Round No. 11
ROCKET NUMBER

PENETRATIONS OF SHELL 122mm, 0-462A LOADED AT/90
Soviet
IN PANELS WITH RADII OF 30' AND FEET

PANEL NUMBERS	PERFORATIONS LENGTH	PERFORATIONS WIDTH	PENETRATIONS LENGTH	PENETRATIONS WIDTH	PENETRATIONS DEPTH	PANEL NUMBERS	PERFORATIONS LENGTH	PERFORATIONS WIDTH	PENETRATIONS LENGTH	PENETRATIONS WIDTH	PENETRATIONS DEPTH
	10	5	1	1	1				2	1	1
	9	4	1	1	1				2	1	1
			1	1	1				2	2	2
			4	3	5	Total		13			48
			2	2	2						
			1	1	1	38	5	3	3	2	2
			3	2	3		4	4	2	2	1
			1	1	1		13	6	3	2	3
			3	2	2		6	3	2	1	1
			4	3	1		7	5	1	1	1
			5	3	6		8	5	3	2	3
			4	3	4		5	4	1	1	1
			1	1	1		7	4	3	2	3
			3	3	2		4	3	1	1	1
			4	2	3		8	4	1	1	1
			4	1	1				2	1	2
			4	2	2				1	1	1
			2	1	1				4	3	2
			1	1	1				1	1	1
			3	3	4				2	1	1
			4	3	4				1	1	1
			3	2	1				3	3	3
			2	1	1				1	1	2
			2	1	2				2	1	1
			1	1	1				3	2	3
			1	1	1				2	1	2
			2	1	2				1	1	1
			2	1	1				2	2	3
			4	3	6				2	1	1
			5	2	3				1	1	1
			2	1	1				2	1	3
			1	1	1				3	2	7
			1	1	1				1	1	1
			2	1	1				1	1	1

CONFIDENTIAL

[redacted]

ARMY-[illegible] ABERDEEN PROVING GROUND, MD. [illegible]

PENETRATION SHELLS IN PANELS

LOT NUMBER | DATE 12 June 52

FIRING NUMBER

PRIORITY NUMBER

XXXXXXXXX Sheet 10 of 37

XXXXXXXXX Round No. 11

ROCKET NUMBER

122mm, O-462A LOADED AT/90

Soviet

30' AND FEET

	PERFORATIONS		PENETRATIONS		
	LENGTH	WIDTH	LENGTH	WIDTH	DEPTH
			1	1	1
			2	2	2
			1	1	2
			1	1	1
			5	3	9
			1	1	1
			1	1	1
			1	1	1
			1	1	1
			1	1	1
		10			39
		4	2	1	1
		9	2	1	1
			1	1	1
			2	2	2
			4	3	8
			2	1	1
			5	3	7
			5	2	2
			3	2	2
			2	1	1
			2	1	2
			1	1	1
			6	3	8
			2	1	1
			4	3	4
			5	4	8
			2	1	1
			4	3	6
		2			18
		3	3	3	4
			4	2	1

PANEL NUMBERS	PERFORATIONS		PENETRATIONS		
	LENGTH	WIDTH	LENGTH	WIDTH	DEPTH
	4	3	3	3	3
	6	4	2	2	2
	5	4	2	1	1
			3	2	3
			1	1	1
			1	1	1
			1	1	1
			2	1	1
			5	4	5
			2	1	1
			3	2	2
			2	1	1
			3	3	2
			2	1	1
			1	1	1
			1	1	1
			2	1	1
			2	1	2
			2	2	6
			1	1	1
			1	1	1
			1	1	7
			4	4	8
Total		5			25
41	5	5	3	2	7
	13	4	1	1	1
	4	4	3	3	4
	14	5	1	1	1
	7	3	3	1	1
	7	5	3	1	1
			4	2	2
			1	1	1
			1	1	1

ORDBG-737 19 FEB 48
FORMERLY SPOTZ-F-281

CONFIDENTIAL

PENETRATIONS OF SHELLS IN PANELS

DATE 12 June 52

FIRING NUMBER

PRIORITY NUMBER

XXXXXXXXX Sheet 11 of 37

XXXXXXXXX Round No. 11

ROCKET NUMBER

PENETRATIONS OF SHELL 122mm, 0-462A LOADED AT/90

Soviet

IN PANELS WITH RADII OF 30' AND FEET

PANEL NUMBERS	PERFORATIONS LENGTH	PERFORATIONS WIDTH	PENETRATIONS LENGTH	PENETRATIONS WIDTH	PENETRATIONS DEPTH
			3	2	3
			1	1	1
			1	1	1
			1	1	1
			3	3	2
			1	1	1
			3	2	4
			1	1	1
			1	1	1
			3	3	4
			1	1	1
			3	2	2
			2	2	2
			1	1	1
			1	1	1
			4	3	4
			1	1	1
			1	1	1
			1	1	1
Total		6			28
42	15	8	5	3	3
	7	3	4	2	2
	15	8	1	1	1
			1	1	1
			2	1	1
			1	1	1
			1	1	1
			1	1	1
			4	3	2
			2	2	1
			9	4	6
			2	2	1
			1	1	1

PANEL NUMBERS	PERFORATIONS LENGTH	PERFORATIONS WIDTH	PENETRATIONS LENGTH	PENETRATIONS WIDTH	PENETRATIONS DEPTH
			1	1	1
			3	2	2
			1	1	1
			2	1	1
			3	3	2
			1	1	1
			3	3	3
			3	2	3
			2	2	1
			2	1	1
			3	2	4
			3	2	4
			1	1	1
			3	3	1
			3	2	1
			2	1	1
			4	3	5
			2	1	1
Total		3			31
43	11	8	4	3	4
			1	1	1
			6	4	8
			1	1	1
			2	2	1
			2	1	1
			1	1	1
			1	1	1
			3	2	1
			4	3	2
			1	1	1
			1	1	1
			1	1	1
			1	1	1

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ORDBG-737 10 FEB 48
FORMERLY SPOTZ-9-201

PENETRATIONS OF SHELLS IN PANELS

LOT NUMBER
STRING NUMBER
PRIORITY NUMBER
XXXXXX Sheet 12 of 37
XXXXXXXX Round No. 11
ROCKET NUMBER

DATE 12 June 52

PENETRATIONS OF SHELL 122mm, D-462A LOADED AT/90
Soviet
IN PANELS WITH RADII OF 30' AND FEET

PANEL NUMBERS	PERFORATIONS		PENETRATIONS		
	LENGTH	WIDTH	LENGTH	WIDTH	DEPTH
			1	1	1
			3	2	3
			2	1	1
			3	2	2
			3	2	2
			1	1	1
			1	1	1
			1	1	1
			1	1	1
Total		1			23
44	5	5	5	2	5
	6	3	4	3	3
			2	2	2
			3	2	2
			1	1	1
			1	1	1
			3	1	1
			1	1	1
			2	2	2
			3	3	2
			5	4	2
			2	2	2
Total		2			12
45	6	5	3	2	2
			4	3	3
			1	1	1
			1	1	1
			4	2	1
			1	1	1
			12	6	4
			2	1	1
			5	2	1

PANEL NUMBERS	PERFORATIONS		PENETRATIONS		
	LENGTH	WIDTH	LENGTH	WIDTH	DEPTH
			2	1	1
			3	3	2
			1	1	1
			2	1	1
			4	3	5
			3	2	2
			5	3	3
			1	1	1
			1	1	1
			1	1	1
Total		1			19
46			2	1	1
			4	2	2
			1	1	1
			2	2	1
			2	1	1
			2	1	1
			2	1	1
			1	1	1
			1	1	1
			2	2	1
			6	3	3
			1	1	1
			3	1	1
			2	2	1
			1	1	1
			3	2	2
			1	1	1
Total					18
47			3	2	2
			2	1	1

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ORDBG-737 19 FEB 48
FORMERLY SPOTZ-F-291

PENETRATIONS OF SHELLS IN PANELS

SLOT NUMBER

DATE 12 June 52

FIRING RECORD NUMBER

PRIORITY NUMBER

XXXXXXXX Sheet 13 of 37

XXXXXXXX Round No. 11

ROCKET NUMBER

PENETRATIONS OF SHELL 122mm, O-462A LOADED AT/90

IN PANELS WITH RADII OF Soviet 30' AND FEET

PANEL NUMBERS	PERFORATIONS LENGTH	PERFORATIONS WIDTH	PENETRATIONS LENGTH	PENETRATIONS WIDTH	PENETRATIONS DEPTH
			1	1	1
			1	1	1
			3	3	2
			2	1	2
			4	3	6
			2	1	1
			1	1	1
			1	1	1
			1	1	1
			2	1	1
			5	3	4
			3	2	2
			1	1	1
			2	1	1
			1	1	1
			5	3	3
			1	1	1
			1	1	1
			1	1	1
			5	4	7
			3	2	2
			1	1	1
			1	1	1
			4	1	1
			1	1	1
			3	2	1
			1	1	1
			1	1	1
			1	1	1
Total					31
48			3	2	1
			1	1	1
			3	3	3

PANEL NUMBERS	PERFORATIONS LENGTH	PERFORATIONS WIDTH	PENETRATIONS LENGTH	PENETRATIONS WIDTH	PENETRATIONS DEPTH
			4	2	2
			1	1	1
			3	2	1
			2	1	1
			4	3	5
			2	1	1
			1	1	1
			2	2	1
			5	3	5
			3	2	3
			1	1	1
			3	2	2
			2	2	1
			1	1	1
			2	2	2
			2	1	1
			3	1	1
			1	1	1
Total					21
49			1	1	1
			1	1	1
			3	2	1
			2	2	1
			5	3	5
			2	1	1
			3	1	1
			1	1	1
			4	2	2
			3	2	1
			1	1	1
			2	1	1
			3	2	1
			4	3	3

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ARMY-OB LABERDEEN PROVING GROUND MD 445

CONFIDENTIAL

B-11122-

ORDBG-737 10 FEB 48
FORMERLY SPOTS-P-591

PENETRATIONS OF SHELLS IN PANELS

DATE 12 June 50

FIRING REPORT NUMBER

PRIORITY NUMBER

XXXXXXX Sheet 14 of 37

XXXXXXXX Round No. 11

ROCKET NUMBER

PENETRATIONS OF SHELL 122mm, O-462A LOADED AT/90 Soviet

IN PANELS WITH RADII OF 30' AND FEET

PANEL NUMBERS	PERFORATIONS		PENETRATIONS		
	LENGTH	WIDTH	LENGTH	WIDTH	DEPTH
			1	1	1
			2	1	1
			1	1	1
Total					17
50			5	2	2
			1	1	1
			1	1	1
			3	2	2
			1	1	1
			1	1	1
			1	1	1
			2	2	1
			4	1	2
			2	1	1
			2	1	1
			3	2	2
			1	1	1
			4	4	3
			2	1	1
			4	3	6
			1	1	1
			4	3	5
			2	2	2
			4	3	7
			1	1	1
			1	1	1
			1	1	1
			2	1	1
			1	1	1
			1	1	1
			2	1	1
			4	1	2
Total					28

PANEL NUMBERS	PERFORATIONS		PENETRATIONS		
	LENGTH	WIDTH	LENGTH	WIDTH	DEPTH
51			1	1	1
			1	1	1
			1	1	1
			2	1	1
			2	1	1
			1	1	1
			4	3	4
			1	1	1
			2	1	1
			2	1	1
			1	1	1
			1	1	1
			2	1	1
			1	1	1
			2	1	1
			1	1	1
			4	3	2
			1	1	1
			1	1	1
			5	3	4
			2	2	1
			3	2	3
			1	1	1
			2	2	2
			1	1	1
			2	2	1
			3	1	1
			2	1	1
			1	1	1
			3	2	2
			2	1	1
			3	2	5
			2	1	2
			3	2	7

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FORMERLY SPOTZ-F-201

PENETRATIONS OF SHELLS IN PANELS

SHOT NUMBER
DATE 12 June 52
FIRING PROJECT NUMBER
PRIORITY NUMBER
XXXXXXXX Sheet 15 of 37
XXXXXXXX Round No. 11
ROCKET NUMBER

PENETRATIONS OF SHELL 122mm, 0-462A LOADED AT/90
IN PANELS WITH RADII OF Soviet 30' AND FEET

PANEL NUMBERS	PERFORATIONS LENGTH	PERFORATIONS WIDTH	PENETRATIONS LENGTH	PENETRATIONS WIDTH	PENETRATIONS DEPTH
			1	1	1
Total					35
52			4	4	10
			1	1	1
			1	1	1
			1	1	1
			1	1	1
			5	4	9
			1	1	1
			1	1	1
			1	1	1
			3	2	2
			5	4	8
			3	3	3
			1	1	1
			1	1	1
			2	2	1
			1	1	1
			3	1	1
			1	1	1
			3	2	2
			1	1	1
Total					20
53			4	3	2
			3	2	2
			2	1	1
			1	1	1
			2	2	2
			3	3	3
			1	1	1
			4	3	8
			1	1	1

PANEL NUMBERS	PERFORATIONS LENGTH	PERFORATIONS WIDTH	PENETRATIONS LENGTH	PENETRATIONS WIDTH	PENETRATIONS DEPTH
			2	2	2
			1	1	1
			1	1	1
			3	2	1
			2	1	1
			4	2	3
			2	1	1
			2	1	1
			3	2	1
			3	1	1
			4	2	3
			4	2	7
			3	2	3
			4	3	4
			2	1	1
			2	1	1
			3	1	1
			3	2	2
Total					27
54			3	3	5
			2	1	1
			1	1	1
			2	2	1
			2	1	1
			2	2	2
			2	2	1
			3	2	1
			3	1	1
			5	5	3
			2	1	1
			4	3	4
			2	2	2
			1	1	1

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[redacted]

ARMY—US—ABERDEEN PROVING GROUND MD—445

ORDBG-737 10 FEB 48
FORMERLY SPOTZ-P-201

PENETRATIONS OF SHELLS IN PANELS

DATE 12 June 52

FIRING PERIOD NUMBER

PRIORITY NUMBER

XXXXXXXX Sheet 16 of 37

XXXXXXXX Round No. 11

ROCKET NUMBER

PENETRATIONS OF SHELL 122mm, O-462A LOADED AT/90

IN PANELS WITH RADII OF Soviet 30' AND FEET

PANEL NUMBERS	PERFORATIONS		PENETRATIONS		
	LENGTH	WIDTH	LENGTH	WIDTH	DEPTH
			2	1	1
			2	1	2
			2	2	4
			2	1	1
			1	1	1
			2	1	1
			2	1	1
			3	2	5
			4	3	5
			1	1	1
			1	1	1
			3	3	4
			2	1	1
			1	1	1
Total					28
55	6	4	4	4	5
			2	2	1
			3	1	1
			1	1	1
			1	1	1
			3	2	1
			2	1	1
			2	1	1
			5	2	4
			1	1	1
			1	1	1
			1	1	1
			1	1	1
			3	1	2
			1	1	1
			1	1	1
			1	1	1

PANEL NUMBERS	PERFORATIONS		PENETRATIONS		
	LENGTH	WIDTH	LENGTH	WIDTH	DEPTH
			3	3	3
			3	1	1
			1	1	1
			1	1	1
			4	3	4
			2	1	1
			3	1	1
			2	2	1
			3	1	1
			2	2	1
			3	2	4
			1	1	1
			2	2	2
			2	1	1
			2	2	2
			1	1	1
			2	2	1
			1	1	1
			3	2	2
			3	3	2
Total		1			38
56	4	3	1	1	1
			1	1	1
			1	1	1
			2	1	1
			2	1	2
			5	2	1
			4	3	2
			3	2	4
			4	3	4
			1	1	1
			1	1	1
			1	1	1

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ORDBG-737 10 FEB 48
FORMERLY SPOTZ-F-291

PENETRATIONS OF SHELLS IN PANELS

CUT NUMBER	DATE 12 June 5
FIRING [illegible] NUMBER	
PRIORITY NUMBER	
XXXXXXXX Sheet 17 of 37	
XXXXXXXX Round No. 11	
ROCKET NUMBER	

PENETRATIONS OF SHELL 122mm, O-462A Soviet LOADED AT/90

IN PANELS WITH RADII OF 30' AND FEET

PANEL NUMBERS	PERFORATIONS LENGTH	PERFORATIONS WIDTH	PENETRATIONS LENGTH	PENETRATIONS WIDTH	PENETRATIONS DEPTH	PANEL NUMBERS	PERFORATIONS LENGTH	PERFORATIONS WIDTH	PENETRATIONS LENGTH	PENETRATIONS WIDTH	PENETRATIONS DEPTH
			1	1	1				3	3	6
			3	2	6				4	2	4
			1	1	1				2	2	2
			1	1	1				2	1	1
			1	1	1				1	1	1
			1	1	1				1	1	1
			1	1	1				2	1	1
			4	3	2	Total		1			29
			1	1	1						
			4	3	3	58.1	8	3	2	2	1
Total		1			22				2	1	1
									1	1	1
57	5	4	1	1	1				1	1	1
			3	2	2				4	3	2
			2	2	2				1	1	1
			4	2	1				4	3	4
			1	1	1				1	1	1
			1	1	1				2	1	1
			2	1	1				3	2	4
			2	2	2				1	1	1
			2	1	1				2	2	2
			2	1	1	Total		1			12
			2	1	1						
			1	1	1	58.2			4	3	2
			1	1	1				2	1	1
			2	1	2				2	2	2
			1	1	1				2	1	1
			2	2	1				1	1	1
			3	2	2				3	2	3
			2	2	2				3	1	2
			3	2	1				3	2	2
			1	1	1				2	2	2
			1	1	1	[redacted]			2	2	1
			1	1	1	Total					10

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ARMY-OB-APERDEEN PROVING GROUND NO. 445

ORDSG-737 19 FEB 48
FORMERLY SPOTZ-F-201

PENETRATION SHELLS IN PANELS

LOT NUMBER | DATE 12 June 52
FIRING RECORD NUMBER
PROJECTILE NUMBER
XXXXXX Sheet 18 of 37
XXXXXX Round No. 11
ROCKET NUMBER

PENETRATIONS OF SHELL 122mm, O-462A LOADED AT/90
Soviet
IN PANELS WITH RADII OF 30' AND FEET

PANEL NUMBERS	PERFORATIONS		PENETRATIONS		
	LENGTH	WIDTH	LENGTH	WIDTH	DEPTH
58.3			2	1	1
			3	3	1
			2	1	1
			4	4	2
			5	4	3
			2	1	1
			2	1	1
			3	2	2
			5	3	6
			4	3	3
			4	3	3
			5	4	5
			1	1	1
			3	2	2
Total					14
58.4	7	3	2	2	2
			1	1	1
			3	1	1
			4	4	4
			4	4	5
			3	3	3
			5	3	6
Total		1			7
58.5	9	6	4	3	4
			3	2	3
			4	2	2
			2	1	1
			6	2	5
			4	3	4
			2	1	1
			4	3	2
			1	1	1

PANEL NUMBERS	PERFORATIONS		PENETRATIONS		
	LENGTH	WIDTH	LENGTH	WIDTH	DEPTH
			2	1	2
			1	1	1
			1	1	1
			3	3	4
Total		1			13
58.6			1	1	1
Total					1
59.1	4	3	1	1	1
			1	1	1
			2	1	1
			1	1	1
			2	1	5
			2	1	1
			4	2	1
			3	3	1
			4	2	2
			4	3	4
			2	1	1
			2	2	1
			2	1	1
			8	4	9
			7	3	3
			1	1	1
			2	2	2
Total		1			17
59.2			1	1	1
			4	3	4
			1	1	1
			4	3	1
			1	1	1
			3	3	5

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ORDBG-737 10 FEB 48
FORMERLY SPOTZ-F-381

PENETRATIONS OF SHELLS IN PANELS

LOT NUMBER

DATE 12 June 52

FIRING REPORT NUMBER

PRIORITY NUMBER

XXXXXXXX Sheet 19 of 37

XXXXXXXXX Round No. 11

ROCKET NUMBER

PENETRATIONS OF SHELL 122mm, C-462A Soviet LOADED AT/90

IN PANELS WITH FACE OF 30' AND FEET

PANEL NUMBERS	PERFORATIONS		PENETRATIONS		
	LENGTH	WIDTH	LENGTH	WIDTH	DEPTH
			2	1	1
Total					7
59.3	14	10	3	3	3
			3	2	3
			4	2	3
			4	2	2
			3	1	1
			6	5	7
			3	2	2
			3	2	2
			3	3	3
Total		1			9
59.4	3	2	4	1	1
	4	4	3	3	4
			2	1	1
			2	2	2
				1	2
				2	3
				1	1
			3	2	4
			4	4	5
			2	1	1
			2	2	1
			1	1	1
			1	1	1
			3	3	3
			3	1	1
			3	1	7
Total		2			16
59.5	9	3	1	1	1
			1	1	1

PANEL NUMBERS	PERFORATIONS		PENETRATIONS		
	LENGTH	WIDTH	LENGTH	WIDTH	DEPTH
			3	2	5
			3	3	4
			4	3	3
			2	2	2
			3	2	2
			2	1	1
			1	1	1
			1	1	1
			1	1	1
			2	2	2
			2	1	1
Total		1			13
59.6			2	1	1
			2	2	2
			3	3	3
			3	3	2
			4	2	2
			7	3	5
			3	1	1
			1	1	1
			1	1	1
			1	1	1
Total					10
60.?	6	3	4	2	5
			5	2	2
			5	3	2
			6	3	3
			1	1	1
			1	1	1
			2	1	1
			1	1	1
			3	1	1

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[redacted]

ORDBG-737 18 FEB 48
FORMERLY SPOTS-F-281

PENETRATIONS OF SHELLS IN PANELS

LOT NUMBER | DATE 12 June 50
FIRING RECORD NUMBER
PRIORITY NUMBER
XXXXXXXX Sheet 20 of 37
XXXXXXXX Round No. 11
ROCKET NUMBER

PENETRATIONS OF SHELL 122mm, O-462A LOADED AT/90
Soviet
IN PANELS WITH RADII OF 30' AND FEET

PANEL NUMBERS	PERFORATIONS LENGTH	PERFORATIONS WIDTH	PENETRATIONS LENGTH	PENETRATIONS WIDTH	PENETRATIONS DEPTH
			5	3	2
			1	1	1
Total		1			11
60.2			1	1	1
			1	1	1
			3	2	6
			1	1	1
			1	1	1
			5	3	2
			1	1	1
			8	3	4
Total					8
60.3	6	3	3	1	1
			4	3	2
			4	3	4
			1	1	1
			1	1	1
			3	2	1
			5	4	2
			4	2	1
			8	3	6
			2	2	2
			6	4	3
			1	1	1
			2	2	3
Total		1			13
60.4	10	4	2	2	1
	8	4	2	1	1
			1	1	1
			4	4	7
			3	2	2

PANEL NUMBERS	PERFORATIONS LENGTH	PERFORATIONS WIDTH	PENETRATIONS LENGTH	PENETRATIONS WIDTH	PENETRATIONS DEPTH
			2	1	3
			2	1	1
			2	1	1
			2	2	1
			7	4	5
			2	2	2
			3	2	1
			4	3	4
			3	3	4
			2	1	3
			1	1	1
Total		2			16
60.5	5	4	4	2	1
	8	6	4	3	2
	7	3	5	3	3
	5	4	4	4	9
			2	2	2
			2	1	1
			1	1	1
			1	1	1
Total		4			8
60.6	6	3	3	2	4
			3	2	2
			1	1	1
			2	1	1
			1	1	1
			4	3	3
			2	1	3
			1	1	1
Total		1			8
61.1	12	8	2	1	1

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[redacted]

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ORDBG-737 19 FEB 49
FORMERLY SPGTZ-F-201

PENETRATIONS OF SHELLS IN PANELS

LOT NO. [illegible] DATE 12 June 50

FIRING REPORT NUMBER

PRIORITY NUMBER

XXXXXXXX Sheet 21 of 37

XXXXXXXXX Round No. 11

ROCKET NUMBER

PENETRATIONS OF SHELL 122mm, O-462A LOADED AT/90 Soviet

IN PANELS WITH RADII OF 30' AND FEET

PANEL NUMBERS	PERFORATIONS		PENETRATIONS		
	LENGTH	WIDTH	LENGTH	WIDTH	DEPTH
			4	3	2
			2	1	3
			4	2	3
			2	1	1
			3	2	4
			4	1	2
			2	1	1
			5	2	2
			5	3	3
			3	2	8
			3	2	3
			2	1	1
			2	1	1
			1	1	1
			1	1	1
Total		1			16
61.2			3	3	7
			6	5	5
			4	3	4
			1	1	1
			?	2	4
			3	2	6
			?	1	1
			3	3	4
			8	3	7
			2	2	2
			2	2	2
			1	1	1
			2	1	1
			4	3	7
			5	3	2
Total					15

PANEL NUMBERS	PERFORATIONS		PENETRATIONS		
	LENGTH	WIDTH	LENGTH	WIDTH	DEPTH
61.3	14	3	4	3	3
			2	1	3
			9	3	3
			2	1	1
			5	4	7
			4	3	6
			2	1	1
			1	1	1
			1	1	1
			5	3	3
			1	1	1
			2	2	2
			2	2	3
			4	3	3
			5	3	5
			8	3	6
			2	2	2
			2	1	1
			7	3	5
			2	2	2
			1	1	1
Total		1			21
61.4	13	7	1	1	1
			2	1	1
			1	1	1
			2	1	1
			1	1	1
			2	2	2
			2	2	1
			4	3	4
			2	1	1
			3	3	7
			3	2	2

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ARMY-OR-ABERDEEN PROVING GROUND MD 616

ORDG-737 10 FEB 48
FORMERLY SPOTZ-F-201

PENETRATIONS OF SHELLS IN PANELS

LOT NUMBER [redacted] DATE 12 June 52
FIRING RECORD NUMBER
PRIORITY NUMBER
XXXXXXXX Sheet 22 of 37
XXXXXXXX Round No. 11
ROCKET NUMBER

PENETRATIONS OF SHELL 122mm, O-462A LOADED AT/90 Soviet
IN PANELS WITH RADII OF 30' AND FEET

PANEL NUMBERS	PERFORATIONS LENGTH	PERFORATIONS WIDTH	PENETRATIONS LENGTH	PENETRATIONS WIDTH	PENETRATIONS DEPTH
			2	2	2
			1	1	1
			5	4	5
			2	1	1
			3	1	2
			2	2	3
			4	3	9
			1	1	1
			1	1	1
Total		1			20
61.6	5	4	2	1	1
			6	3	2
			3	2	1
			1	1	1
			3	1	1
			2	1	1
			1	1	1
			1	1	1
			6	3	7
			3	2	1
			1	1	1
			2	1	1
			1	1	1
Total		1			13
62.6	10	4	2	2	2
			4	3	1
			3	3	3
			5	4	4
			4	3	3
			4	2	4
			1	1	1
			1	1	1

PANEL NUMBERS	PERFORATIONS LENGTH	PERFORATIONS WIDTH	PENETRATIONS LENGTH	PENETRATIONS WIDTH	PENETRATIONS DEPTH
			8	4	6
			1	1	1
			1	1	1
			2	1	1
			2	2	2
			3	1	1
			1	1	1
Total		1			15
62.1	12	5	1	1	1
	6	4	4	3	7
			7	2	9
			1	1	1
			1	1	1
			1	1	1
			1	1	1
			2	1	1
			3	2	5
			3	3	6
			5	3	5
Total		2			11
62.2	7	3	3	2	2
	4	3	5	2	4
	9	3	1	1	1
			2	2	3
			3	3	3
			2	1	2
			7	3	5
			3	2	5
			5	2	3
			3	3	8
			4	2	4
			1	1	1

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OADBG-737 10 FEB 48
FORMERLY SPOTZ-F-381

PENETRATION OF SHELLS IN PANELS

DATE 12 June 52

FIRING NUMBER

PRIORITY NUMBER

XXXXXXXX Sheet 23 of 37

XXXXXXXX Round No. 11

GUNNER NUMBER

PENETRATIONS OF SHELL 122mm, O-462A LOADED AT/90 Soviet

IN PANELS WITH RADII OF 30' AND FEET

PANEL NUMBERS	PERFORATIONS		PENETRATIONS		
	LENGTH	WIDTH	LENGTH	WIDTH	DEPTH
			2	1	1
			1	1	1
			3	2	2
			4	3	3
			2	2	1
			2	1	1
			3	1	4
Total		3			19
62.3	7	3	1	1	1
	4	4	2	2	2
			3	2	2
			3	3	3
			3	2	1
			4	2	4
			1	1	1
			4	3	6
			3	3	3
			1	1	2
			2	2	1
			2	2	4
			3	3	6
			8	2	6
			2	2	2
			3	2	2
			3	2	3
			5	2	4
			4	2	2
			2	1	1
			1	1	1
			2	1	1
			1	1	1
			4	3	5
			1	1	1

PANEL NUMBERS	PERFORATIONS		PENETRATIONS		
	LENGTH	WIDTH	LENGTH	WIDTH	DEPTH
			1	1	1
Total		2			26
62.4	6	5	2	2	1
			2	1	1
			2	1	2
			2	1	2
			4	3	3
			3	2	2
			3	2	2
			5	3	4
			2	1	1
			3	1	2
			2	2	2
			3	2	3
			2	2	2
			2	2	2
			2	2	1
			3	2	6
			1	1	1
			2	1	1
Total		1			18
62.5			3	3	4
			1	1	1
			4	3	3
			8	2	3
			3	1	1
			3	3	3
			3	2	2
			2	2	1
			3	3	6
			2	2	1
			2	1	2

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OPSPG-737 10 FEB 48
FORMERLY SPOTS-F-281

PENETRATIONS OF SHELLS IN PANELS

SHOT NUMBER | DATE 12 June 52
FIRING REPORT NUMBER
PRIORITY NUMBER
XXXXXXX Sheet 24 of 37
XXXXXXXXX Round No. 11
ROCKET NUMBER

PENETRATIONS OF SHELL 122mm, O-462A LOADED AT/90
Soviet
IN PANELS WITH RADII OF 30' AND FEET

PANEL NUMBERS	PERFORATIONS LENGTH	PERFORATIONS WIDTH	PENETRATIONS LENGTH	PENETRATIONS WIDTH	PENETRATIONS DEPTH
			2	1	1
			7	2	3
			3	2	5
			4	3	4
			2	2	1
			4	4	6
			5	3	10
Total					18
62.6			1	1	1
			4	3	5
			2	2	1
			10	4	10
			3	2	3
			2	1	1
			2	1	1
			1	1	1
			5	2	2
			4	3	2
			1	1	1
			2	1	1
			2	2	2
			2	2	1
Total					14
63.1	6	3	2	2	1
	9	3	3	3	3
	7	2	1	1	1
			1	1	1
			1	1	1
			1	1	1
			4	2	3
			4	1	3
			4	3	4

PANEL NUMBERS	PERFORATIONS LENGTH	PERFORATIONS WIDTH	PENETRATIONS LENGTH	PENETRATIONS WIDTH	PENETRATIONS DEPTH
			4	3	4
			5	3	4
			1	1	1
			1	1	1
			2	2	4
			1	1	2
			3	2	2
Total		3			16
63.2			1	1	1
			1	1	1
			3	2	4
			1	1	2
			3	3	2
			3	2	3
			6	2	8
			1	1	1
			3	2	5
			2	2	1
Total					10
63.3	5	3	3	2	9
			5	3	3
			4	1	3
			3	3	3
			2	2	2
			2	2	7
			1	1	1
			1	1	1
			1	1	1
			2	2	1
			1	1	2
			1	1	1
			2	2	1

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ORDBG-727 18 FEB 48
FORMERLY SPOTZ-F-201

PENETRATION OF SHELLS IN PANELS

PLOT NUMBER
FIRING TABLE NUMBER
PRIORITY NUMBER
ROCKET NUMBER

DATE 12 June 52

XXXXXXX Sheet 25 of 37
XXXXXXX Round No. 11

PENETRATIONS OF SHELL 122mm, O-462A Soviet LOADED AT/90

IN PANELS WITH RADII OF 30' AND FEET

PANEL NUMBERS	PERFORATIONS		PENETRATIONS		
	LENGTH	WIDTH	LENGTH	WIDTH	DEPTH
Total		1			13
63.4	5	4	1	1	1
	5	3	1	1	1
	5	3	1	1	1
	4	3	1	1	1
	9	2	1	1	1
	8	3	1	1	1
			1	1	1
			3	1	1
			2	2	2
			2	1	5
			3	3	8
			2	2	1
			3	2	1
			2	2	2
			3	2	3
			4	3	5
			2	1	1
Total		6			17
63.5	4	3	3	2	3
	8	3	1	1	1
	8	5	3	2	4
			3	3	7
			1	1	1
			1	1	1
			4	2	7
			1	1	1
			2	1	1
			5	2	4
			3	2	2
			1	1	1
			1	1	1

PANEL NUMBERS	PERFORATIONS		PENETRATIONS		
	LENGTH	WIDTH	LENGTH	WIDTH	DEPTH
			7	3	7
			2	1	1
			2	2	4
			2	2	3
Total		3			17
63.6	5	4	2	1	1
			4	1	4
			8	4	3
			2	1	1
			1	1	1
			3	2	3
			7	5	5
			1	1	1
			2	1	1
			4	3	3
			1	1	1
			1	1	1
			2	1	1
			2	1	1
			9	3	3
			1	1	1
Total		1			16
	TOTALS				
30' Radius		319			1518

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[redacted]

ARMY—OB—ABERDEEN PROVING GROUND MD. 446

R-11422

ORDBG-727 10 FEB 48
FORMERLY SPOTZ-F-201

PENETRATIO[illegible] SHELLS IN PANELS

DATE 12 June 52

FIRING R[illegible] NUMBER

PRIORITY NUMBER

XXXXXXXX Sheet 26 of 37

XXXXXXXX Round No. 11

ROCKET NUMBER

PENETRATIONS OF SHELL 122mm, O-462A Soviet LOADED AT/90

IN PANELS WITH RADII OF 60' AND FEET

PANEL NUMBERS	PERFORATIONS		PENETRATIONS		
	LENGTH	WIDTH	LENGTH	WIDTH	DEPTH
2.2			1	1	1
Total					1
2.3			3	2	3
Total					1
15			4	2	2
Total					1
18	4	2			
Total		1			
19			2	1	2
Total					1
20			1	1	1
Total					1
21			4	2	2
Total					1
22			3	2	2
Total					1
23	14	4	1	1	1
Total		1			1
24			2	1	1
			2	1	1
			2	2	1
			1	1	1
			5	4	5
Total					5

PANEL NUMBERS	PERFORATIONS		PENETRATIONS		
	LENGTH	WIDTH	LENGTH	WIDTH	DEPTH
2.5	5	3	3	3	2
			2	1	1
			2	1	1
			3	2	3
			3	1	1
			2	1	1
			4	2	1
			1	1	1
			2	1	1
			3	2	2
			3	2	2
			2	1	2
			3	1	1
			2	1	1
Total		1			14
26	4	4	3	2	3
	19	10	2	2	1
			4	3	4
			3	2	1
			2	1	1
			3	2	3
			1	1	1
			3	2	3
			2	1	2
			2	1	1
			3	2	2
			5	3	2
			3	2	1
			2	2	1
			5	4	2
Total		2			15
[redacted]					

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ORDBG-737 18 FEB 48
FORMERLY SPOTZ-P-201

PENETRATIONS OF SHELLS IN PANELS

LOT NUMBER | DATE 12 June 52
FIRING REPORT NUMBER
PRIORITY NUMBER
XXXXXXXXX Sheet 27 of 37
XXXXXXXXX Round No. 11
ROCKET NUMBER

PENETRATIONS OF SHELL 122mm, O-462A Soviet LOADED AT/90
IN PANELS WITH RADII OF 60' AND FEET

PANEL NUMBERS	PERFORATIONS LENGTH	PERFORATIONS WIDTH	PENETRATIONS LENGTH	PENETRATIONS WIDTH	PENETRATIONS DEPTH
27	6	4	4	2	2
	8	6	4	3	10
	4	3	4	3	2
			2	1	1
			2	2	1
			6	4	7
			4	1	2
			2	2	1
			5	3	2
			3	1	2
			3	1	1
			4	3	9
			12	4	8
Total		3			13
28	13	7	2	1	1
	9	5	1	1	1
	9	5	1	1	1
	6	6	1	1	1
	7	6	1	1	1
			2	1	1
			2	1	1
			2	1	1
			3	2	1
			2	1	1
			3	2	2
			6	3	4
			1	1	1
Total		5			13
29	7	5	2	2	1
	5	3	3	2	6
	24	8	2	2	1
	12	5	1	1	1

PANEL NUMBERS	PERFORATIONS LENGTH	PERFORATIONS WIDTH	PENETRATIONS LENGTH	PENETRATIONS WIDTH	PENETRATIONS DEPTH
	7	3	3	2	1
	5	2	9	3	6
	4	3	2	2	1
	8	4	3	2	1
	7	4	4	3	4
			5	2	5
			2	1	1
			3	3	2
			4	2	2
			2	2	2
			2	1	1
			4	2	2
			3	1	1
			3	1	1
			3	2	1
			3	2	3
			1	1	1
Total		9			21

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ORDBG-737 19 FEB 48
FORMERLY SPOTS-F-201

PENETRATION OF SHELLS IN PANELS

LOT NUMBER | DATE 12 June 52
FIRING [illegible] NUMBER
PRIORITY NUMBER
XXXXXXX Sheet 28 of 37
XXXXXXXX Round No. 11
SHOT NUMBER

PENETRATIONS OF SHELL 122mm, O-462A LOADED AT/90
IN PANELS WITH RADII OF Soviet 60' AND FEET

PANEL NUMBERS	PERFORATIONS LENGTH	PERFORATIONS WIDTH	PENETRATIONS LENGTH	PENETRATIONS WIDTH	PENETRATIONS DEPTH
30	10	4	2	2	2
	8	6	1	1	2
	10	6	1	1	2
	12	6	2	1	1
	4	6	1	1	1
			1	1	1
			1	1	1
			3	2	3
			2	2	3
			2	1	4
			4	4	6
			2	2	2
			2	2	1
			1	1	2
			3	2	10
			1	1	1
			2	1	2
Total		5			17
31	10	8	1	1	1
	7	4	4	6	8
	8	6	3	2	2
	7	6	3	2	3
	7	4	2	2	2
			3	2	2
			3	2	2
			1	1	1
			3	2	3
			3	2	2
			2	1	1
			3	3	4
			5	3	3
			1	1	1
Total		5			14

PANEL NUMBERS	PERFORATIONS LENGTH	PERFORATIONS WIDTH	PENETRATIONS LENGTH	PENETRATIONS WIDTH	PENETRATIONS DEPTH
32	10	6	2	2	1
	8	6	6	4	2
	11	6	2	2	2
			6	4	6
			1	1	1
			3	1	2
			3		2
Total		3			7
33	10	6	1	1	1
	12	8	2	2	2
	10	5	5	3	4
	8	6	3	2	2
	26	8	1	1	1
	12	4	8	5	7
	7	5	1	1	1
	10	4	1	1	1
	8	6	5	3	5
	12	6	1	1	2
			3	3	2
			2	1	1
			4	2	4
			5	4	5
			4	3	5
			3	2	2
			3	3	2
			6	4	6
			5	2	4
			2	2	4
			3	2	4
			4	6	8
Total		10			22
[redacted]					

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ARMY-OR-ABERDEEN PROVING GROUND MD 446

ORDBD-737 15 FEB 48
FORMERLY SPOTZ-P-201

PENETRATIONS OF SHELLS IN PANELS

DATE 12 June 52

FIRING RECORD NUMBER

PRIORITY NUMBER

XXXXXXXX Round No. 11

XXXXXXXX Sheet 29 of 37

ROCKET NUMBER

PENETRATIONS OF SHELL 122mm, O-462A LOADED AT/90 Soviet

IN PANELS WITH RADII OF 60' AND FEET

PANEL NUMBERS	PERFORATIONS		PENETRATIONS			PANEL NUMBERS	PERFORATIONS		PENETRATIONS		
	LENGTH	WIDTH	LENGTH	WIDTH	DEPTH		LENGTH	WIDTH	LENGTH	WIDTH	DEPTH
34	14	6	2	2	2		8	4	4	3	4
	24	9	1	1	1		15	10	2	2	2
	18	8	2	2	3		6	4	1	1	1
	8	6	4	4	2		20	6	4	3	2
	16	7	5	4	3		16	8	4	1	1
	12	4	2	1	2		18	7	6	4	6
	8	5	2	2	4		5	4	3	2	2
	20	5	4	1	1		12	6	3	2	2
	5	4	2	1	1		12	4	4	2	2
	9	4	3	1	1		16	8	4	4	4
	10	6	1	1	1		14	6	2	2	2
	12	9	1	1	1		14	8	2	2	2
	8	7	1	1	1		6	4	1	1	1
			5	3	4				1	1	1
			8	4	7				4	3	2
			6	6	6				1	1	1
			5	3	2				4	2	4
			2	2	3				4	2	2
			2	1	1				1	1	1
			2	1	1				2	2	2
			2	1	1				3	2	2
			1	1	1				4	2	2
			2	1	1				6	4	7
			1	1	1				2	2	2
			2	2	2				6	4	2
			4	3	3				1	1	1
			2	1	1				5	2	3
Total		13			27				1	1	1
									3	3	4
35	8	6	5	2	2				2	2	2
	16	16	1	1	1				1	1	1
	8	6	1	1	1				2	2	2
	11	4	3	3	3				2	2	2
	14	6	2	2	2				4	2	3

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ARMY-OB-ABERDEEN PROVING GROUND MD 465

ORDEC-737 10 FEB 48
FORMERLY SPOTX-F-201

PENETRATIONS OF SHELLS IN PANELS

LOT NUMBER | DATE 12 June 52

FIRING SERIAL NUMBER

PRIORITY NUMBER

PENETRATIONS OF SHELL 122mm, D-462A LOADED AT/90 Soviet

IN PANELS WITH RADII OF 60' AND FEET

XXXXXXXX Sheet 30 of 37

XXXXXXXX Round No. 11

ROCKET NUMBER

PANEL NUMBERS	PERFORATIONS		PENETRATIONS		
	LENGTH	WIDTH	LENGTH	WIDTH	DEPTH
			1	1	1
			4	4	4
			1	1	2
			1	1	1
			2	1	1
Total		18			44
36	10	4	4	3	3
	10	6	4	3	3
	8	5	5	3	2
	16	10	4	2	2
	8	4	3	1	2
			2	1	1
			1	1	1
			1	1	2
			1	1	1
			1	1	1
			1	1	1
			3	3	4
			1	1	1
			2	2	1
			2	2	2
			3	2	3
			4	3	2
			4	2	2
			1	1	1
			1	1	2
			1	1	1
Total		5			21
37	7	4	2	2	4
			1	1	1
			1	1	1
			1	1	1

PANEL NUMBERS	PERFORATIONS		PENETRATIONS		
	LENGTH	WIDTH	LENGTH	WIDTH	DEPTH
cont 37			4	2	2
			2	1	1
			1	1	1
			1	1	1
			1	1	1
			2	1	1
			2	2	2
			2	1	1
Total		1			12
38	7	5	2	1	1
			6	5	10
			1	1	1
			6	4	4
			7	4	4
			4	2	4
			6	4	3
			5	4	3
			4	2	2
Total		1			9
39	5	5	1	1	1
	6	6	3	2	2
			3	2	2
			5	2	5
			2	2	1
			1	1	1
			2	1	2
			1	1	2
			2	2	2
			2	2	3
			3	3	3
Total		2			11

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ORDMC-737 19 FEB 48
FORMERLY SPOTZ-F-201

PENETRATIONS OF SHELLS IN PANELS

LOT NO. [redacted] DATE 12 June 52
FIRING AGENCY NUMBER
PRIORITY NUMBER
XXXXXXX Sheet 31 of 37
XXXXXXX Round No. 11
ROCKET NUMBER

PENETRATIONS OF SHELL 122mm, O-462A LOADED AT/90
IN PANELS WITH RADII OF Soviet 60' AND FEET

PANEL NUMBERS	PERFORATIONS		PENETRATIONS		
	LENGTH	WIDTH	LENGTH	WIDTH	DEPTH
40			2	2	2
			3	2	1
			7	4	6
			7	5	5
			3	2	3
Total					5
41	13	5	4	2	2
	14	9	6	5	7
	4	12	4	4	2
			2	1	1
			3	2	2
Total		3			5
42	8	3	4	2	2
			2	2	1
			2	2	2
			9	3	3
			1	1	1
			4	2	2
Total		1			6
43			1	1	1
			3	1	1
			2	2	2
			1	1	1
Total					4
44	6	4	2	2	2
			2	1	1
			1	1	1
			1	1	1
			2	1	1
Total		1			5

PANEL NUMBERS	PERFORATIONS		PENETRATIONS		
	LENGTH	WIDTH	LENGTH	WIDTH	DEPTH
45			1	1	1
			2	2	1
			2	2	1
			1	1	1
			3	2	2
			4	2	2
Total					6
46			5	4	3
			1	1	1
			4	4	2
			2	2	1
			2	2	5
			3	3	1
Total					6
47			4	4	1
			2	2	1
			4	2	2
			2	2	2
			3	2	2
Total					5
48			4	2	3
			2	2	1
			4	2	3
Total					3
49			2	2	1
			2	2	1
			2	1	1
			4	2	2
[redacted]			1	1	1
			1	1	1
Total					6

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FORMERLY SPOTZ-F-281

PENETRATIONS OF SHELLS IN PANELS

DATE 12 June 52

FIRING REPORT NUMBER

PRIORITY NUMBER

XXXXXX Sheet 32 of 37

XXXXXXXX Round No. 11

ROCKET NUMBER

PENETRATIONS OF SHELL 122mm, O-462A LOADED AT/90

IN PANELS WITH RADII OF Soviet 60' AND FEET

PANEL NUMBERS	PERFORATIONS		PENETRATIONS		
	LENGTH	WIDTH	LENGTH	WIDTH	DEPTH
50			2	2	2
			1	1	1
			4	2	3
			4	4	2
			3	2	2
			2	2	2
			1	1	1
			4	3	3
Total					8
51			1	1	1
			2	1	1
			2	2	2
			4	4	6
			1	1	1
			4	3	2
			2	2	2
Total					7
52			1	1	1
			1	1	1
			1	1	1
			4	2	2
			1	1	1
			4	3	3
			2	2	2
			4	3	2
			4	2	2
Total					9
53			3	3	5
			5	4	4
			4	4	4
			4	3	4

PANEL NUMBERS	PERFORATIONS		PENETRATIONS		
	LENGTH	WIDTH	LENGTH	WIDTH	DEPTH
cont 53			3	2	2
Total					5
54			1	1	2
			2	1	1
			1	1	1
			1	1	1
			2	2	2
			2	2	1
			2	1	1
Total					7
55			4	3	2
			1	1	2
			4	2	2
			1	1	1
			2	2	2
			3	2	2
			4	3	1
Total					7
56			4	2	2
			2	1	1
			1	1	1
			1	1	1
			2	1	1
			3	3	2
			3	3	2
Total					7
57			3	2	2
			1	1	1
			4	3	2
			1	1	1

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OADBG-737 10 FEB 48
FORMERLY SPOTZ-F-201

PENETRATION OF SHELLS IN PANELS

LOT NUMBER | DATE 12 June 52
FIRING RECORD NUMBER
PRIORITY NUMBER
XXXXXXXXX Sheet 33 of 37
XXXXXXXXX Round No. 11
ROCKET NUMBER

PENETRATIONS OF SHELL 122mm, O-462A LOADED AT/90
IN PANELS WITH RADII OF Soviet 60' AND FEET

PANEL NUMBERS	PERFORATIONS LENGTH	PERFORATIONS WIDTH	PENETRATIONS LENGTH	PENETRATIONS WIDTH	PENETRATIONS DEPTH
57 cont			1	1	1
			3	2	2
			2	2	3
			2	2	2
			2	2	1
			2	2	2
Total					10
58.1			2	1	1
			3	2	2
			1	1	1
			1	1	1
			2	2	2
Total					5
58.2	9	7	2	2	2
	10	8	1	1	1
			4	2	2
			4	2	3
Total		2			4
58.3	6	4	5	4	3
			2	1	1
			3	1	1
			4	2	2
			2	1	2
			2	1	1
Total		1			
59.1	4	4	2	2	2
			1	1	1
			6	6	4
			4	2	3
			3	2	2

PANEL NUMBERS	PERFORATIONS LENGTH	PERFORATIONS WIDTH	PENETRATIONS LENGTH	PENETRATIONS WIDTH	PENETRATIONS DEPTH
59.1 cont			4	2	2
			3	2	1
			6	2	5
			1	1	1
			4	2	2
			4	2	2
			1	1	1
Total		1			12
59.2			2	1	1
			2	1	1
			2	2	2
			2	2	1
			5	2	3
			2	2	1
			1	1	1
			1	1	1
			3	1	2
			3	2	2
			3	2	2
			4	2	2
			1	1	1
			5	5	6
			2	2	2
Total					15
59.3	4	8	1	1	1
			2	2	1
			2	2	4
			2	2	2
			2	2	2
			2	1	2
[redacted]			4	2	2
			1	1	1

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ARMY - OR ABERDEEN PROVING GROUND MD 444

ORDBG-737 10 FEB 48
FORMERLY SPOTZ-F-291

PENETRATIONS OF SHELLS IN PANELS

SHOT NUMBER | DATE 12 June 52
FIRING RECORD NUMBER
PRIORITY NUMBER
XXXXXXX Sheet 34 of 37
XXXXXXX Round No. 11
ROCKET NUMBER

PENETRATIONS OF SHELL 122mm Soviet O-462A LOADED AT/90
IN PANELS WITH RADII OF 60' AND FEET

PANEL NUMBERS	PERFORATIONS		PENETRATIONS		
	LENGTH	WIDTH	LENGTH	WIDTH	DEPTH
cont 59.3			1	1	2
			4	2	2
Total		1			10
60.1			1	1	1
			1	1	1
			2	2	2
			3	3	3
			1	1	1
			4	4	4
			1	1	1
			4	3	4
			4	2	4
			2	2	2
			3	1	1
			1	1	1
			4	2	2
			1	1	1
			1	1	1
			7	3	5
			4	2	3
			4	1	1
			4	3	3
			2	2	2
			1	1	1
			2	2	2
			2	2	2
			1	1	1
			2	1	1
			2	1	1
			6	2	6
Total					27
60.2			1	1	1

PANEL NUMBERS	PERFORATIONS		PENETRATIONS		
	LENGTH	WIDTH	LENGTH	WIDTH	DEPTH
cont 60.2			6	3	2
			2	1	2
			2	1	1
			1	1	4
			1	1	1
			5	2	4
			8	2	4
			1	1	1
			1	1	1
			2	2	1
			2	1	1
			2	1	1
			1	1	1
			1	1	1
			5	2	2
			4	2	3
			6	3	2
			3	2	1
Total					19
60.3			1	1	1
			4	2	2
			4	2	2
			3	2	1
			4	3	4
			2	2	1
			3	2	1
			1	1	1
			1	1	1
			4	3	2
			5	2	4
			4	4	2
			2	2	2
			2	2	2

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ORDBG-727-10 FEB 48
FORMERLY SPOTZ-F-281

PENETRATIONS OF SHELLS IN PANELS

LOT NUMBER

DATE 12 June 52

FIRING RECORD NUMBER

PRIORITY NUMBER

XXXXXXXX Sheet 35 of 37

CHXXXXXXXX Round No. 11

ROCKET NUMBER

PENETRATIONS OF SHELL 122mm, 0-462A LOADED AT/90

IN PANELS WITH RADII OF Soviet 60' AND FEET

PANEL NUMBERS	PERFORATIONS LENGTH	PERFORATIONS WIDTH	PENETRATIONS LENGTH	PENETRATIONS WIDTH	PENETRATIONS DEPTH
cont 60.3			12	2	6
			1	1	1
			2	1	1
			6	3	3
			5	2	2
			1	1	1
			2	1	1
Total					21
61.1			3	2	2
			1	1	1
			2	1	1
			1	1	1
			2	1	2
			4	2	2
			1	1	1
			7	3	3
			2	2	2
			4	3	5
			2	1	1
			2	2	2
			2	1	2
			2	2	2
			2	2	3
			3	2	2
Total					16
61.2			4	4	2
			4	3	4
			1	1	1
			3	2	2
			1	1	1
			7	5	6
			1	1	1

PANEL NUMBERS	PERFORATIONS LENGTH	PERFORATIONS WIDTH	PENETRATIONS LENGTH	PENETRATIONS WIDTH	PENETRATIONS DEPTH
cont 61.2			2	2	2
			2	2	1
			6	3	2
			2	2	8
			2	2	2
			1	1	1
			2	2	2
			10	5	7
			2	2	2
			3	2	2
Total					17
61.3			5	2	3
			4	4	2
			4	2	1
			6	2	4
			2	2	2
			4	3	3
			6	2	2
			1	1	1
			1	1	1
			5	4	3
			10	3	8
			5	2	3
Total					12
62.1			2	1	1
			2	2	2
			1	1	1
			6	3	3
			3	2	2
			4	2	2
			7	5	4
			1	1	1

ORDBG-737 10 FEB 48
FORMERLY SPOTZ-F-281

PENETRATIONS OF SHELLS IN PANELS

SHOT NUMBER | DATE 12 June 58
FIRING RANGE NUMBER
PRIORITY NUMBER
XXXXXXXX Round No. 11
XXXXXXXXX Sheet 36 of 37
ROCKET NUMBER

PENETRATIONS OF SHELL 122mm, O-462A LOADED AT/90
IN PANELS WITH RADII OF Soviet 50' AND FEET

PANEL NUMBERS	PERFORATIONS		PENETRATIONS		
	LENGTH	WIDTH	LENGTH	WIDTH	DEPTH
cont 62.1			2	2	3
			2	2	5
			7	3	4
			1	1	1
			4	2	3
			1	1	1
			1	1	1
			1	1	1
Total					16
62.2	6	4	4	2	2
	4	3	2	2	2
			4	2	2
			4	1	1
			1	1	1
			4	3	2
			1	1	1
			4	2	4
			2	1	2
			4	2	2
			2	2	2
			1	1	1
			4	2	2
Total		2			13
62.3			7	3	2
			1	1	1
			1	1	1
			4	4	4
			9	4	3
			6	4	3
			1	1	1
			4	3	2
			1	1	1

PANEL NUMBERS	PERFORATIONS		PENETRATIONS		
	LENGTH	WIDTH	LENGTH	WIDTH	DEPTH
cont 62.3			1	1	1
			3	3	1
			5	3	4
			6	2	2
			4	2	6
Total					14
63.1	7	3	6	3	3
			4	2	3
			6	3	6
			3	2	3
			1	1	1
			4	3	7
			4	3	7
			1	1	1
			2	2	2
			4	2	3
			1	1	1
			1	1	1
			7	2	5
			4	1	4
			2	1	1
			4	3	3
			7	4	4
			7	2	4
			1	1	1
			2	1	1
			5	3	3
Total		1			21
63.2	7	2	1	1	1
	7	7	3	2	2
	8	2	1	1	1
			6	3	6

ORDSG-737 10 FEB 48
FORMERLY SPOTZ-P-281.

PENETRATIONS OF SHELLS IN PANELS

LOT NUMBER

FIRING REPORT NUMBER

PRIORITY NUMBER

DATE 12 June 52

PENETRATIONS OF SHELL 122mm, O-462A LOADED AT/90

Soviet

IN PANELS WITH RADII OF 60' AND FEET

XXXXXXXX Sheet 37 of 37

XXXXXXXX Round No. 11

ROCKET NUMBER

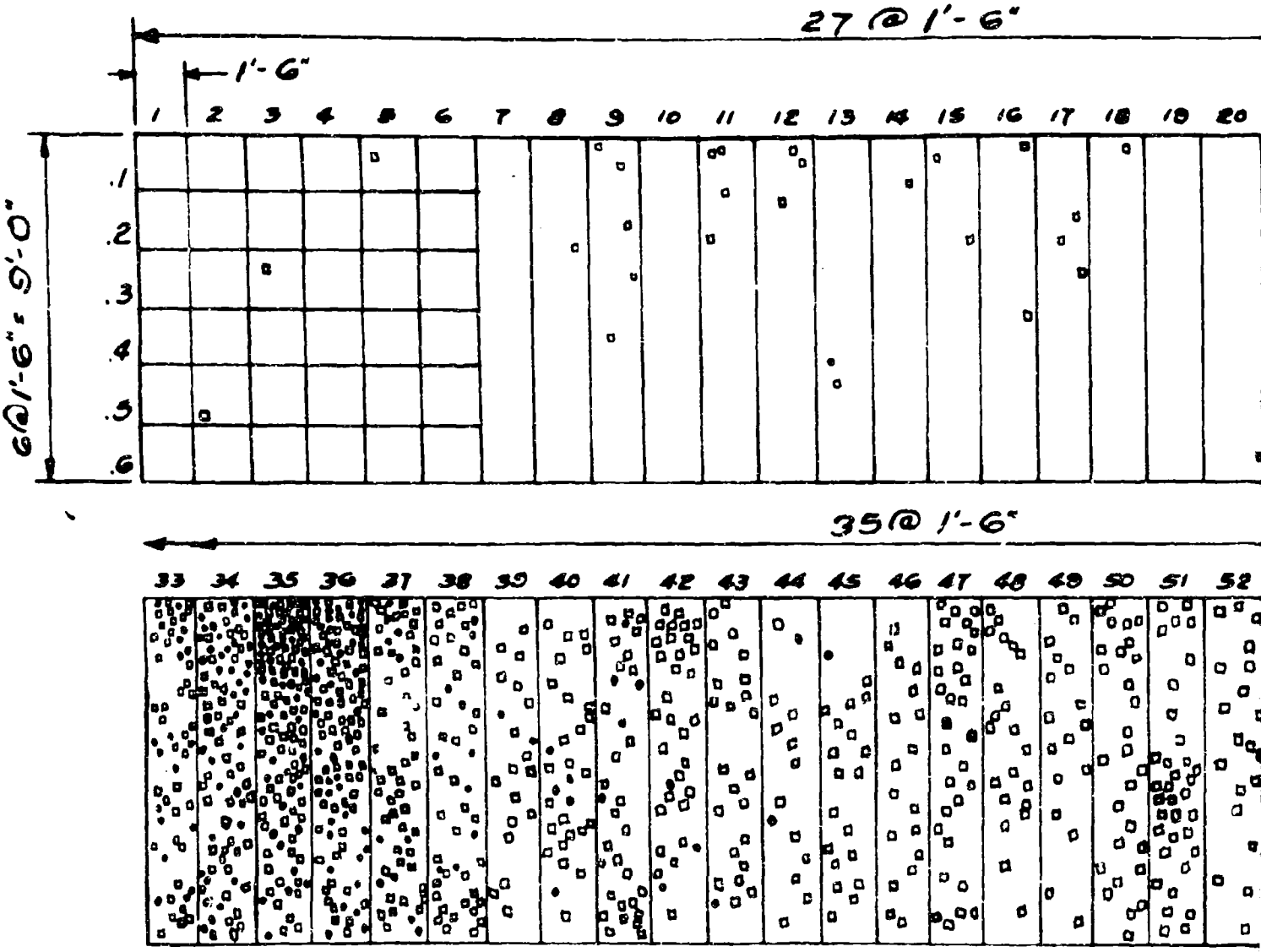
PANEL NUMBERS	PERFORATIONS		PENETRATIONS			PANEL NUMBERS	PERFORATIONS		PENETRATIONS		
	LENGTH	WIDTH	LENGTH	WIDTH	DEPTH		LENGTH	WIDTH	LENGTH	WIDTH	DEPTH
cont 63.2			6	3	2						
			3	2	2						
			2	1	1						
			3	3	4						
			4	2	4						
			3	2	2						
			5	3	2						
			3	2	2						
			5	1	1						
			5	3	1						
			3	2	2						
			2	1	1						
			3	1	2						
			5	3	3						
			2	2	2						
Total		3			19						
63.3			4	3	2						
			4	3	3						
			2	2	1						
			2	1	1						
			1	1	1						
			4	2	5						
			2	1	1						
			2	1	1						
			1	1	1						
Total					9						
	TOTALS										
60' Radius		101			640						

105

CONFIDENTIAL

PANEL A

30 FT RADIUS 180° AR



1" NO. 3 PINE BOARDS (DRESSED) PLACED VER

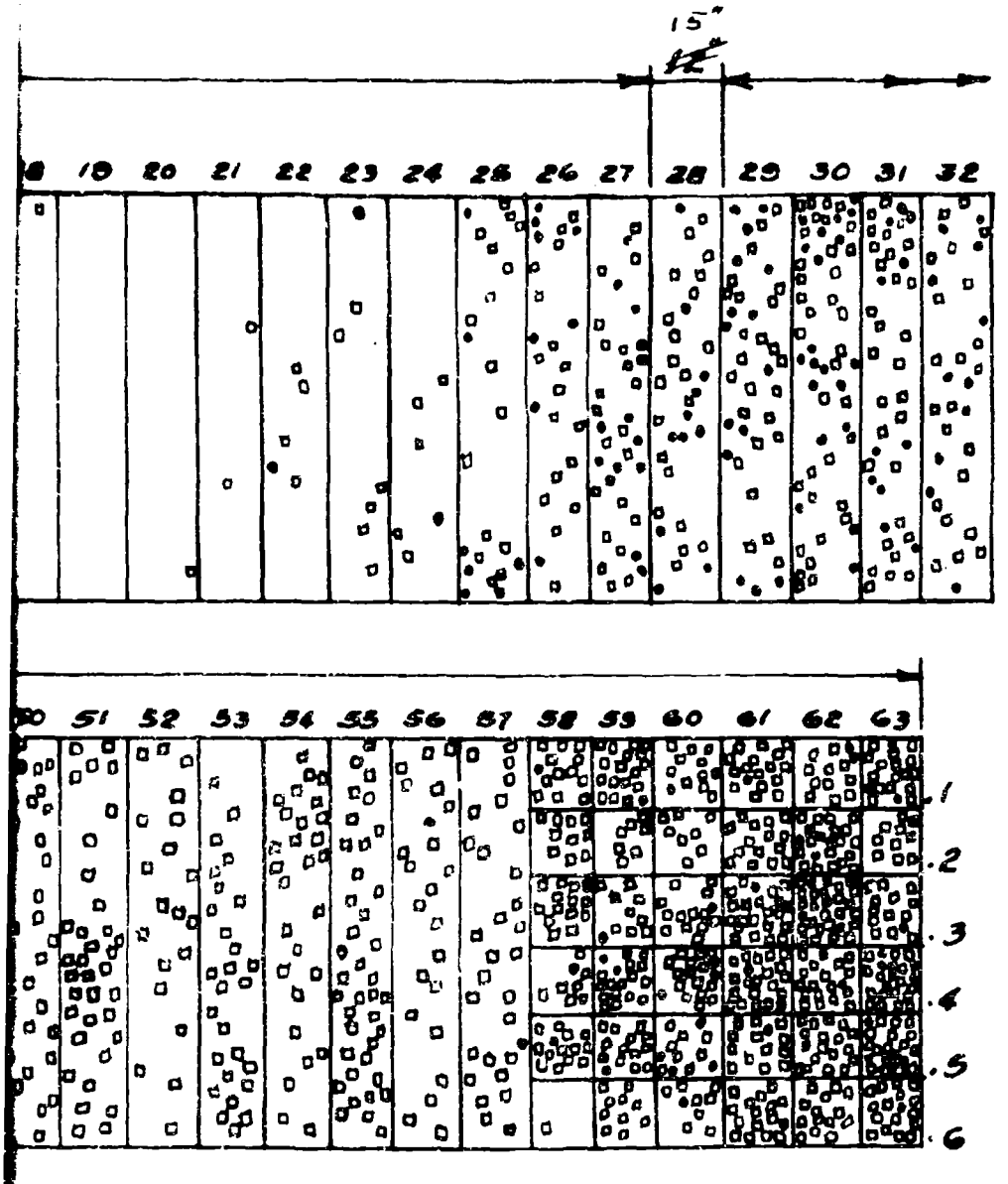
DATE - 12 JUNE 52 RD. NO. 11
SHELL, 122MM, SOVIET
POSITION OF SHELL - HORIZONTAL

● PERFORATION 3
□ PENETRATIONS 15

CONFIDENTIAL

30° ARC

2



D VERTICALLY.

CN 319
NS 1518

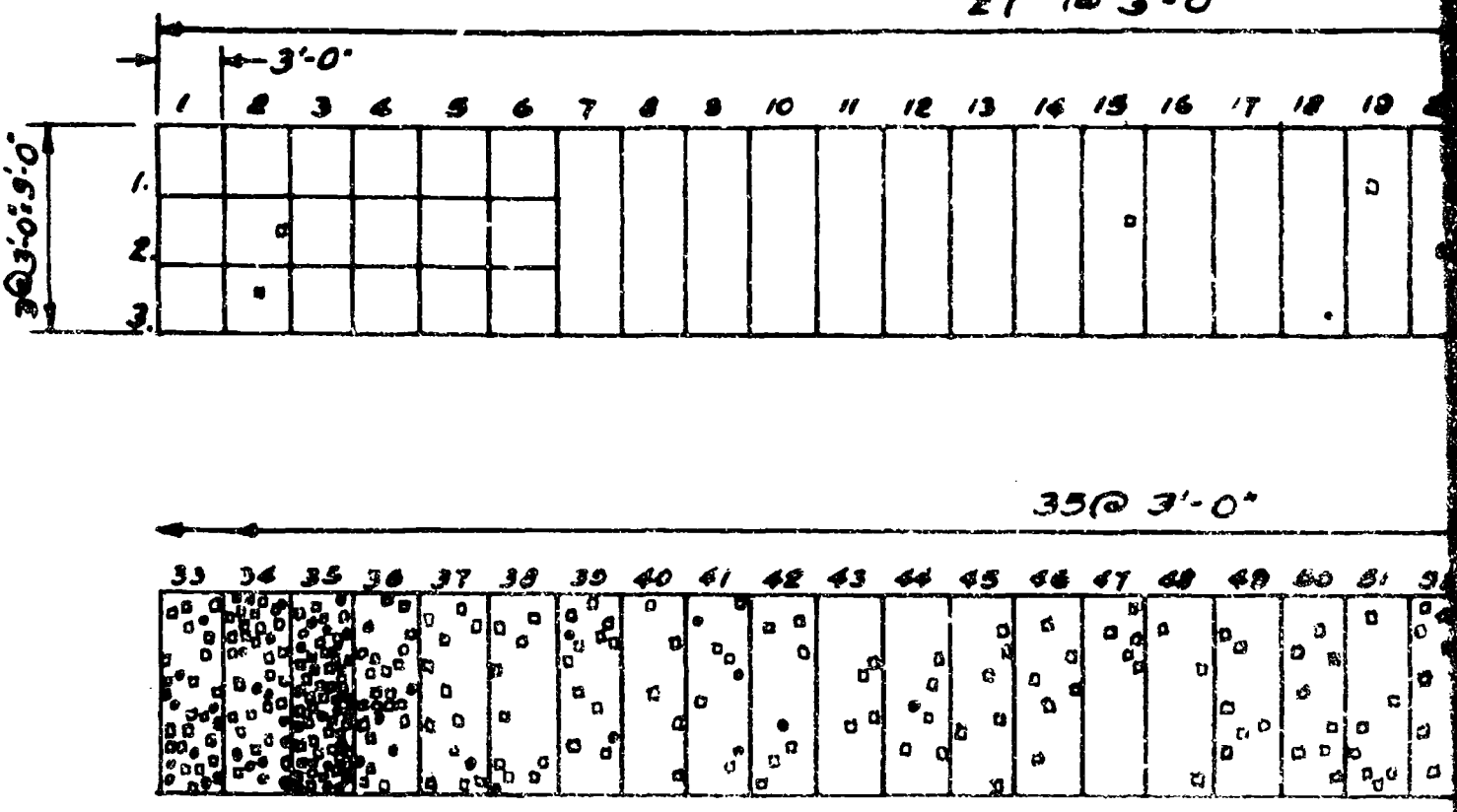
RANGE OPERATIONS SECTION

LAYOUT OF PANELS
FOR
NUMBER AND DISTRIBUTION
OF FRAGMENTS
(30 FT. RADIUS)

ABERDEEN PROVING GROUND MD.
OCT. 27, 1944 APG 1187G-15 PR

PANEL B

60 FT. RADIUS 180° AR

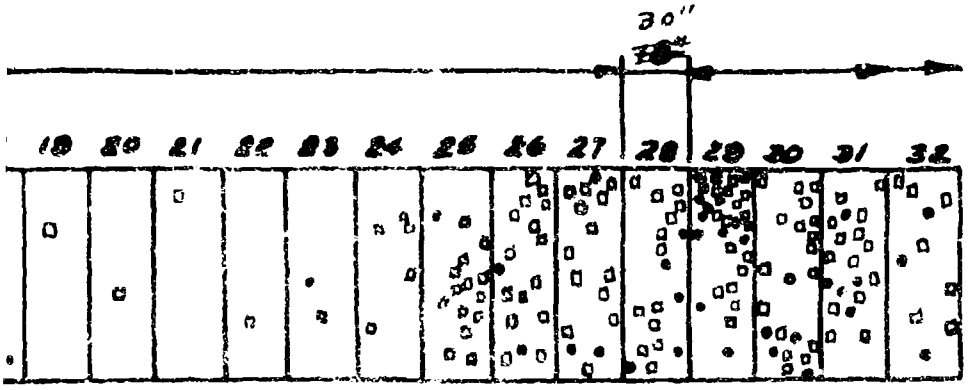


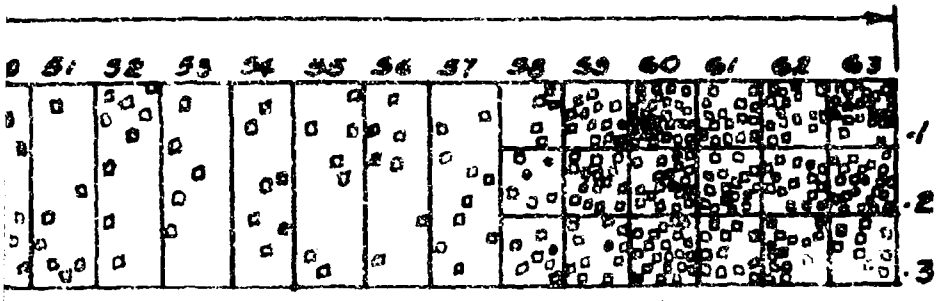
1" NO. 3 PINE BOARDS (DRESSED) PLACED VE

DATE - 12 JUNN 52 RD. NO 11
SHELL, 122 MM, SOVIET
POSITION OF SHELL - HORIZONTAL

● PERFORATIONS - 10
□ PENETRATIONS -- 64

)° ARC





D VERTICALLY.

2

– 101
– 640

RANGE OPERATIONS SECTION

LAYOUT OF PANELS
FOR
NUMBER AND DISTRIBUTION
OF FRAGMENTS
(60 FT. RADIUS)

165B

ABERDEEN PROVING GROUND, MD.
OCT. 27, 1944 APG 11876-14 PR

FIRING RECORD NO. B-11[illegible]
ENCLOSURE 3

ROUND NO. 17

4 June 1953

SHELL, [illegible], 1[illegible]mm, Soviet
MODEL, [illegible], Ammonium Nitrate 90% - TNT 10%

SHELL MARKINGS

[illegible]

515
4-45
[illegible]

[illegible]

(none)

[illegible]

[illegible]

Shell has one split rotating band.

Weight of Shell w/o [illegible] - [illegible] lbs.
[illegible] - [illegible] lbs.

Distance from Shell to the center of the [illegible] duralumin flash target - 20.[illegible] ft.

Shell before [illegible] in [illegible] No. [illegible].

[illegible]

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[redacted]

FRAGMENT VELOCITY DATA

Test of Shell, HE, 122mm, Soviet ,AT/90 Side Recovery Box Data

Proof Director Mr. O. L. Rogers Date Fired 4 June 1953

Distance from detonation point to target 22.75 feet. Round No. 17

Round statically detonated and velocity obtained by Photographic Methods.

Fragment No.	Weight, Grains	Velocity, f/s	Fragment No.	Weight, Grains	Velocity, f/s	Fragment No.	Weight, Grains	Velocity, f/s
1	N.R.		17	N.R.		33	N.R.	
2	0+		18	21	2143	34	11	
3	N.R.		19	2		35	4(2)	2483
4	0+		20	N.R.		36	N.R.	
5	3		21	3	2607	37	0+	2565
6	0+		22	1		38	N.R.	
7	6	2573	23	N.R.		39	40	2696
8	N.R.		24	2	2794	40	N.R.	
9	N.R.	2407	25	14	2745	41	9	2524
10	1		26	12		42	N.R.	
11	N.R.		27	3		43	N.R.	
12	N.R.		28	N.R.		44	N.R.	2483
13	3	2532	29	N.R.		45	N.R.	
14	0+		30	0+		46	N.R.	
15	N.R.		31	53	2483	47	10	2745
16	N.R.		32	N.R.		48	5	

Average velocity 2565 ft/sec.
NV - no velocity recorded.
NR - not recovered.

(2) - total weight of two pieces.
(n) - total weight of n pieces.

Individual velocity inaccuracies are less than ± 3.8 % for the highest velocity and ± 3.3 % for the lowest velocity.

Sheet ~~8~~ 1 of ~~26~~ 8

CONFIDENTIAL

[redacted]

FRAGMENT VELOCITY DATA

Test of Shell, HE, 122mm, Soviet — Side Recovery Box Data

Proof Director Mr. O. L. Rogers — Date Fired 4 June 1953

Distance from detonation point to target 22.75 feet. Round No. 17

Round statically detonated and velocity obtained by Photographic Methods.

Fragment No.	Weight, Grains	Velocity, f/s	Fragment No.	Weight, Grains	Velocity, f/s	Fragment No.	Weight, Grains	Velocity, f/s
49	9	2745	65	38	2696	81	14(2)	2407
50	13	2607	66	16		82	8	2483
51	N.R.	2652	67	1	2483	83	4	
52	169	2652	68	2		84	127	2696
53	8		69	28	2696	85	N.R.	
54	N.R.		70	18	2696	86	33(2)	2794
55	N.R.	2794	71	5	2483	87	3	
56	4(2)		72	N.R.		88	2	
57	2		73	10		89	54	2794
58	38	2607	74	47		90	N.R.	
59	12		75	9		91	N.R.	
60	N.R.		76	14		92	N.R.	
61	32		77	N.R.		93	N.R.	
62	2		78	29	2696	94	9	
63	N.R.		79	N.R.		95	N.R.	
64	N.R.		80	62(2)		96	83	2696

Average velocity 2565 ft/sec.
NV - no velocity recorded.
NR - not recovered.

(2) - total weight of two pieces.
(n) - total weight of n pieces.

[redacted]

Individual velocity inaccuracies are less than ± 3.8 % for the highest velocity and ± 3.3 % for the lowest velocity.

Sheet 2 of 8

CONFIDENTIAL

FRAGMENT VELOCITY DATA

Test of Shell, HE, 122mm, Soviet Side Recovery Box Data

Proof Director Mr. O. L. Rogers Date Fired 4 June 1953

Distance from detonation point to target 22.75 feet. Round No. 17

Round statically detonated and velocity obtained by Photographic Methods.

Fragment No.	Weight, Grains	Velocity, f/s	Fragment No.	Weight, Grains	Velocity, f/s	Fragment No.	Weight, Grains	Velocity, f/s
97	8		113	1		129	0+	
98	31	2607	114	N.R.		130	8	
99	N.R.		115	3		131	N.R.	
100	N.R.		116	21		132	0+	
101	N.R.		117	N.R.		133	N.R.	
102	N.R.		118	46		134	5	
103	N.R.		119	9		135	9	
104	N.R.		120	4	2335	136	5	
105	N.R.		121	1	2524	137	N.R.	
106	N.R.		122	8	2524	138	4	2565
107	3	2524	123	N.R.		139	7	
108	14	2696	124	54		140	35	2483
109	N.R.		125	N.R.		141	N.R.	
110	5		126	4		142	0+	
111	N.R.		127	11	2696	143	26	
112	N.R.		128	81	2696	144	N.R.	

Average velocity 2565 ft/sec.
NV - no velocity recorded.
NR - not recovered.

(2) - total weight of two pieces.
(n) - total weight of n pieces.

Individual velocity inaccuracies are less than ± 3.8 % for the highest velocity and ± 3.3 % for the lowest velocity.

[redacted]

FRAGMENT VELOCITY DATA

Test of Shell, HE, 122mm, Soviet Side Recovery Box Data

Proof Director Mr. O. L. Rogers Date Fired 4 June 1953

Distance from detonation point to target 22.75 feet. Round No. 17

Round statically detonated and velocity obtained by Photographic Methods.

Fragment No.	Weight, Grains	Velocity, f/s	Fragment No.	Weight, Grains	Velocity, f/s	Fragment No.	Weight, Grains	Velocity, f/s
145	31	2607	161	N.R.		177	N.R.	
146	4		162	10		178	N.R.	
147	N.R.		163	2	2235	179	0+	
148	17	2565	164	6	2696	180	142	
149	5		165	20(2)	2652	181	N.R.	
150	6		166	1		182	N.R.	
151	62	2696	167	N.R.		183	N.R.	
152	0+		168	N.R.		184	N.R.	
153	13		169	10		185	2	
154	40		170	2		186	17	2006
155	14	2565	171	2		187	144	
156	1		172	219		188	N.R.	
157	N.R.	2301	173	58(2)	2235	189	9	
158	N.R.		174	N.R.		190	3	
159	5(2)	2565	175	95		191	3	
160	7		176	4		192	N.R.	

Average velocity 2565 ft/sec.
NV - no velocity recorded.
NR - not recovered.

(2) - total weight of two pieces.
(n) - total weight of n pieces.

Individual velocity inaccuracies are less than ± 3.8 % for the highest velocity and ± 3.3 % for the lowest velocity. 4 8

Sheet ~~11~~ of ~~26~~

CONFIDENTIAL

[redacted]

FRAGMENT VELOCITY DATA

Test of Shell, HE, 122mm, Soviet — Side Recovery Box Data

Proof Director Mr. O. L. Rogers — Date Fired 4 June 1953

Distance from detonation point to target 22.75 feet. Round No. 17

Round statically detonated and velocity obtained by Photographic Methods.

Fragment No.	Weight, Grains	Velocity, f/s	Fragment No.	Weight, Grains	Velocity, f/s	Fragment No.	Weight, Grains	Velocity, f/s
193	N.R.	2565	209	7		225	5	
194	66(2)	2565	210	N.R.		226	12	
195	41		211	22		227	0+	
196	0+		212	17		228	3	
197	N.R.		213	21		229	6	
198	N.R.		214	N.R.		230	33(2)	
199	73		215	43		231	1	
200	N.R.		216	N.R.		232	7	
201	N.R.		217	N.R.		233	5	
202	8		218	73(3)		234	0+	
203	4	2268	219	30		235	3	
204	23		220	N.R.		236	12	
205	3		221	N.R.		237	120	
206	6		222	N.R.		238	9	
207	N.R.		223	N.R.		239	N.R.	
208	N.R.		224	2		240	N.R.	

Average velocity 2565 ft/sec.
NV - no velocity recorded.
NR - not recovered.

(2) - total weight of two pieces.
(n) - total weight of n pieces.

Individual velocity inaccuracies are less than ± 3.8 % for the highest velocity and ± 3.3 % for the lowest velocity.

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[redacted]

FRAGMENT VELOCITY DATA

Test of Shell, HE, 122mm, Soviet Side Recovery Box Data

Proof Director Mr. O. L. Rogers Date Fired 4 June 1953

Distance from detonation point to target 22.75 feet. Round No. 17

Round statically detonated and velocity obtained by Photographic Methods.

Fragment No.	Weight, Grains	Velocity, f/s	Fragment No.	Weight, Grains	Velocity, f/s	Fragment No.	Weight, Grains	Velocity, f/s
241	N.R.		257	N.R.		273	47	
242	N.R.		258	N.R.		274	230(2)	
243	N.R.		259	17		275	7	
244	2		260	45		276	N.R.	
245	N.R.		261	N.R.		277	2	
246	1		262	22		278	N.R.	
247	27		263	N.R.		279	6	
248	2		264	3	2532	280	4	
249	1		265	5		281	38	
250	5		266	43		282	13	
251	N.R.		267	24		283	165	
252	7		268	9		284	34	2371
253	N.R.		269	21		285	13	
254	10		270	10		286	74(2)	
255	22		271	10		287	2	
256	47		272	4		288	37	

Average velocity 2565 ft/sec.
NV - no velocity recorded.
NR - not recovered.

(2) - total weight of two pieces.
(n) - total weight of n pieces.

Individual velocity inaccuracies are less than ± 3.8 % for the highest velocity and ± 3.3 % for the lowest velocity.

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FRAGMENT VELOCITY DATA

Test of Shell, HE, 122mm, Soviet Side Recovery Box Data

Proof Director Mr. O. L. Rogers Date Fired 4 June 1953

Distance from detonation point to target 22.75 feet. Round No. 17

Round statically detonated and velocity obtained by Photographic Methods.

Fragment No.	Weight, Grains	Velocity, f/s	Fragment No.	Weight, Grains	Velocity, f/s	Fragment No.	Weight, Grains	Velocity, f/s
289	28		305	04		321	04	
290	N.R.		306	N.R.		322	N.R.	
291	21		307	N.R.		323	4	
292	9		308	11(2)	2607	324	N.R.	
293	1(3)		309	N.R.		325	N.R.	
294	25		310	7	2696	326	123	
295	29		311	6		327	N.R.	2745
296	9	2445	312	2	2524	328	3	
297	28		313	1		329	N.R.	2483
298	3		314	3		330	N.R.	
299	43(2)		315	2		331	N.R.	
300	3		316	3		332	N.R.	
301	3		317	3		333	6	2696
302	21		318	N.R.		334	N.R.	
303	9		319	12		335	N.R.	
304	37		320	31		336	N.R.	

Average velocity 2565 ft/sec.
NV - no velocity recorded.
NR - not recovered.

(2) - total weight of two pieces.
(n) - total weight of n pieces.

Individual velocity inaccuracies are less than ± 3.8 % for the highest velocity and ± 3.3 % for the lowest velocity. 7 8

Sheet ~~14~~ of ~~26~~

[redacted]

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FORM OF ABERDEEN PROVING GROUND NO 354

FRAGMENT VELOCITY DATA

Test of Shell, HE, 122mm, Soviet — Side Recovery Box Data

Proof Director Mr. O. L. Rogers — Date Fired 4 June 1953

Distance from detonation point to target 22.75 feet. Round No. 17

Round statically detonated and velocity obtained by Photographic Methods.

Fragment No.	Weight, Grains	Velocity, f/s	Fragment No.	Weight, Grains	Velocity, f/s	Fragment No.	Weight, Grains	Velocity, f/s
337	28							
338	3							
339	3							

Average velocity 2565 ft/sec.
NV - no velocity recorded.
NR - not recovered.

(2) - total weight of two pieces.
(n) - total weight of n pieces.

Individual velocity inaccuracies are less than ± 3.8 % for the highest velocity and ± 3.3 % for the lowest velocity.

8 8

Sheet ~~15~~ of ~~26~~ [redacted]

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ARMY OR AEROTECH PROVING GROUND NO 354

OMCOO-737 10 FEB 48
FORMERLY SPOTZ-P-201

PENETRATION OF SHELLS IN PANELS

LOT NUMBER

FIRING PROOF NUMBER

PRIORITY NUMBER

DATE 4 June 53

xxxxxxx Sheet 1 of 34

xxxxxxxxx Round No. 17

ROCKET NUMBER

PENETRATIONS OF SHELL 122mm, D-462A LOADED AT/90

Soviet

IN PANELS WITH RADII OF 30' AND FEET

PANEL NUMBERS	PERFORATIONS		PENETRATIONS		
	LENGTH	WIDTH	LENGTH	WIDTH	DEPTH
2.3			1	1	1
Total					1
7			1	1	1
Total					1
8			2	1	2
Total					1
9			2	1	1
			3	2	2
Total					2
12			2	1	1
Total					1
14			1	1	2
Total					1
17			2	1	1
			4	2	2
			1	1	2
Total					3
19			3	2	2
			3	3	1
			1	1	1
Total					3

PANEL NUMBERS	PERFORATIONS		PENETRATIONS		
	LENGTH	WIDTH	LENGTH	WIDTH	DEPTH
20	6	4	1	1	1
	20	6	1	1	1
Total		2			2
21			2	2	2
			2	1	1
Total					2
22			1	1	1
			3	2	1
			3	1	2
			3	2	2
Total					4
23	7	6	3	2	2
	12	4	1	1	1
			4	2	2
			1	1	1
			1	1	1
			1	1	2
			2	1	1
			2	1	2
			1	1	1
			2	1	2
			2	1	1
			1	1	1
			2	1	1
			2	1	2
Total		2			14

R-1122

ORDBG-737 10 FEB 48
FORMERLY SPOTZ-F-281

PENETRATIONS OF SHELLS IN PANELS

LOT NUMBER | DATE June 53
FIRING RECORD NUMBER
PRIORITY NUMBER
XXXXXXX Sheet 2 of 34
XXXXXXXXX Round No. 17
ROCKET NUMBER

PENETRATIONS OF SHELL 122mm, O-462A LOADED AT/90
Soviet
IN PANELS WITH RADII OF 30' AND FEET

PANEL NUMBERS	PERFORATIONS		PENETRATIONS		
	LENGTH	WIDTH	LENGTH	WIDTH	DEPTH
24	8	5	2	1	1
	6	5	3	2	3
	4	4	2	1	1
	4	3	1	1	1
	3	2	4	2	4
			2	2	2
			1	1	1
			2	2	1
			1	1	2
			7	4	5
			1	1	1
			2	1	1
			3	3	3
			1	1	1
			2	2	3
			3	2	3
			3	2	4
			3	2	3
			3	2	6
			2	1	1
			2	1	2
			2	1	1
			2	1	2
			1	1	1
			2	2	2
		5			25
25	4	4	3	2	3
	6	4	2	1	1
	7	4	1	1	2
	7	6	1	1	2
	13	12	2	1	2
	6	5	2	1	2
			2	1	2

PANEL NUMBERS	PERFORATIONS		PENETRATIONS		
	LENGTH	WIDTH	LENGTH	WIDTH	DEPTH
			1	1	1
			3	3	4
			1	1	1
			4	3	6
			2	1	2
			1	1	1
			3	2	5
			1	1	1
			1	1	1
			4	2	6
			1	1	1
			2	2	4
			4	2	4
			1	1	1
			1	1	1
			2	2	2
			3	2	2
Total		6			24
26	3	2	2	2	2
	3	2	2	1	2
	7	4	2	1	1
	4	3	4	3	4
	5	4	2	2	2
	5	4	2	1	1
	19	9	1	1	1
	5	4	1	1	1
	6	4	3	1	3
			3	3	4
			1	1	2
			4	4	4
			1	1	1
			1	1	2
			1	1	1

6-1,4 E 2

ORCDS-737 10 FEB 45
FORMERLY SPOTZ-F-201

PENETRATIONS OF SHELLS IN PANELS

LOT NUMBER

DATE 4 June 53

FIRING RECORD NUMBER

PRIORITY NUMBER

xxxxxxxx Sheet 3 of 34

~~SHELL NUMBER~~ Round No. 17

ROCKET NUMBER

PENETRATIONS OF SHELL 122mm, 0-462A Soviet LOADED AT/90

IN PANELS WITH RADII OF 30' AND FEET

PANEL NUMBERS	PERFORATIONS LENGTH	PERFORATIONS WIDTH	PENETRATIONS LENGTH	PENETRATIONS WIDTH	PENETRATIONS DEPTH
			2	1	2
			1	1	1
			2	2	2
			3	2	4
			2	1	2
			1	1	1
			2	1	1
			1	1	1
			1	1	1
			2	2	4
			2	1	1
			2	1	1
Total		9			27
27	5	4	3	2	2
	5	4	2	1	2
	4	2	1	1	1
	6	4	1	1	2
	5	3	3	1	2
	6	4	3	1	4
	8	4	3	2	4
	4	4	4	3	3
	4	3	2	1	2
	8	6	2	2	2
	3	3	4	2	2
	6	5	3	3	3
			2	1	1
			2	2	3
			3	2	3
			1	1	1
			1	1	1
			3	2	2
			1	1	1
			4	3	2

PANEL NUMBERS	PERFORATIONS LENGTH	PERFORATIONS WIDTH	PENETRATIONS LENGTH	PENETRATIONS WIDTH	PENETRATIONS DEPTH
			5	4	4
			3	2	4
			1	1	1
			1	1	2
			2	2	2
			3	2	3
			4	3	3
			2	2	3
			3	3	5
			1	1	1
			3	2	3
Total		12			31
28	6	.5	2	1	2
	5	5	1	1	1
	15	6	1	1	1
	9	5	1	1	1
	10	4	4	2	5
	10	5	3	3	5
			4	2	4
			4	2	5
			1	1	1
			3	2	3
			1	1	1
			1	1	2
			3	2	2
			4	3	5
			4	2	2
			4	3	3
			3	2	3
			1	1	1
			2	1	1
			1	1	1
			1	1	1

ARMY...06...ABERDEEN PROVING GROUND MD...445

CRDBB-737 10 FEB 46
FORMERLY SPOTS-F-281

PENETRATIONS OF SHELLS IN PANELS

LOT NUMBER

DATE 4 June 53

FIRING RECORD NUMBER

PRIORITY NUMBER

PENETRATIONS OF SHELL 122mm- 0-462A LOADED AT/90

Soviet

IN PANELS WITH RADII OF 30' AND FEET

Sheet 4 of 34

Round No. 17

ROCKET NUMBER

PANEL NUMBERS	PERFORATIONS		PENETRATIONS		
	LENGTH	WIDTH	LENGTH	WIDTH	DEPTH
Total		6			21
29	5	5	3	2	5
	10	4	2	2	2
	6	5	3	2	3
	13	5	2	2	4
	4	3	2	1	2
	5	3	5	4	6
	4	3	3	1	2
	5	3	3	2	2
	12	6	3	2	2
	4	4	1	1	1
	7	3	2	1	1
	9	4	1	1	1
	7	5	4	3	6
	6	5	2	2	2
			1	1	1
			4	3	2
			1	1	1
			2	1	1
			2	2	3
			2	2	1
			1	1	1
			1	1	1
			5	3	8
			3	2	4
			2	1	1
			1	1	2
			3	2	3
			2	3	2
			3	2	2
			3	2	6
			3	2	4
			4	2	6

PANEL NUMBERS	PERFORATIONS		PENETRATIONS		
	LENGTH	WIDTH	LENGTH	WIDTH	DEPTH
			2	1	1
			4	3	3
			2	1	1
			3	2	2
			3	2	3
			3	1	1
			2	1	2
			2	1	1
Total		14			40
30	7	4	2	1	2
	10	6	3	2	2
	6	4	3	2	2
	4	4	2	1	1
	8	6	1	1	1
	5	3	1	1	2
	5	3	2	2	2
	4	4	2	1	2
	8	6	4	3	3
	7	5	1	1	1
	6	4	2	1	1
	8	7	2	1	1
	12	7	1	1	1
	12	9	2	1	2
	4	4	2	1	1
	7	3	2	2	2
	8	4	2	2	2
	8	5	1	1	1
	5	3	1	1	1
	11	8	6	2	8
	6	4	5	3	7
	6	5	2	1	2
	4	3	1	1	1
			3	2	3

CONFIDENTIAL

ORDR-787 10 FEB 48
FORMERLY SPOTZ-P-201

PENETRATIONS OF SHELLS IN PANELS

LOT NUMBER | DATE 4 June 5[illegible]
FIRING R[illegible] NUMBER
PRIORITY NUMBER
~~ITEM NUMBER~~ Sheet 5 of 34
~~SHELL NUMBER~~ Round No. 17
ROCKET NUMBER

PENETRATIONS OF SHELL 122mm, O-462A LOADED AT/90
IN PANELS WITH RADII OF Soviet 30' AND FEET

PANEL NUMBERS	PERFORATIONS		PENETRATIONS			PANEL NUMBERS	PERFORATIONS		PENETRATIONS		
	LENGTH	WIDTH	LENGTH	WIDTH	DEPTH		LENGTH	WIDTH	LENGTH	WIDTH	DEPTH
			3	2	3				2	1	1
			1	1	1				1	1	1
			1	1	1				3	2	3
			1	1	2				3	2	4
			2	2	4				2	1	1
			1	1	1				4	3	3
			4	3	3				1	1	1
			1	1	1				5	3	3
			1	1	1				1	1	2
			1	1	1				2	1	3
			1	1	1				4	3	3
			3	1	2				1	1	1
			1	1	1				3	2	4
			2	1	1				8	4	6
			4	3	6				8	3	2
			3	2	2				10	7	2
			1	1	1				8	5	2
			3	2	5				1	1	1
			4	3	6				1	1	1
			3	1	4				2	1	1
Total		23			44				1	1	1
									3	3	4
31	6	4	3	3	2				3	2	3
	6	5	3	2	4				3	2	5
	6	3	2	1	1				3	2	1
	6	6	3	2	5	Total		10			37
	8	4	3	2	3						
	5	3	2	1	3	32	3	2	4	3	4
	5	3	3	2	6		12	8	2	1	1
	8	5	4	3	2		4	3	3	3	3
	9	7	3	2	5		9	5	3	3	6
	12	6	3	2	4		10	6	3	2	1
			1	1	1		11	9	1	1	1
			3	2	7		5	3	1	1	1

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ORDBG-737 19 FEB 48
FORMERLY SPOTZ-F-201

PENETRATIONS OF SHELLS IN PANELS

LOT NUMBER | DATE 4 June 53
FIRING RECORD NUMBER
PRIORITY NUMBER
ITEM Sheet 6 of 34
Round No. 17
ROCKET NUMBER

PENETRATIONS OF SHELL 122mm, O-462A LOADED AT/90
IN PANELS WITH RADII OF Soviet 30' AND FEET

PANEL NUMBERS	PERFORATIONS LENGTH	PERFORATIONS WIDTH	PENETRATIONS LENGTH	PENETRATIONS WIDTH	PENETRATIONS DEPTH	PANEL NUMBERS	PERFORATIONS LENGTH	PERFORATIONS WIDTH	PENETRATIONS LENGTH	PENETRATIONS WIDTH	PENETRATIONS DEPTH
			2	1	1		15	8	1	1	1
			3	2	2		4	4	4	4	4
			3	2	4		5	3	2	2	2
			1	1	2		10	6	3	3	4
			4	2	2		10	5	7	3	7
			1	1	2		5	4	3	1	1
			2	2	3		6	3	2	1	1
			2	2	3		10	7	3	2	4
			5	2	2		13	5	3	2	2
			1	1	1		4	4	1	1	1
			2	1	1		15	7	1	1	1
			3	1	1		4	3	2	1	2
			6	2	2		8	4	1	1	1
			2	2	3		6	4	5	3	8
			1	1	2		4	4	5	3	6
			1	1	1		17	7	5	4	6
			2	3	3				9	4	4
			5	3	3				1	1	1
			2	1	2				3	2	4
			2	2	2				4	1	1
			1	1	2				1	1	1
			5	4	6				4	2	2
			3	2	3				2	1	1
			3	1	1				2	1	1
			1	1	1				2	1	1
Total		7			32				2	1	1
									5	5	2
33	9	8	2	2	2				3	2	2
	5	4	1	1	1				2	1	1
	7	4	1	1	1				2	1	2
	8	5	1	1	1				3	1	2
	5	4	2	1	1				4	2	2
	6	4	2	2	4				4	3	4
	4	4	3	2	3				4	2	4

FORM 737 TO REPLACE FORMERLY BRL 2-201

PENETRATIONS SHELLS IN PANELS

LOT NUMBER

FIRING RECORD NUMBER

DATE 4 June 53

PRIORITY NUMBER

xxxxxxxx Sheet 7 of 34

xxxxxxxx Round No. 17

ROCKET NUMBER

PENETRATIONS OF SHELL 122mm, o-462A LOADED AT/90

IN PANELS WITH FACE OF Soviet 30' AND FEET

PANEL NUMBERS	PERFORATIONS		PENETRATIONS			PANEL NUMBERS	PERFORATIONS		PENETRATIONS		
	LENGTH	WIDTH	LENGTH	WIDTH	DEPTH		LENGTH	WIDTH	LENGTH	WIDTH	DEPTH
			1	1	1		8	5	1	1	1
			3	2	3		4	3	3	2	2
			3	1	2		8	6	1	1	1
			2	1	1		9	6	2	2	2
Total		23			45		8	4	3	2	2
							10	4	1	1	2
34	4	3	3	3	2		14	6	3	2	4
	13	5	2	2	1		3	3	5	3	2
	6	4	2	1	1		5	4	4	3	6
	8	4	3	2	2		6	4	4	2	2
	5	4	3	2	4		10	6	1	1	1
	4	3	1	1	1		8	3	2	1	2
	10	4	1	1	1		6	4	4	4	6
	10	4	3	2	2		7	7	3	2	2
	10	5	3	1	2		6	4	3	2	2
	8	6	1	1	1		8	4	3	2	3
	7	5	1	1	1		5	3	2	2	1
	4	3	2	1	1		12	6	1	1	1
	9	4	1	1	1		5	5	4	2	2
	8	4	1	1	1		12	4	1	1	1
	17	6	2	1	1		8	5	2	1	1
	7	5	2	1	1		6	3	2	1	3
	6	5	2	1	1		7	7	3	2	2
	5	3	2	1	1		10	5	4	3	4
	17	6	2	2	2		29	7	4	3	4
	3	2	3	2	3		3	2	2	1	1
	6	5	8	2	2		18	7	2	1	1
	5	4	1	1	1		14	5	6	4	5
	6	4	2	1	1		15	5	1	1	1
	8	5	3	2	2		17	5	3	3	3
	3	3	5	3	3		10	5	2	1	3
	11	6	4	2	6		5	3	2	2	2
	16	6	2	2	2		10	5	4	3	2
	8	3	4	3	4		6	4	1	1	1

OMC80-737 10 FEB 48
FORMERLY SPOTZ-P-281

PENETRATIONS OF SHELLS IN PANELS

LOT NUMBER

FIRING RECORD NUMBER

PRIORITY NUMBER

DATE 4 June 53

xxxxxxxx Sheet 8 of 34

xxxxxxxxx Round No. 17

ROCKET NUMBER

PENETRATIONS OF SHELL 122mm, O-462A LOADED AT 90

Soviet

IN PANELS WITH RADII OF 30' AND FEET

PANEL NUMBERS	PERFORATIONS		PENETRATIONS		
	LENGTH	WIDTH	LENGTH	WIDTH	DEPTH
	5	3	2	1	1
	16	13	3	2	4
	12	5	5	3	5
	9	5	2	2	2
			2	1	1
			2	1	2
			2	2	2
			3	2	2
			4	3	4
			1	1	1
			2	2	4
			1	1	1
			5	3	5
			3	3	4
			2	1	1
			4	3	3
			1	1	1
			1	1	1
			2	2	2
			1	1	1
			1	1	1
			3	2	1
			4	3	5
			3	1	2
			1	1	1
Total		66			87
35	5	4	2	2	2
	10	5	4	2	4
	13	7	1	1	2
	6	4	1	1	1
	18	5	1	1	1
	10	6	2	1	1
	3	2	2	2	1

PANEL NUMBERS	PERFORATIONS		PENETRATIONS		
	LENGTH	WIDTH	LENGTH	WIDTH	DEPTH
	8	3	1	1	1
	7	4	4	4	4
	5	3	2	1	1
	9	6	5	4	5
	5	4	1	1	1
	10	5	1	1	1
	10	8	1	1	1
	10	5	3	1	3
	7	4	4	3	4
	9	5	1	1	1
	13	9	1	1	1
	6	5	5	3	6
	12	6	3	2	2
	7	4	1	1	1
	5	4	1	1	1
	15	6	2	2	4
	4	3	3	2	3
	5	3	3	4	4
	8	7	2	1	2
	4	3	4	3	3
	4	3	1	1	1
	10	5	1	1	1
	10	3	2	1	1
	10	4	2	2	3
	6	4	4	2	2
	9	4	3	1	2
	9	4	4	3	4
	9	4	4	3	4
	7	5	2	1	1
	6	3	2	1	2
	8	4	3	2	2
	5	4	1	1	1
	6	6	1	1	3
	8	7	4	1	2

ORDBQ-737 10 FEB 48
FORMERLY ORDTZ-F-281

PENETRATIONS OF SHELLS IN PANELS

LOT NUMBER

FIRING [illegible] NUMBER

PRIORITY NUMBER

DATE 4 June 53

PENETRATIONS OF SHELL 122mm, O-462A LOADED AT/90

IN PANELS WITH RADII OF Soviet 30' AND FEET

~~XXXXXXX~~ Sheet 9 of 34

~~XXXXXXX~~ Round No. 17

ROCKET NUMBER

PANEL NUMBERS	PERFORATIONS		PENETRATIONS			PANEL NUMBERS	PERFORATIONS		PENETRATIONS		
	LENGTH	WIDTH	LENGTH	WIDTH	DEPTH		LENGTH	WIDTH	LENGTH	WIDTH	DEPTH
	10	5	2	1	2				3	1	1
	9	5	1	1	1				6	3	2
	8	5	2	1	2				3	3	6
	7	5	3	2	2				3	1	2
	20	5	3	2	1				3	2	1
	6	5	4	2	3				4	2	1
	10	6	3	2	2				4	3	6
	11	5	3	1	1				3	1	2
	11	7	4	3	5				1	1	1
	5	4	2	2	2				4	3	3
	9	7	1	1	1				1	1	1
	15	9	1	1	1				2	2	3
	11	5	3	1	2				2	2	2
			3	2	2				2	1	1
			2	1	2				8	2	5
			1	1	1				6	4	6
			1	1	1				3	2	4
			5	3	5				1	1	1
			1	1	1				3	3	5
			2	1	2				2	1	4
			2	1	1				2	2	3
			2	2	2				2	2	2
			3	2	4				3	2	2
			3	2	3				5	4	5
			1	1	1				2	1	1
			1	1	1				2	2	3
			1	1	1				3	2	2
			3	2	2				4	3	3
			2	2	1				4	2	2
			1	1	1				1	1	1
			4	2	2	Total		54			105
			1	1	1						
			1	1	1	36	12	9	2	1	2
			3	2	2	"	8 "	6	1	1	1

ORDBG-737 10 FEB 48
FORMERLY SPOTZ-F-201

PENETRATIONS OF SHELLS IN PANELS

LOT NUMBER

DATE 4 June 55

FIRING ROUND NUMBER

PRIORITY NUMBER

XXXXXXXX Sheet 10 of 34

XXXXXXXX Round No. 17

ROCKET NUMBER

PENETRATIONS OF SHELL 122mm, O-462A LOADED AT/90

IN PANELS WITH BACK OF Soviet 30 AND FEET

PANEL NUMBERS	PERFORATIONS		PENETRATIONS			PANEL NUMBERS	PERFORATIONS		PENETRATIONS		
	LENGTH	WIDTH	LENGTH	WIDTH	DEPTH		LENGTH	WIDTH	LENGTH	WIDTH	DEPTH
	9	5	1	1	1		4	4	2	2	2
	7	5	3	2	1		9	5	2	1	2
	9	5	1	1	1		6	3	2	1	2
	5	4	1	1	1		5	2	1	1	1
	5	4	2	2	8		8	3	3	2	3
	4	3	3	2	5		7	4	3	2	5
	8	4	2	1	1				4	3	6
	21	14	3	2	3				3	2	6
	7	5	4	3	4				1	1	1
	5	3	2	2	2				3	2	4
	11	4	1	1	1				1	1	1
	7	5	2	2	1				1	1	1
	6	3	2	1	3				2	1	4
	5	2	3	2	2				4	3	4
	23	7	1	1	2				1	1	1
	10	7	1	1	1				3	3	6
	4	2	2	1	2				4	3	8
	4	2	1	1	1				1	1	2
	14	11	3	2	5				1	1	1
	4	2	4	3	2				3	2	4
	4	2	4	3	4				1	1	1
	4	2	3	3	2				3	1	1
	7	4	2	1	1				2	1	2
	3	2	1	1	2				1	1	1
	12	7	1	1	1				2	1	1
	6	5	1	1	1				2	1	3
	5	3	2	1	1				3	2	4
	4	3	4	3	2				1	1	1
	6	3	3	2	3				1	1	1
	6	3	5	4	6				2	1	1
	9	6	3	2	2	Total		42			66
	7	4	1	1	1						
	13	5	3	2	2	37	9	4	3	2	2
	7	4	3	2	3		5	4	1	1	1

ORDBG-737 10 FEB 48
FORMERLY SPOTZ-F-291

PENETRATIONS SHELLS IN PANELS

LOT NUMBER

FIRING [illegible] NUMBER

PRIORITY NUMBER

DATE 4 June 56

PENETRATIONS OF SHELL 122mm, O-462A LOADED AT/90

IN PANELS WITH RADII OF Soviet 30' AND FEET

~~XXXXXXXX~~ Sheet 11 of 34

~~XXXXXXXX~~ Round No. 17

ROCKET NUMBER

PANEL NUMBERS	PERFORATIONS		PENETRATIONS			PANEL NUMBERS	PERFORATIONS		PENETRATIONS		
	LENGTH	WIDTH	LENGTH	WIDTH	DEPTH		LENGTH	WIDTH	LENGTH	WIDTH	DEPTH
	7	5	3	2	1				3	2	1
	10	6	1	1	1	Total		9			37
	5	4	3	2	4						
	11	6	1	1	2	38	8	5	3	2	2
	12	5	5	3	3		8	5	4	2	3
	8	5	1	1	1		8	5	2	2	1
	6	4	2	1	1		5	4	3	2	1
			2	1	4		6	4	3	2	4
			3	3	2		5	4	2	2	2
			3	2	1		12	9	3	3	1
			2	1	1				2	1	1
			1	1	1				1	1	1
			4	3	6				8	4	7
			4	4	5	Total		7			10
			2	2	1						
			2	1	1	39	6	4	2	3	4
			3	2	1		9	5	3	1	1
			1	1	1		10	3	6	4	4
			1	1	1		9	5	4	3	4
			2	2	1				2	1	2
			2	1	1				7	5	4
			2	1	1				2	1	1
			4	3	4				4	3	4
			3	3	6				1	1	1
			2	2					4	3	2
			2	1					4	3	4
			3	1	1				4	2	2
			4	2	1				2	2	1
			2	2	2				3	2	4
			4	2	4				2	2	2
			7	4	8				2	1	1
			6	4	8				1	1	1
			2	1	2				4	3	2
			1	1	1	[illegible]	[illegible]	[illegible]	2	2	3

ORDBG-237 19 FEB 46
FORMERLY SPOTZ-F-281

PENETRATIONS OF SHELLS IN PANELS

LOT NUMBER | DATE 4 June 52
FIRING RECORD NUMBER
PRIORITY NUMBER
~~XXXXXXXX~~ Sheet 12 of 34
~~XXXXXXXX~~ Round No. 17
ROCKET NUMBER

PENETRATIONS OF SHELL 122mm, o-462A LOADED AT/90
IN PANELS WITH Soviet BUTT OF 30' AND FEET

PANEL NUMBERS	PERFORATIONS		PENETRATIONS		
	LENGTH	WIDTH	LENGTH	WIDTH	DEPTH
			5	4	5
			5	4	4
			4	3	2
			1	1	1
			3	2	3
			3	2	6
			5	4	6
			1	1	1
Total		4			27
40	5	4	4	1	1
	6	4	4	3	2
	6	5	1	1	1
	11	5	1	1	1
	5	4	3	2	3
	11	5	6	4	2
			3	2	3
			3	2	4
			5	5	4
			4	3	3
			3	2	3
			3	3	4
			1	1	1
			2	2	3
			3	2	2
			2	2	1
			1	1	1
			1	1	1
			3	3	3
			2	1	1
			2	1	1
			3	2	6
			2	1	2
			4	3	7

PANEL NUMBERS	PERFORATIONS		PENETRATIONS		
	LENGTH	WIDTH	LENGTH	WIDTH	DEPTH
Total		6			24
41	4	3	3	2	3
	8	3	4	3	2
	5	4	2	1	1
	9	4	2	1	2
	14	5	1	1	1
	6	4	3	2	2
	8	5	4	3	3
			3	2	4
			3	2	1
			5	3	3
			3	2	2
			2	2	3
			1	1	1
			4	2	4
			1	1	1
			1	1	1
			3	2	3
			2	1	2
			2	1	1
Total		7			19
42	8	4	5	3	2
	13	9	3	2	1
	7	4	1	1	1
			3	2	2
			3	2	1
			3	3	1
			3	2	2
			2	1	1
			3	2	1
			3	2	2
			2	1	1

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FORMERLY SPOTZ-P-301

PENETRATIONS OF SHELLS IN PANELS

LOT NUMBER | DATE 4 June 48
FIRING RD NUMBER
PRIORITY NUMBER
XXXXXXXX Sheet 13 of 34
SXXXXXXXX Round No. 17
ROCKET NUMBER

PENETRATIONS OF SHELL 122mm, O-462A Soviet LOADED AT/90
IN PANELS WITH RADII OF 30' AND FEET

PANEL NUMBERS	PERFORATIONS LENGTH	PERFORATIONS WIDTH	PENETRATIONS LENGTH	PENETRATIONS WIDTH	PENETRATIONS DEPTH
			2	1	2
Total		3			12
43	11	6	2	1	2
			1	1	1
			3	2	1
			2	1	1
			3	2	1
			1	1	1
			2	1	1
Total		1			7
44			1	1	1
			3	2	2
			3	2	3
			1	1	1
			2	2	2
			6	4	4
			4	2	4
			2	2	2
			5	3	3
			5	3	3
Total					10
45			4	2	2
			1	1	1
			2	2	2
			3	2	2
			2	2	1
			4	3	2
			4	3	2
			3	2	3
			1	1	1
			1	1	1

PANEL NUMBERS	PERFORATIONS LENGTH	PERFORATIONS WIDTH	PENETRATIONS LENGTH	PENETRATIONS WIDTH	PENETRATIONS DEPTH
			3	2	1
			3	2	2
			2	1	1
			3	2	2
			5	3	6
			1	1	1
Total					16
46			3	1	1
			1	1	1
			1	1	1
			5	2	2
			2	2	1
			1	1	1
			2	1	1
			2	2	1
Total					8
47	5	4	3	2	1
			2	1	1
			3	2	2
			3	2	2
			3	2	2
			1	1	1
			2	1	1
			4	2	4
			1	1	1
			4	3	4
			2	1	1
			6	4	5
			5	3	4
			6	4	4
Total		1			14

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FORMERLY SPOTZ-F-291

PENETRATION OF SHELLS IN PANELS

LOT NUMBER
DATE 4 June 53
FIRING BOARD NUMBER
PRIORITY NUMBER
ITEM NUMBER Sheet 14 of 34
SHELL NUMBER Round No. 17
ROCKET NUMBER

PENETRATIONS OF SHELL 122mm, O-462A Soviet LOADED AT/90
IN PANELS WITH RADII OF 30' AND FEET

PANEL NUMBERS	PERFORATIONS LENGTH	PERFORATIONS WIDTH	PENETRATIONS LENGTH	PENETRATIONS WIDTH	PENETRATIONS DEPTH
48			3	2	2
			3	1	1
			3	2	1
			2	2	1
			8	2	4
			4	4	2
			3	2	3
			2	1	1
			1	1	1
			1	1	1
Total					10
49			2	2	2
			2	1	1
			2	1	1
			1	1	1
			1	1	1
			2	2	2
			3	3	5
			2	1	1
			3	1	1
			3	2	1
			3	2	3
			3	3	1
			2	1	1
			1	1	1
			3	2	2
			1	1	1
			2	1	1
Total					17
50	5	3	2	1	1
	3	2	1	1	1
	9	7	2	2	1

PANEL NUMBERS	PERFORATIONS LENGTH	PERFORATIONS WIDTH	PENETRATIONS LENGTH	PENETRATIONS WIDTH	PENETRATIONS DEPTH
			1	1	1
			1	1	1
			2	2	1
			2	1	1
			2	2	3
			2	2	1
			2	2	1
			2	2	2
			1	1	2
			2	1	1
			4	4	5
			1	1	2
			1	1	1
			3	1	1
			1	1	1
			2	2	1
			5	4	5
			5	3	2
Total		3			21
51	6	5	2	1	1
			2	1	1
			3	2	1
			2	1	1
			2	1	1
			1	1	1
			3	1	2
			4	2	2
			2	1	2
			3	2	2
			1	1	1
			3	3	4
			2	1	1
			3	3	3

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FORMERLY SPOTZ-F-291

PENETRATION OF SHELLS IN PANELS

LOT NUMBER
FIRING RECORD NUMBER
PRIORITY NUMBER
DATE 4 June 53
XXXXXXXX Sheet 15 of 34
XXXXXXXXX Round No. 17
ROCKET NUMBER

PENETRATIONS OF SHELL 122mm. O-462A LOADED AT/90

IN PANELS WITH RADII OF Soviet 30' AND FEET

PANEL NUMBERS	PERFORATIONS		PENETRATIONS		
	LENGTH	WIDTH	LENGTH	WIDTH	DEPTH
			3	2	2
			4	2	2
			2	1	1
			4	4	3
Total		1			18
52	3	3	3	3	4
			2	1	1
			1	1	1
			2	2	1
			1	1	1
			4	2	3
			4	2	2
			4	3	4
			3	1	3
			2	2	1
			1	1	1
			5	3	1
			1	1	1
			1	1	1
			3	2	3
			1	1	1
			3	2	1
			2	1	1
			1	1	1
			1	1	1
Total		1			20
53	9	5	1	1	2
			1	1	1
			1	1	1
			2	2	1
			2	1	1
			2	2	2

PANEL NUMBERS	PERFORATIONS		PENETRATIONS		
	LENGTH	WIDTH	LENGTH	WIDTH	DEPTH
			3	2	2
			3	2	2
			1	1	1
			3	1	1
			3	2	2
			1	1	1
			3	3	3
			2	1	1
			4	2	6
			2	2	1
			2	1	2
			3	2	2
			1	1	1
			1	1	1
			2	1	1
Total		1			21
54			2	2	2
			2	2	3
			1	1	1
			1	1	1
			3	1	4
			1	1	2
			2	2	1
			1	1	1
			5	3	4
			2	2	2
			1	1	1
			1	1	1
			2	1	1
			5	4	2
			7	4	6
			1	1	1
Total					16

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FORMERLY SPOTS-F-201

PENETRATIONS OF SHELLS IN PANELS

LOT NUMBER | DATE 4 June 53
FIRING RECORD NUMBER
PRIORITY NUMBER
~~XXXXXXXX~~ Sheet 16 of 34
~~XXXXXXXX~~ Round No. 17
ROCKET NUMBER

PENETRATIONS OF SHELL 122mm, O-452A LOADED AT/20
IN PANELS WITH RADII OF Soviet 30' AND FEET

PANEL NUMBERS	PERFORATIONS		PENETRATIONS		
	LENGTH	WIDTH	LENGTH	WIDTH	DEPTH
55			4	2	4
			3	2	1
			4	2	2
			2	1	1
			1	1	1
			2	2	1
			1	1	1
			2	2	1
			2	2	2
			1	1	1
			4	2	4
			4	3	2
			3	1	1
			2	1	2
			2	1	1
			1	1	1
			4	3	4
			5	2	3
			1	1	1
			2	2	5
			1	1	1
			2	1	1
			4	2	2
			4	2	3
			2	2	1
			2	2	3
			2	1	2
			4	3	2
			3	2	2
			7	5	1
			3	2	3
			1	1	1
Total					32

PANEL NUMBERS	PERFORATIONS		PENETRATIONS		
	LENGTH	WIDTH	LENGTH	WIDTH	DEPTH
56			4	3	3
			2	2	1
			1	1	1
			2	2	2
			2	2	2
			5	4	3
			2	1	1
			1	1	1
			4	2	2
			3	2	3
			3	2	4
			4	3	3
			2	1	1
			1	1	1
			3	1	1
			3	2	3
			2	2	2
			2	1	1
			4	2	2
			1	1	1
			4	1	1
			2	1	1
			3	1	1
			3	1	1
			3	1	1
			3	2	2
			2	2	1
			3	1	3
			1	1	1
			1	1	2
			3	2	3
			1	1	1
			3	2	1
			1	1	1

ARMY-OB-ABERDEEN PROVING GROUND MD. 665

B-1-172

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FORMERLY SPOTZ-F-291

PENETRATIONS OF SHELLS IN PANELS

LOT NUMBER | DATE 4 June 53
FIRING RECORD NUMBER
PRIORITY NUMBER
~~XXXXXXX~~ Sheet 17 f 34
S ~~XXXXXXX~~ Round No. 17
ROCKET NUMBER

PENETRATIONS OF SHELL 122mm, O-462A LOADED AT/90
Soviet
IN PANELS WITH RADII OF 30' AND FEET

PANEL NUMBERS	PERFORATIONS LENGTH	PERFORATIONS WIDTH	PENETRATIONS LENGTH	PENETRATIONS WIDTH	PENETRATIONS DEPTH
			4	3	3
			2	3	7
Total					36
57	6	4	2	1	2
			1	1	1
			5	4	4
			4	2	2
			4	1	2
			8	3	6
			1	1	1
			1	1	1
			2	1	1
			5	4	5
			3	3	3
			2	1	1
			3	3	6
			3	1	1
			1	1	1
			3	2	3
			3	2	4
			5	2	5
			3	2	2
			1	1	1
			1	1	1
			1	1	1
			2	2	2
			1	1	1
Total		1			24
58.1			6	3	5
			3	1	1
			2	1	[illegible]
Total					[illegible]

PANEL NUMBERS	PERFORATIONS LENGTH	PERFORATIONS WIDTH	PENETRATIONS LENGTH	PENETRATIONS WIDTH	PENETRATIONS DEPTH
58.2	4	4	2	1	1
			1	1	1
			3	1	3
			3	2	3
Total		1			4
58.3			1	1	1
			3	2	3
			1	1	1
			1	1	1
			1	1	1
			3	2	1
			7	2	6
Total					7
58.4			2	2	2
			4	4	5
			1	1	1
			2	2	2
			6	2	6
			1	1	2
			1	1	2
Total					7
58.5	6	4	5	3	3
			3	2	4
			4	3	3
			1	1	1
			3	2	4
Total		1			5
58.6			2	1	1
			1	1	1
[illegible]		[illegible]	1	1	3

ARMY-OB-ABERDEEN PROVING GROUND, MD 4-5

B-11722

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FORMERLY SPOTZ-F-291

PENETRATIONS OF SHELLS IN PANELS

LOT NUMBER

DATE 4 June 53

SERIES AND NUMBER

PRIORITY NUMBER

PENETRATIONS OF SHELL 122mm, D-462A LOADED AT/90

Sheet 18 of 34

IN PANELS WITH RADII OF 30' AND FEET

Round No. 17

ROCKET NUMBER

PANEL NUMBERS	PERFORATIONS		PENETRATIONS		
	LENGTH	WIDTH	LENGTH	WIDTH	DEPTH
Total 58.6					3
59.1			2	1	1
			3	2	2
Total					2
59.2	13	5	5	4	4
			4	2	2
			1	1	1
			2	2	2
Total		1			4
59.3	10	7	1	1	1
			4	3	4
			2	2	2
			5	4	6
			2	2	2
			2	1	1
Total		1			6
59.4			7	4	6
			4	2	2
			3	1	1
			2	1	2
			4	2	4
			5	4	4
			4	3	2
			1	1	1
			2	2	2
Total					9
59.5	12	5	2	1	1
			3	2	2
			4	3	3
			3	2	3
			5	4	9
			1	1	1
			1	1	1
			1	1	1
			6	4	3
			3	3	4
			3	2	3
			2	2	2
			3	3	5
			4	2	2
Total		1			14
59.6			2	1	1
			5	3	2
			5	3	3
			5	3	2
			4	3	6
			3	1	3
Total					6
60.1	14	6	4	3	3
	11	11	3	3	3
			1	1	1
			7	4	5
			1	1	1
			2	1	2
			2	1	1
			1	1	1
Total		2			8
60.2	8	4	1	1	1
			3	2	2
			1	1	2

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FORMERLY SPOTZ-P-281

PENETRATIONS OF SHELLS IN PANELS

LOT NUMBER

DATE 4 June 53

FIRING RECORD NUMBER

PRIORITY NUMBER

xxxxxxxxx Sheet 19 of 34

xxxxxxxxx Round No. 17

ROCKET NUMBER

PENETRATIONS OF SHELL 122mm, O-462A LOADED AT/SO Soviet

IN PANELS WITH RADII OF 30' AND FEET

PANEL NUMBERS	PERFORATIONS		PENETRATIONS		
	LENGTH	WIDTH	LENGTH	WIDTH	DEPTH
			1	1	1
			4	2	4
			3	2	3
			4	1	2
			1	1	1
			3	2	2
			3	2	7
Total		1			10
60.3	4	3	3	1	1
			1	1	2
			2	1	1
			2	2	3
			3	2	4
			2	1	1
			4	4	3
			2	1	1
Total		1			8
60.4	6	6	5	4	6
	6	5	1	1	1
			8	2	7
			3	2	1
			1	1	1
			7	2	4
			1	1	1
			1	1	2
			1	1	1
			3	2	4
			6	1	1
Total		2			11
60.5	5	3	5	5	4
			5	3	3

PANEL NUMBERS	PERFORATIONS		PENETRATIONS		
	LENGTH	WIDTH	LENGTH	WIDTH	DEPTH
			1	1	1
			5	4	4
			4	4	5
			4	3	2
			1	1	1
			3	2	2
Total		1			8
60.6	12	5	4	2	2
			2	1	1
			4	2	2
			1	1	2
			2	2	2
			1	1	1
			2	2	4
			5	3	4
			2	1	2
			2	1	3
			3	2	2
Total		1			11
61.1	5	4	1	1	1
			1	1	1
			9	6	5
			2	1	2
			5	4	2
			1	1	1
			1	1	1
			4	4	6
			3	1	1
Total		1			9
61.2	8	4	2	1	1
	14	7	1	1	1

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FORMERLY SPOTZ-F-291

PENETRATION OF SHELLS IN PANELS

LOT NUMBER

DATE 4 June 53

FIRING [illegible] NUMBER

PRIORITY NUMBER

PENETRATIONS OF SHELL 122mm, O-462A LOADED AT/90 Soviet

~~XXXXXXX~~ Sheet 20 of 34

IN PANELS WITH RADII OF 30' AND FEET

~~XXXXXXXX~~ Round No. 17

ROCKET NUMBER

PANEL NUMBERS	PERFORATIONS		PENETRATIONS			PANEL NUMBERS	PERFORATIONS		PENETRATIONS		
	LENGTH	WIDTH	LENGTH	WIDTH	DEPTH		LENGTH	WIDTH	LENGTH	WIDTH	DEPTH
			1	1	1	61.4	6	4	1	1	1
			2	1	1		4	4	2	1	1
			5	4	3		7	4	1	1	1
			12	3	4		8	4	4	2	2
			1	1	1				1	1	1
			3	2	2				4	2	2
			4	2	1				1	1	1
			5	3	3				5	3	7
			2	1	2				4	2	4
			1	1	1				1	1	1
			3	1	1				4	3	3
			2	1	2				6	4	3
			1	1	1				2	2	1
			2	1	2				2	2	2
			2	2	2				4	3	7
Total		2			17				1	1	1
									7	4	9
61.3	5	4	4	3	2	Total		4			17
	14	4	1	1	1						
	5	4	1	1	1	61.5	8	5	2	2	3
	9	4	1	1	1		7	4	2	2	1
	6	3	1	1	1		11	4	3	2	1
			3	2	4				2	2	1
			1	1	1				2	1	1
			4	3	2				3	2	2
			1	1	1				5	3	7
			1	1	1				1	1	1
			8	3	5				4	2	3
			1	1	1				3	3	4
			5	4	4				3	2	4
			4	3	3				2	2	2
			1	1	1				5	3	6
			2	1	1				2	1	1
Total		5			16	[illegible]	[illegible]	[illegible]	1	1	1

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FORMERLY SPOTZ-F-891

PENETRATIONS OF SHELLS IN PANELS

LOT NUMBER

FIRING RECORD NUMBER

PRIORITY NUMBER

DATE 4 June 55

PENETRATIONS OF SHELL 122mm, O-462A LOADED AT/90

IN PANELS WITH RABIT OF Soviet 30' AND FEET

XXXXXXXXXX Sheet 21 of 34

XXXXXXXXXX Round No. 17

ROCKET NUMBER

PANEL NUMBERS	PERFORATIONS		PENETRATIONS		
	LENGTH	WIDTH	LENGTH	WIDTH	DEPTH
			2	1	1
Total		3			16
61.6	11	4	1	1	1
	7	5	4	3	2
			4	2	2
			5	3	4
			8	5	7
			4	2	2
			3	3	5
			5	3	4
Total		2			8
62.1	9	5	1	1	1
	5	4	5	4	8
			2	1	2
			1	1	1
			4	3	2
			1	1	1
			8	4	6
			1	1	1
			1	1	1
			2	1	1
			1	1	1
			4	3	4
			2	1	2
			1	1	1
			2	2	1
			1	1	1
			1	1	1
Total		2			17
62.2	6	4	3	2	1
	6	5	4	3	2

PANEL NUMBERS	PERFORATIONS		PENETRATIONS		
	LENGTH	WIDTH	LENGTH	WIDTH	DEPTH
	14	8	1	1	1
			1	1	1
			1	1	1
			3	2	2
			3	2	2
			3	2	2
			6	4	4
			1	1	1
			3	2	5
			1	1	1
			3	2	1
			6	4	4
			3	1	1
			1	1	1
Total		3			16
62.3	9	4	3	1	1
			4	3	3
			1	1	1
			3	1	1
			2	1	1
			4	4	6
			3	3	2
			3	2	1
			3	3	3
			1	1	1
			8	5	7
Total		1			11
62.4	5	4	2	1	1
	6	3	3	2	2
	10	4	1	1	1
			3	2	4
			4	3	3

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FORMERLY SPOTZ-F-291

PENETRATIONS OF SHELLS IN PANELS

LOT NUMBER

DATE 4 June 5[illegible]

FIRING [illegible] NUMBER

PRIORITY NUMBER

~~XXXXXXXX~~ Sheet 22 of 34

~~XXXXXXXX~~ Round No. 17

ROCKET NUMBER

PENETRATIONS OF SHELL 122mm, 0-462A LOADED AT/90

IN PANELS WITH RADII OF Soviet 30' AND FEET

PANEL NUMBERS	PERFORATIONS LENGTH	PERFORATIONS WIDTH	PENETRATIONS LENGTH	PENETRATIONS WIDTH	PENETRATIONS DEPTH
			2	2	2
			10	3	5
			1	1	2
			3	1	1
			4	2	2
			4	3	2
			5	3	3
			1	1	1
			3	2	1
Total		3			14
62.5	7	6	4	3	3
	10	5	4	3	5
	4	2	2	1	1
			5	4	4
			3	2	2
			1	1	1
			5	3	4
			1	1	1
			3	2	1
			4	3	2
			8	3	3
			2	2	3
			2	1	1
			5	4	4
			2	1	2
			2	2	6
Total		3			16
62.6	8	6	1	1	2
	11	6	1	1	1
	14	8	1	1	1
			3	1	1
			2	2	2

PANEL NUMBERS	PERFORATIONS LENGTH	PERFORATIONS WIDTH	PENETRATIONS LENGTH	PENETRATIONS WIDTH	PENETRATIONS DEPTH
			3	2	4
			2	2	1
			3	3	1
			2	1	2
			3	3	2
			3	2	5
			1	1	1
			2	1	6
			1	1	1
			1	1	1
			6	4	6
			14	4	5
			3	2	1
			2	1	1
			1	1	1
Total		3			20
63.1			1	1	1
			1	1	1
			3	2	3
			5	5	6
			3	2	3
			1	1	1
			4	3	4
			4	3	4
			5	2	2
			4	3	2
			2	2	1
			3	2	2
			7	3	6
			3	3	2
Total					14

ARMY—OS—ABERDEEN PROVING GROUND MD—446

ORDBG-737 19 FEB 48
FORMERLY SPOTS-F-281

PENETRATIONS OF SHELLS IN PANELS

LOT NUMBER

DATE 4 June 53

FIRING RECORD NUMBER

PRIORITY NUMBER

~~XXXXXXXX~~ Sheet 23 of 34

~~XXXXXXXX~~ Round No. 17

ROCKET NUMBER

PENETRATIONS OF SHELL 122mm, D-462A LOADED AT/90 Soviet

IN PANELS WITH RADII OF 30' AND FEET

PANEL NUMBERS	PERFORATIONS		PENETRATIONS		
	LENGTH	WIDTH	LENGTH	WIDTH	DEPTH
63.2	12	8	4	3	2
	6	3	4	2	3
	5	4	2	1	2
			4	3	4
			3	2	2
			3	1	1
			1	1	1
			4	3	4
			2	1	1
Total		3			9
63.3	4	3	7	3	4
	10	4	2	1	1
	4	4	2	1	1
	5	4	2	1	1
	5	3	5	4	4
			1	1	1
			2	1	1
			2	1	2
			2	1	1
			2	1	1
			7	3	4
			4	3	2
			3	2	3
			6	3	3
			5	4	4
			3	1	1
			6	2	2
Total		5			17
63.4	12	6	3	2	2
	7	5	3	1	2
	4	4	4	3	2
			3	2	2

PANEL NUMBERS	PERFORATIONS		PENETRATIONS		
	LENGTH	WIDTH	LENGTH	WIDTH	DEPTH
			3	2	1
			5	3	3
			2	1	1
			2	1	1
			3	2	1
			1	1	1
			2	1	1
			4	3	4
			3	2	3
			5	2	4
Total		3			14
63.5	4	3	2	2	2
	3	3	2	1	1
			3	2	2
			7	4	5
			2	1	1
			3	2	2
			6	5	4
			8	4	4
			1	1	1
			3	3	5
			2	1	1
			2	1	1
Total		2			12
63.6	8	6	4	4	6
	5	4	3	2	2
	6	5	3	3	6
			3	2	1
			3	2	2
			3	3	3
			3	2	2
			2	2	2

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FORMERLY SPOTZ-F-281

PENETRATIONS OF SHELLS IN PANELS

LOT NUMBER | DATE 4 June 53

FIRING [illegible] NUMBER

PRIORITY NUMBER

PENETRATIONS OF SHELL 122mm, D-462A Soviet LOADED AT/90

IN PANELS WITH RADII OF 30' AND FEET

xxxxxxx Sheet 24 of 34

xxxxxxx Round No. 17

ROCKET NUMBER

PANEL NUMBERS	PERFORATIONS		PENETRATIONS			PANEL NUMBERS	PERFORATIONS		PENETRATIONS		
	LENGTH	WIDTH	LENGTH	WIDTH	DEPTH		LENGTH	WIDTH	LENGTH	WIDTH	DEPTH
			6	3	3						
			2	1	1						
			6	3	5						
			1	1	1						
			3	2	3						
			1	1	1						
			4	2	3						
			1	1	1						
Total		3	4	2	3 17						
	TOTALS										
30' Radius	387				1404						

R-1122

ORDBB-737 10 FEB 48
FORMERLY SPOTZ-F 281

PENETRATION OF SHELLS IN PANELS

LOT NUMBER | DATE 4 June 53

FIRING RECORD NUMBER

PRIORITY NUMBER

XXXXXXXX Sheet 25 of 34

XXXXXXXX Round No. 17

ROCKET NUMBER

PENETRATIONS OF SHELL 122mm, O-462A LOADED AT/90

IN PANELS WITH RADII OF Soviet 60' AND FEET

PANEL NUMBERS	PERFORATIONS		PENETRATIONS		
	LENGTH	WIDTH	LENGTH	WIDTH	DEPTH
10			4	2	2
Total					1
12			4	2	2
Total					1
15			5	3	4
Total					1
19			1	1	1
Total					1
21			2	2	2
Total					1
22			4	2	4
Total					1
23			5	4	5
			2	1	1
			4	2	4
			4	2	2
Total					4
24	5	4	1	1	1
			2	1	1
			3	2	3
Total		1			3
25			1	1	1
			1	1	1
			4	4	2
			3	2	2
			1	1	1

PANEL NUMBERS	PERFORATIONS		PENETRATIONS		
	LENGTH	WIDTH	LENGTH	WIDTH	DEPTH
Total					5
26	6	4	2	1	1
			2	1	1
			4	3	2
			2	2	1
Total		1			4
27	5	4	1	1	1
	9	5	5	5	3
	8	7	3	3	2
			6	4	4
			1	1	2
			1	1	1
Total		3			6
28	4	4	4	3	4
	9	5	1	1	1
	6	4	1	1	1
	7	6	3	3	2
	5	5	4	3	2
			2	1	2
			3	2	4
			2	2	2
			6	4	3
Total		5			9
29	6	4	2	2	2
	6	4	2	1	1
	6	4	5	4	7
	6	4	2	1	1
	6	5	5	4	5
	16	4	6	3	4
			1	1	1

B-11822

ORDBG-727 19 FEB 46
FORMERLY SPOTZ-F-291

PENETRATIONS OF SHELLS IN PANELS

LOT NUMBER | DATE 4 June 53
FIRING [illegible] NUMBER
PRIORITY NUMBER
XXXXXXXX Sheet 26 of 34
XXXXXXXX Round No. 17
ROCKET NUMBER

PENETRATIONS OF SHELL 122mm, 0-462A LOADED AT/90
Soviet
IN PANELS WITH RADII OF 60' AND FEET

PANEL NUMBERS	PERFORATIONS LENGTH	PERFORATIONS WIDTH	PENETRATIONS LENGTH	PENETRATIONS WIDTH	PENETRATIONS DEPTH
			5	3	2
			4	2	2
			3	1	4
			3	2	2
			2	2	2
			3	2	4
			2	1	1
			4	3	6
			5	4	8
			3	1	1
			2	2	4
			3	2	2
			3	2	1
			5	4	4
			5	4	8
			2	1	1
			1	1	1
Total		6			24
30	6	4	1	1	1
	7	4	2	1	1
	8	7	3	2	3
	6	5	1	1	1
	4	4	3	2	1
	7	6	1	1	1
	7	5	1	1	1
	10	5	3	3	2
	6	5	2	2	1
	7	5	1	1	1
			2	2	2
			2	2	1
			3	2	4
			1	1	1
Total		10			14

PANEL NUMBERS	PERFORATIONS LENGTH	PERFORATIONS WIDTH	PENETRATIONS LENGTH	PENETRATIONS WIDTH	PENETRATIONS DEPTH
31			2	2	2
			2	1	1
			2	2	3
			2	1	3
			2	2	1
			1	1	1
			1	1	1
			4	2	6
			3	2	2
			5	3	3
			3	3	2
			3	1	1
			3	1	1
			1	1	1
Total					14
32	8	6	1	1	1
	8	3	5	3	5
	7	4	1	1	1
	5	4	2	1	1
	6	3	1	1	1
			4	4	2
			1	1	1
			4	3	1
			2	3	3
			4	3	3
			8	4	6
			4	3	4
			1	1	1
			2	2	2
			3	2	6
Total		5			15
33	6	4	3	3	1

ARMY—OO—ABERDEEN PROVING GROUND MD 1-45

R-11722

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FORMERLY SPOTZ-F-281

PENETRATIONS OF SHELLS IN PANELS

LOT NUMBER

DATE 4 June 53

FIRING RECORD NUMBER

PRIORITY NUMBER

PENETRATIONS OF SHELL 122mm, O-462A LOADED AT/90

Soviet

IN PANELS WITH RADII OF 60' AND FEET

~~xxxxxxxx~~ Sheet 27 of 34

~~xxxxxxxx~~ Round No. 17

ROCKET NUMBER

PANEL NUMBERS	PERFORATIONS LENGTH	PERFORATIONS WIDTH	PENETRATIONS LENGTH	PENETRATIONS WIDTH	PENETRATIONS DEPTH
	8	6	4	2	2
	8	4	1	1	1
	11	6	1	1	1
	7	4	6	4	8
	8	4	2	1	1
	7	5	2	2	2
	3	3	6	3	4
	18	6	5	3	8
	7	5	1	1	1
	10	5	4	3	3
	12	6	2	1	1
	8	5	3	2	2
	8	4			
Total		14			13
34	7	5	3	2	2
	27	4	3	2	2
	20	5	5	3	2
	23	8	7	4	3
	4	3	9	3	5
	7	4	2	2	1
	11	5	4	3	2
	12	4	5	4	4
	7	6	2	1	1
	4	3	1	1	1
	20	8	1	1	1
	14	6	3	1	1
			3	2	2
			4	3	3
			5	4	4
			2	2	3
			2	1	2
			3	1	1
			3	1	2

PANEL NUMBERS	PERFORATIONS LENGTH	PERFORATIONS WIDTH	PENETRATIONS LENGTH	PENETRATIONS WIDTH	PENETRATIONS DEPTH
			3	2	1
			4	2	1
			4	2	4
			4	2	5
			3	2	2
			2	2	1
			1	1	1
			6	3	5
			3	1	1
Total		12			28
35	6	5	6	5	8
	10	4	1	1	1
	6	4	7	4	7
	10	5	6	3	5
	16	5	3	2	2
	14	7	3	2	2
	27	7	3	2	1
	12	5	2	1	1
	10	8	1	1	1
	8	5	3	2	1
	11	6	4	3	2
	9	6	4	2	2
	7	4	5	2	4
	6	4	2	2	1
	14	14	4	3	2
	5	4	4	3	5
	9	4	3	3	5
	10	5	1	1	1
	6	3	2	1	1
	11	8	2	1	1
	9	5	2	1	1
			4	2	6
			4	3	2

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FORMERLY SPOTZ-F-281

PENETRATIONS OF SHELLS IN PANELS

LOT NUMBER

DATE 4 June 53

FIRING RECORD NUMBER

PRIORITY NUMBER

PENETRATIONS OF SHELL 122mm, 0-462A LOADED AT/90

Sheet 28 of 34

Round No. 17

IN PANELS WITH RADII OF Soviet 60' AND FEET

ROCKET NUMBER

PANEL NUMBERS	PERFORATIONS		PENETRATIONS		
	LENGTH	WIDTH	LENGTH	WIDTH	DEPTH
			1	1	1
			3	2	2
			4	3	2
			4	2	2
			1	1	1
			3	2	4
			2	2	1
			1	1	1
			3	2	1
			8	2	2
			4	2	1
			3	2	1
			5	2	5
			4	3	3
			2	1	1
			3	2	3
			9	3	6
			3	2	1
			1	1	1
			3	2	1
			2	2	1
			2	1	1
			1	1	1
			3	2	2
			5	3	2
			2	2	1
			2	1	2
			3	3	3
Total		21			51
36	19	9	4	3	3
	13	9	3	2	1
	4	3	2	2	1
	12	7	5	4	2

PANEL NUMBERS	PERFORATIONS		PENETRATIONS		
	LENGTH	WIDTH	LENGTH	WIDTH	DEPTH
	10	8	6	4	4
	4	4	1	1	1
	5	2	2	1	1
	6	5	4	3	9
	9	4	3	2	1
	7	5	3	2	1
	11	5	1	1	1
	7	5	3	2	1
	28	4	1	1	1
	5	4	4	2	3
	4	4	2	1	1
			1	1	1
			2	2	1
			3	2	1
			4	3	6
			2	1	1
			8	4	5
			1	1	1
			2	1	1
			2	1	1
			3	3	1
			2	1	1
			1	1	1
			4	3	2
			2	1	1
			2	2	2
			1	1	1
			4	3	2
			2	2	1
			2	1	1
			3	1	1
			4	4	6
			5	3	2
			1	1	1

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FORMERLY SPOTS F-281

PENETRATIONS SHELLS IN PANELS

LOT NUMBER

DATE 4 June 53

FIRING RECORD NUMBER

PRIORITY NUMBER

~~XXXXXXXX~~ Sheet 29 of 34

~~XXXXXXXX~~ Round No. 17

ROCKET NUMBER

PENETRATIONS OF SHELL 122mm, O-462A Soviet LOADED AT/90

IN PANELS AT RADII OF 60' AND FEET

PANEL NUMBERS	PERFORATIONS		PENETRATIONS		
	LENGTH	WIDTH	LENGTH	WIDTH	DEPTH
			4	3	6
			2	1	3
			3	2	2
			3	2	3
			3	2	2
			3	2	1
			5	2	4
			4	2	2
			2	1	1
Total		15			47
37	5	3	4	3	4
	15	9	5	4	3
	8	5	6	5	6
			2	1	1
			5	3	7
			8	5	6
			3	3	2
			2	1	1
			2	2	1
			9	5	6
Total		3			10
38	13	5	10	8	5
	8	4	5	4	2
	8	6	2	1	1
			2	2	1
			5	3	2
			5	3	6
			3	3	3
			4	3	1
			4	4	2
			5	3	2
			3	2	2

PANEL NUMBERS	PERFORATIONS		PENETRATIONS		
	LENGTH	WIDTH	LENGTH	WIDTH	DEPTH
			3	3	6
Total		3			12
39	6	4	8	6	2
	7	5	2	1	1
	13	4	4	3	2
			2	1	1
			2	1	1
			8	3	2
			5	4	3
			4	3	3
			2	1	1
Total		3			9
40	10	5	1	1	1
	12	4	6	4	2
			4	4	3
			3	2	2
Total		2			4
41	10	5	2	2	1
	15	5	1	1	1
			1	1	1
			4	2	1
			3	2	1
			8	5	2
			2	1	1
			5	4	2
			3	3	2
			3	3	2
			4	4	4
			3	2	1
			3	2	1
Total		2			13

ORDBG-737 10 FEB 48
FORMERLY SPOTX-F-281

PENETRATIONS OF SHELLS IN PANELS

LOT NUMBER | DATE 4 June 53

FIRING RECORD NUMBER

PRIORITY NUMBER

xxxxxxxx Sheet 30 of 34

xxxxxxxx Round No. 17

ROCKET NUMBER

PENETRATIONS OF SHELL 122mm, D-462A Soviet LOADED AT/90

IN PANELS WITH RADII OF 60' AND FEET

PANEL NUMBERS	PERFORATIONS		PENETRATIONS		
	LENGTH	WIDTH	LENGTH	WIDTH	DEPTH
42	15	8	3	3	2
	10	5	3	3	2
			7	3	3
			3	2	1
Total		2			4
43			6	4	5
			1	1	1
			5	4	2
			1	1	1
Total					4
44			5	4	2
			3	4	2
Total					2
45			4	3	2
			1	1	1
			2	1	1
Total					3
46			6	4	3
			3	2	2
Total					2
47			5	3	2
Total					1
48			1	1	1
Total					1
49			4	3	2
Total					1

PANEL NUMBERS	PERFORATIONS		PENETRATIONS		
	LENGTH	WIDTH	LENGTH	WIDTH	DEPTH
50			3	2	2
			3	2	2
Total					2
51			1	1	1
Total					1
52	6	4	1	1	1
			1	1	1
			2	2	1
			2	2	1
			2	1	1
			1	1	1
Total		1			6
53			3	2	2
			3	3	2
			1	1	1
			2	1	1
			4	3	2
			2	2	2
			1	1	1
			3	2	2
			2	2	1
Total					9
54			2	1	1
			5	2	2
			3	1	1
			5	2	1
			2	1	1
			3	2	2
			2	2	1
Total					7

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FORMERLY BPOTZ-P-281

PENETRATIONS OF SHELLS IN PANELS

LOT NUMBER | DATE 4 June 53

FIRING [illegible] NUMBER

PRIORITY NUMBER

PENETRATIONS OF SHELL 122mm, O-462A LOADED AT/90

~~xxxxxxxx~~ Sheet 31 of 34

IN PANELS WITH RACE OF Soviet 60' AND FEET

~~xxxxxxxx~~ Round No. 17

ROCKET NUMBER

PANEL NUMBERS	PERFORATIONS		PENETRATIONS		
	LENGTH	WIDTH	LENGTH	WIDTH	DEPTH
55			2	1	2
			1	1	1
			5	4	4
			2	3	2
			3	1	1
			1	1	1
			3	2	2
			3	2	2
			5	4	4
			5	4	5
			5	4	4
			2	2	2
Total					12
56			3	2	3
			4	4	4
			1	1	1
			2	1	1
			2	2	1
			2	1	1
			1	1	1
			4	1	2
Total					8
57			4	3	2
			2	2	1
Total					2
58.1			3	3	2
			3	2	1
			3	2	1
Total					3

PANEL NUMBERS	PERFORATIONS		PENETRATIONS		
	LENGTH	WIDTH	LENGTH	WIDTH	DEPTH
58.2			3	2	1
			2	2	1
			2	2	1
Total					3
58.3			3	1	1
Total					1
59.1	13	6	5	3	2
	8	4	3	2	2
			3	2	2
			6	3	3
			1	1	1
Total		2			5
59.2	12	4	2	1	1
			3	2	2
			8	3	3
			3	2	1
			5	3	2
			2	2	1
Total		1			6
59.3	12	12	2	2	2
			6	4	3
			3	3	2
			3	2	3
			1	1	1
Total		1			5
60.1	4	4	2	1	1
	8	4	4	3	3
			4	4	3
			1	1	1

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FORMERLY SPOTZ-F-201

PENETRATIONS OF SHELLS IN PANELS

LOT NUMBER | DATE 4 June 53

FIRING REPORT NUMBER

PRIORITY NUMBER

~~XXXXXXX~~ Round No. 17

~~XXXXXXX~~ Sheet 32 of 34

ROCKET NUMBER

PENETRATIONS OF SHELL 122 mm, D-462A Soviet LOADED AT/90

IN PANELS WITH RADII OF 60' AND FEET

PANEL NUMBERS	PERFORATIONS		PENETRATIONS		
	LENGTH	WIDTH	LENGTH	WIDTH	DEPTH
			1	1	1
			1	1	1
			3	2	1
			3	2	3
			4	3	2
			5	3	2
			1	1	1
Total		2			11
60.2			6	4	4
			3	2	2
			2	2	2
			12	6	6
			7	4	7
			3	2	1
			5	3	3
			3	2	1
			1	1	2
			4	4	4
			5	2	2
Total					11
60.3			3	2	1
			10	3	3
			4	4	1
			1	1	1
			4	4	5
			6	3	3
			1	1	1
			3	2	1
			1	1	1
			1	1	1
			3	2	1
			6	4	2

PANEL NUMBERS	PERFORATIONS		PENETRATIONS		
	LENGTH	WIDTH	LENGTH	WIDTH	DEPTH
Total					12
61.1	12	5	6	3	8
	11	6	3	2	1
	5	4	2	1	1
			3	2	2
			2	2	1
			7	4	4
			2	2	1
			3	2	2
			2	2	1
			3	2	4
			1	1	1
			3	2	1
			2	2	1
			3	2	5
Total		3			14
61.2	9	5	2	2	2
	5	5	3	2	1
	3	2	5	4	4
			1	1	1
			1	1	1
			4	2	2
			5	3	3
			7	4	3
			3	2	1
			1	1	1
			1	1	1
Total		3			11
61.3	8	5	4	4	3
			3	2	1
			3	1	1

B-1132

ORDEG-737 10 FEB 48
FORMERLY SPOTZ-F-281

PENETRATIONS OF SHELLS IN PANELS

LOT NUMBER

DATE 4 June 56

FIRING [illegible] NUMBER

PRIORITY NUMBER

PENETRATIONS OF SHELL 122mm, Q-462A LOADED AT 90

Soviet

IN PANELS WITH RADII OF 60' AND FEET

XXXXXXXX Sheet 33 of 34

XXXXXXXXX Round No. 17

ROCKET NUMBER

PANEL NUMBERS	PERFORATIONS		PENETRATIONS		
	LENGTH	WIDTH	LENGTH	WIDTH	DEPTH
			4	3	3
			9	4	6
			4	3	2
			12	6	6
Total		1			7
62.1	5	7	4	2	2
			5	4	4
			3	2	2
			4	4	4
			3	2	2
			5	3	2
			4	4	6
Total		1			7
62.2	6	6	2	2	1
			1	1	1
			2	2	1
			2	2	1
			3	2	1
			5	3	2
			5	2	2
			3	2	2
			1	1	1
			2	2	2
			2	2	1
			2	1	1
			2	1	1
			2	1	1
			4	2	1
			3	3	2
			5	4	3
Total		1			17

PANEL NUMBERS	PERFORATIONS		PENETRATIONS		
	LENGTH	WIDTH	LENGTH	WIDTH	DEPTH
62.3			3	3	1
			6	4	3
			8	5	7
			5	3	8
			2	1	1
			7	3	3
			4	2	3
			1	1	1
Total					8
63.1			3	2	2
			2	2	1
			4	3	1
			3	2	2
			6	4	5
			2	1	1
			2	2	2
			2	1	1
			4	4	4
			1	1	1
			4	1	1
			4	1	1
Total					12
63.2	6	4	3	2	1
	6	6	2	1	1
	5	4	5	4	4
			3	2	2
			10	3	8
			2	2	1
			1	1	1
			2	2	2
			6	2	1
			3	3	1

ORDMG-737 10 FEB 48
FORMERLY SPOTZ-F-3P1

PENETRATION OF SHELLS IN PANELS

LOT NUMBER

FIRING [illegible] NUMBER

DATE 4 June 55

PRIORITY NUMBER

PENETRATIONS OF SHELL 122mm, O-462A LOADED AT/90

Soviet

IN PANELS WITH RADII OF 60' AND FEET

xxxxxxxx Sheet 34 of 34

xxxxxxxxx Round No. 17

ROCKET NUMBER

PANEL NUMBERS	PERFORATIONS		PENETRATIONS			PANEL NUMBERS	PERFORATIONS		PENETRATIONS		
	LENGTH	WIDTH	LENGTH	WIDTH	DEPTH		LENGTH	WIDTH	LENGTH	WIDTH	DEPTH
			2	2	1						
			1	1	1						
			5	2	2						
Total		3			13						
63.3	5	4	1	1	1						
	4	4	3	3	2						
	4	3	2	2	1						
			33	4	8						
			3	2	1						
			3	3	2						
			1	1	1						
Total		3			7						
	TOTALS										
60' Radius		130			509						

ARMY—OS—ABERDEEN PROVING GROUND, MD. 445

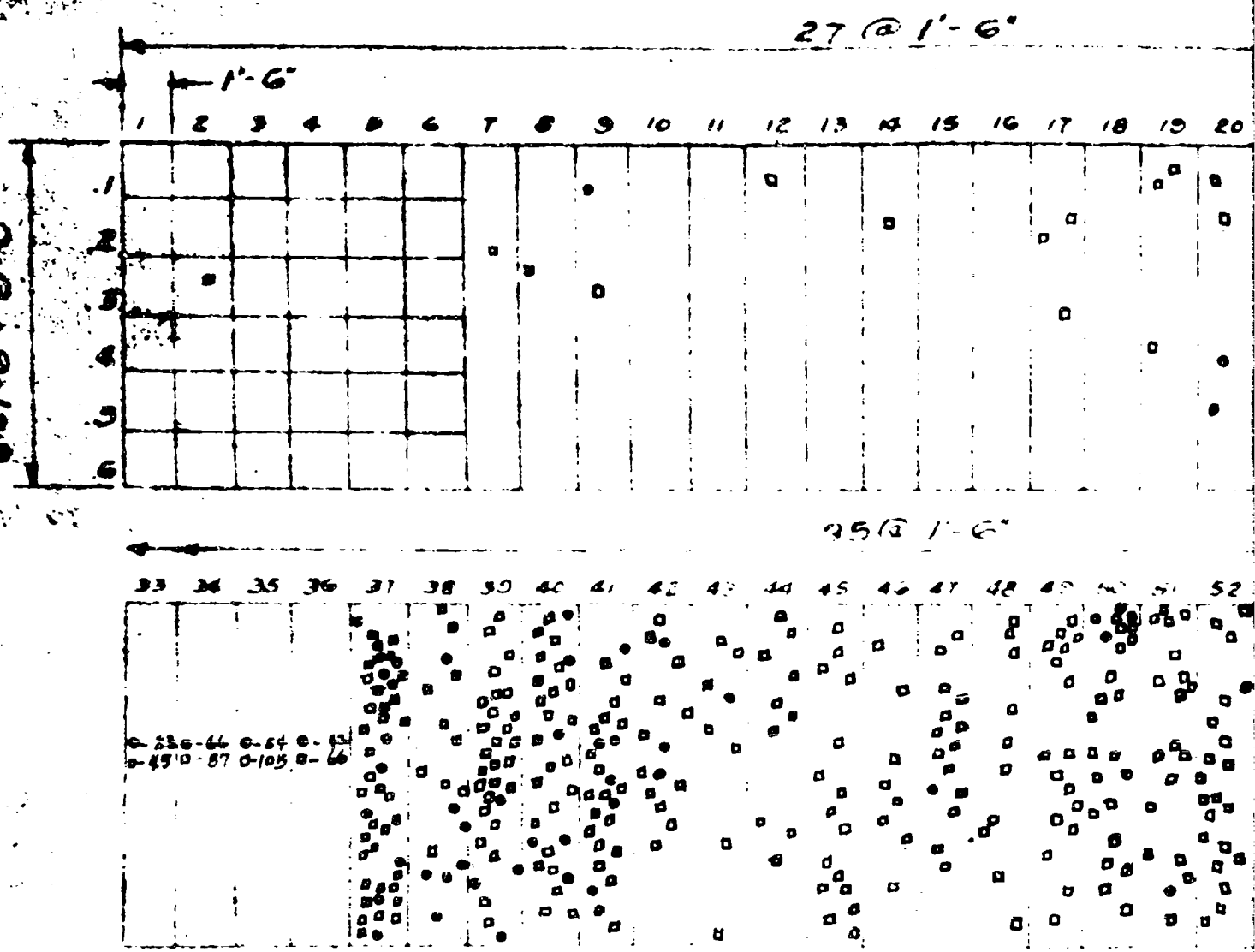
B-11822

1

CONFIDENTIAL

PANEL A

30 FT RADIUS 180° A



1" NO. 3 PINE BOARDS (PRESSED) PLACED VE

DATE: 6/4/53 RD. NO. 17

PERFORATIONS: ● = 387

SHELL: 12[redacted], SOVIET

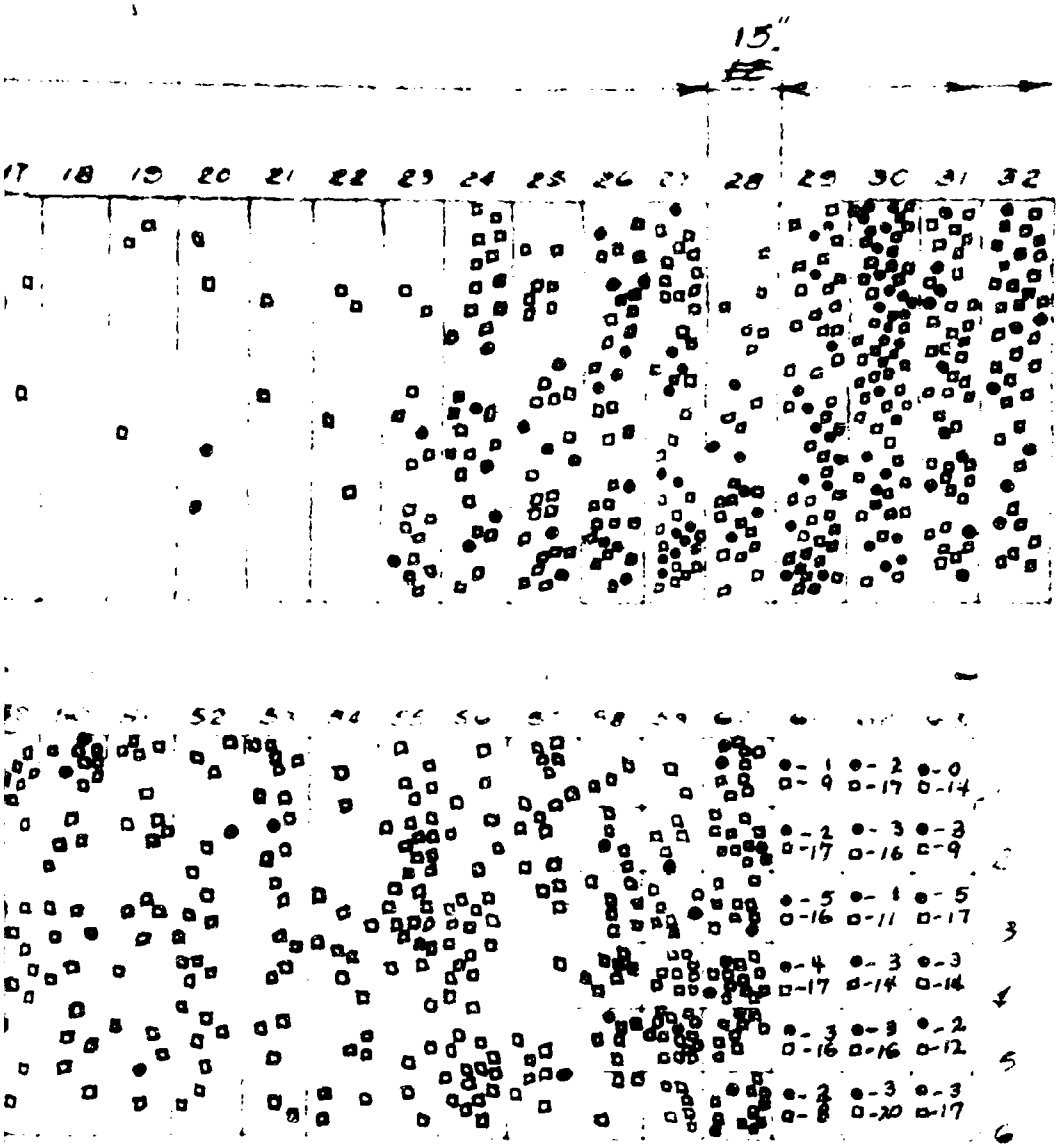
PENETRATIONS: □ = 1404

POSITION OF SHELL: HORIZONTAL

CONFIDENTIAL

7

180° ARC



2

LED VERTICALLY

RANGE OPERATIONS SECTION

387

1404

LAYOUT OF PANELS
FOR
NUMBER AND DISTRIBUTION
OF FRAGMENTS
(30 FT RADIUS)

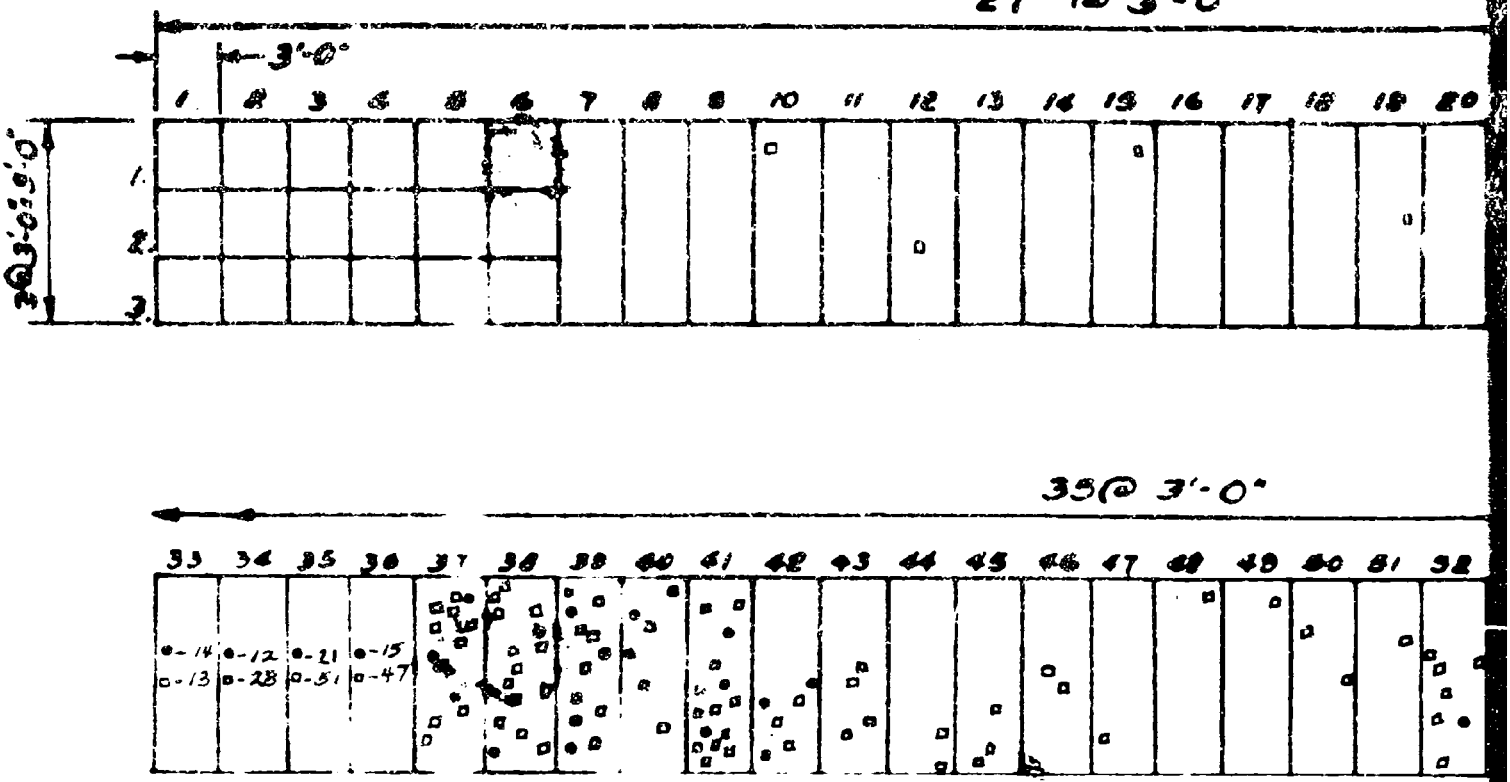
148 A

ABERDEEN PROVING GROUND MD
OCT 27 1944 OPG 1676-15

CONFIDENTIAL

PANEL B

60 FT. RADIUS 180° ARC



1" NO. 3 PINE BOARDS (DRESSED) PLACED VER

DATE: JUNE 4 / 53 RD. NO. 17

PERFORATIONS: ● = 130

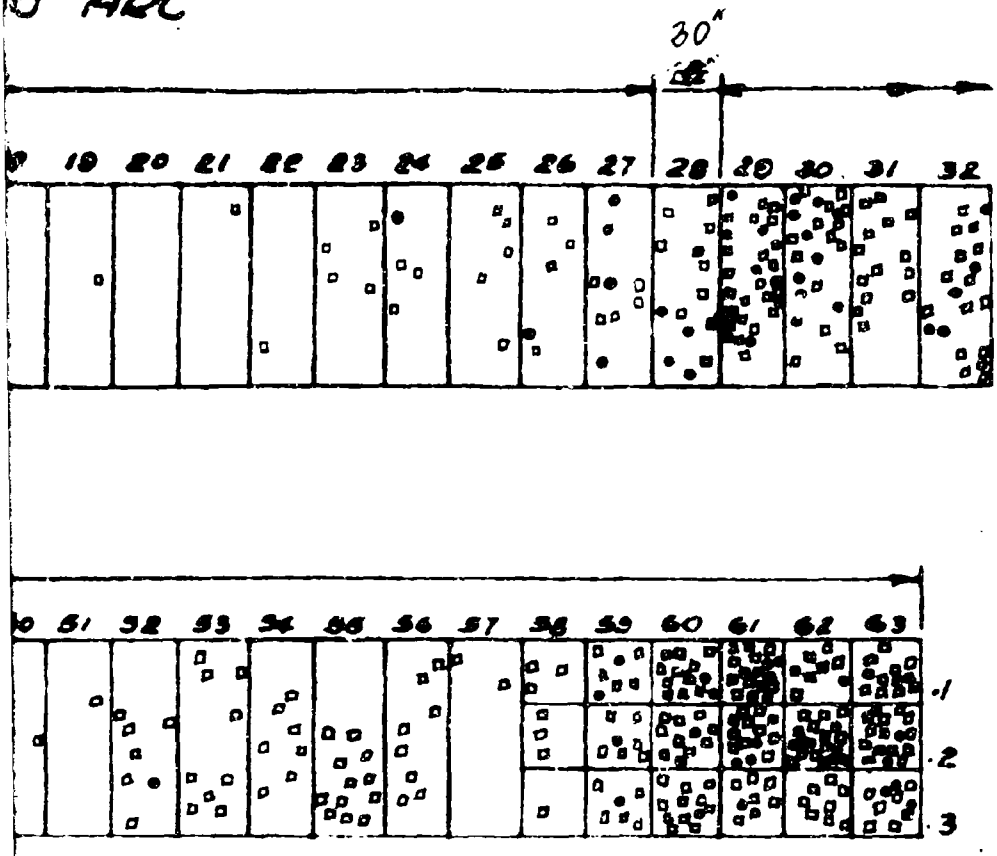
SHELL: 122 MM, SOVIET

PENETRATIONS: □ = 509

POSITION OF SHELL: HORIZONTAL

CONFIDENTIAL

0° ARC



D VERTICALLY.

130

509

RANGE OPERATIONS SECTION

LAYOUT OF PANELS
FOR
NUMBER AND DISTRIBUTION
OF FRAGMENTS
(60 FT. RADIUS)

1/8B

ABERDEEN PROVING [redacted]O

OCT. 27, 1944 APG 11876-[redacted] PR

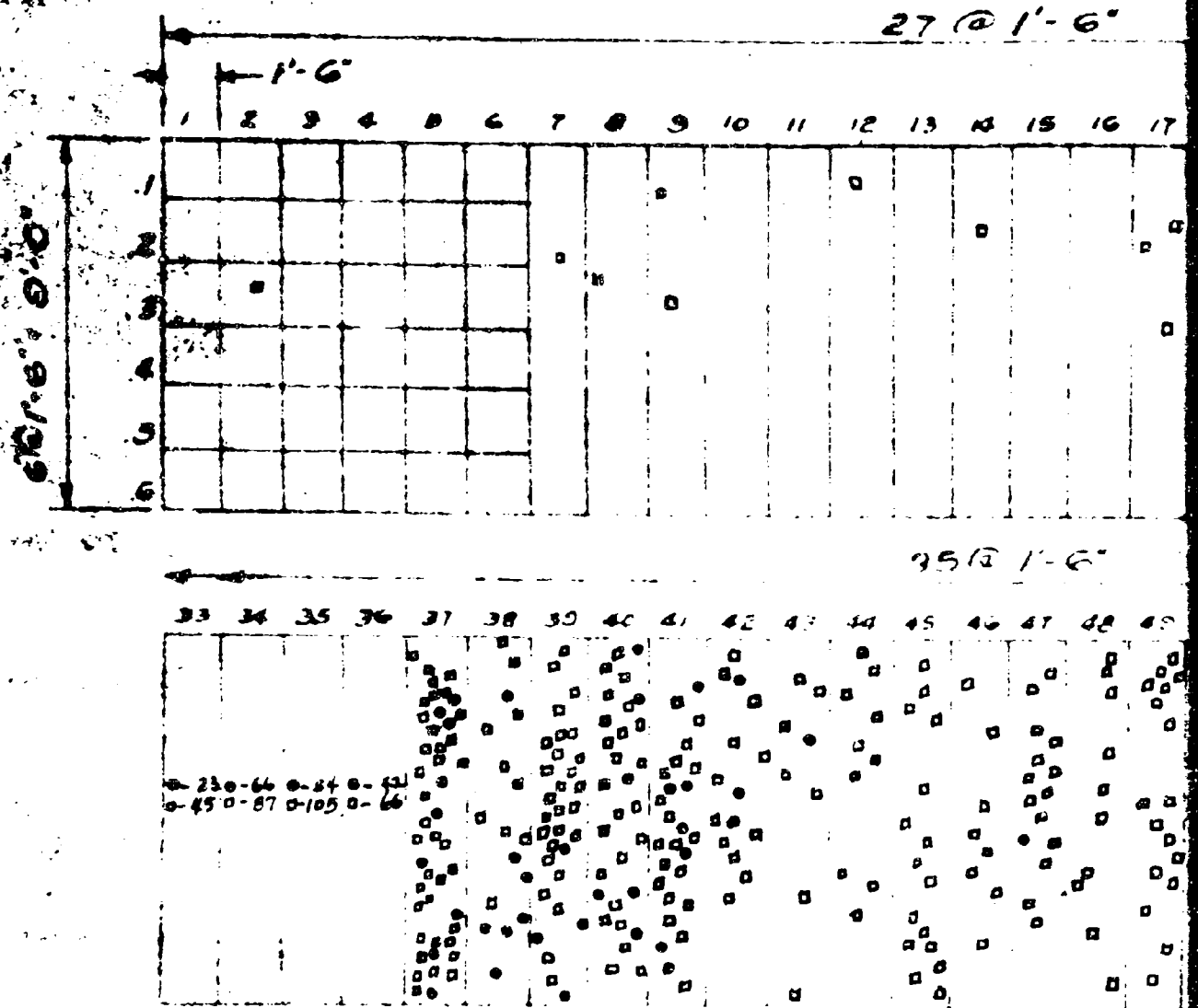
UB-11822

1

CONFIDENTIAL

PANEL A

30 FT RADIUS



1" NO. 3 PINE BOARDS (DRESSED) PLACE

DATE: 6/4/53 RD. NO. 17

PERFORATIONS: ●

SHELL: 122MM, SOVIET

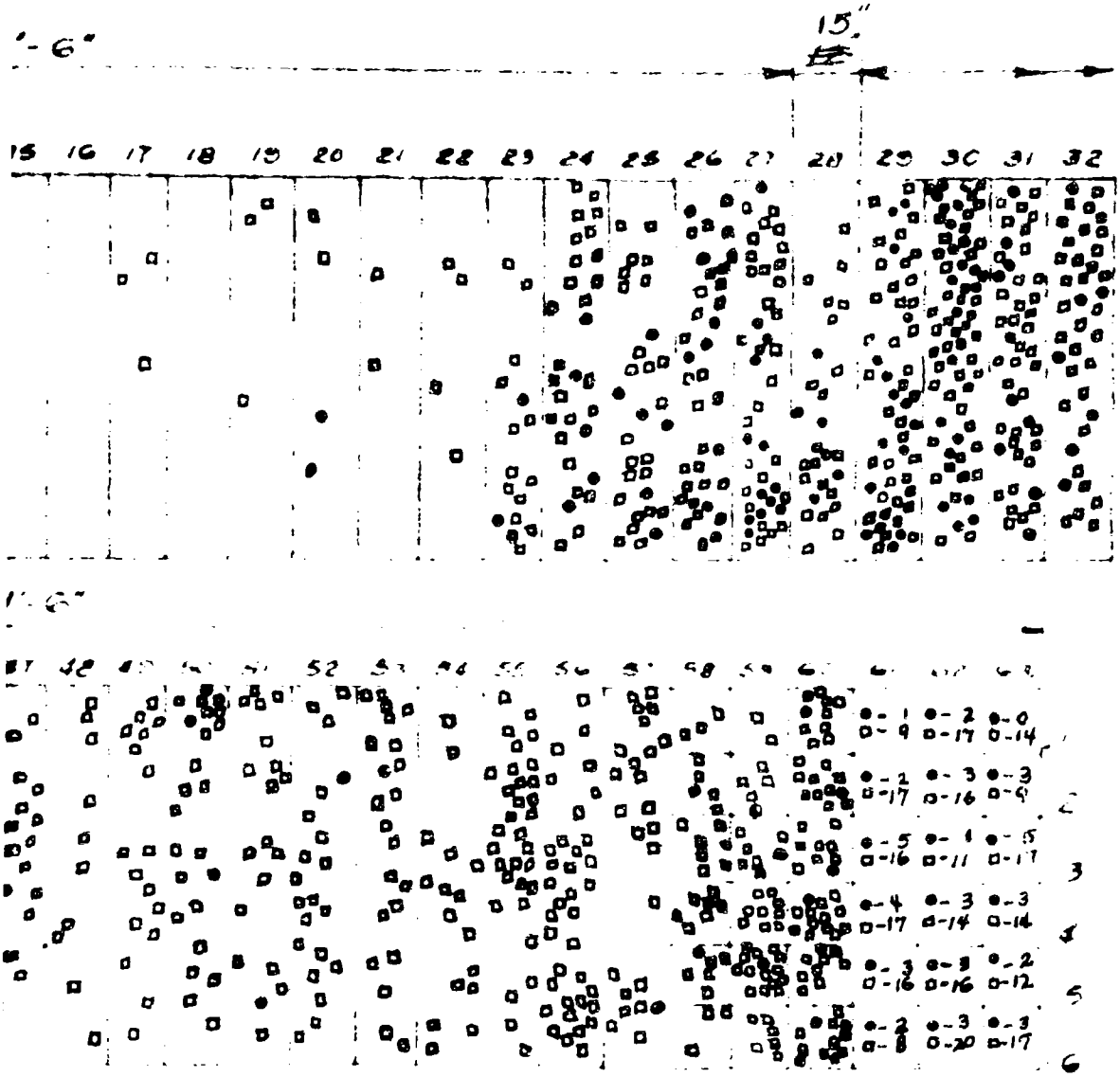
PENETRATIONS: □

POSITION OF SHELL: HORIZONTAL

CONFIDENTIAL

L A

DIUS 18C° ARC



PLACED VERTICALLY

ONS: ● = 387

ONS: □ = 1404

TIAL

RANGE OPERATIONS SECTION

LAYOUT OF TARGETS

FOR

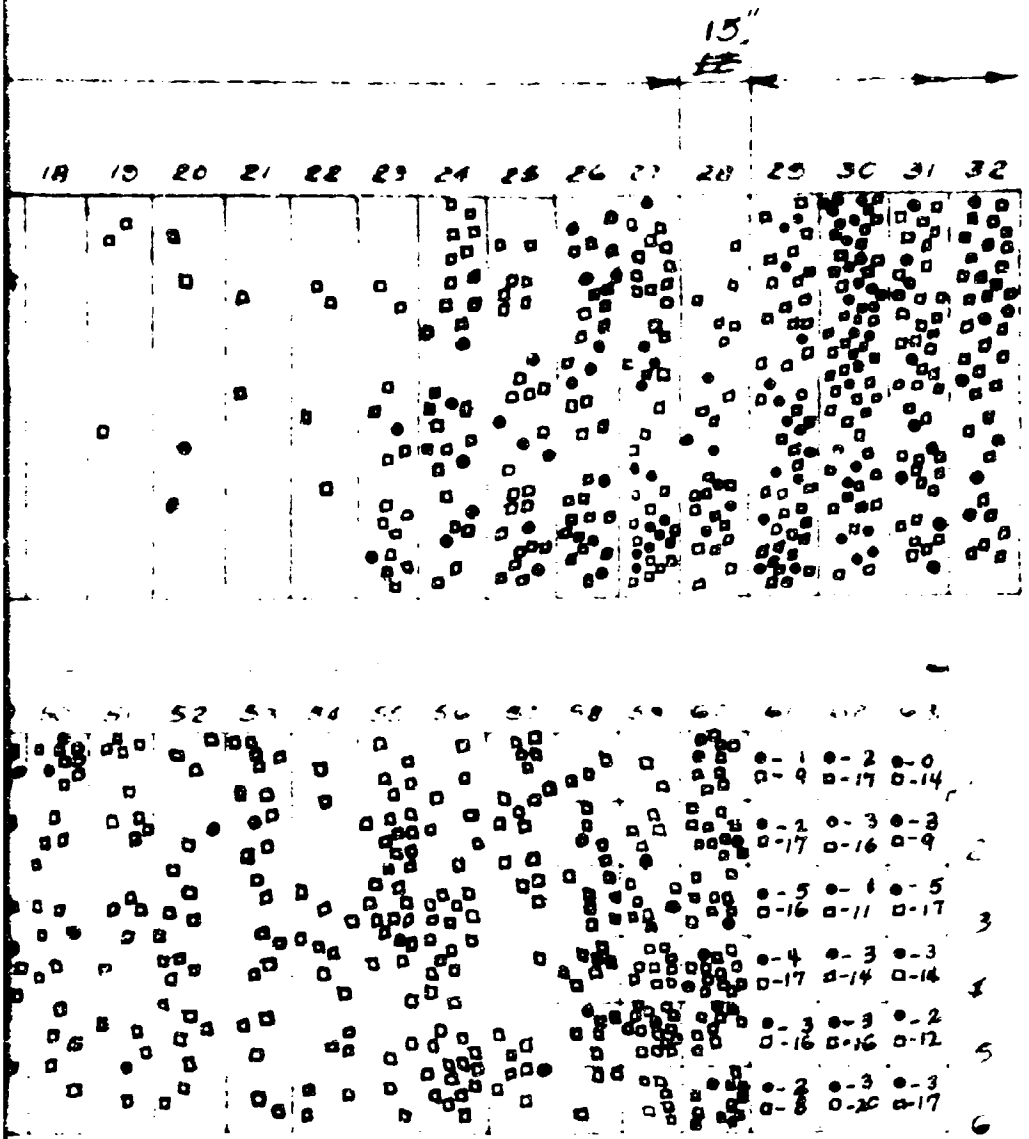
NUMBER AND DISTRIBUTION OF FRAGMENTS (30 FT RADIUS)

148P

ABERDEEN PROVING GROUND MD

180° ARC

3



ED VERTICALLY

RANGE OPERATIONS SECTION

387

1404

LAYOUT OF TARGETS

FOR

NUMBER AND DISTRIBUTION

OF FRAGMENTS

(30 FT RADIUS)

146 A

ABERDEEN PROVING GROUND MD

OCT 27 1944 OPG 1876-15

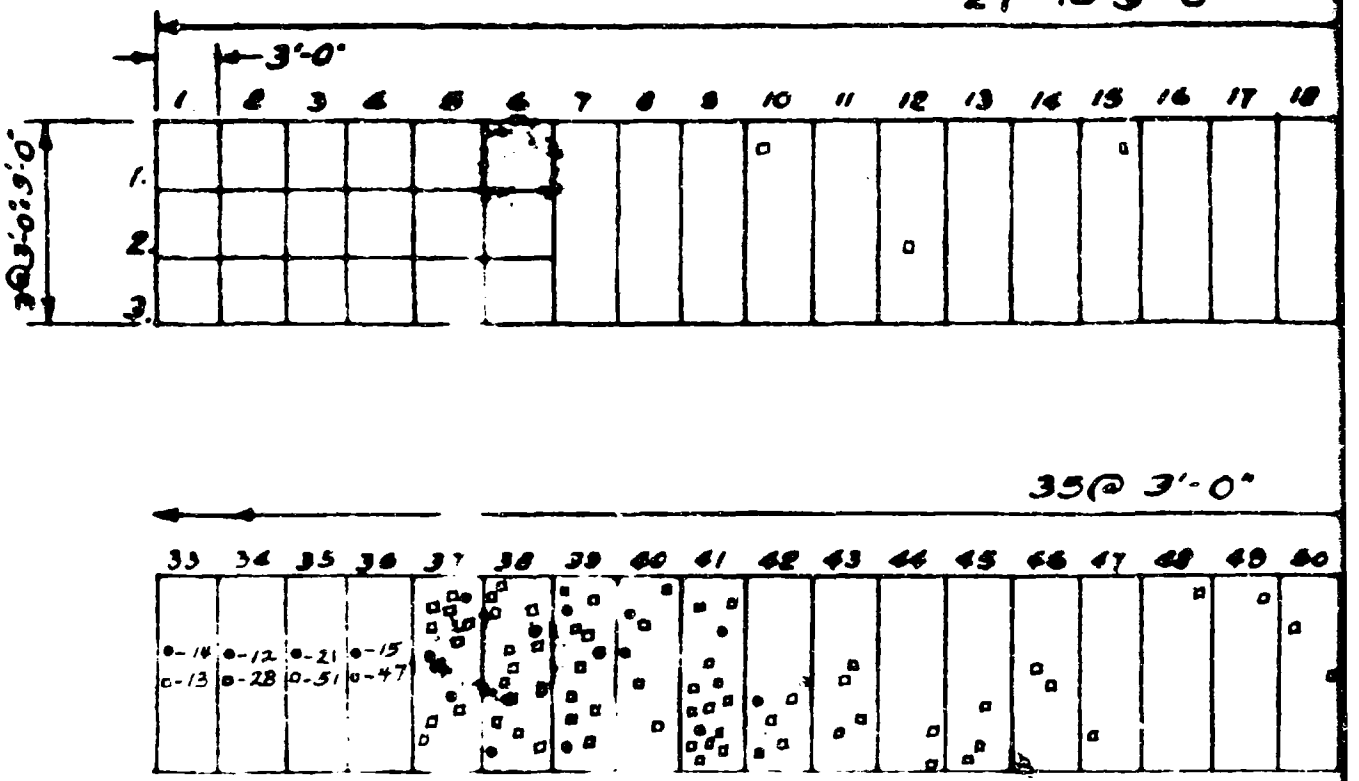
3-11822

1

CONFIDENTIAL

PANEL B

60 FT. RADIUS 180



1" NO. 3 PINE BOARDS (DRESSED) PLACED

DATE: JUNE 4 / 53 RD. NO. 17

PERFORATIONS: ●=

SHELL: 122MM, SOVIET

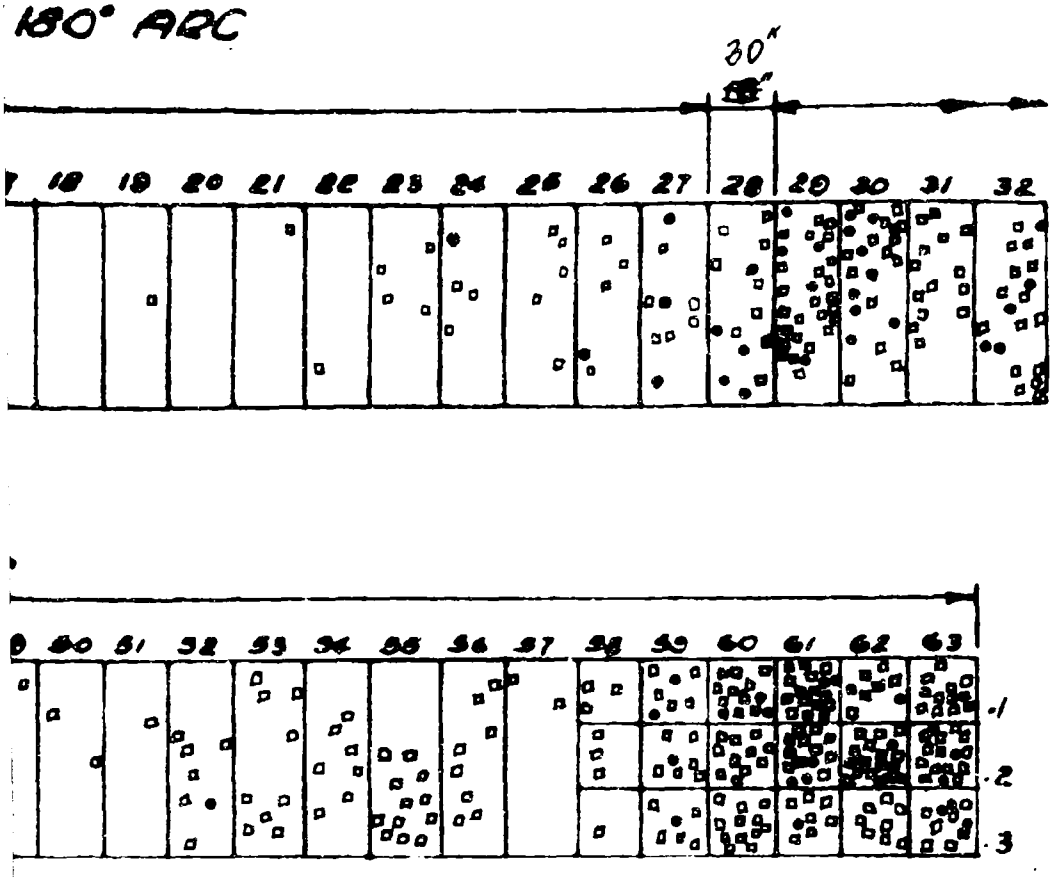
PENETRATIONS: □=

POSITION OF SHELL: HORIZONTAL

CONFIDENTIAL

2

180° ARC



CED VERTICALLY.

● = 130

□ = 509

RANGE OPERATIONS SECTION

LAYOUT OF PANELS FOR NUMBER AND DISTRIBUTION OF FRAGMENTS (60 FT. RADIUS)

1/8B

ABERDEEN PROVING GROUND, MD

OCT. 27, 1944 APG 11876-14 PR

FIRING RECORD NO. B-11822
INCLOSURE 3

31 July 1953

ROUND NO. 20

SHELL, HE, 12[illegible], Cavity
MODEL, C-[illegible], Ammonium Nitrate 90% - TNT 10%

SHELL MARKINGS

OBVERSE

515
4-45
122

REVERSE

(none)

BASE

Machined Rough

Shell has one split rotating band.

Weight of Shell w/o Components- 4[illegible].1[illegible] lbs.
As Fired - 4[illegible].[illegible] lbs.

Distance from Shell to the center of the 0.020" duralumin flash target- 22,5[illegible] ft.

Shell before firing is shown in AFS Photograph No. A[illegible].

Recovered fragments with their respective weights and velocities are shown in AFS Photograph No. A[illegible].

ORDCO-1109
Rev 12 Aug 52

B-11822

CONFIDENTIAL

FRAGMENT VELOCITY DATA

Test of Shell, HE, 122mm, Soviet ,AT/90 Side Recovery Box Data

Proof Director Mr. O. L. Rogers Date Fired 31 July 1953

Distance from detonation point to target 22.71 feet. Round No. 20

Round statically detonated and velocity obtained by Photographic Methods.

Fragment No.	Weight, Grains	Velocity, f/s	Fragment No.	Weight, Grains	Velocity, f/s	Fragment No.	Weight, Grains	Velocity, f/s
1	18	2656	17	42	2604	33	N.R.	
2	4		18	3		34	N.R.	
3	3	2304	19	1		35	132	2042
4	12		20	4	2642	36	75	2567
5	5		21	N.R.	2567	37	5	2428
6	3		22	25		38	4	
7	35	2496	23	N.R.		39	N.R.	
8	26		24	6	2531	40	N.R.	
9	2		25	36	2496	41	N.R.	2567
10	17	2695	26	N.R.		42	N.R.	
11	2		27	46	2531	43	14	
12	N.R.		28	30(2)	2604	44	13	
13	N.R.		29	10	2462	45	1(2)	
14	3		30	4		46	N.R.	2604
15	5		31	4		47	110(2)	2604
16	7		32	11		48	1	

Average velocity 2376 ft/sec.
NV - no velocity recorded.
NR - not recovered.

(2) - total weight of two pieces.
(n) - total weight of n pieces.

Individual velocity inaccuracies are less than ± 3.5 % for the highest velocity and ± 2.8 % for the lowest velocity.

Sheet ~~30~~ 1 of ~~26~~ 7

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[redacted]

ARMY OR ABERDEEN PROVING GROUND MD 354

ORDNANCE 1169
Rev 12 Aug 52

CONFIDENTIAL

FRAGMENT VELOCITY DATA

Test of Shell, HE, 122mm, Soviet — Side Recovery Box Data

Proof Director Mr. O. L. Rogers — Date Fired 31 July 1953

Distance from detonation point to target 22.71 feet. Round No. 20

Round statically detonated and velocity obtained by Photographic Methods.

Fragment No.	Weight, Grains	Velocity, f/s	Fragment No.	Weight, Grains	Velocity, f/s	Fragment No.	Weight, Grains	Velocity, f/s
49	N.R.		65	2		81	3	
50	50		66	14	2462	[illegible]	N.R.	2139
51	10		67	N.R.		83	19	1510
52	N.R.		68	N.R.		84	4	2428
53	7		69	2	2364	85	6	
54	69		70	13		86	5	
55	1		71	N.R.		87	6	2428
56	11	2531	72	163(3)	2567	88	8	
57	99(4)		73	N.R.		89	2	
58	2(3)		74	20		90	12	2531
59	11		75	19(2)	2604	91	N.R.	2567
60	3		76	10		92	8	2604
61	N.R.		77	N.R.		93	9	
62	N.R.	2396	78	1	2364	94	N.R.	
63	N.R.	2642	79	N.R.	2428	95	N.R.	
64	42(2)	2604	80	N.R.		96	5	

Average velocity 2376 ft/sec.
NV - no velocity recorded.
NR - not recovered.

(2) - total weight of two pieces.
(n) - total weight of n pieces.

Individual velocity inaccuracies are less than ± 3.5 % for the highest velocity and ± 2.8 % for the lowest velocity.

Sheet 21 of 86

CONFIDENTIAL

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CRDBG-1109
Rev 12 Aug 52

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FRAGMENT VELOCITY DATA

Test of Shell, HE, 122mm, Soviet Side Recovery Box Data

Proof Director Mr. O. L. Rogers Date Fired 31 July 1953

Distance from detonation point to target 22.71 feet. Round No. 20

Round statically detonated and velocity obtained by Photographic Methods.

Fragment No.	Weight, Grains	Velocity, f/s	Fragment No.	Weight, Grains	Velocity, f/s	Fragment No.	Weight, Grains	Velocity, f/s
97	N.R.	1834	113	N.R.	2462	129	N.R.	2364
98	48(4)	2531	114	67		130	67(2)	2396
99	3		115	16		131	N.R.	
100	19	2019	116	N.R.	2496	132	24	
101	14		117	8	2334	133	158	
102	19		118	N.R.		134	15	
103	N.R.		119	37(3)	2496	135	5	2428
104	9		120	67(5)		136	42(9)	
105	N.R.		121	2	2496	137	19(4)	
106	N.R.		122	1		138	58	
107	12		123	N.R.	2462	139	29	
108	N.R.		124	95		140	8	
109	78(4)	1932	125	27(5)	2139	141	3	1975
110	6(3)	1695	126	N.R.		142	N.R.	
111	12(7)		127	11		143	16	2531
112	14		128	1		144	46(2)	2066

Average velocity 2376 ft/sec.
NV - no velocity recorded.
NR - not recovered.

(2) - total weight of two pieces.
(n) - total weight of n pieces.

Individual velocity inaccuracies are less than ± 3.5 % for the highest velocity and ± 2.8 % for the lowest velocity.

Sheet ~~22~~ 3 of ~~26~~ 7

ARMY OF ABERDEEN PROVING GROUND NO 354

B-11822

GPOBG-1109
Rev 12 Aug 53

CONFIDENTIAL

FRAGMENT VELOCITY DATA

Test of Shell, HE, 122mm, Soviet Side Recovery Box Data

Proof Director Mr. C. L. Rogers Date Fired 31 July 1953

Distance from detonation point to target 22.71 feet. Round No. 20

Round statically detonated and velocity obtained by Photographic Methods.

Fragment No.	Weight, Grains	Velocity, f/s	Fragment No.	Weight, Grains	Velocity, f/s	Fragment No.	Weight, Grains	Velocity, f/s
145	9		161	3		177	12	
146	9		162	200(2)	1695	178	7(4)	
147	N.R.		163	20	2364	179	1	
148	99(3)		164	271		180	3	
149	3		165	N.R.	2218	181	N.R.	
150	40		166	14		182	N.R.	
151	19	2304	167	11(2)		183	N.R.	
152	1		168	3		184	3(5)	
153	106(3)		169	N.R.		185	21	
154	2		170	N.R.		186	6	
155	0+		171	79		187	N.R.	
156	12		172	98(7)		188	51	
157	15		173	8		189	141	
158	2		174	81(2)		190	4	
159	110(5)	2396	175	26		191	34	
160	N.R.		176	59		192	45	

Average velocity 2376 ft/sec.
NV - no velocity recorded.
NR - not recovered.

(2) - total weight of two pieces.
(n) - total weight of n pieces.

Individual velocity inaccuracies are less than ± 3.5 % for the highest velocity and ± 2.8 % for the lowest velocity.

Sheet ~~23~~ 4 of ~~26~~ 7

[redacted]

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ARMY OF ABERDEEN PROVING GROUND MD 354

GRDBG-1139
Rev 17 Aug 52

B-11822

FRAGMENT VELOCITY DATA

Test of Shell, HE, 122mm, Soviet Side Recovery Box Data

Proof Director Mr. O. L. Rogers Date Fired 31 July 1953

Distance from detonation point to target 22.71 feet. Round No. 20

Round statically detonated and velocity obtained by Photographic Methods.

Fragment No.	Weight, Grains	Velocity, f/s	Fragment No.	Weight, Grains	Velocity, f/s	Fragment No.	Weight, Grains	Velocity, f/s
193	12		209	N.R.	2156	225	17	
194	N.R.		210	N.R.		226	15	
195	7		211	N.R.		227	22	
196	7		212	6		228	16	
197	N.R.		213	N.R.		229	7(7)	
198	40		214	N.R.		230	27	
199	N.R.		215	20	2156	231	N.R.	
200	137		216	17		232	32	
201	51		217	N.R.		233	3	
202	23(4)		218	46(2)		234	8	
203	50		219	27		235	39	
204	48		220	N.R.		236	37	
205	N.R.	2510	221	15		237	N.R.	
206	N.R.		222	N.R.		238	12(2)	
207	N.R.		223	20(2)		239	5	
208	1	2083	224	4		240	N.R.	

Average velocity 2376 ft/sec.
NV - no velocity recorded.
NR - not recovered.

(2) - total weight of two pieces.
(n) - total weight of n pieces.

Individual velocity inaccuracies are less than ± 3.5 % for the highest velocity and ± 2.8 % for the lowest velocity.

Sheet ~~24~~ 5 of ~~26~~ 7 [redacted]

ARMY OF ABERDEEN PROVING GROUND MD 354

ORDNANCE Rev 12 Aug 53

CONFIDENTIAL

13-11822

FRAGMENT VELOCITY DATA

Test of Shell, HE, 122mm, Soviet Side Recovery Box Data

Proof Directory Mr. O. L. Rogers Date Fired 31 July 1953

Distance from detonation point to target 22.71 feet. Round No. 20

Round statically detonated and velocity obtained by Photographic Methods.

Fragment No.	Weight, Grains	Velocity, f/s	Fragment No.	Weight, Grains	Velocity, f/s	Fragment No.	Weight, Grains	Velocity, f/s
241	63(2)		257	N.R.		273	2(3)	2496
242	75(2)		258	12		274	1	
243	8		259	14		275	15	
244	5		260	61(2)		276	21(2)	
245	24		261	N.R.		277	8	2604
246	53		262	31		278	74	2567
247	N.R.		263	2	2531	279	44	
248	146(4)		264	N.R.		280	0+	
249	37(7)		265	43		281	22(2)	
250	37(5)		266	7		282	18	
251	14		267	N.R.		283	10	2604
252	47(2)		268	3		284	N.R.	2567
253	23		269	N.R.	2246	285	N.R.	2604
254	94		270	0+		286	17	2462
255	12		271	93		287	N.R.	
256	22	1997	272	2	1912	288	0+	

Average velocity 2376 ft/sec.

NV - no velocity recorded.

NR - not recovered.

(2) - total weight of two pieces.

(n) - total weight of n pieces.

Individual velocity inaccuracies are less than ± 3.5 % for the highest velocity and ± 2.8 % for the lowest velocity.

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ORDC 1109
Rev 12 Aug 52

B-1182-2

FRAGMENT VELOCITY DATA

Test of Shell, HE, 122mm, Soviet — Side Recovery Box Data

Proof Director Mr. O. L. Rogers — Date Fired 31 July 1953

Distance from detonation point to target 22.71 feet. Round No. 20

Round statically detonated and velocity obtained by Photographic Methods.

Fragment No.	Weight, Grains	Velocity, f/s	Fragment No.	Weight, Grains	Velocity, f/s	Fragment No.	Weight, Grains	Velocity, f/s
289	4(2)		305	N.R.				
290	4		306	N.R.				
291	3		307	2				
292	13		308	3	2208			
293	8		309	2				
294	N.R.		310	3				
295	N.R.		311	N.R.	2208			
296	11	2396						
297	2							
298	N.R.							
299	36	2656						
300	11							
301	23							
302	12	2510						
303	3	2131						
304	N.R.	2262						

Average velocity 2376 ft/sec.
NV - no velocity recorded.
NR - not recovered.

(2) - total weight of two pieces.
(n) - total weight of n pieces.

Individual velocity inaccu[illegible] less than ± 3.5 % for the highest velocity and ± 2.8 % for the low[illegible]locity.

Sheet [illegible]

[redacted]

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B-11722

ORDBG-737 10 FEB 46
FORMERLY SPOTZ-F-291

PENETRATION OF SHELLS IN PANELS

LOT NUMBER | DATE 31 July 53
FIRING RECORD NUMBER
PRIORITY NUMBER
Sheet 1 of 46
Round No. 20
ROCKET NUMBER

PENETRATIONS OF SHELL 122mm-462A Soviet LOADED AT/90
IN PANELS WITH RADII OF 30' AND FEET

PANEL NUMBERS	PERFORATIONS LENGTH	PERFORATIONS WIDTH	PENETRATIONS LENGTH	PENETRATIONS WIDTH	PENETRATIONS DEPTH
2.3			1	1	1
			1	1	1
Total					2
3.5			1	1	1
Total					1
5.2			2	2	2
Total					1
6.4			1	1	1
Total					1
7			3	1	1
Total					1
8					
			2	[illegible]	1
Total					1
10			2	2	1
Total					1
11	8	2	2	1	1
Total		1			1
15			1	1	1
			1	1	1
Total					2
16			3	1	6
Total					1
17			2	1	1

PANEL NUMBERS	PERFORATIONS LENGTH	PERFORATIONS WIDTH	PENETRATIONS LENGTH	PENETRATIONS WIDTH	PENETRATIONS DEPTH
Total					1
18	8	4	2	1	1
			1	1	2
			1	1	1
			2	2	2
			3	2	4
Total		1			5
19			1	1	1
			1	1	1
			1	1	1
			1	1	1
			2	1	2
Total					5
20	10	10	2	1	2
			2	1	3
			1	1	3
Total		1			3
21			3	2	3
Total					1
22			1	1	1
			1	1	1
			2	1	1
			1	1	1
			4	2	4
Total					5
23			2	2	2
			[illegible]	1	2
				1	1

157

[redacted]

CONFIDENTIAL

ARMY-OR-ABERDEEN PROVING GROUND, MD 445

B-11822

ORDNG-737 10 FEB 48
FORMERLY SPOTZ-F-201

PENETRATION OF SHELLS IN PANELS

LOT NUMBER

FIRING DATA NUMBER

PRIORITY NUMBER

DATE 31 July 50

PENETRATIONS OF SHELL 122mm, D-432A LOADED AT/80

IN PANELS WITH RADII OF Soviet 30' AND FEET

Sheet 2 of 46

Round No. 20

ROCKET NUMBER

PANEL NUMBERS	PERFORATIONS LENGTH	PERFORATIONS WIDTH	PENETRATIONS LENGTH	PENETRATIONS WIDTH	PENETRATIONS DEPTH
23 Cont			1	1	1
			2	1	2
			2	1	2
			1	1	1
			2	1	2
			1	1	1
			3	2	3
Total					10
24			1	1	1
			4	3	2
			2	1	1
			2	1	2
			2	1	1
			1	1	1
			2	1	1
			1	1	2
			1	1	1
			2	1	2
			2	1	3
			1	1	1
			1	1	1
			1	1	1
			4	3	2
			1	1	2
			1	1	1
			1	1	1
			1	1	1
			2	1	2
			2	1	1
			1	1	1
			2	1	2
			2	1	3
Total					23

PANEL NUMBERS	PERFORATIONS LENGTH	PERFORATIONS WIDTH	PENETRATIONS LENGTH	PENETRATIONS WIDTH	PENETRATIONS DEPTH
25	8	7	1	1	1
	15	6	1	1	2
	4	2	1	1	2
	3	2	3	2	3
	4	3	2	1	1
			1	1	1
			5	2	4
			2	1	2
			4	3	4
			2	1	1
			4	3	4
			2	1	2
			2	1	2
			4	3	6
			6	4	3
			4	2	4
			3	2	4
			2	1	2
			1	1	1
			5	3	4
			2	1	2
			5	3	4
			3	2	7
			5	2	6
			3	1	1
			1	1	2
			1	1	1
			2	1	2
			1	1	1
			1	1	1
			3	2	5
			1	1	1
[redacted]			6	3	9
			3	2	3

B-11824

ORDG-737 10 MAR 48
FORMERLY SPOTZ-F-201

PENETRATION OF SHELLS IN PANELS

LOT NUMBER

DATE 31 July 50

FIRING [illegible] NUMBER

PRIORITY NUMBER

[illegible] Sheet 3 of 46

[illegible] Round No. 20

ROCKET NUMBER

PENETRATIONS OF SHELL 122mm, O-462A LOADED AT/SO

IN PANELS WITH RADII OF Soviet 301 AND FEET

PANEL NUMBERS	PERFORATIONS LENGTH	PERFORATIONS WIDTH	PENETRATIONS LENGTH	PENETRATIONS WIDTH	PENETRATIONS DEPTH
26 Cont			1	1	1
			3	2	4
			2	2	5
			2	1	1
			1	1	2
			2	2	5
Total		5			40
26	4	3	1	1	1
	4	3	1	1	1
	2	2	2	1	2
	9	6	1	1	1
	5	3	3	2	7
	3	2	3	2	2
	3	2	1	1	2
	5	4	2	2	4
	7	4	1	1	1
	3	2	1	1	1
	3	3	1	1	2
			1	1	1
			1	1	1
			2	1	4
			2	1	2
			3	2	7
			1	1	1
			2	1	3
			2	2	3
			2	1	2
			1	1	1
			5	2	5
			1	1	1
			4	3	7
			1	1	1
			3	2	4

PANEL NUMBERS	PERFORATIONS LENGTH	PERFORATIONS WIDTH	PENETRATIONS LENGTH	PENETRATIONS WIDTH	PENETRATIONS DEPTH
			6	3	3
			1	1	1
			1	1	2
			6	3	6
			2	1	1
			1	1	2
			4	2	5
			3	2	3
			3	2	5
			2	1	2
			1	1	1
			2	1	1
			1	1	1
			1	1	1
			2	2	2
			1	1	1
			4	2	4
			2	1	1
			1	1	1
			2	2	2
			3	2	4
			3	2	8
Total		11			48
27	4	3	4	3	4
	18	9	2	2	2
	4	3	1	1	1
	3	4	1	1	1
	9	4	3	2	2
	4	2	2	2	2
	4	4	2	2	2
	5	4	2	2	3
	4	2	4	3	15
	5	3	3	2	3

CONFIDENTIAL [redacted]

ARMY—OR—ABERDEEN PROVING GROUND MD 446

B-1482

ORDNANCE 737 10 FEB 48
FORMERLY SPOTS-F-201

PENETRATIONS OF SHELLS IN PANELS

LOT NUMBER | DATE 31 July 48
FIRING RECORD NUMBER
PRIORITY NUMBER
ITEM NUMBER Sheet 4 of 46
GUN NUMBER Round No. 20
ROCKET NUMBER

PENETRATIONS OF SHELL 122mm, D-432A LOADED HT/90 Soviet
IN PANELS WITH RADII OF 30' AND FEET

PANEL NUMBERS	PERFORATIONS LENGTH	PERFORATIONS WIDTH	PENETRATIONS LENGTH	PENETRATIONS WIDTH	PENETRATIONS DEPTH
27 Cont	4	3	2	1	2
	3	4			
			1	1	1
			3	2	7
			3	3	2
			2	2	2
			4	2	1
			2	1	3
			2	2	4
			1	1	1
			3	2	3
			3	2	5
			1	1	1
			2	2	2
			3	2	5
			3	2	1
			1	1	2
			1	1	3
			1	1	1
			3	2	4
			1	1	1
			9	3	2
			1	1	2
			4	2	4
			6	2	6
			2	2	3
			2	2	2
			4	2	4
			3	3	2
			1	1	2
			1	1	1
			1	1	1
			3	2	4
			3	1	2
			4	2	3

PANEL NUMBERS	PERFORATIONS LENGTH	PERFORATIONS WIDTH	PENETRATIONS LENGTH	PENETRATIONS WIDTH	PENETRATIONS DEPTH
			1	1	2
			1	3	2
Total		12			46
28	7	6	3	3	2
	10	4	2	1	2
	4	4	1	1	1
	4	2	2	1	1
	8	5	2	2	2
	5	2	4	3	6
	5	3	2	2	3
	3	3	1	1	1
			2	2	7
			2	2	2
			2	2	2
			2	2	2
			2	1	3
			1	1	1
			1	1	1
			3	3	4
			2	2	7
			2	2	4
			3	2	4
			1	1	1
			1	1	1
Total		8			21
29	6	5	1	1	2
	5	3	1	1	1
	5	3	1	1	3
	4	4	1	1	2
	8	4	1	1	1
	4	4	1	1	1
	5	2	2	2	2

ARMY—OR—ABERDEEN PROVING GROUND MD. 845

R-11822

ORDBG-737 19 FEB 46
FORMERLY SPOTZ-F-281

PENETRATIONS OF SHELLS IN PANELS

LOT NUMBER

DATE 31 July 50

FIRING RECORD NUMBER

PRIORITY NUMBER

Sheet 5 of 46

Round No. 20

ROCKET NUMBER

PENETRATIONS OF SHELL 122mm, O-462A Soviet LOADED AT/90

IN PANELS WITH RADII OF 30' AND FEET

PANEL NUMBERS	PERFORATIONS LENGTH	PERFORATIONS WIDTH	PENETRATIONS LENGTH	PENETRATIONS WIDTH	PENETRATIONS DEPTH	PANEL NUMBERS	PERFORATIONS LENGTH	PERFORATIONS WIDTH	PENETRATIONS LENGTH	PENETRATIONS WIDTH	PENETRATIONS DEPTH
	3	2	4	2	4				3	2	2
	5	5	1	1	1				1	1	1
	4	2	2	2	3				3	3	6
	4	3	1	1	1				3	3	8
	5	5	2	2	2				2	2	5
	8	4	1	1	2				3	2	6
	4	3	1	1	3	Total		14			47
			3	3	2						
			2	2	3	30	6	4	3	2	2
			1	1	2		7	5	2	2	3
			1	1	1		5	4	4	2	6
			3	2	4		7	4	4	2	4
			1	1	2		9	8	3	2	4
			1	1	1		6	4	2	2	2
			1	1	1		6	3	1	1	1
			4	4	5		4	3	2	1	1
			1	1	1		6	4	3	1	2
			4	2	3		6	4	2	2	2
			1	1	1		5	4	6	3	6
			9	6	8		5	2	3	2	1
			1	1	1		8	6	1	1	1
			3	2	3		7	5	2	2	2
			2	1	1		6	4	3	2	6
			2	2	2		4	3	1	1	1
			4	3	5		7	6	1	1	7
			2	1	1		4	4	2	2	2
			2	2	4		3	2	2	2	2
			1	1	1		4	4	1	1	1
			2	2	2		12	8	1	1	1
			4	2	3		3	3	1	1	1
			4	3	6		4	2	1	1	1
			1	1	1		9	3	4	2	7
			2	1	1		5	3	3	1	1
			[illegible]	3	4		10	4	3	3	6

CONFIDENTIAL

[redacted]

ARMY-OO-ABERDEEN PROVING GROUND MD 445

B-1 1922

ORDBG-737 19 FEB 48
FORMERLY SPOTZ-F-281

PENETRATIONS OF SHELLS IN PANELS

LOT NUMBER | DATE 31 July 53
FIRING RECORD NUMBER
PRIORITY NUMBER
~~HIGH NUMBER~~ Sheet 6 of 46
~~SHELL NUMBER~~ Round No. 20
ROCKET NUMBER

PENETRATIONS OF SHELL 122mm, O-462A Soviet ADDED AT/SO

IN PANELS WITH RADII OF 30' AND FEET

PANEL NUMBERS	PERFORATIONS LENGTH	PERFORATIONS WIDTH	PENETRATIONS LENGTH	PENETRATIONS WIDTH	PENETRATIONS DEPTH
30 Cont	4	3	4	2	1
	5	3	3	1	1
	4	3	8	4	3
	4	3	1	1	1
	6	4	2	2	2
	8	4	2	2	2
	8	5	2	2	3
	7	5	3	2	2
	4	3	4	2	2
	8	7	1	1	1
	7	4	1	1	1
	8	6	1	1	1
			1	1	1
			4	2	3
			4	2	9
			1	1	1
			3	2	1
			2	2	2
			2	2	2
			3	1	1
			3	3	6
			2	2	2
			4	3	2
			4	2	3
			2	2	2
			1	1	1
			2	2	2
			2	2	2
			3	3	8
			3	3	2
			3	2	1
			3	3	6
			1	1	1
			1	1	1

PANEL NUMBERS	PERFORATIONS LENGTH	PERFORATIONS WIDTH	PENETRATIONS LENGTH	PENETRATIONS WIDTH	PENETRATIONS DEPTH
30 Cont			6	2	7
			2	2	2
			3	2	1
			2	2	2
			1	1	1
			1	1	1
			3	2	1
Total		38			67
31	6	4	4	3	7
	4	3	1	1	1
	7	4	1	1	1
	6	5	2	2	2
	5	4	1	1	1
	7	5	1	1	1
	6	7	3	2	5
	5	3	1	1	1
			2	2	2
			6	4	1
			1	1	1
			1	1	1
			1	1	1
			3	2	4
			3	2	1
			6	4	8
			2	2	2
			4	2	4
			3	2	2
			1	1	1
			2	2	2
			1	1	1
			1	1	1
			4	2	6
[redacted]			2	2	2

CONFIDENTIAL

ARMY-OR-ABERDEEN PROVING GROUND, MD 445

CHECK TOT 10 PER 48 PROPERLY SPOTZ-P-201

PENETRATIONS OF SHELLS IN PANELS

LOT NUMBER | DATE 31 July 5[illegible]

FIRING AGENCY AND NUMBER

PRIORITY NUMBER

PENETRATIONS OF SHELL 122mm, C-462A Sorinel MODEL AT/90 Sheet 7 of 46

PANELS WITH RADII OF 30' AND FEET Round No. 20

SOCKET NUMBER

PANEL NUMBERS	PERFORATIONS LENGTH	PERFORATIONS WIDTH	PENETRATIONS 23 LENGTH	PENETRATIONS WIDTH	PENETRATIONS DEPTH
31 Cont			1	1	1
			2	1	3
			1	1	1
Total		8			29
32	6	4	3	2	1
	7	5	3	1	1
	9	5	4	2	1
	3	3	1	1	1
	5	4	3	2	1
	9	2	5	3	7
	6	4	2	2	2
	7	4	4	3	9
	8	3	5	4	7
	5	4	5	4	8
	11	9	1	1	1
			1	1	1
			1	1	1
			1	1	1
			1	1	1
			3	1	1
			1	1	1
			1	1	1
			4	3	2
			6	3	5
			1	1	1
			3	3	3
			3	2	4
			4	2	5
			3	2	3
			1	1	1
			1	1	1
			3	2	2
			1	1	1

PANEL NUMBERS	PERFORATIONS LENGTH	PERFORATIONS WIDTH	PENETRATIONS LENGTH	PENETRATIONS WIDTH	PENETRATIONS DEPTH
Total		11			29
33	4	3	4	3	4
	6	3	3	2	4
	4	2	4	3	7
	7	3	4	3	5
	7	4	1	1	1
	8	7	4	3	6
	7	3	3	2	5
	8	3	1	1	1
	4	3	1	1	1
	11	5	2	2	2
	6	4	3	2	1
	7	4	3	1	1
	15	12	1	1	1
	6	7	3	2	1
	8	4	3	2	1
	7	3	2	2	3
	6	3	1	1	1
	12	5	1	1	1
	5	4	1	1	1
	10	7	1	1	1
	4	3	4	2	1
	4	3	4	3	2
	2	2	2	2	2
	7	4	3	3	4
	7	4	2	2	2
	7	5	1	1	1
	8	4	2	2	7
	6	5	5	3	6
	14	5	2	2	3
			1	1	1
	[illegible]	[illegible]	1	1	1
[redacted]		1	4	3	2

ORDBG 737 1R FEB 48
FORMERLY SPOTS-P-261

PENETRATIONS OF SHELLS IN PANELS

LOT NUMBER

DATE

FIRING RECORD NUMBER

PRIORITY NUMBER

PAGE NUMBER Sheet 3 of 46

ROUND NUMBER Round No. 20

ROCKET NUMBER

PENETRATIONS OF SHELL 122mm, D-462A LOADED AT/20

IN PANELS WITH RADII OF Soviet 3.1 AND FEET

PANEL NUMBERS	PERFORATIONS		PENETRATIONS		
	LENGTH	WIDTH	LENGTH	WIDTH	DEPTH
33 Con			3	2	1
			2	2	2
			2	2	2
			2	2	2
			1	1	1
			4	2	3
			3	1	5
			2	2	2
			1	1	1
			4	4	5
			2	2	3
			2	2	2
			3	1	1
			1	1	1
			3	3	3
			1	1	1
			1	1	1
			3	2	7
			3	2	3
			2	2	2
			2	3	2
			2	2	2
			2	1	1
			3	2	1
		29			55
34	4	4	1	1	1
	30	7	3	3	5
	7	4	2	1	1
	10	7	1	1	1
	6	5	2	2	2
	4	4	1	1	1
	3	3	2	1	2
	7	3	2	2	3

PANEL NUMBERS	PERFORATIONS		PENETRATIONS		
	LENGTH	WIDTH	LENGTH	WIDTH	DEPTH
34 Con	12	4	3	2	4
	5	3	1	1	2
	9	3	1	1	3
	10	6	2	2	2
	3	4	1	1	1
	16	6	1	1	1
	3	3	5	4	4
	4	3	1	1	1
	4	4	1	1	1
	7	5	2	1	2
	7	4	3	2	1
	9	1	1	1	2
	5	4	3	3	12
	20	11	1	1	2
	9	7	4	3	3
	16	6	4	3	4
	6	5	1	1	1
	9	4	1	1	2
	7	4	2	2	2
	3	3	2	1	4
	8	6	3	3	6
	3	3	1	1	1
	6	5	1	1	1
	5	4	3	3	5
	10	4	1	1	1
	6	5	1	1	1
	10	8	3	2	7
	13	8	6	5	5
	11	6	3	2	3
	7	4	1	1	1
	9	5	2	2	4
	6	4	2	1	1
	3	3	3	2	4
	11	8	4	3	5

CONFIDENTIAL

ARMY-ORD-ABERDEEN PROVING GROUND MD 447

B-11x22

ORDBG-787 10 FEB 43
FORMERLY SPOTZ-F-281

PENETRATIONS OF SHELLS IN PANELS

LOT NUMBER | DATE 31 July 6

FIRING R[illegible] NUMBER

PRIORITY NUMBER

PENETRATIONS OF SHELL 122mm, C-462A LOADED AT/00

IN PANELS WITH RADII OF Soiet 30' AND FEET

[illegible] Sheet 9 of 46

[illegible] Round No. 20

ROCKET NUMBER

PANEL NUMBERS	PERFORATIONS LENGTH	PERFORATIONS WIDTH	PENETRATIONS LENGTH	PENETRATIONS WIDTH	PENETRATIONS DEPTH	PANEL NUMBERS	PERFORATIONS LENGTH	PERFORATIONS WIDTH	PENETRATIONS LENGTH	PENETRATIONS WIDTH	PENETRATIONS DEPTH
34 Cont	10	6	3	2	6	34 Cont			3	3	10
	6	4	1	1	2				3	2	6
	5	4	3	2	5				1	1	1
	7	4	1	1	1				6	3	6
	7	7	1	1	1				3	1	2
	5	4	1	1	1				1	1	1
	7	4	1	1	2				2	2	2
	5	4	1	1	2				2	1	2
	14	6	3	2	5				2	2	3
	6	4	1	1	1				3	3	6
	4	3	3	1	3				4	3	6
	9	5	3	1	1				4	3	3
	7	4	1	1	1				2	2	4
	5	4	5	3	5				1	1	1
	5	4	2	2	3				2	1	1
	8	4	2	1	1				1	1	1
	11	7	1	1	1				1	1	1
	4	3	1	1	2				2	2	3
	9	5	3	2	4				3	2	4
	7	5	1	1	1				1	1	1
	9	5	1	1	2				2	1	1
			1	1	1				3	2	2
			1	1	1				1	1	1
			2	1	1				2	2	3
			1	1	1	Total		63			100
			1	1	1						
			2	1	1	35	16	8	1	1	2
			2	2	4		6	4	2	2	2
			1	1	1		4	4	2	2	2
			1	1	1		12	6	1	1	1
			2	2	10		5	4	1	1	1
			2	1	1		17	7	2	2	2
			1	1	2		11	6	2	2	1
			1	1	1	[illegible]	[illegible]	4	3	3	6

CONFIDENTIAL

ARMY-OB-ABERDEEN PROVING GROUND MD-445

PENETRATIONS SHELLS IN PANELS

PANEL NUMBERS	PERFORATIONS		PENETRATIONS		
	LENGTH	WIDTH	LENGTH	WIDTH	DEPTH
35 Cent	3	8	3	2	4
	4	3	1	1	1
	7	4	2	1	1
	10	6	2	1	1
	14	7	3	2	2
	10	3	5	3	2
	12	11	1	1	1
	18	6	6	3	3
	14	5	3	2	4
	3	2	4	3	3
	14	6	1	1	1
	6	4	2	1	3
	13	8	2	1	1
	10	6	2	1	1
	17	5	3	4	7
	3	3	2	1	1
	11	8	1	1	1
	11	7	1	1	2
	14	8	1	1	1
	4	4	2	1	2
	5	4	1	1	2
	7	5	1	1	1
	8	6	3	2	2
	15	6	1	1	1
	7	4	1	1	1
	4	3	1	1	1
	4	2	5	3	3
	5	4	1	1	1
	10	5	3	2	3
	7	4	1	1	1
	9	6	1	1	1
	13	7	2	1	2
	12	4	5	3	8
	4	4	7	2	2

PANEL NUMBERS	PERFORATIONS		PENETRATIONS		
	LENGTH	WIDTH	LENGTH	WIDTH	DEPTH
35 Cent	1	8	2	2	3
	8	7	4	2	4
	8	5	3	2	3
	14	7	1	1	1
	10	10	2	2	3
	6	8	1	1	1
	15	6	1	1	2
	13	4	1	1	2
	8	4	1	1	1
	9	7	1	1	1
	10	8	3	3	4
	8	4	1	1	1
	8	4	2	1	2
	6	4	2	2	3
	4	3	1	1	1
	11	4	1	1	1
	18	9	6	3	6
	21	6	1	1	1
	11	6	4	2	5
	8	5	4	3	6
	4	3	2	2	3
	7	4	4	3	4
			1	1	2
			1	1	1
			2	2	2
			1	1	1
			1	1	1
			3	2	3
			2	1	1
			3	3	9
			9	3	8
			3	2	6
			2	1	1
			1	1	2

CONFIDENTIAL

GROUND TEST ... FORMERLY ... FLAME

PENETRATION SHELLS IN PANELS

PENETRATIONS OF SHELL [illegible] LOADED [illegible]
Soviet
IN PANELS WITH RADII OF 30' AND FEET

Sheet 11 of 43
Round No. 20
ROCKET NUMBER

PANEL NUMBERS	PERFORATIONS LENGTH	PERFORATIONS WIDTH	PENETRATIONS LENGTH	PENETRATIONS WIDTH	PENETRATIONS DEPTH	PANEL NUMBERS	PERFORATIONS LENGTH	PERFORATIONS WIDTH	PENETRATIONS LENGTH	PENETRATIONS WIDTH	PENETRATIONS DEPTH
35 Cont			2	1	3	35 Cont			2	1	2
			5	4	7				3	2	3
			3	3	3				2	1	1
			4	2	4				2	1	5
			4	3	2				4	3	9
			3	2	6				3	3	5
			1	1	3				1	1	3
			1	1	3				3	3	3
			4	3	4				3	3	4
			3	2	5				6	3	6
			2	2	3				6	4	6
			1	1	2				6	3	5
			2	1	2				5	3	8
			2	1	1				2	1	2
			2	1	3				4	2	6
			4	3	5				1	1	1
			2	1	1				8	3	9
			1	1	1				1	1	1
			2	1	6				2	1	2
			2	1	4				7	3	4
			1	1	1				1	1	1
			1	1	2				2	1	1
			3	2	3				1	1	1
			1	1	1				3	3	4
			2	2	9				6	3	2
			1	1	1				1	1	1
			3	2	2				2	1	2
			1	1	1				2	1	3
			4	2	4				2	2	2
			1	1	1				1	1	1
			1	1	1				2	1	1
			3	3	5				2	2	1
			1	1	1	Total		64			140
			1	1	1	[redacted]					

CONFIDENTIAL

ARMY—OB—ABERDEEN PROVING GROUND MD

PENETRATION OF SHELLS IN PANELS

Sheet 12 of 43

Round No. 20

PANEL NUMBERS	PERFORATIONS		PENETRATIONS		
	LENGTH	WIDTH	LENGTH	WIDTH	DEPTH
36 Cont	8	5	3	2	2
	8	5	2	2	3
	3	4	2	3	1
	12	7	1	1	1
	8	5	4	3	3
	5	4	2	2	2
	6	2	2	2	2
	2	2	2	2	1
	11	3	3	2	1
	11	5	2	2	2
	12	4	1	1	1
	11	10	1	1	1
	10	4	2	2	2
	6	4	1	1	1
	10	8	2	3	4
	6	3	3	2	4
	6	4	1	1	1
	3	5	3	2	5
	10	9	3	2	3
	9	4	1	1	2
	9	5	3	2	3
	3	3	1	1	2
	10	9	1	1	1
	5	3	5	4	3
	5	4	1	1	1
	7	3	2	1	2
	15	5	1	1	1
	12	3	1	1	1
	10	7	3	3	3
	3	3	1	1	1
	6	2	5	3	5
	10	3	3	2	2
			2	2	2
			1	1	1

PANEL NUMBERS	PERFORATIONS		PENETRATIONS		
	LENGTH	WIDTH	LENGTH	WIDTH	DEPTH
36 Cont			1	1	1
			3	3	4
			2	2	2
			3	2	3
			5	5	2
			2	1	1
			2	2	3
			2	3	4
			2	2	3
			1	1	1
			2	2	2
			5	2	5
			1	1	1
			1	1	1
			1	1	1
			2	2	2
			1	1	2
			2	2	2
			1	1	1
			1	1	1
			5	5	3
			1	1	1
			2	1	3
			1	1	1
			1	1	1
			2	1	2
			1	1	1
			1	1	1
			2	2	3
			1	1	1
			1	1	1
			1	1	1
			2	2	2
			2	2	4

DRDBG 737 10 FEB 48
FORMERLY SPOTZ # 201

PENETRATION OF SHELLS IN PANELS

DATE 21 [illegible]

PRIORITY NUMBER

PENETRATIONS OF SHELL 12[illegible] LOADED AT/LO

Soviet

IN PANELS WITH RADII OF 30' AND FEET

Sheet 15 of 46

Round No. 20

ROCKET NUMBER

PANEL NUMBERS	PERFORATIONS LENGTH	PERFORATIONS WIDTH	PENETRATIONS LENGTH	PENETRATIONS WIDTH	PENETRATIONS DEPTH	PANEL NUMBERS	PERFORATIONS LENGTH	PERFORATIONS WIDTH	PENETRATIONS LENGTH	PENETRATIONS WIDTH	PENETRATIONS DEPTH
36 Cont			1	1	1	37 Cont			2	2	1
			3	3	1				1	1	1
			3	3	4				4	4	3
			1	1	1				1	1	1
			1	1	1				3	3	6
			1	1	1				3	2	2
			2	2	4				4	2	1
			3	2	2				4	3	5
			3	3	3				2	2	1
			2	2	1				1	1	1
			4	3	4				1	1	1
			4	3	3				1	1	1
			1	1	1				4	3	2
			3	1	1				2	2	2
Total		32			82				1	1	1
									1	1	2
37	11	5	2	2	2				4	2	3
	12	8	3	2	3				1	1	1
	3	3	3	3	2				3	2	2
	8	4	3	3	1				5	3	6
	5	2	3	2	1				2	2	4
	9	3	2	1	1				1	1	1
	4	4	3	3	3				1	1	1
			2	2	2				1	1	1
			1	1	1				2	2	2
			1	1	1				1	1	1
			2	2	2				1	1	2
			2	2	1				3	3	2
			1	1	1				2	2	5
			2	2	1				2	1	1
			1	1	1				1	1	1
			2	2	4				1	1	1
			1	1	1				2	2	[illegible]
			1	1	1				2	2	3

CONFIDENTIAL

[redacted]

ARMY OB ABERDEEN PROVING GROUND MD 415

ORDNANCE PAM 10-535 FEB 60
FORMERLY ORDP 5-301

PENETRATIONS OF SHELLS IN PANELS

DATE 1 July

PENETRATIONS OF SHELL 120mm, T-123A DATED 12/61

30 Cal

IN PANELS WITH BACK OF 50# AND FEET

XXXXXXXX Shot 14 of 48

XXXXXXXX Round No. 20

OBSERVER

PANEL NUMBERS	PERFORATIONS		PENETRATIONS		
	LENGTH	WIDTH	LENGTH	WIDTH	DEPTH
37 Cont.			1	1	1
			2	2	2
			3	2	2
			1	1	1
			1	1	1
			1	1	1
			1	1	1
			1	1	1
			3	2	2
			1	1	1
			1	1	1
			2	2	1
			3	1	2
			1	1	2
			2	2	1
			2	2	1
			1	1	1
			2	2	2
			1	1	1
			2	2	1
Total		7			71
38	12	8	3	3	2
	8	6	4	3	3
	13	7	3	3	2
	8	6	1	1	1
	4	3	1	1	1
	3	2	1	1	1
	13	5	1	1	1
	5	7	1	1	1
	7	5	1	1	1
	5	3	2	2	1
	8	4	1	1	1
	8	6	2	2	1
	6	5	2	2	2

PANEL NUMBERS	PERFORATIONS		PENETRATIONS		
	LENGTH	WIDTH	LENGTH	WIDTH	DEPTH
38 Cont.	7	4	3	2	2
	3	5	1	1	1
			3	3	3
			1	1	1
			4	2	3
			1	1	1
			4	3	3
			1	1	1
			3	2	3
			4	3	3
			1	1	1
			5	3	3
			1	1	2
			1	1	3
			3	2	3
			3	4	3
			1	1	1
			1	1	1
			3	2	3
			3	2	4
			2	2	3
			2	2	2
			2	2	2
Total		15			38
39	5	2	3	4	3
	6	4	3	3	4
	5	3	2	1	1
	3	7	2	1	2
	8	6	3	4	3
	4	3	2	2	1
	10	7	2	3	2
	8	4	3	3	2
	4	4	1	1	1

[redacted]

ORDCM 787 18 FEB 48
FORMERLY SPOTS-P-201

PENETRATION OF SHELLS IN PANELS

PENETRATIONS OF SHELL 122mm, D-912A LOADED AP/HE

IN PANELS WITH RADII OF Soviet 30' AND FEET

DATE 21 Jun

FIRING NUMBER

PROJECTILE NUMBER

GUN [illegible] Shoot 15 of 43

ROUND NUMBER Round No. 20

ROCKET NUMBER

PANEL NUMBERS	PERFORATIONS		PENETRATIONS		
	LENGTH	WIDTH	LENGTH	WIDTH	DEPTH
39 Cont			2	2	2
			2	1	1
			1	1	1
			3	2	3
			2	2	2
			2	2	1
			2	2	3
			1	1	1
			2	1	1
			1	1	1
			3	3	2
			2	2	2
			3	2	3
			3	2	2
			5	5	7
			2	2	2
			1	1	1
			2	3	3
			3	2	4
			2	2	2
			3	2	1
			1	1	1
			1	1	1
			2	2	1
			1	1	1
			2	2	2
			1	1	1
			1	1	2
			3	2	2
			2	1	1
			1	1	1
			3	1	1
			1	1	1
			3	2	4

PANEL NUMBERS	PERFORATIONS		PENETRATIONS		
	LENGTH	WIDTH	LENGTH	WIDTH	DEPTH
29 Cont			3	1	2
			3	2	4
			3	3	6
			3	2	2
			2	2	1
			2	2	2
			1	1	1
			5	3	6
			2	2	2
			2	2	1
			1	1	1
			2	2	2
			1	1	3
Total		9			50
40	6	3	3	2	5
	5	3	2	2	1
	5	2	2	2	3
	5	5	1	1	1
	9	3	1	1	1
	3	4	2	2	2
	7	3	2	2	2
	4	4	2	1	1
			1	1	1
			2	2	2
			2	2	4
			2	2	4
			2	2	2
			1	1	1
			3	2	3
			1	1	1
			1	1	1
[redacted]			5	5	5

CONFIDENTIAL

PENETRATIONS OF SHELLS IN PANELS

PENETRATIONS OF SHELL 12[illegible], 0-[illegible] LOADED AT/90

Soviet

IN PANELS WITH FACING OF 30' AND FEET

DATE 31 [illegible]

PROPERTY NUMBER

[illegible] Sheet 1[illegible] of 40

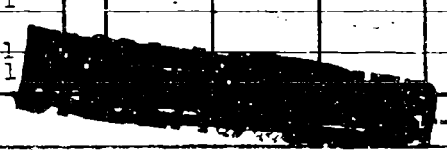
[illegible] Round No. 20

ROCKET NUMBER

PANEL NUMBERS	PERFORATIONS LENGTH	PERFORATIONS WIDTH	PENETRATIONS LENGTH	PENETRATIONS WIDTH	PENETRATIONS DEPTH
40 Cont			1	1	1
			3	3	2
			5	3	6
			1	1	1
			2	1	1
			1	1	1
			3	3	5
			3	2	1
			1	1	1
			3	2	2
			1	1	1
			2	1	1
			2	2	[illegible]
			2	2	2
			3	2	2
			2	3	3
			4	3	4
			1	1	2
			3	2	2
			1	1	1
			2	2	2
			2	2	2
			2	2	4
			1	1	1
			4	2	4
			4	2	2
			2	2	1
			1	1	1
Total		8			47
41	5	3	6	3	5
	12	4	4	1	1
	4	3	4	2	1
	13	5	1	1	1

PANEL NUMBERS	PERFORATIONS LENGTH	PERFORATIONS WIDTH	PENETRATIONS LENGTH	PENETRATIONS WIDTH	PENETRATIONS DEPTH
41 Cont	8	4	4	4	9
	8	4	3	2	3
	4	3	1	1	1
	10	5	3	2	1
	7	3	3	2	1
	12	7	2	2	2
			2	2	2
			[illegible]	3	2
			1	1	1
			6	6	7
			2	2	2
			7	3	7
			4	2	1
			3	2	1
			1	1	1
			2	2	2
			3	2	4
			[illegible]	4	10
			3	2	2
			3	3	1
			4	2	5
			1	1	1
			3	1	1
			2	2	2
			3	2	5
			3	2	2
			2	2	2
			5	3	7
			3	2	1
			4	3	3
[illegible]			2	2	2
		[illegible]	2	2	2
			5	4	[illegible]
			1	1	1

[redacted]



ORDBS 737 10 FEB 48
FORMERLY SPOTZ-F-201

PENETRATION OF SHELLS IN PANELS

DATE 31 Jul

FIRING NUMBER

PRIORITY NUMBER

[illegible] Sheet 17 of 4[illegible]

[illegible] Round No. 20

ROCKET NUMBER

PENETRATIONS OF SHELL 12[illegible] O-[illegible] LOADED [illegible]/90

Soviet

IN PANELS WITH RADII OF 30' AND FEET

PANEL NUMBERS	PERFORATIONS LENGTH	PERFORATIONS WIDTH	PENETRATIONS LENGTH	PENETRATIONS WIDTH	PENETRATIONS DEPTH
41 Cont			1	1	1
			2	3	4
			3	2	3
			2	2	2
			1	1	1
			2	7	3
			4	3	3
			6	3	6
			2	2	2
			2	2	2
			2	2	2
			4	1	1
Total		10			50
42	12	5	6	4	6
	6	3	4	3	10
	12	9	3	2	1
	6	4	6	3	3
	12	6	7	3	3
			2	2	2
			2	2	2
			1	1	1
			3	2	1
			5	4	1
			3	3	1
			1	1	1
			3	1	1
			1	1	1
			1	1	1
			2	2	1
			1	1	1
			3	1	1
			3	2	2
			2	2	2

PANEL NUMBERS	PERFORATIONS LENGTH	PERFORATIONS WIDTH	PENETRATIONS LENGTH	PENETRATIONS WIDTH	PENETRATIONS DEPTH
42 Cont			4	2	1
			3	2	1
			1	1	1
Total		5			25
43			3	2	1
			3	1	2
			1	1	1
			5	4	3
			4	2	1
			2	2	1
			3	1	1
			3	1	3
			1	1	1
			3	2	1
			5	3	5
			3	2	2
			4	2	7
			3	1	1
			3	3	2
			3	3	3
			2	2	2
			5	2	2
			3	2	1
			1	1	1
			1	1	1
			3	2	4
			5	3	4
			3	1	1
			1	1	1
			2	2	2
			[illegible]	1	1
Total					27

CONFIDENTIAL

[redacted]

ARMY—OB—ABERDEEN PROVING GROUND MD 445

ORDBG-737 10 FEB 48
FORMERLY SPOTZ-F-201

PENETRATIONS OF SHELLS IN PANELS

DATE 31 July 50

PENETRATIONS OF SHELL 122mm, D-432A LOADED AT/90

Soviet

IN PANELS WITH RADII OF 30' AND FEET

Sheet 18 of 46

Round No. 20

PANEL NUMBERS	PERFORATIONS		PENETRATIONS		
	LENGTH	WIDTH	LENGTH	WIDTH	DEPTH
45	3	3	3	2	1
			1	1	1
			3	3	3
			1	1	1
			1	1	1
			3	1	1
			3	1	2
			2	2	2
			1	1	1
			3	1	1
			3	1	1
			4	1	1
			3	3	8
			1	1	1
Total		1			14
46			4	3	10
			2	1	1
			4	3	2
				1	1
			2	1	1
			1	1	1
			3	2	2
			1	1	1
			2	1	1
			2	2	2
Total					10
47			2	1	3
			1	1	1
			2	1	1
			6	4	5
			2	1	1
			2	1	1

PANEL NUMBERS	PERFORATIONS		PENETRATIONS		
	LENGTH	WIDTH	LENGTH	WIDTH	DEPTH
46 Cont			1	1	1
			2	1	1
			4	2	2
			1	1	1
			1	1	1
			1	1	1
			1	1	1
			2	1	2
			2	1	2
			1	1	1
Total					16
47	5	4	3	2	2
			3	2	2
			1	1	3
			1	1	1
			3	2	2
			1	1	1
			1	1	1
			3	2	2
			1	1	1
			2	1	2
			3	2	4
Total		1			13
48			1	1	1
			1	1	1
			2	1	2
			3	2	2
			2	1	1
			1	1	1
			1	1	1
			2	1	1

ORDBG-737 18 FEB 48
FORMERLY SPOTZ-F-291

PENETRATIONS OF SHELLS IN PANELS

LOT NUMBER
DATE 31 July 5[illegible]
FIRING [illegible] NUMBER
PRIORITY [illegible]BER
XXXXXXXXX Sheet 19 of 46
XXXXXXXXX Round No. 20
ROCKET NUMBER

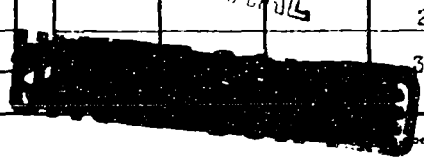
PENETRATIONS OF SHELL 122 mm, O-462A LOADED AT/90
Soviet
IN PANELS WITH RADII OF 30' AND FEET

PANEL NUMBERS	PERFORATIONS LENGTH	PERFORATIONS WIDTH	PENETRATIONS LENGTH	PENETRATIONS WIDTH	PENETRATIONS DEPTH
48 Cont			2	1	1
			4	2	3
			3	2	3
			2	1	1
			2	2	1
			1	1	1
			4	2	6
			3	2	4
			2	1	1
			2	1	1
			1	1	1
			1	1	1
			1	1	1
			4	3	3
			3	2	2
			1	1	1
			2	1	1
			2	[illegible]	3
Total					26
49	3	2	2	2	1
			1	1	1
			1	1	1
			5	3	5
			2	2	2
			1	1	1
			1	1	1
			2	1	1
			2	2	2
			2	1	1
			1	1	1
			2	1	2
			2	2	2
			3	2	2

PANEL NUMBERS	PERFORATIONS LENGTH	PERFORATIONS WIDTH	PENETRATIONS LENGTH	PENETRATIONS WIDTH	PENETRATIONS DEPTH
49 Cont			1	1	1
			1	1	1
			4	3	5
			1	1	1
			2	2	1
			2	1	1
			1	1	1
			1	1	1
			2	1	1
			1	1	1
			1	1	1
			1	1	1
			2	2	2
			2	1	1
Total		1			23
50			3	2	2
			1	1	1
			1	1	1
			1	1	1
			1	1	1
			1	1	1
			1	1	1
			2	2	1
			2	2	1
			2	1	1
			3	2	1
			3	2	2
			3	2	2
			2	2	2
			1	1	1
			2	2	2
			3	2	1
			1	1	1

CONFIDENTIAL

[redacted]



ORDBG-737 19 FEB 46
FORMERLY SPOTZ-F-281

PENETRATIONS OF SHELLS IN PANELS

LOT NUMBER | DATE 31 [illegible]
FIRING [illegible] NUMBER
PRIORITY NUMBER
[illegible] Sheet 20 of 46
[illegible] Round No. 20
ROCKET NUMBER

PENETRATIONS OF SHELL 122mm, 0-462A LOADED AT/90
Soviet.
IN PANELS WITH RADII OF 30' AND FEET

PANEL NUMBERS	PERFORATIONS LENGTH	PERFORATIONS WIDTH	PENETRATIONS LENGTH	PENETRATIONS WIDTH	PENETRATIONS DEPTH
50 Cont			2	1	1
			3	2	2
			3	2	2
			1	1	1
			1	1	1
			2	2	2
Total					24
51	4	3	2	2	2
			3	2	5
			3	2	2
			5	5	6
			1	1	1
			1	1	1
			1	1	1
			2	1	1
			1	1	1
			2	2	1
			2	1	1
			2	1	1
			2	2	2
			2	2	2
			2	1	1
			2	1	1
			1	1	1
			3	2	1
			2	1	1
			2	2	3
			2	2	5
			6	2	6
			2	1	1
			3	2	2
			1	1	1
			2	1	1

PANEL NUMBERS	PERFORATIONS LENGTH	PERFORATIONS WIDTH	PENETRATIONS LENGTH	PENETRATIONS WIDTH	PENETRATIONS DEPTH
51 Cont			1	1	1
			5	4	2
Total		1			28
52	4	4	4	4	5
			2	2	2
			1	1	1
			1	1	1
			1	1	1
			3	3	2
			1	1	1
			1	1	1
			1	1	1
			2	1	1
			3	2	2
			7	3	6
			2	2	2
			1	1	1
			2	1	1
			1	1	1
			1	1	1
			3	2	2
			3	2	1
			2	2	2
			1	1	1
			2	2	2
			1	1	1
			1	1	1
Total		1			24
53	6	4	2	2	2
			8	6	3
			1	1	1
			3	2	2

[redacted]

CONFIDENTIAL

ARMY OD—ABERDEEN PROVING GROUND MD 445

ORDBG-737 15 FEB 46
FORMERLY SPOTZ-F-291

PENETRATIONS OF SHELLS IN PANELS

LOT NUMBER

DATE 31 July 46

FIRING [illegible] NUMBER

PRIORITY NUMBER

Sheet 21 of 46

Round No. 20

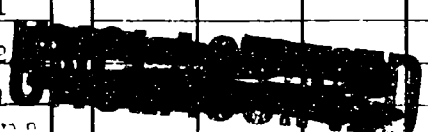
ROUND NUMBER

PENETRATIONS OF SHELL 122mm, D-462A LOADED AT/90

IN PANELS WITH Soviet RADII OF 30' AND FEET

PANEL NUMBERS	PERFORATIONS		PENETRATIONS		
	LENGTH	WIDTH	LENGTH	WIDTH	DEPTH
53 Cont.			2	2	2
			1	1	1
			3	2	2
			1	1	1
			2	1	1
			1	1	2
			3	2	2
			1	1	1
			4	3	5
			2	1	1
			3	3	2
			1	1	1
			3	1	2
			1	1	1
			1	1	1
			2	2	2
			2	1	1
			1	1	1
Total		1			23
54	5	2	2	1	1
			1	1	2
			1	1	1
			1	1	1
			1	1	2
			1	1	2
			1	1	1
			1	1	1
			1	1	1
			2	2	1
			3	2	2
			1	1	1
			1	1	2

PANEL NUMBERS	PERFORATIONS		PENETRATIONS		
	LENGTH	WIDTH	LENGTH	WIDTH	DEPTH
54 Cont.			2	2	2
			3	2	2
			1	1	1
			1	1	1
			1	1	2
			1	1	1
			2	1	2
			1	1	1
			1	1	1
			1	1	3
			1	1	1
			3	1	2
			2	2	2
			1	1	1
			3	2	2
			2	1	1
Total		1			29
55	6	3	3	2	2
			1	1	1
			1	1	2
			2	2	3
			2	2	2
			3	1	2
			2	2	3
			2	1	2
			3	2	1
			3	1	4
			3	1	1
			3	1	2
			1	1	1
			3	1	2
			4	1	2
			3	1	2



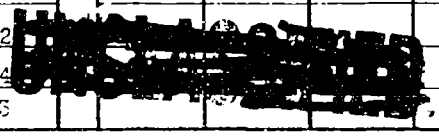
ORCRG-727 19 FEB 48
FORMERLY SPOTZ-F-291

PENETRATIONS OF SHELLS IN PANELS

LOT NUMBER | DATE 31 July [illegible]
FIRING RECORD NUMBER
PRIORITY NUMBER
XXXXXXXXXX Sheet 22 of 43
SHELL NUMBER
ROCKET NUMBER

PENETRATIONS OF SHELL 122mm, C-462A LOADED AT/90
Soviet
IN PANELS WITH RADII OF 30' AND FEET

PANEL NUMBERS	PERFORATIONS LENGTH	PERFORATIONS WIDTH	PENETRATIONS LENGTH	PENETRATIONS WIDTH	PENETRATIONS DEPTH	PANEL NUMBERS	PERFORATIONS LENGTH	PERFORATIONS WIDTH	PENETRATIONS LENGTH	PENETRATIONS WIDTH	PENETRATIONS DEPTH
55 Cont			3	2	3	56 Cont			2	2	6
			2	1	1				2	2	3
			3	1	3				2	1	2
			3	1	4				3	1	3
			3	1	5				3	1	2
			3	1	2				4	4	2
			1	1	1				2	1	1
			3	3	1				2	1	1
			3	2	2				1	1	1
			4	3	4				2	1	1
			2	1	1				2	2	2
			1	1	1				2	1	1
			3	2	5				3	1	2
			2	2	2				1	1	1
Total		1			30				4	4	3
									2	1	2
56	6	5	4	1	2				1	1	1
			2	2	3				4	2	3
			3	1	2				2	2	2
			4	2	3				3	1	2
			2	2	2				2	1	2
			2	1	2				4	1	2
			1	1	2				1	1	1
			3	3	2				2	1	1
			3	3	1	Total		1			42
			3	1	2						
			3	1	2	57	7	5	4	2	2
			3	2	3		3	4	2	1	1
			3	3	3				1	1	1
			3	1	6				2	1	1
			2	2	2				2	1	2
			2	2	2	[redacted]			4	2	2
			4	3	4				2	2	2
			1	1	3				3	2	1



ORDBG-737 10 FEB 45
FORMERLY SPOTZ-F-291

PENETRATIONS OF SHELLS IN PANELS

LOT NUMBER | DATE 31 July 45

FIRING [illegible] NO. NUMBER

PROJECTILE NUMBER

[illegible] Sheet 23 of 46

SOLID ROUND Round No. 20

ROCKET NUMBER

PENETRATIONS OF SHELL 122mm, O-432A LOADED AT/90

Soviet

IN PANELS WITH RACE OF 30° [illegible] AND [illegible] FEET

PANEL NUMBERS	PERFORATIONS		PENETRATIONS			PANEL NUMBERS	PERFORATIONS		PENETRATIONS		
	LENGTH	WIDTH	LENGTH	WIDTH	DEPTH		LENGTH	WIDTH	LENGTH	WIDTH	DEPTH
57 Cont			1	1	1	57 Cont			4	2	2
			3	1	2				5	4	3
			2	1	2				5	2	2
			2	1	1				2	1	1
			3	2	1				3	1	1
			3	3	3				2	1	1
			4	4	2				1	1	1
			4	2	3				2	2	3
			3	3	2				3	2	3
			3	2	2				3	2	2
			5	3	2				2	1	1
			1	1	1				2	1	1
			2	1	3				2	2	3
			2	2	2				4	1	1
			2	1	2				3	1	1
			2	2	1				1	1	1
			4	3	3				1	1	1
			3	1	1				6	3	4
			1	1	1				1	1	1
			3	2	1				5	3	2
			2	1	2				2	2	1
			4	2	3				2	1	1
			2	2	2				4	1	1
			1	1	1				5	3	3
			2	1	1				3	2	3
			4	2	1				1	1	2
			3	1	3				2	1	1
			2	1	1				3	2	2
			3	1	2				2	2	1
			2	2	2				2	1	2
			2	2	4				5	3	3
			3	1	1				3	1	4
			3	1	1				3	2	4
			3	2	2	Total		2			75

CONFIDENTIAL

ORDBG-737 10 FEB 45
FORMERLY SPOTZ-F-20

PENETRATIONS OF SHELLS IN PANELS

LOT NUMBER | DATE 31 July

FIRING NUMBER

PROPERTY NUMBER

Sheet 24 of 46

Round No. 20

ROCKET NUMBER

PENETRATIONS OF SHELL 122mm, D-470A LOADED AP/HE

IN PANELS WITH RADII OF Soviet 30' AND FEET

PANEL NUMBERS	PERFORATIONS		PENETRATIONS		
	LENGTH	WIDTH	LENGTH	WIDTH	DEPTH
58.1			4	2	3
			5	1	3
			4	1	2
			4	1	2
			1	1	1
			2	1	1
			4	3	2
			3	1	1
			2	1	1
			2	1	1
			4	3	2
			2	1	1
Total					12
58.2			4	2	3
			2	1	1
			1	1	1
			2	2	2
			1	1	1
			2	1	1
			2	1	1
			3	2	3
			1	1	1
Total					9
58.3			1	1	1
			1	1	1
			2	1	1
			1	1	1
			1	1	1
Total					5
58.4			2	1	1
			2	1	2

PANEL NUMBERS	PERFORATIONS		PENETRATIONS		
	LENGTH	WIDTH	LENGTH	WIDTH	DEPTH
			2	1	2
			1	1	1
			2	1	1
			1	1	1
			3	1	1
			2	2	2
			1	1	1
			4	2	2
Total					10
58.5			4	2	2
			2	1	2
			3	1	1
			2	2	2
			1	1	1
			3	2	2
			4	2	2
			1	1	1
			3	1	1
			1	1	1
			3	2	1
Total					11
58.6			3	2	3
			2	1	1
			2	2	2
Total					3
58.1			4	4	1
			1	1	1
			2	1	1
			2	1	2
			1	1	2
			1	1	1

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ORDBG-727 10 FEB 46
FORMERLY SPOTZ-F-281

PENETRATIONS OF SHELLS IN PANELS

LOT NUM
DATE 31 July 5
FIRING [illegible] NUMBER
PRIORITY NUMBER
[illegible] Sheet 25 of 46
[illegible] Round No. 20
ROCKET NUMBER

PENETRATIONS OF SHELL 122mm, O-462A LOADED AT/90
IN PANELS WITH RADII OF Soviet 30' AND FEET

PANEL NUMBERS	PERFORATIONS LENGTH	PERFORATIONS WIDTH	PENETRATIONS LENGTH	PENETRATIONS WIDTH	PENETRATIONS DEPTH
59.1 Cont			3	2	4
			2	1	2
			2	1	3
			1	1	1
			3	2	3
			1	1	1
			1	1	1
Total					13
59.2			5	2	7
			2	1	3
			1	1	1
			1	1	1
			5	3	5
Total					5
59.3	7	6	3	2	2
	6	4	2	1	1
			1	1	1
			1	1	1
			1	1	1
			5	3	3
			2	1	2
			2	1	2
			8	3	3
Total		2			9
59.4			4	2	4
			1	1	1
			1	1	1
			2	2	2
			1	1	1
			2	2	2
			5	3	2

PANEL NUMBERS	PERFORATIONS LENGTH	PERFORATIONS WIDTH	PENETRATIONS LENGTH	PENETRATIONS WIDTH	PENETRATIONS DEPTH
59.4 Cont			1	1	1
			1	1	1
			2	1	1
			1	1	1
Total					11
59.5	11	6	2	2	2
			2	2	2
			3	1	2
			2	1	1
			3	2	2
			2	2	2
Total		1			6
59.6	4	4	3	2	2
			2	1	1
			3	3	1
		1			3
60.1	12	5	2	2	5
			1	1	1
			4	3	4
			1	1	1
			2	1	1
			2	1	1
			1	1	1
			1	1	1
			3	2	2
			1	1	1
Total		1			10
60.2			2	1	1
			3	2	2
			1	1	1

CONFIDENTIAL [redacted]

[illegible] ABERDEEN PROVING GROUND MD 445

ORDBG-737 10 FEB 48
FORMERLY SPOTI-F-201

PENETRATIONS OF SHELLS IN PANELS

LOT NUM | DATE 31 July
FIRING RECORD NUMBER
PRIORITY NUMBER
Sheet 26 of 46
SHELL NUMBER
ROCKET NUMBER

PENETRATIONS OF SHELL 122mm, 0-4[illegible]2A LOADED [illegible]T/90
IN PANELS WITH RADII OF Soviet 30' AND FEET

PANEL NUMBERS	PERFORATIONS LENGTH	PERFORATIONS WIDTH	PENETRATIONS LENGTH	PENETRATIONS WIDTH	PENETRATIONS DEPTH
60.2 Cont			4	3	3
			4	3	4
			1	1	1
			1	1	2
			3	2	2
			3	2	2
			2	2	1
			3	2	2
			1	1	1
			2	2	2
Total					13
60.3	4	3	7	4	6
	7	4	1	1	1
	5	5	2	2	2
			1	1	2
			3	2	2
			2	2	2
			1	1	3
			3	2	4
			4	3	7
			5	4	7
			1	1	1
			2	2	3
			2	2	2
			1	1	1
			3	2	1
			2	2	1
			1	1	1
			3	2	4
			1	1	1
			5	2	1
			4	3	3
			6	3	2

PANEL NUMBERS	PERFORATIONS LENGTH	PERFORATIONS WIDTH	PENETRATIONS LENGTH	PENETRATIONS WIDTH	PENETRATIONS DEPTH
60.3 Cont			1	1	2
			2	2	2
			3	2	2
			1	1	1
			2	2	2
			4	2	3
			1	1	1
Total		3			29
60.4	9	6	3	3	3
	3	2	1	1	1
			2	2	2
			2	2	2
			3	2	2
			5	4	5
			1	1	1
			2	1	1
			2	2	2
			1	1	1
			5	2	5
			3	2	2
			2	2	2
			4	4	3
			1	1	1
			1	1	2
			2	2	2
			4	3	3
			3	2	3
			5	3	7
			4	3	4
			2	2	2
			2	2	2
			2	1	[illegible]
			3	2	6

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[redacted]

ORDBG-737 10 FEB 48
FORMERLY SPOTZ-F-201

PENETRATIONS OF SHELLS IN PANELS

LOT NUM
FIRING RECORD NUMBER
PROJECTILE NUMBER
GUN NUMBER Sheet 27 of 46
CARTRIDGE Round No. 20
ROCKET NUMBER

DATE 1 July 51

PENETRATIONS OF SHELL 122mm, D-462A LOADED AP/HE

IN PANELS WITH RADII OF Soviet 30' AND . FEET

PANEL NUMBERS	PERFORATIONS		PENETRATIONS		
	LENGTH	WIDTH	LENGTH	WIDTH	DEPTH
30.4 Cont			2	2	2
			1	1	1
			2	2	1
Total		2			25
30.5			10	4	4
			2	1	1
			2	2	2
			3	2	2
			1	1	1
			2	2	2
			3	3	5
			3	2	2
			2	2	3
			3	2	4
Total					10
30.6	12	4	4	3	2
			2	2	2
			1	1	1
			2	2	2
			3	2	2
			1	1	1
			2	1	1
Total		1			7
31.1			2	2	2
			3	2	2
			1	1	1
			2	2	2
			2	2	2
			3	2	4
			3	2	3
			3	3	3

PANEL NUMBERS	PERFORATIONS		PENETRATIONS		
	LENGTH	WIDTH	LENGTH	WIDTH	DEPTH
31.1 Cont			6	5	3
			12	4	4
			3	2	2
			1	1	1
			1	1	2
			4	3	1
			2	1	1
			1	1	1
Total					17
31.2	3	3	3	2	3
	3	4	1	1	1
			3	2	1
			2	1	1
			3	3	3
			1	1	2
			3	2	4
			3	3	2
			2	2	3
			3	3	3
			1	1	1
			3	2	3
			3	2	3
			4	2	3
			3	2	4
			2	2	2
			2	2	2
			1	1	1
			1	1	1
			2	1	1
Total		2			20
31.3	4	3	5	2	5
	3	3	4	2	2

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ORDBG-737 10 FEB 48
FORMERLY SPOTS-F-201

PENETRATIONS OF SHELLS IN PANELS

DATE 31 July

PENETRATIONS OF SHELL 122mm, D-462A LOADED AT/20

IN PANELS WITH BACK OF Soviet 30° AND FEET

Sheet 23 of 40

Round No. 20

PANEL NUMBERS	PERFORATIONS		PENETRATIONS			PANEL NUMBERS	PERFORATIONS		PENETRATIONS		
	LENGTH	WIDTH	LENGTH	WIDTH	DEPTH		LENGTH	WIDTH	LENGTH	WIDTH	DEPTH
31.3 Cont	5	3	1	1	1				2	2	2
	9	2	1	1	1				2	2	2
			1	1	1				4	4	4
			2	2	2	Total		3			15
			2	2	2						
			1	1	2	31.5	5	5	2	2	2
			2	2	2		5	3	4	3	3
			1	1	1		11	6	1	1	1
			7	4	8		3	2	2	1	1
			4	3	5				2	1	1
			5	2	6				1	1	1
			3	3	2				3	3	3
			4	3	4				1	1	1
			3	1	3				3	2	2
			1	1	1				3	2	2
			2	2	2				1	1	1
			1	1	1				3	2	4
			2	2	3				4	3	3
			2	1	1				2	2	2
			1	1	1				3	2	2
Total		4			44				3	3	3
									1	1	1
31.4	5	4	3	3	3				1	1	1
	10	7	4	2	4				2	2	2
	12	3	2	2		Total		4			19
			1	1	1						
			2	2	2	31.6	6	4	3	2	4
			2	1	1		4	3	5	3	4
			2	2	5		7	4	3	2	2
			2	2	2		3	3	2	2	1
			2	2	2		10	4	7	6	4
			2	1	1		4	3	3	3	2
			3	3	3				3	2	3
			2	1	1				3	2	3

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ORDBG-737 10 FEB 48
FORMERLY SPO' -F-281

PENETRATION F SHELLS IN PANELS

LOT NUMBER
FIRING [illegible] NUMBER
PRIORITY NUMBER
ROCKET NUMBER

DATE 31 Jul [illegible]

[illegible] Sheet 30 of 48
[illegible] Round No. 20

PENETRATIONS OF SHELL 122mm, O-432A LOADED AT/90
Soviet
IN PANELS WITH RADII OF 30' AND FEET

PANEL NUMBERS	PERFORATIONS		PENETRATIONS		
	LENGTH	WIDTH	LENGTH	WIDTH	DEPTH
82.3 Cont			2	2	9
			4	1	2
			6	2	9
			3	2	5
			7	3	9
			4	3	6
			4	3	4
Total		6			17
82.4	4	4	3	2	2
	5	4	1	1	1
			1	1	1
			4	2	2
			3	2	2
			1	1	1
			3	1	1
			2	1	1
			2	2	2
			6	3	4
			4	2	3
			3	2	2
			2	2	2
			3	2	3
			3	2	2
			2	2	2
			6	5	7
			6	4	9
			1	1	1
			2	1	1
			3	3	5
			1	1	1
			2	2	2
			3	3	4
			2	2	2

PANEL NUMBERS	PERFORATIONS		PENETRATIONS		
	LENGTH	WIDTH	LENGTH	WIDTH	DEPTH
			2	1	1
			1	1	1
Total		2			27
82.5	5	4	5	2	4
			3	3	2
			7	4	3
			1	1	1
			4	3	3
			2	2	1
			1	1	1
			3	3	2
			5	3	3
			2	2	2
			3	3	4
			3	2	2
			1	1	1
			5	4	5
			4	3	5
			3	4	4
			3	2	2
			1	1	1
			3	2	3
			2	1	1
			3	2	2
			9	4	6
			1	1	1
			3	2	3
			4	4	4
			2	1	1
Total		1			26
82.6	3	4	8	4	3
	4	4	5	3	3

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[redacted]

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FORMERLY SPOTZ-F-281

PENETRATIONS OF SHELLS IN PANELS

LOT NUM
FIRING ROAD NUMBER
PRIORITY NUMBER
DATE 31 July 5[illegible]
Sheet 31 of 46
Round No. 20
ROCKET NUMBER

PENETRATIONS OF SHELL 122mm, D-462A LOADED AT/80

IN PANELS WITH RAILS OF Soviet 30t AND FEET

PANEL NUMBERS	PERFORATIONS		PENETRATIONS		
	LENGTH	# DTH	LENGTH	WIDTH	DEPTH
82.6 Cont			2	1	1
			2	1	1
			6	3	3
			1	1	2
			1	1	1
			1	1	1
			4	2	2
			1	1	1
			2	1	1
			3	1	1
			1	1	1
			3	1	3
			5	1	3
			9	3	4
			6	3	4
			2	2	1
			9	4	7
			5	3	4
			2	2	1
Total		2			21
83.1	7	5	2	1	1
	10	5	1	1	1
			2	2	2
			5	2	2
			6	3	4
			1	1	1
			2	1	1
			1	1	1
			5	3	4
			1	1	1
			3	2	2
			2	1	2
			4	3	2

PANEL NUMBERS	PERFORATIONS		PENETRATIONS		
	LENGTH	WIDTH	LENGTH	WIDTH	DEPTH
			1	1	1
			7	3	3
			2	1	1
			1	1	1
			2	1	1
			3	2	4
			1	1	1
			1	1	1
			2	2	3
			4	3	4
Total		2			23
83.2	7	3	5	3	3
	8	4	4	2	3
			2	1	1
			1	1	1
			2	1	1
			1	1	2
			3	2	3
			3	2	2
			5	3	3
			2	1	1
			3	1	2
			3	3	2
			2	1	1
			1	1	1
			1	1	1
			1	1	1
			1	1	1
			1	1	1
			4	3	2
			5	3	2
			1	1	1

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R-11822

ORDBG-737 19 FEB 46
FORMERLY SPOTZ-F-201

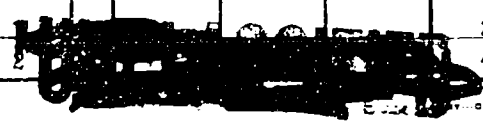
PENETRATIONS OF SHELLS IN PANELS

LOT NUMBER | DATE 31 July
FIRING [illegible] NUMBER
PRIORITY NUMBER
XXXXXXXXX Sheet 32 of 46
SHELL NUMBER
ROCKET NUMBER

PENETRATIONS OF SHELL 122mm, 0-462A LOADED AT/90
IN PANELS WITH RADII OF Soviet 30' AND FEET

PANEL NUMBERS	PERFORATIONS LENGTH	PERFORATIONS WIDTH	PENETRATIONS LENGTH	PENETRATIONS WIDTH	PENETRATIONS DEPTH
63.2 Cont			6	4	4
			5	3	4
			1	1	1
Total		2			25
63.3	6	4	4	3	4
			3	2	3
			8	2	4
			2	1	1
			3	2	6
			3	2	2
			1	1	1
			1	1	1
			3	2	2
			1	1	1
			3	2	2
			1	1	1
			5	3	3
			2	2	1
			5	2	6
			3	1	4
			2	2	2
			2	2	3
			3	2	1
			2	2	1
			3	1	2
			1	1	1
Total		1			22
63.4	6	4	3	3	4
	3	3	2	1	1
	7	5	1	1	1
	7	5	1	1	[illegible]
	7	3	4	3	2

PANEL NUMBERS	PERFORATIONS LENGTH	PERFORATIONS WIDTH	PENETRATIONS LENGTH	PENETRATIONS WIDTH	PENETRATIONS DEPTH
63.4 Cont	7	5	1	1	1
	4	3	2	2	1
			2	2	2
			6	3	3
			3	2	3
			3	1	2
			2	2	3
			1	1	1
			3	1	2
			1	1	1
			2	2	1
			6	3	7
			3	3	2
			2	2	2
			2	2	2
			3	2	2
			2	1	2
			1	1	1
			2	2	1
			3	1	2
			3	2	2
			3	2	1
			1	1	1
			6	2	2
			2	2	2
			2	2	1
			1	1	1
Total		7			32
63.5	4	3	7	3	6
	8	3	4	3	2
	5	3	2	2	2
			2	2	1
			4	3	5



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B-11822

ORDBG-737 10 FEB 48
FORMERLY SPOTS-F-281

PENETRATIONS OF SHELLS IN PANELS

[illegible] NUMBER	DATE 31 July 5[illegible]
FIRING [illegible] NUMBER	
PRIORITY NUMBER	
[illegible] Sheet 33 of 46	
[illegible] Round No. 20	
ROCKET NUMBER	

PENETRATIONS OF SHELL 122mm, C-462A LOADED AT/90

Soviet

IN PANELS WITH RADII OF 30' AND FEET

PANEL NUMBERS	PERFORATIONS LENGTH	PERFORATIONS WIDTH	PENETRATIONS LENGTH	PENETRATIONS WIDTH	PENETRATIONS DEPTH
63.5 Cont			2	1	2
			2	1	1
			1	1	1
			1	1	1
			2	2	1
			3	2	1
			4	3	6
			5	2	4
			1	1	1
			3	2	2
			2	2	2
			2	1	1
			1	1	1
			1	1	1
			1	1	1
			6	3	2
			3	2	5
			5	3	2
			1	1	1
			1	1	1
Total		3			25
63.[illegible]	4	3	1	1	1
	6	4	1	1	1
	16	7	1	1	1
	6	6	3	1	1
	5	3	3	1	4
			5	2	7
			2	1	1
			2	1	1
			1	1	1
			1	1	1
			1	1	1
			2	1	1

PANEL NUMBERS	PERFORATIONS LENGTH	PERFORATIONS WIDTH	PENETRATIONS LENGTH	PENETRATIONS WIDTH	PENETRATIONS DEPTH
			3	2	4
			3	2	5
			7	4	4
			1	1	1
			5	3	2
			2	1	1
			2	2	3
			3	2	1
			4	3	3
			2	1	1
			1	1	1
			2	1	2
			1	1	1
			2	2	2
			1	1	1
			1	1	1
			1	1	1
Total		5			29
		TOTALS			
30'	Radius	423			2056

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[redacted]

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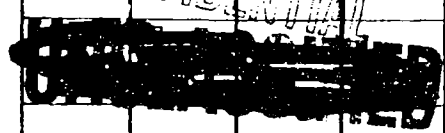


ARMY-OB-ABERDEEN PROVING GROUND MD-446

ORDBG-737 10 FEB 48
FORMERLY SPOTZ-F-281

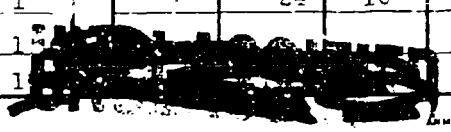
PENETRATIONS OF SHELLS IN PANELS

LOT NAME | DATE 31 July 50
FIRING | ROUND NUMBER
PRIORITY NUMBER
GUN NUMBER Sheet 34 of 46
ROUND NUMBER Round No. 20
ROCKET NUMBER

PENETRATIONS OF SHELL 122mm, D-462A LOADED AP/HE
Soviet
IN PANELS WITH FACE OF 60° AND FEET

PANEL NUMBERS	PERFORATIONS LENGTH	PERFORATIONS WIDTH	PENETRATIONS LENGTH	PENETRATIONS WIDTH	PENETRATIONS DEPTH
13			4	2	2
Total					1
17			4	3	5
Total					1
20	12	8			
Total		1			
23	5	3	3	2	2
	4	3	3	3	3
			1	1	1
			3	2	2
			1	1	1
			3	3	1
			1	1	1
			1	1	1
			3	2	1
Total		2			9
24	4	3	2	1	1
			3	2	1
			2	1	1
			4	2	1
			3	3	3
			4	3	4
			2	1	1
Total		1			7
25	5	3	3	1	1
			6	2	4
			1	1	1
			1	1	1
			1	1	1

PANEL NUMBERS	PERFORATIONS LENGTH	PERFORATIONS WIDTH	PENETRATIONS LENGTH	PENETRATIONS WIDTH	PENETRATIONS DEPTH
25 Cont			2	1	1
			2	1	2
			1	1	1
			1	1	1
Total		1			9
28	4	3	3	3	3
	5	4	3	2	3
	4	2	4	3	3
	6	3	2	2	1
			2	1	1
			4	2	3
			2	1	2
			3	3	3
			1	1	1
			4	3	4
			1	1	1
			1	1	1
			2	2	1
			2	2	1
			1	1	1
			5	3	3
			2	2	1
			2	2	1
			1	1	1
Total		4			13
27	5	4	3	3	2
	5	4	3	2	2
	5	4	2	1	1
	7	4	3	2	4
	24	10	2	2	1
			1	1	1
			2	2	2



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ORDBG-737 19 FEB 48
FORMERLY SPOTZ-F-231

PENETRATIONS OF SHELLS IN PANELS

LOT NUMBER

FIRING [illegible] NUMBER

PRIORITY NUMBER

DATE 31 July

Sheet 35 of 46

Round No. 20

ROCKET NUMBER

PENETRATIONS OF SHELL 122mm, D-432A LOADED TM/90

Soviet

IN PANELS WITH RADII OF 60' AND FEET

PANEL NUMBERS	PERFORATIONS		PENETRATIONS		
	LENGTH	WIDTH	LENGTH	WIDTH	DEPTH
27			3	1	2
			4	4	3
Total		5			9
28	7	4	2	2	5
	7	6	1	1	1
	5	3	2	1	3
	5	4	4	3	1
			3	2	1
			3	2	1
			1	1	1
			2	2	1
			1	1	1
Total		4			9
29	8	4	7	4	7
	9	6	1	1	1
	7	4	3	1	2
	6	4	1	1	1
	12	5	6	3	3
	7	3	4	3	3
			2	2	2
			2	2	3
			2	1	1
			2	2	2
			1	1	1
			3	2	2
			2	1	1
			2	1	2
			3	2	3
			1	1	1
			3	2	2
			1	1	1
			4	3	1

PANEL NUMBERS	PERFORATIONS		PENETRATIONS		
	LENGTH	WIDTH	LENGTH	WIDTH	DEPTH
Total		6			19
30	8	4	2	1	1
	7	7	4	4	4
			1	1	1
			4	3	3
			4	3	1
			2	1	2
			1	1	1
			1	1	1
			4	4	7
			1	1	1
			1	1	1
			1	1	1
			3	2	2
			1	1	1
			3	2	3
Total		2			16
31	8	6	5	4	6
	4	3	2	1	1
	6	5	1	1	1
	6	4	1	1	2
			5	3	3
			3	3	4
			3	2	1
			2	1	1
			4	3	1
			2	2	2
			1	1	1
			2	1	1
			4	3	1
			2	1	1
			4	3	4

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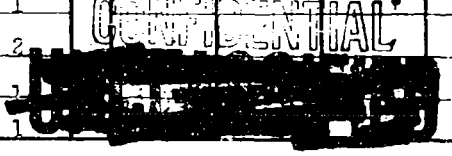

R-11822

ORDBG-737 19 FEB 46
FORMERLY SPOTZ-F-291

PENETRATIONS OF SHELLS IN PANELS

LOT NUMBER
DATE 31 July
FIRING RECORD NUMBER
PRIORITY NUMBER
Sheet 36 of 46
SHELL NUMBER
ROCKET NUMBER

PENETRATIONS OF SHELL 122mm, D-402A LOADED AT/90
Soviet
IN PANELS WITH RADII OF 60' AND FEET

PANEL NUMBERS	PERFORATIONS LENGTH	PERFORATIONS WIDTH	PENETRATIONS LENGTH	PENETRATIONS WIDTH	PENETRATIONS DEPTH
31 Cont			2	2	1
			2	2	1
			2	1	1
			2	1	1
			2	2	2
Total		4			20
32	4	5	3	2	4
	7	6	1	1	1
	5	4	1	1	1
	10	6	1	1	1
	6	4	1	1	1
	8	6	2	1	2
	8	5	2	1	2
	4	4	1	1	1
	12	4	6	3	3
	16	8	3	2	2
	16	6	1	1	1
	5	4	2	1	1
			5	4	6
			3	2	2
			6	3	3
			1	1	1
			1	1	1
			4	3	6
			3	2	2
			2	1	1
			1	1	1
			3	2	4
			3	3	3
			4	2	4
			2	2	1
			2	1	1
			4	2	5

PANEL NUMBERS	PERFORATIONS LENGTH	PERFORATIONS WIDTH	PENETRATIONS LENGTH	PENETRATIONS WIDTH	PENETRATIONS DEPTH
32 Cont			5	3	4
			3	2	2
			1	1	1
			1	1	1
Total		12			31
33	9	8	4	3	5
	6	4	6	4	7
	10	4	4	2	3
	16	5	1	1	1
	12	4	4	3	3
	9	6	4	3	2
	6	4	6	3	4
	4	4	4	3	6
	9	4	2	2	1
	4	3	3	2	1
	5	3	3	2	6
	8	3	5	2	1
	18	8	6	3	3
	12	8	5	4	2
	6	5	4	4	5
	13	4	4	2	2
	6	5	10	4	5
	9	4	5	3	3
	14	5	6	3	3
	6	3	1	1	1
	16	10	5	4	6
	12	6	4	3	2
	4	3	1	1	1
	6	3	4	2	2
	15	8	1	1	1
	[redacted]		4	2	2
			3	1	2
			1	1	1

R-11232

ORDBG-737 10 FEB 48
FORMERLY SPOTZ-P-201

PENETRATIONS OF SHELLS IN PANELS

LOT NUMBER | DATE 31 July 48
FIRING SERIES NUMBER
PRIORITY NUMBER
Sheet 37 of 46
Round No. 20
ROCKET NUMBER

PENETRATIONS OF SHELL 120mm, O-482A LOADED AT/30
IN PANELS WITH RADII OF Soviet 60' AND FEET

PANEL NUMBERS	PERFORATIONS LENGTH	PERFORATIONS WIDTH	PENETRATIONS LENGTH	PENETRATIONS WIDTH	PENETRATIONS DEPTH
33 Cont			3	1	1
			4	2	2
			4	2	2
			1	1	1
			6	5	6
			1	1	1
			3	2	1
			3	1	1
			3	2	2
			4	4	3
			3	2	1
			5	3	5
			4	3	2
			2	1	1
Total		25			42
34	12	3	4	4	2
	16	3	4	4	2
	8	5	3	2	2
	13	6	2	1	1
	8	3	4	2	2
	11	3	4	3	3
	4	4	2	1	1
	10	4	6	3	1
	10	4	2	1	1
	5	3	3	2	1
	12	4	4	2	2
	7	6	6	2	5
	12	5	1	1	1
	19	5	4	3	4
	9	7	2	2	2
	5	4	2	1	1
	16	6	3	3	1
	14	7	6	5	6

PANEL NUMBERS	PERFORATIONS LENGTH	PERFORATIONS WIDTH	PENETRATIONS LENGTH	PENETRATIONS WIDTH	PENETRATIONS DEPTH
34 Cont	9	6	1	1	1
	4	3	2	1	1
	9	6	4	1	2
	13	7	2	2	1
			4	2	5
			4	1	4
			4	2	4
			4	1	2
			3	1	1
			3	1	1
			4	2	1
			1	1	1
			2	2	2
			4	3	2
			3	2	1
			1	1	1
			6	4	4
			4	4	7
			4	2	4
			2	2	2
			4	1	1
			2	2	2
			2	2	4
			1	1	1
			6	2	1
			7	6	5
			1	1	1
			6	4	2
			7	4	3
Total		22			47
35	6	7	4	3	1
			4	2	2
			3	2	2

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ORDBG-737 10 FEB 46
FORMERLY SPOTZ-F-291

PENETRATION OF SHELLS IN PANELS

LOT NUMBER
DATE 31 July 53
FIRING [illegible] NUMBER
PRIORITY NUMBER
[illegible] Sheet 38 of 46
[illegible] Round No. 20
ROCKET NUMBER

PENETRATIONS OF SHELL 122mm, C-482A LOADED AT/90
IN PANELS WITH RADII OF Soviet 60' AND FEET

PANEL NUMBERS	PERFORATIONS LENGTH	PERFORATIONS WIDTH	PENETRATIONS LENGTH	PENETRATIONS WIDTH	PENETRATIONS DEPTH
35 Cont	12	4	5	5	2
	3	4	3	2	1
	6	5	2	1	1
	19	5	3	3	1
	9	5	4	3	1
	14	4	2	1	1
	6	4	3	2	2
	9	6	2	1	1
			2	1	1
			3	2	1
			2	2	2
			1	1	1
			5	2	1
			1	1	1
			2	1	1
			3	2	1
			5	3	4
			12	4	7
			2	1	1
			2	1	1
			1	1	2
			3	1	1
			4	3	1
			3	2	1
Total		11			27
36	12	5	4	4	2
	7	2	4	2	3
			7	4	3
			1	1	1
			3	1	2
			1	1	1
			8	4	2
			2	2	1

PANEL NUMBERS	PERFORATIONS LENGTH	PERFORATIONS WIDTH	PENETRATIONS LENGTH	PENETRATIONS WIDTH	PENETRATIONS DEPTH
36 Cont			1	1	1
			3	2	1
			1	1	1
Total		2			11
37	8	4	6	4	6
	4	4	4	2	3
	7	5	4	3	2
	12	5	1	1	1
	11	11	6	3	6
			5	3	3
			3	2	2
			8	5	8
			3	2	2
			5	4	4
			4	2	2
Total		5			11
38	9	4	4	3	1
	6	3	5	3	2
	6	5	9	5	4
			2	2	2
			3	2	2
			3	2	1
			4	3	3
			4	4	4
			5	2	2
			4	2	3
			4	2	4
			4	2	3
			3	2	1
			1	1	1
Total		3			14

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[illegible] ROUND NO 445

R-11522

ORDBG-737 18 FEB 48
FORMERLY SPOTZ-F-281

PENETRATIONS OF SHELLS IN PANELS

LOT NUMBER
DATE 31 July 5[illegible]
FIRING RECORD NUMBER
PRIORITY NUMBER
Sheet 39 of 46
Round No. 20
ROCKET NUMBER

PENETRATIONS OF SHELL 122mm, 0-462A LOADED AT/90
IN PANELS WITH RADII OF Soviet 60' AND FEET

PANEL NUMBERS	PERFORATIONS LENGTH	PERFORATIONS WIDTH	PENETRATIONS LENGTH	PENETRATIONS WIDTH	PENETRATIONS DEPTH
39	12	5	4	3	3
			2	1	1
			4	3	1
			4	3	2
			1	1	1
			3	1	1
			2	1	1
			4	1	1
			4	2	1
			7	4	6
			1	1	1
			2	2	1
			1	1	1
			2	2	1
			1	1	1
			6	3	4
Total		1			16
40	11	4	2	2	1
	7	4	5	3	2
	4	5	3	2	2
			3	2	1
			3	2	1
			4	2	2
			3	2	1
			2	1	1
			1	1	1
			5	2	9
Total		3			10
41	6	6	4	3	1
			4	3	2
			4	4	1
Total		1			3

PANEL NUMBERS	PERFORATIONS LENGTH	PERFORATIONS WIDTH	PENETRATIONS LENGTH	PENETRATIONS WIDTH	PENETRATIONS DEPTH
42			3	1	1
			1	1	2
			4	3	2
Total					3
43			5	4	6
			7	3	2
			3	2	1
			1	1	1
			3	2	3
			2	2	1
Total					6
44			2	2	2
			2	3	1
			2	2	1
			1	1	1
			3	2	2
			1	1	1
			3	2	2
Total					7
45			5	3	2
			3	2	2
			3	2	2
			2	1	1
			2	2	2
Total					5
46	15	8	2	1	1
			4	4	1
			4	2	2
			1	1	1
			1	1	1

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[redacted]

ARMY-OS-ABERDEEN PROVING GROUND MD 445

ORDBG-737 10 FEB 48
FORMERLY SPOTZ-F-281

PENETRATIONS OF SHELLS IN PANELS

LOT NUMBER | DATE 31 July 52
FIRING RECORD NUMBER
PROJECTILE NUMBER
MEASUREMENTS BY Sheet 40 of 46
RECORDED BY Round No. 20
ROCKET NUMBER

PENETRATIONS OF SHELL 122mm, D-462A LOADED AT/90

IN PANELS WITH Soviet RADII OF 80' AND FEET

PANEL NUMBERS	PERFORATIONS		PENETRATIONS		
	LENGTH	WIDTH	LENGTH	WIDTH	DEPTH
46 Cont			2	1	1
			1	1	1
			1	1	1
			2	1	1
			4	1	1
			1	1	1
			2	2	2
Total		1			12
47	6	4	4	3	2
			1	1	1
			2	1	1
			6	1	1
			1	1	1
			3	2	2
			2	1	1
			2	2	1
Total		1			8
48			1	1	1
			1	1	1
			1	1	1
			1	1	1
			2	1	1
Total					5
49			3	2	1
			1	1	1
			1	1	2
Total					3
50			2	2	1
Total					1

PANEL NUMBERS	PERFORATIONS		PENETRATIONS		
	LENGTH	WIDTH	LENGTH	WIDTH	DEPTH
51			3	2	2
			4	3	3
			1	1	1
			1	1	1
			2	2	2
			3	3	1
			2	1	2
			3	3	2
			1	1	1
			6	6	3
Total					10
52			3	3	3
			2	1	1
			2	1	1
			4	1	1
			1	1	1
			5	4	4
Total					6
53			1	1	1
			2	2	4
			4	4	3
			2	2	2
			2	2	1
			1	1	1
			3	3	2
			1	1	1
Total					6
					104
54			7	1	3
			5	5	2
			1	1	1
			4	3	1

ORDBS-737 10 FEB 48
FORMERLY SPOTS-F-281

PENETRATIONS OF SHELLS IN PANELS

DATE 21 July 50

PENETRATIONS OF SHELL 122mm, C-462A LOADED AT/90

IN PANELS WITH RADII OF Soviet 60' AND FEET

Sheet 41 of 90

Round No. 20

PANEL NUMBERS	PERFORATIONS		PENETRATIONS		
	LENGTH	WIDTH	LENGTH	WIDTH	DEPTH
54 Cont			1	1	2
			1	1	1
			1	1	1
			3	1	1
Total					8
55	5	5	2	2	2
			1	1	1
			1	1	1
			4	4	2
			3	2	2
			1	1	1
			1	1	1
			3	2	2
			1	1	1
			5	4	3
Total		1			10
56			3	2	2
			4	2	4
			4	4	1
			1	1	1
			3	2	1
			3	2	3
			2	2	1
			2	2	1
			3	3	2
			3	2	2
			2	1	1
			4	2	3
			3	2	2
			2	2	2
Total					14

PANEL NUMBERS	PERFORATIONS		PENETRATIONS		
	LENGTH	WIDTH	LENGTH	WIDTH	DEPTH
57			5	2	1
			1	1	1
			6	3	2
			2	2	2
			3	1	1
			2	2	2
			1	1	1
Total					7
58.1	9	4	3	2	1
			2	2	2
			4	2	4
Total		1			3
58.2	12	6	3	2	2
Total		1			1
58.3	7	7	6	4	3
			1	1	1
			2	1	1
Total		1			3
59.1			3	2	2
			1	1	1
			2	2	1
			6	4	3
			1	1	1
			4	4	5
			4	3	3
Total					7
59.2	8	6	5	4	8
	3	5	5	3	2
			5	3	5

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R-11822

ORDMG-737 10 FEB 48
FORMERLY SPOTZ-P-291

PENETRATIONS OF SHELLS IN PANELS

LOT NUMBER
FIRING [illegible] NUMBER
PRIORITY NUMBER
[illegible] Sheet 42 of 46
[illegible] Round No. 20
ROCKET NUMBER

DATE 31 July 50

PENETRATIONS OF SHELL 122mm, O-462A LOADED AT/30

IN PANELS WITH RADII OF Soviet 60' AND FEET

PANEL NUMBERS	PERFORATIONS		PENETRATIONS		
	LENGTH	WIDTH	LENGTH	WIDTH	DEPTH
59.2 Cont			2	1	1
			1	1	1
			4	3	1
			2	2	2
			2	2	1
			1	1	1
			5	4	5
			6	2	3
			6	3	3
Total		2			12
59.3			4	3	1
			3	2	2
			2	2	2
			3	2	2
			5	3	4
			1	1	2
			2	2	2
			2	2	1
			3	2	4
			4	3	4
			1	1	1
			2	2	2
Total					12
60.1			7	3	2
			2	2	1
			10	5	3
			3	2	1
			7	7	4
			6	3	2
			1	1	1
			2	1	1
			4	3	4

PANEL NUMBERS	PERFORATIONS		PENETRATIONS		
	LENGTH	WIDTH	LENGTH	WIDTH	DEPTH
60.1 Cont			1	1	1
			1	1	1
			5	3	2
			5	2	2
			10	4	4
			2	1	1
			2	2	2
			2	2	2
			5	2	3
			6	2	2
			6	2	5
			1	1	1
Total					21
60.2			5	3	3
			8	2	2
			2	2	2
			5	3	2
			3	2	1
			2	1	1
			2	1	1
			1	1	1
			1	1	1
			1	1	1
			4	2	1
			5	3	2
			4	2	2
			4	2	3
			3	2	2
			2	2	1
[redacted]			6	3	3
			3	2	2
			1	1	1
			2	1	1

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B-11822

ORDBG-737 19 FEB 48
FORMERLY SPOTZ-F-281

PENETRATIONS . SHELLS IN PANELS

LOT NUMBER | DATE 31 July 33
FIRING R[illegible] NUMBER
PRIORITY NUMBER
[illegible] Sheet 43 of 46
[illegible] Round No. 20
ROCKET NUMBER

PENETRATIONS OF SHELL 122mm, C-462A LOADED AT/90
Soviet
IN PANELS WITH RADII OF 60' AND FEET

PANEL NUMBERS	PERFORATIONS LENGTH	PERFORATIONS WIDTH	PENETRATIONS LENGTH	PENETRATIONS WIDTH	PENETRATIONS DEPTH
60.2 Cont			6	2	3
Total					21
60.3			5	2	2
			2	2	1
			2	1	1
			2	2	2
			2	2	4
			3	2	1
			12	4	4
			2	2	1
			2	2	1
			3	1	1
			1	1	1
			5	2	2
			4	2	2
			2	2	1
			7	3	4
			2	1	1
			2	1	1
			2	3	1
			6	3	6
			3	1	5
			4	3	2
			2	1	1
			8	3	2
Total					33
61.1			6	4	5
			2	2	2
			1	1	1
			1	1	1
			2	2	1
			5	3	2

PANEL NUMBERS	PERFORATIONS LENGTH	PERFORATIONS WIDTH	PENETRATIONS LENGTH	PENETRATIONS WIDTH	PENETRATIONS DEPTH
			2	2	1
			2	1	1
			5	3	2
			2	2	2
			2	1	1
			1	1	1
			2	1	1
			1	1	1
			5	3	5
			1	1	1
			5	5	2
			4	2	2
			6	2	3
			1	1	1
			1	1	1
			3	1	1
			4	2	2
			2	2	2
			2	1	1
			4	3	4
			2	2	1
			1	1	2
Total					28
61.2			2	2	1
			3	1	3
			3	1	1
			2	2	1
			2	1	1
			4	2	2
			4	2	2
			4	3	2

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[redacted]

ARMY-OB-ABERDEEN PROVING GROUND MD 446

ORDBG-737 10 FEB 48
FORMERLY SPOTZ-F-201

PENETRATIONS OF SHELLS IN PANELS

LOT NUMBER [illegible] DATE 31 July [illegible]
FIRING [illegible] NO. NUMBER
PROPERTY NUMBER
[illegible] Sheet 4[illegible] of 48
[illegible] Round No. 20
ROCKET NUMBER

PENETRATIONS OF SHELL 122mm, D-462S LOADED AT/S
Soviet
IN PANELS WITH RADII OF 60' AND FEET

PANEL NUMBERS	PERFORATIONS LENGTH	PERFORATIONS WIDTH	PENETRATIONS LENGTH	PENETRATIONS WIDTH	PENETRATIONS DEPTH
21.2 Cont			1	1	1
			2	1	8
			1	1	1
			5	4	4
			4	2	2
			2	2	2
			7	4	3
			8	2	2
			1	1	1
			10	3	7
			8	3	3
			5	2	5
			1	1	1
			1	1	1
			5	2	1
Total					25
21.3			4	2	3
			2	2	1
			1	1	1
			8	4	4
			3	2	1
			8	4	5
			8	3	3
			1	1	1
			1	1	1
			4	2	2
			1	1	1
			2	1	1
			1	1	1
			4	3	2
			2	2	1
Total					15

PANEL NUMBERS	PERFORATIONS LENGTH	PERFORATIONS WIDTH	PENETRATIONS LENGTH	PENETRATIONS WIDTH	PENETRATIONS DEPTH
62.1			4	4	2
			1	1	1
			5	2	2
			4	2	2
			6	2	2
			2	1	1
			1	1	1
			4	2	1
			8	3	4
			3	2	2
			8	3	6
			2	1	1
			3	1	1
			9	3	3
			8	3	2
			6	3	3
			3	2	2
			2	1	1
			1	1	1
			1	1	1
Total					30
62.2	9	6	6	3	6
			2	2	4
			3	1	1
			2	1	1
			1	1	1
			4	3	4
			12	6	6
			2	3	2
			5	4	1
			5	2	2
			1	1	1
			2	2	1

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[redacted]

ARMY—OB—ABERDEEN PROVING GROUND [illegible]445

ORDNG-737 10 FEB 46
FORMERLY SPOTZ-F-291

PENETRATION OF SHELLS IN PANELS

LOT NUMBER | DATE 31 July [illegible]
FIRING [illegible] NUMBER
PRIORITY NUMBER
XXXXXXXXXX Sheet 45 of 46
XXXXXXXXXX Round No. 20
ROUND NUMBER

PENETRATIONS OF SHELL 122mm, C-462A LOADED [illegible]/90
Soviet
IN PANELS WITH RADII OF 601 AND FEET

PANEL NUMBERS	PERFORATIONS LENGTH	PERFORATIONS WIDTH	PENETRATIONS LENGTH	PENETRATIONS WIDTH	PENETRATIONS DEPTH	PANEL NUMBERS	PERFORATIONS LENGTH	PERFORATIONS WIDTH	PENETRATIONS LENGTH	PENETRATIONS WIDTH	PENETRATIONS DEPTH
62.2 Cont			1	1	1				8	4	5
			6	4	5				2	1	1
			6	2	2				2	1	1
			7	3	3				2	2	1
			3	1	1				2	1	2
			1	1	1				1	1	1
			5	3	2				3	2	1
			5	2	5	Total		2			27
			4	3	2						
			1	1	1	63.1	8	6	3	2	2
			2	1	1				1	1	1
			1	1	1				2	2	2
Total		1			24				3	3	7
									1	1	1
62.3	7	7	3	2	1				1	1	1
	5	3	1	1	1				3	2	2
			3	3	2				1	1	1
			3	2	2				2	1	1
			2	2	1				7	3	3
			2	2	1				2	1	1
			3	2	2				2	1	1
			4	3	2				4	3	2
			8	3	3				2	1	1
			4	3	1				2	1	1
			2	2	1				3	3	1
			2	2	1	Total		1			16
			1	1	1						
			4	3	3	63.2	7	3	3	2	2
			1	1	1		5	4	5	4	5
			8	3	3		8	7	2	2	4
			9	6	3		7	4	3	2	2
			2	1	1		7	3	2	2	2
			2	1	1		7	5	2	1	[illegible]
			[illegible]	2	2	[redacted]			[illegible]	[illegible]	3

[redacted]

ORDBS-737 10 FEB 49
FORMERLY SPOTS-F-29*

PENETRATION OF SHELLS IN PANELS

LOT NUMB.
DATE 31 July 5
FIRING RD NUMBER
PRIORITY NUMBER
~~XXXXXXXXXX~~ Sheet 46 of 46
~~XXXXXXXXXX~~ Round No. 20
ROCKET NUMBER

PENETRATIONS OF SHELL 122mm, O-4627 LOADED AM/OD
Soviet
IN PANELS WITH RADII OF 60' AND FEET

PANEL NUMBERS	PERFORATIONS LENGTH	PERFORATIONS WIDTH	PENETRATIONS LENGTH	PENETRATIONS WIDTH	PENETRATIONS DEPTH
63.2 Cont			5	6	2
			5	1	3
			1	1	1
			1	1	1
			2	1	1
			1	1	1
			1	1	1
			3	2	4
			2	1	1
			2	2	2
			3	2	2
			2	2	2
			1	1	1
			4	3	2
			3	2	2
			2	1	1
			1	1	2
			2	1	1
			4	1	1
			1	1	1
			1	1	1
			2	1	1
			3	2	1
Total		6			30
63.3	8	7	6	3	1
			4	3	3
			5	4	3
			2	2	2
			1	1	1
			1	1	1
			3	2	3
			1	1	1
			7	3	1

PANEL NUMBERS	PERFORATIONS LENGTH	PERFORATIONS WIDTH	PENETRATIONS LENGTH	PENETRATIONS WIDTH	PENETRATIONS DEPTH
			6	3	3
			8	2	2
			2	1	1
			1	1	1
			2	1	1
Total		1			14
		TOTALS			
60'	Radius	134			743

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[redacted]

ARMY-OR-ABERDEEN PROVING GROUND, MD 445

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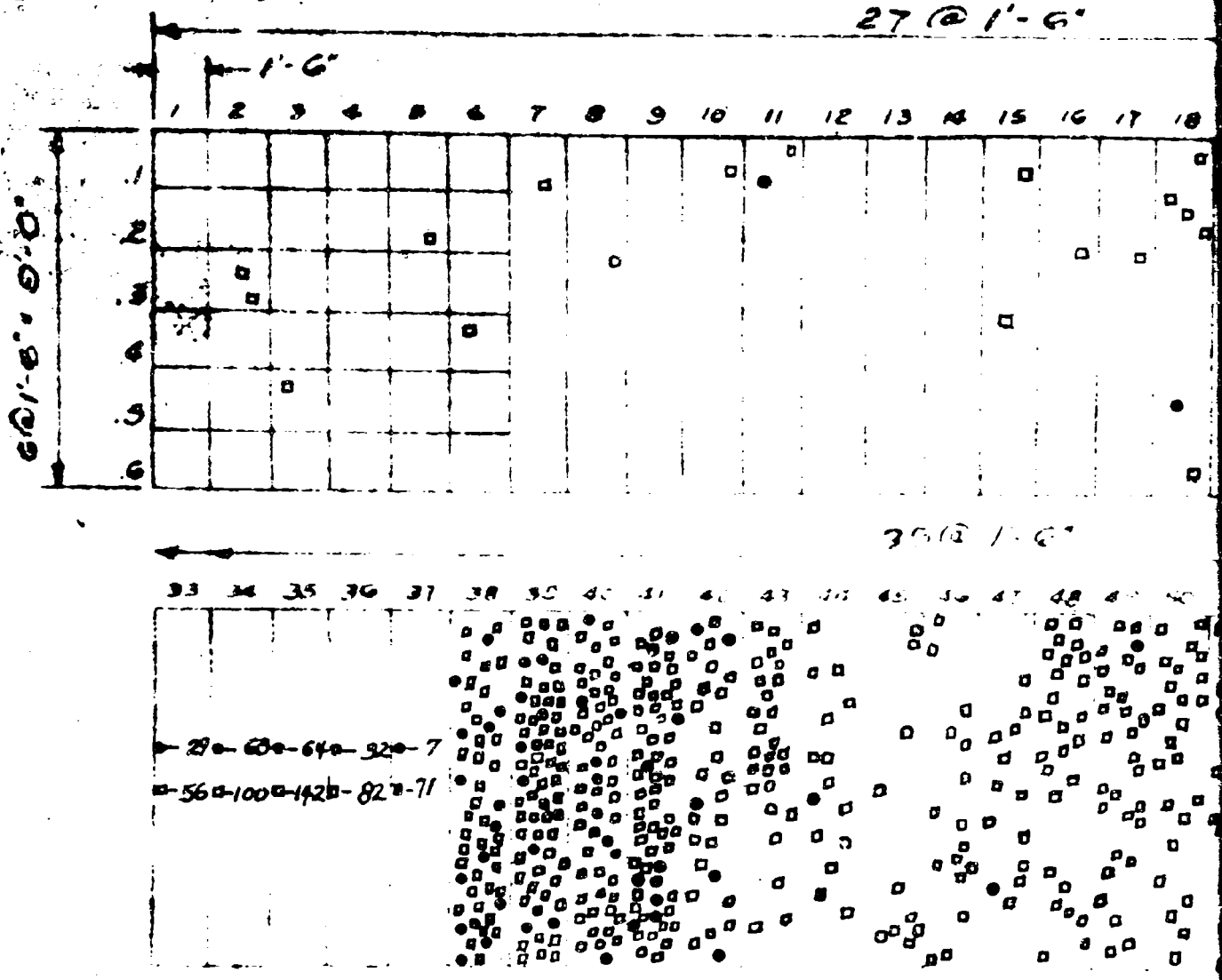
PANEL A

30 FT RADIUS 18



1" NO. 3 PINE BOARDS (DOUBLED) PLACED

DATE: 31 JULY 53 RD. NO. 20

PERFORATIONS: ●

SHELL: 122 MM, SOVIET

PENETRATIONS: □

POSITION OF SHELL: HORIZONTAL

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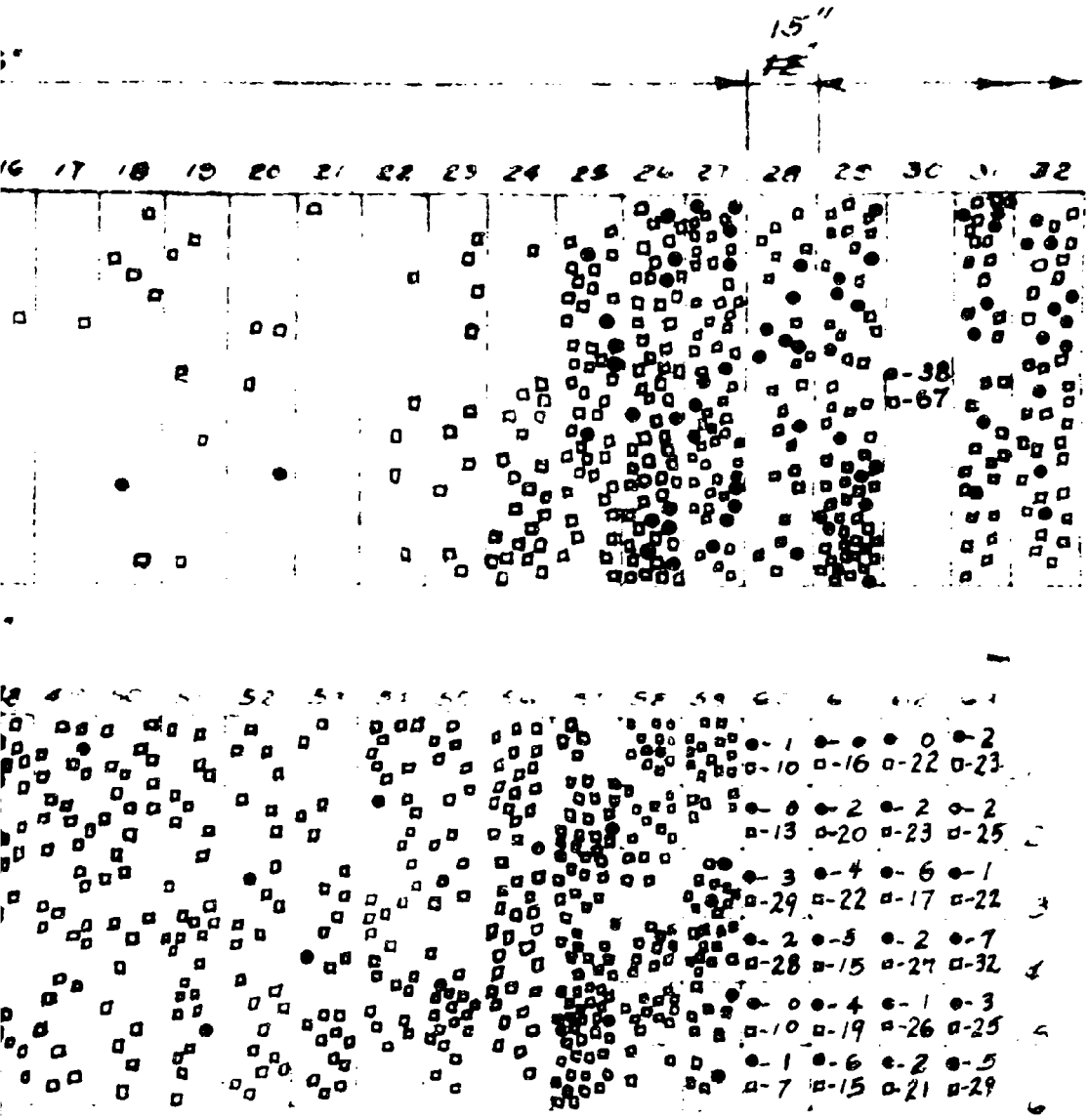
1

A

S 180° ARC



2

NS: ● = 426

NS: □ = 2056

RANGE OPERATIONS SECTION

CHART OF PANELS

FOR

NUMBER AND DISTRIBUTION

OF FRAGMENTS

(30 FT RADIUS)

ABERDEEN PROVING GROUND MD

262A

2D 3

B-11822

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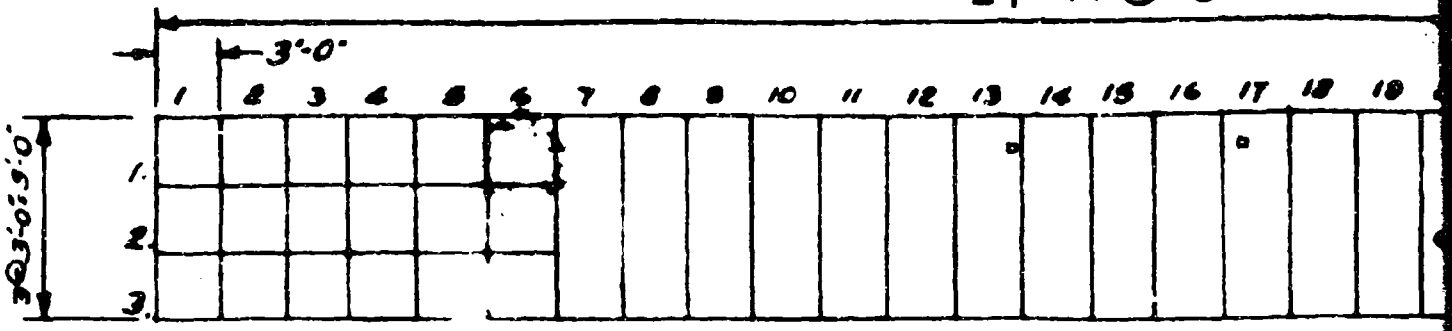
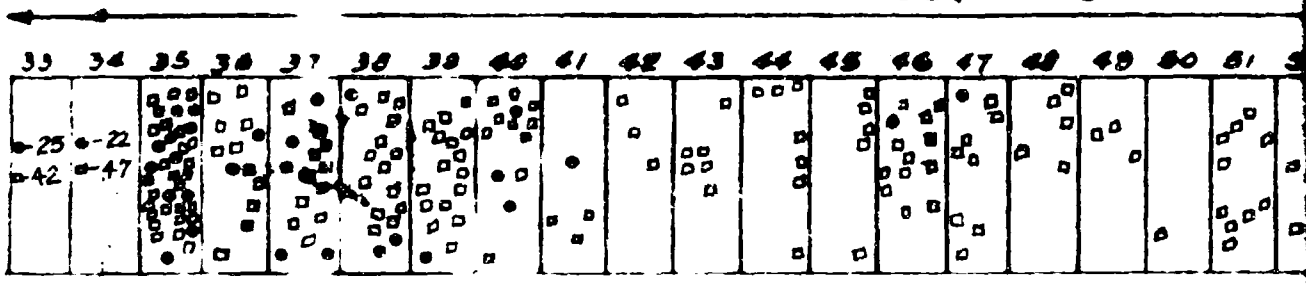
PANEL B

60 FT. RADIUS 180° A

27 @ 3'-0"



35@ 3'-0"



1" NO. 3 PINE BOARDS (DRESSED) PLACED VE

DATE: 31 JULY 53 RD. NO. 20

PERFORATIONS: ● = 134

SHELL: 122 MM, SOVIET

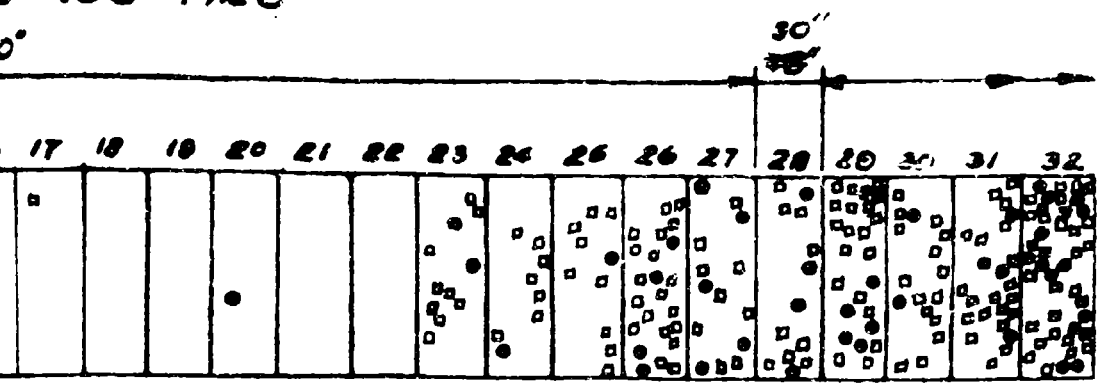
PENETRATIONS: □ = 743

POSITION OF SHELL: HORIZONTAL

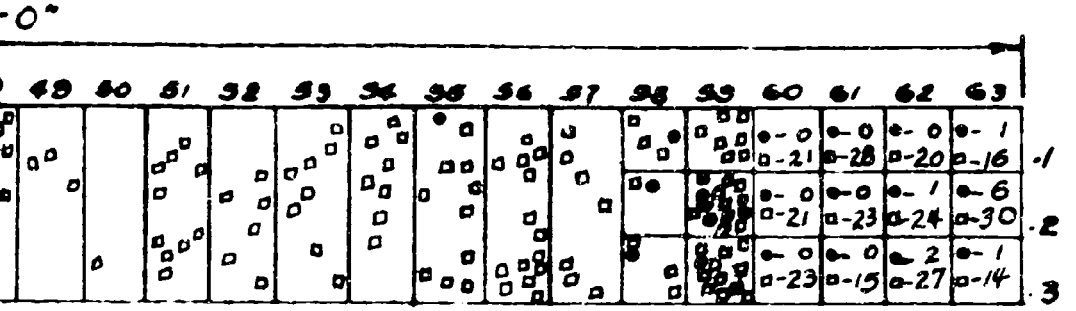
1

B

S 180° ARC



-0"



2

ACED VERTICALLY.

●= 134

□= 743

RANGE OPERATIONS SECTION

LAYOUT OF PANELS
FOR
NUMBER AND DISTRIBUTION
OF FRAGMENTS
(60 FT. RADIUS)

ABERDEEN PROVING GROUND, MD
OCT. 27, 1944 APG 11876-14 PR

FIRING RECORD NO. B-11822
INCLOSURE 3

ROUND NO. 13

8 October 1952

SHELL, HE, 122mm, Soviet
MODEL, CF -462, Ammonium Nitrate 80% - TNT 20%

SHELL MARKINGS

OBVERSE

SI
297-45
122

REVERSE

AT/80
[redacted]
0ø - 462

BASE

78
51 45
Ⓒ

Shell has one split rotating band.

Weight of Shell w/o Components- 45.64 lbs.
As Fired - 45.76 lbs.

Distance from Shell to center of the 0.020" duralumin flash target- 22.67 ft.

Shell before firing is shown in APG Photograph No. A78157.

Recovered fragments with their respective weights and velocities are shown in APG Photograph No. A97558.

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[redacted]

3c3

OPSAG 1110
Rev 22 Aug 52

FRAGMENT VELOCITY DATA

Test of Shell, H.E., 122mm, Soviet, AT/80 Side Velocity Box Data

Proof Director Mr. O. L. Rogers Date Fired 8 Oct 1952

Distance from detonation point to target 221 8" feet. Round No. 13

Round statically detonated and velocity obtained by Photographic Methods.

Fragment No.	Weight, Grains	Velocity, f/s	Fragment No.	Weight, Grains	Velocity, f/s	Fragment No.	Weight, Grains	Velocity, f/s
1	N.R.		17	2	2904	33	3	
2	3	3404	18	15	3284	34	2	
3	N.R.		19	250	2828	35	N.R.	3181
4	1		20	61	2951	36	300	3181
5	2	3054	21	N.R.		37	2	
6	6	3284	22	45	3284	38	546	2679
7	28	3338	23	11	3284	39	61	2314
8	N.R.		24	9	3085	40	408	2237
9	N.R.	3085	25	13	3133	41	25	2644
10	04	2838	26	92	3133	42	2	2121
11	N.R.	3039	27	14	3133	43	5	
12	N.R.	3099	28	28	3133	44	134	2596
13	N.R.		29	14		45	N.R.	
14	N.R.		30	13	3085	46	N.R.	
15	N.R.	3039	31	83	3085	47	3	
16	N.R.		32	8	3133	48	27	

Average velocity 2968 ft/sec.
NV - no velocity recorded.
NR - not recovered.

(2) - total weight of two pieces.
(n) - total weight of n pieces.

Individual velocity inaccuracies are less than ± 3.6 % for the highest velocity and ± 3.0 % for the lowest velocity.

ARMY-ORD ABERDEEN PROVING GROUND MD 3/4

FRAGMENT VELOCITY DATA

Test of Shell, H.E., 122mm, Soviet Side Velocity Box Data

Proof Director Mr. O. D. Rogers Date Fired 8 Oct 1952

Distance from detonation point to target 22' 8" feet. Round No. 13

Round statically detonated and velocity obtained by Photographic Methods.

Fragment No.	Weight, Grains	Velocity, f/s	Fragment No.	Weight, Grains	Velocity, f/s	Fragment No.	Weight, Grains	Velocity, f/s
49	N.R.		65	N.R.	3133			
50	7		66	1	3133			
51	4		67	25				
52	572(2)		68	198				
53	3		69	186(2)				
54	N.R.		70	58				
55	N.R.		71	680	2951			
56	18	2453	72	28				
57	61		73	151				
58	6	2963	74	321				
59	N.R.		75	14				
60	N.R.		76	15				
61	N.R.		77	N.R.				
62	543(2)	3039	78	N.R.				
63	21(2)	3039	79	455(2)				
64	N.R.							

Average velocity 2968 ft/sec.
NV - no velocity recorded.
NR - not recovered.

(2) - total weight of two pieces.
(n) - total weight of n pieces.

Individual velocity inaccuracies are less than ± 3.6 % for the highest velocity and ± 3.0 % for the lowest velocity.

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[redacted]

PENETRATIONS SHELLS IN PANELS

LOT NUMBER | DATE 8 Oc 52

FIRING R NUMBER

PROPERTY NUMBER

XXXXXXXX Sheet 1 of 12

XXXXXXXX Round No. 13

ROCKET NUMBER

PENETRATIONS OF 122mm, OF-462 LOADED AT/80

Soviet

IN PANELS WITH [illegible] OF 30' AND FEET

PANEL NUMBERS	PERFORATIONS LENGTH	PERFORATIONS WIDTH	PENETRATIONS LENGTH	PENETRATIONS WIDTH	PENETRATIONS DEPTH
2.5			10	8	2
			1	1	1
Total					2
3.1			2	2	6
			3	2	3
			1	1	1
			2	2	1
Total					4
3.2			1	1	1
			1	1	2
Total					2
4.2			2	2	10
			1	1	2
			2	2	7
Total					3
4.5			2	2	4
			2	2	1
			1	1	1
Total					3
5.4			8	2	4
Total					1
6.3			3	1	3
Total					1
6.4			4	1	4
Total					1
7			3	3	1

PANEL NUMBERS	PERFORATIONS LENGTH	PERFORATIONS WIDTH	PENETRATIONS LENGTH	PENETRATIONS WIDTH	PENETRATIONS DEPTH
Total					1
9			4	3	5
			3	3	2
			1	1	1
Total					3
10			1	1	1
Total					1
12			3	2	2
			1	1	1
			3	2	2
Total					3
13	4	3			
Total		1			
14			3	2	2
Total					1
15			5	2	8
Total					1
17			5	2	6
			4	3	1
Total					2
20	3	2			
Total		1			
22			3	2	10
Total					1

ARMY OR ABERDEEN PROVING GROUND MD 415

DIRECTOR 737 TO REV. 48
FORMERLY BRL 12-P-261

PENETRATIONS SHELLS IN PANELS

DATE 0ct 52

LOT NUMBER

FIRING P... NUMBER

PRIORITY NUMBER

PENETRATIONS OF SHELL 122mm, OF-462 ... LOADED AT/60

Soviet

IN PANELS AT PROJECTOR 30' AND FEET

XXXXXXXX Sheet 2 of 12

XXXXXXXX Round No. 13

ROCKET NUMBER

PANEL NUMBERS	PERFORATIONS		PENETRATIONS		
	LENGTH	WIDTH	LENGTH	WIDTH	DEPTH
23	4	3	4	2	1
	4	2	2	2	2
			2	1	4
			1	1	1
Total		2			4
24	7	2	4	2	6
			2	1	6
Total		1			2
25	5	3	2	2	6
	12	5	1	1	2
	4	4	4	2	3
	5	3	2	1	1
Total		4			4
26	8	4	1	1	2
	22	8	1	1	1
	5	2	2	1	1
	9	4	2	1	6
	9	6	1	1	4
	4	4	1	1	3
	16	5			
Total		7			6
27	36	12	3	2	5
	3	3	1	1	1
	8	5	2	1	1
	4	2	3	1	2
			1	1	2
Total		4			5
28			3	1	2
			4	2	8

PANEL NUMBERS	PERFORATIONS		PENETRATIONS		
	LENGTH	WIDTH	LENGTH	WIDTH	DEPTH
28 cont			1	1	2
			1	1	1
Total					4
29	3	3	1	1	4
	3	3	2	1	2
	9	8	2	1	2
	3	2	1	1	4
			1	1	1
Total		4			5
30	4	3	3	1	4
	16	7	3	2	4
	3	2	1	1	2
			3	1	1
			1	1	2
			1	1	1
			1	1	2
Total		3			7
31	5	5	2	2	6
	16	9	4	2	3
	4	3	1	1	2
	4	3	4	1	4
	7	7	2	2	6
	4	3	4	1	4
	4	3			
	5	3			
	4	3			
Total		9			6
32	12	5	2	1	1
	32	8	2	2	6
	16	8	1	1	1

GROUND 737 19 FEB 48
FORMERLY SPOTZ F-291

PENETRATIONS OF SHELLS IN PANELS

LOT NUMBER | DATE 8 Oct 52
FIRING RECORD NUMBER
PRIORITY NUMBER
XXXXXXXXX Sheet 3 of 12
XXXXXXXXXXX Round No. 13
ROCKET NUMBER

PENETRATIONS OF SHELL 122mm, OF-462 LOADED AT/80
Soviet
IN PANELS WITH RADII OF 30' AND FEET

PANEL NUMBERS	PERFORATIONS LENGTH	PERFORATIONS WIDTH	PENETRATIONS LENGTH	PENETRATIONS WIDTH	PENETRATIONS DEPTH	PANEL NUMBERS	PERFORATIONS LENGTH	PERFORATIONS WIDTH	PENETRATIONS LENGTH	PENETRATIONS WIDTH	PENETRATIONS DEPTH
32 cont	14	8	3	1	2	34 cont	30	8	2	2	2
	4	4	1	1	2		8	5	3	2	3
	9	4	4	2	2		12	12	5	1	5
	11	3	4	1	4		8	6	1	1	1
			2	1	5		6	4	2	2	3
			2	2	2		10	4	1	1	3
			1	1	1		12	4	4	1	3
			4	1	3		20	8			
			2	1	2		8	8			
			3	2	8		24	12			
			1	1	1		28	8			
Total		7			14		8	4			
							4	3			
33	48	16	2	2	5	Total		16			10
	5	4	4	1	10						
	12	8	3	2	3	35	7	4	4	2	2
	20	6	5	2	4		6	4	1	1	1
	8	3	1	1	2		25	9	1	1	1
	12	4	3	2	6		5	2	5	3	7
	4	3	2	1	2		20	9	4	1	1
	5	4	2	1	2		7	4	2	1	1
	20	18	1	1	2		8	4	2	1	2
	8	3	1	1	1		11	7	3	2	3
	12	6	2	1	2				4	2	2
	14	6	2	1	1	Total		8			9
	20	4	3	1	2						
	5	4	5	2	4	36	8	4	2	1	1
	52	8	4	2	6		7	3	1	1	1
	28	8					11	7	1	1	1
Total		16			15		12	6	7	1	2
							13	10	4	3	5
34	8	6	3	1	2	[redacted]	8	5	2	2	2
	7	3	3	1	2		11	4	4	3	7
	8	2	2	1	1		19	8	1	1	1

CONFIDENTIAL

ARMY-GB-ABERDEEN PROVING GROUND, MD 1445

ORTS-237 13 FED 48
FORMERLY CROTZ-F-281

PENETRATIONS OF SHELLS IN PANELS

LOT NUMBER

DATE 8 Oct 52

FIRING RANGE NUMBER

PRIORITY NUMBER

XXXXXXXX Sheet 4 of 12

XXXXXXXX Round No. 13

ROCKET NUMBER

PENETRATIONS OF SHELL 122mm, OF-462 Soviet LOADED AT/80

IN PANELS WITH SHELL OF 30' AND FEET

PANEL NUMBERS	PENETRATIONS LENGTH	PENETRATIONS WIDTH	PENETRATIONS LENGTH	PENETRATIONS WIDTH	PENETRATIONS DEPTH
36 cont	6	4	2	2	9
	4	3	1	1	1
	10	8	6	2	6
	37	11	4	2	3
	12	6			
	22	16			
	20	12			
	20	16			
Total		16			12
37	7	5	3	2	2
	2	2	1	1	4
	6	4	4	3	4
	7	2	2	1	1
	3	3	1	1	1
			1	1	1
Total		5			6
38	6	2	1	1	2
	16	4	1	1	1
	10	5	2	2	3
	10	3			
Total		4			3
39	6	2	1	1	2
	2	2	4	4	7
			1	1	1
Total		2			3
40			4	3	2
			1	1	1
			2	2	4
			1	1	1
Total					4

PANEL NUMBERS	PENETRATIONS LENGTH	PENETRATIONS WIDTH	PENETRATIONS LENGTH	PENETRATIONS WIDTH	PENETRATIONS DEPTH
41			2	1	3
			1	1	2
			1	1	1
			3	1	1
Total					4
42	20	7			
Total		1			
43	14	8			
	4	3			
Total		2			
44			3	1	1
			2	1	1
			1	1	3
Total					3
45	6	4	2	1	3
	7	3			
Total		2			1
46	4	2	4	3	5
	6	3	1	1	1
			2	1	2
			4	2	3
Total		2			4
47			2	1	2
			3	1	3
			1	1	1
			1	1	1
Total					4

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[redacted]

ORDNANCE 237 10 FEB 43
FORMERLY SPOTZ-F-221

PENETRATION OF SHELLS IN PANELS

DATE 8 Oct 47

PENETRATION OF SHELL 122mm, OF-462 LOADED AT/80

Soviet

IN PANELS WITH FACE OF 30° AND FEET

Sheet 5 of 12

Round No. 13

PANEL NUMBERS	PERFORATIONS		PENETRATIONS		
	LENGTH	WIDTH	LENGTH	WIDTH	DEPTH
48	3	3	8	2	2
	8	8	1	1	2
			1	1	2
			2	1	1
Total		2			4
49	7	3	1	1	2
	8	6	1	1	1
			4	2	2
			2	1	2
			4	3	3
			2	1	1
			2	2	1
			1	1	2
Total		2			8
50			1	1	2
			2	1	2
			2	1	1
			2	1	1
			2	2	1
			3	1	1
			1	1	2
			2	1	2
			3	2	3
Total					9
51	8	6	2	1	2
			3	1	1
			2	1	1
			3	2	9
			2	2	3
			1	1	1
			2	1	1

PANEL NUMBERS	PERFORATIONS		PENETRATIONS		
	LENGTH	WIDTH	LENGTH	WIDTH	DEPTH
51 cont			2	1	3
			2	1	1
			3	2	1
Total		1			10
52	12	7	2	1	2
			1	1	1
			4	1	3
			1	1	2
			2	2	1
			3	3	3
			4	2	8
Total		1			7
54	10	6	2	1	2
			2	1	4
			1	1	1
			2	1	2
			1	1	1
Total		1			5
55			1	1	1
			2	1	2
Total					2
56			1	1	1
Total					1
57			4	2	5
			3	3	3
			1	1	1
			4	2	2
Total					4

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[redacted]

ORDNANCE 13 FEB 49
FORMERLY SPOLE-EVI

PENETRATIONS ( ) SHELLS IN PANELS

LOT NUMBER ( ) DATE 6 ( ) 52
FIRING ROUND NUMBER
PROJECTILE NUMBER

PENETRATIONS OF SHELL 122 mm, OF-462 LOADED 27/30
IN PANELS WITH OBLIQUITY OF Soviet 30° AND FEET

XXXXXXXXX Sheet 6 of 12
XXXXXXXXX Round No. 13
MORTAR NUMBER

PANEL NUMBERS	PANEL EFFECT		PENETRATIONS		
	LENGTH	WIDTH	LENGTH	WIDTH	DEPTH
58.2	8	7	1	1	1
			1	1	1
Total		1			2
58.3			2	1	1
			1	1	1
Total					2
58.4			1	1	2
			2	2	2
			2	1	3
Total					3
58.5	7	7	3	2	2
	7	4			
Total		2			1
58.1	7	7	2	1	2
Total		1			1
59.3	7	4	5	2	8
	13	11			
Total		2			1
59.6	7	5			
	10	5			
Total		2			
60.1	10	8	2	2	4
			3	2	4
Total		1			2
60.3	12	7	3	3	2
	6	3			

PANEL NUMBERS	PENETRATIONS				
	LENGTH	WIDTH	LENGTH	WIDTH	DEPTH
CONTD					
60.3	4	3			
Total		3			1
60.4	13	6	1	1	1
Total		1			1
60.6	8	3	3	1	3
Total		1			1
61.1	11	5	3	2	3
			3	2	7
Total		1			2
61.3	13	12	1	1	1
	7	4	4	3	7
	7	3			
	4	2			
Total		4			2
61.4	3	3	2	2	1
	4	4	2	1	1
	4	4	2	1	7
			2	1	3
Total		3			4
61.5	12	12	2	1	1
Total		1			1
61.6	3	3	3	2	3
Total		1			1
62.1			2	1	3
Total					1

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[redacted]

ARMY-OO-ABERDEEN PROVING G... MD - 447

FORM NO. 1 FEB 48
FORMER NOTE F-261

PENETRATIONS SHELLS IN PANELS

LOT NUMBER
FIRING NUMBER
PROJECTILE NUMBER
DATE 8 Oct 52

PENETRATIONS OF SHELL 122mm, OF-462 LOADED AT/80
Soviet
IN PANELS WITH FACES OF 30' AND FEET

XXXX 17X Round No. 13
XXXX 17 Sheet 7 of 12
ROCKET NUMBER

PANEL NUMBERS	PERFORATIONS		PENETRATIONS		
	LENGTH	WIDTH	LENGTH	WIDTH	DEPTH
62.2	10	3	3	2	6
	13	1	3	1	4
	15	7	3	2	7
	5	2			
	4	3			
Total		5			3
.3	6	4	1	1	3
	4	3	3	2	3
			2	1	3
			3	2	4
			4	2	3
		2			5
	5	3	3	2	7
	8	3	3	2	3
	4	3	3	2	5
			1	1	1
			1	1	2
tal		3			5
62.5	4	4	3	2	3
			2	1	1
			2	1	2
Total		1			3
62.6	6	3	10	3	4
	10	7	2	1	4
			3	1	3
			3	3	1
Total		2			4
63.1	6	4	2	1	5
			2	1	2

PANEL NUMBERS	PERFORATIONS		PENETRATIONS		
	LENGTH	WIDTH	LENGTH	WIDTH	DEPTH
cont 63.1			2	1	5
			2	2	8
Total		1			4
63.2	6	4	2	2	6
	12	7	2	2	6
	6	3	1	1	2
	3	3	2	2	7
	8	5	2	1	2
Total		5			5
63.3	14	7	3	2	4
	12	7	3	3	4
	7	6	2	1	6
	20	16	2	1	7
	8	5	2	2	4
	3	3	2	1	2
	4	3			
	4	3			
	4	3			
Total		9			6
63.4	16	8	2	1	2
	12	9	1	1	3
	20	16			
	12	12			
	4	3			
	4	3			
Total		6			2
63.5	8	6	2	1	3
	8	5			
Total		2			1

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[redacted]

PENETRATION OF SHELLS IN PANELS

PENETRATIONS OF SHELL 122mm, OF-462 LOADED AP/BD
Soviet
IN PANELS WITH A FILL OF 30' AND FEET

LOT NUMBER ( )
TEST OR ORD NUMBER
PRIORITY NUMBER
XXXXXXXX Sheet 8 of 12
XXXXXXXX Round No. 13
LOCALITY NUMBER
DATE 8 Oct 52

PANEL NUMBERS	PANEL SECTIONS		PENETRATIONS			PANEL NUMBERS	PENETRATIONS		PENETRATIONS		
	LENGTH	WIDTH	LENGTH	WIDTH	DEPTH		LENGTH	WIDTH	LENGTH	WIDTH	DEPTH
53.6	S	8									
Total		1									
	TOTALS										
30' Panels		185			279						

CONFIDENTIAL

[redacted]

ARMY-ORD ABERDEEN PROVING GROUND MD 41

ORCL - 737 10 FEB 48
FORMERLY BRDTZ-F-291

PENETRATION OF SHELLS IN PANELS

LOT NUMBER | DATE 8 Oct 62
FIRING NUMBER
PRIORITY NUMBER
XXXXXXXX Sheet 9 of 12
XXXXXXXXX Round No. 13
ROCKET NUMBER

PENETRATIONS OF SHELL 122mm, OF-462 LOADED AT/80
Soviet
IN PANELS WITH RADII OF 60' AND FEET

PANEL NUMBERS	PERFORATIONS LENGTH	PERFORATIONS WIDTH	PENETRATIONS LENGTH	PENETRATIONS WIDTH	PENETRATIONS DEPTH
17			3	2	1
Total					1
20			8	2	2
Total					1
23			2	2	1
Total					1
24	7	3			
Total		1			
25			12	4	9
			4	4	8
Total					2
26	8	4			
Total		1			
27	5	4			
	6	4			
Total		2			
28			3	1	2
Total					1
29	8	4	2	1	2
	12	8	4	1	1
Total		2			2
30			6	5	4
Total					1

PANEL NUMBERS	PERFORATIONS LENGTH	PERFORATIONS WIDTH	PENETRATIONS LENGTH	PENETRATIONS WIDTH	PENETRATIONS DEPTH
31	4	3	8	2	8
	16	12			
	8	8			
	4	3			
Total		4			1
32	4	3	3	1	3
	3	3	4	2	3
	8	7	5	1	4
	7	3			
	6	4			
Total		5			3
33	4	4	2	1	1
	44	12			
	7	8			
Total		3			1
34	40	8	5	2	2
	10	6	3	2	9
	16	3	3	1	1
	14	9	5	2	3
	5	5	1	1	1
	20	8	2	1	1
	15	8	2	1	2
	3	3	3	2	3
	12	8			
	7	4			
Total		10			8

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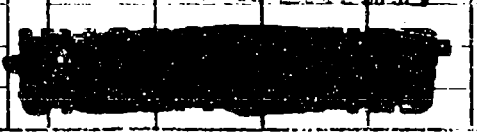

ORDNG-737 19 FEB 45
FORMERLY APG12-F-291

PENETRATION OF SHELLS IN PANELS

LOT NUMBER | DATE 8 Oct [illegible]
FIRING [illegible] NUMBER
PRIORITY NUMBER
XXXXXXXXX Sheet 10 of 12
XXXXXXXXX Round No. 13
ROCKET NUMBER

PENETRATION OF SHELL 122 OF-462 LOADED AT/80
Soviet
IN PANELS [illegible] OF 60' AND FEET

PANEL NUMBERS	PERFORATIONS LENGTH	PERFORATIONS WIDTH	PENETRATIONS LENGTH	PENETRATIONS WIDTH	PENETRATIONS DEPTH
35	4	3	12	4	2
	16	3	5	3	8
	13	7	3	2	4
	8	4	4	3	3
	32	10			
Total		5			4
	8	7	12	4	2
	20	6	12	2	2
	9	5	4	2	1
	28	9	6	5	4
	17	13			
	32	9			
Total		6			4
37			4	2	2
Total					1
38			22	2	4
Total					1
39	8	5			
Total		1			
41			10	4	2
Total					1
43	8	5	3	2	2
	7	4			
Total		2			1
44	22	6			
	12	7			
Total		2			

PANEL NUMBERS	PERFORATIONS LENGTH	PERFORATIONS WIDTH	PENETRATIONS LENGTH	PENETRATIONS WIDTH	PENETRATIONS DEPTH
46			3	2	1
Total					1
48			4	2	3
Total					1
49	8	6			
Total		1			
50	8	4	1	1	1
			3	3	2
Total		1			2
53			8	3	2
Total					1
54	7	4	2	1	1
	8	7	3	2	3
Total		2			2
55			1	1	1
			2	2	1
Total					2
56			2	1	1
			1	1	1
Total					2
57	9	7			
	4	2			
Total		2			

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[redacted]

ARMY [illegible] ABERDEEN PROVING GROUND MD 445

ORDNANCE [illegible] FORM 203
FORMERLY [illegible] 201

PENETRATIONS SHELLS IN PANELS

DATE 8 Oct 52

PENETRATIONS OF SHELL 12 cm, Obr 462 LOADED AT/80

IN PANELS MADE OF Soviet 60 AND FEET

XXXXXXXX Sheet 11 of 12

XXXXXXXX Round No. 13

PANEL NUMBERS	PANEL AREAS		PENETRATIONS			PANEL NUMBERS	PENETRATIONS		PENETRATIONS		
	LENGTH	WIDTH	LENGTH	WIDTH	DEPTH		LENGTH	WIDTH	LENGTH	WIDTH	DEPTH
58.3	6	8	1	1	1	62.1	9	5	6	3	5
	5	5				Total		1			1
Total		2			1						
						62.2	6	6	3	2	2
59.1	7	5	2	2	1		4	3	7	3	2
Total		1			1		10	5	2	2	1
							5	4	3	2	2
60.1	8	7	2	2	1		10	10			
	7	3	3	2	1		7	5			
	5	3				Total		6			4
Total		3			2						
						62.3	7	4			
60.2	12	9	3	2	4		8	6			
	8	5				Total		2			
	5	5									
Total		3			1	63.1	5	4	9	4	3
							7	6	3	2	2
60.3	10	8					4	3	2	1	1
Total		1					9	4	5	2	2
							7	4	5	5	3
61.1	6	4	1	1	1		10	7			
	5	4					8	7			
Total		2			1		4	2			
						Total		8			5
61.2	12	10	2	1	1						
	5	4	3	2	1	63.2	8	6	7	7	3
			2	2	1		8	4	2	1	1
Total		2			3		7	7	3	2	2
							5	4	4	3	2
61.3	8	7	3	3	2		5	4	1	1	1
			4	2	1		6	4	16	12	2
			4	2	1		4	2	1	1	1
Total		1			3		8	7	5	3	2
							34	31	3	2	1

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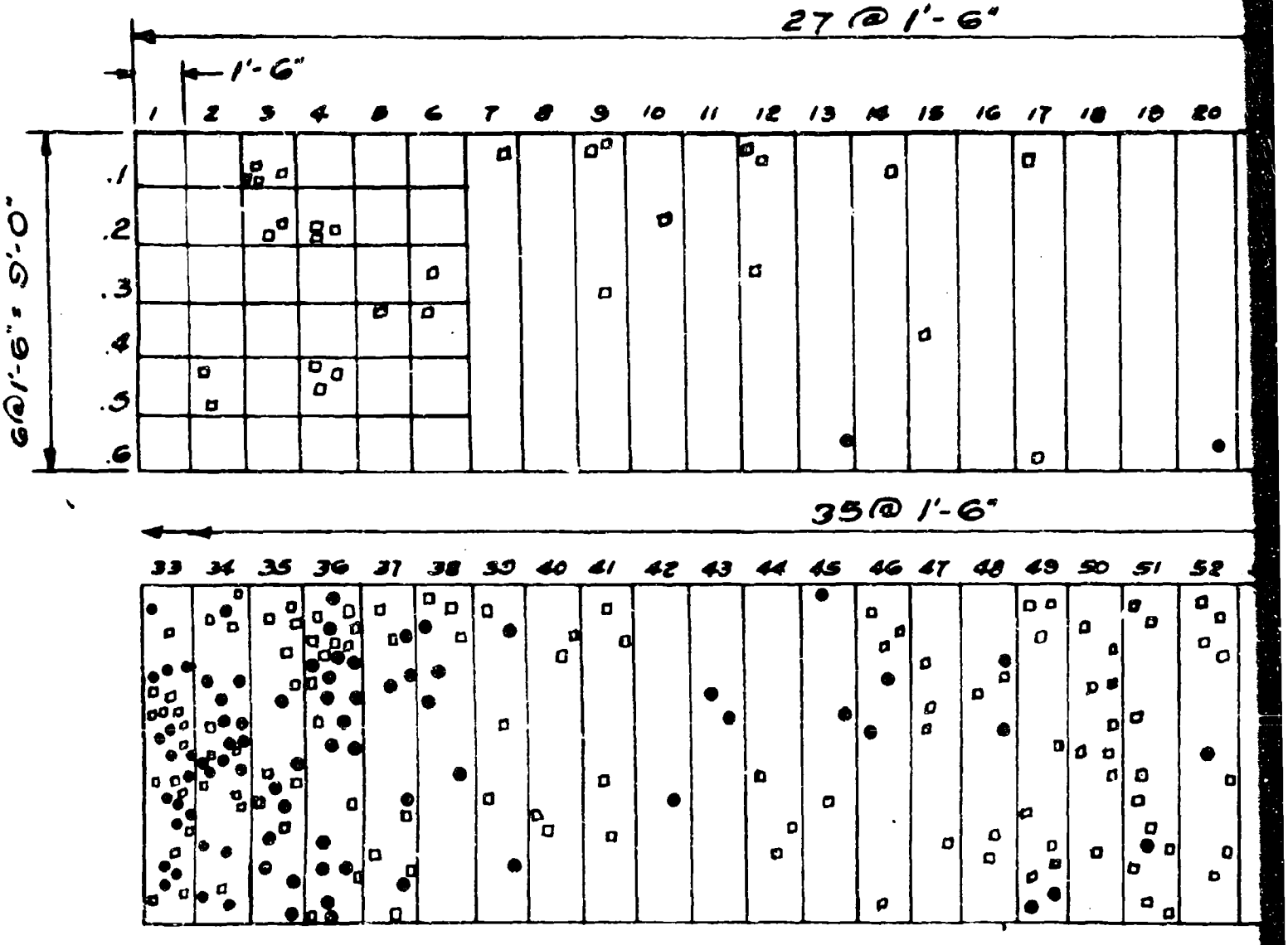
[redacted]

1

PANEL A

30 FT RADIUS 180° AR



1" NO. 3 PINE BOARDS (DRESSED) PLACED VERT

SHELL - 122 MM, OØ462, SOVIET

RD. NO. 13

O PERFORATIONS - 1

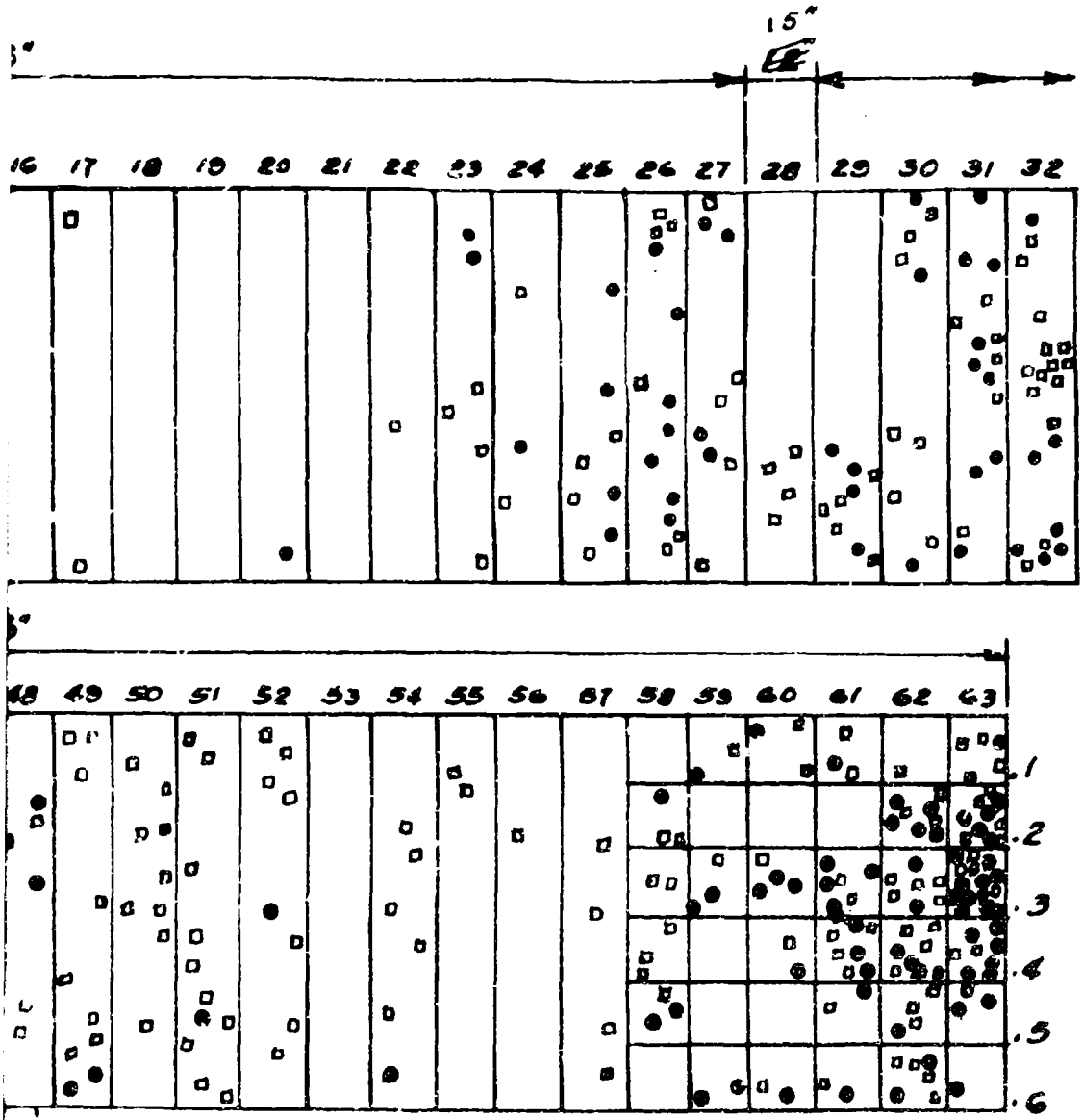
DATE FIRED - 8 OCTOBER 52

□ PENETRATIONS - 2

POSITION - HORIZONTAL

A

S 180° ARC



2

LACED VERTICALLY.

ERFORATIONS - 185

ENETRATIONS - 279

RANGE OPERATIONS SECTION

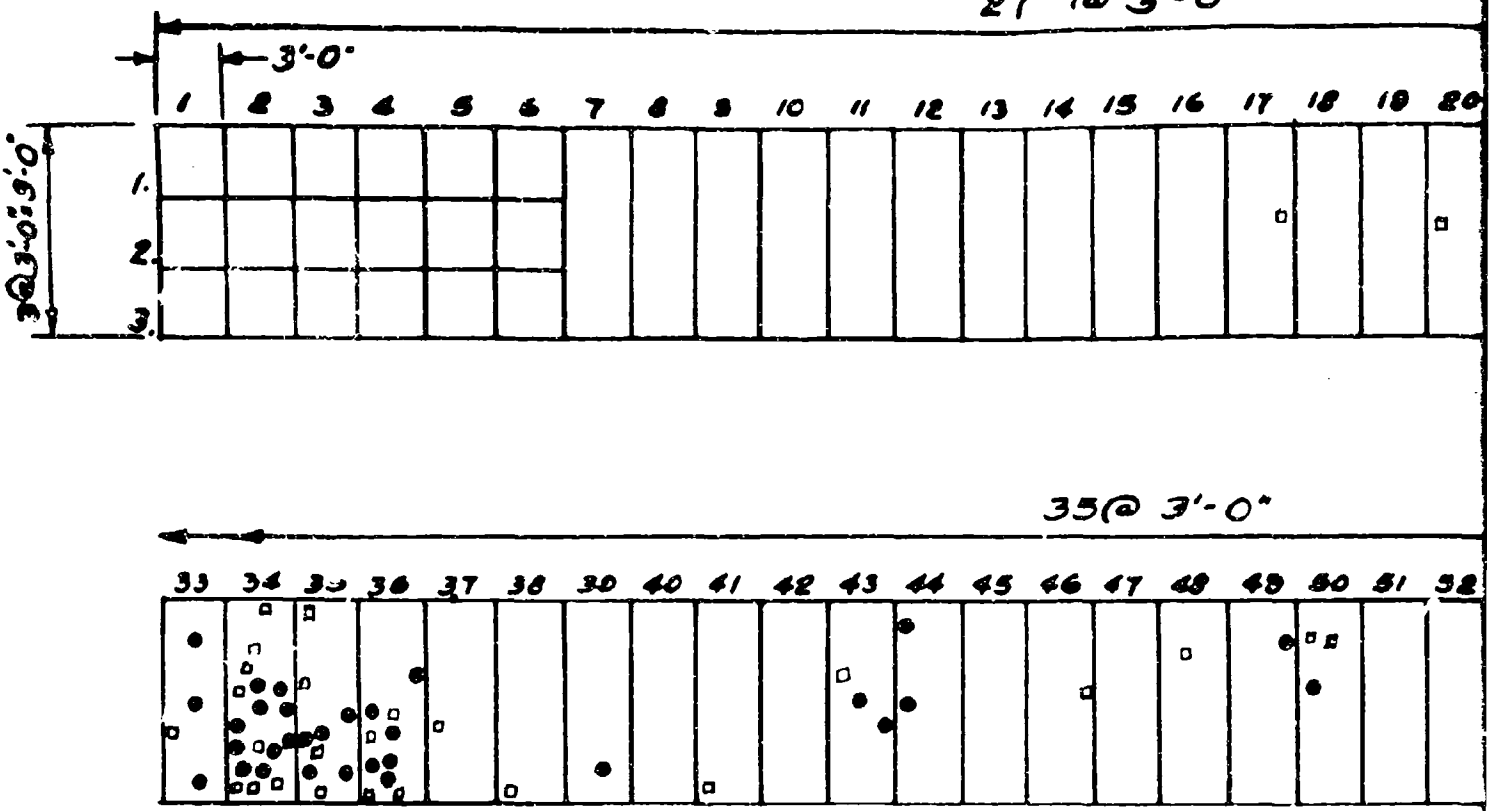
LAYOUT OF PANELS
FOR
NUMBER AND DISTRIBUTION
OF FRAGMENTS
(30 FT. RADIUS)

ABERDEEN PROVING GROUND MD.

OCT 27, 1944 APG 1187G-15 PR

PANEL B

60 FT. RADIUS 180° ARC



1

1" NO. 3 PINE BOARDS (DRESSED) PLACED VE

SHELL - 122 MM, OØ462, SOVIET

DATE FIRED - 8 OCTOBER 52

POSIT[illegible] - HORIZONTAL

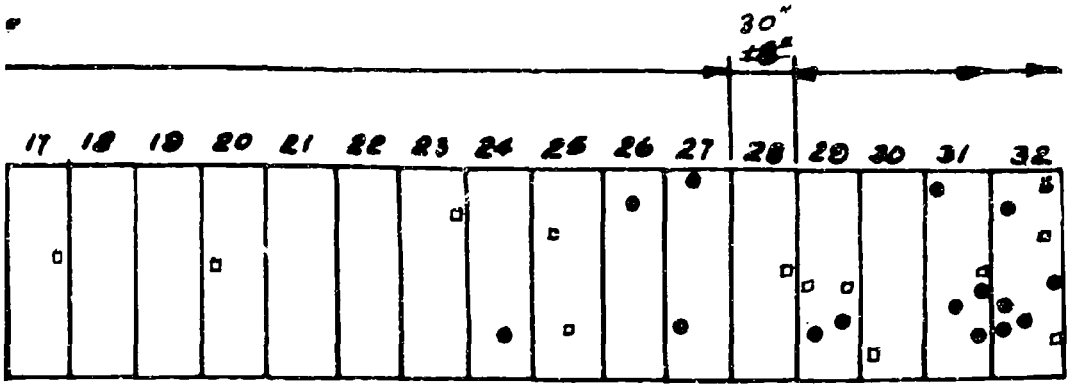
RD. NO 13

● PERFORATION

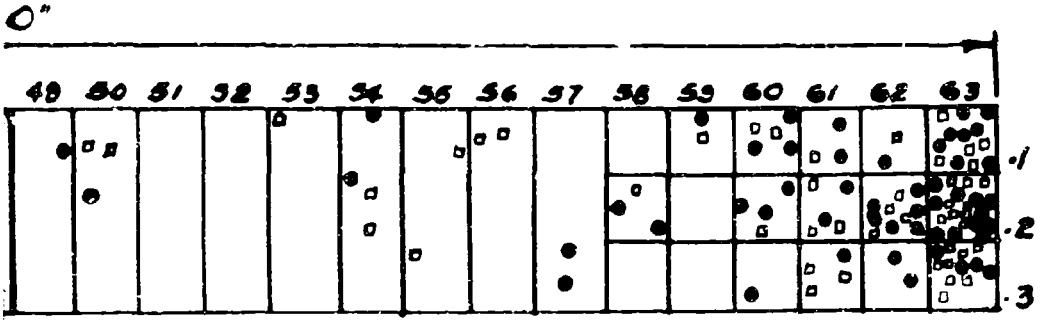
□ PENETRATIO

3

180° ARC



0"



2

ACED VERTICALLY.

PERFORATIONS - 97
PENETRATIONS - 84

RANGE OPERATIONS SECTION

LAYOUT OF PANELS
FOR
NUMBER AND DISTRIBUTION
OF FRAGMENTS
(60 FT. RADIUS)

211B

ABERDEEN PROVING GROUND, MD.
OCT. 27, 1944 APG 11876-14 PE

PENETRATIONS SHELLS IN PANELS

DATE 8 Oct 57

XXXXXXXXX Sheet 12 of 12
XXXXXXXXX Round No. 13

122mm, OF-4[illegible] LOADED AT/60
Soviet
60' AND FEET

	PERFORATIONS		PENETRATIONS			PANEL NUMBERS	PERFORATIONS		PENETRATIONS		
	LENGTH	WIDTH	LENGTH	WIDTH	DEPTH		LENGTH	WIDTH	LENGTH	WIDTH	DEPTH
63.3	17	12									
	15	7									
Total		11			9						
63.3	4	4	4	3	1						
	6	3	4	4	2						
	3	3	29	10	7						
	11	9	3	2	2						
			4	3	2						
			2	2	2						
			2	2	1						
			3	3	2						
Total		4			8						
	TOTALS										
60' Radius		97			84						

CONFIDENTIAL

[redacted]

CONFIDENTIAL

FRAGMENT VELOCITY DATA

Test of: Shell, HE, 122 mm, Soviet, M/60 Side Recovery Box Data

Proof Director Mr. O. L. Rogers Date Fired 30 June 1953

Distance from detonation point to target 22.59 feet. Round No. 18

Round statically detonated and velocity obtained by Photographic Methods.

Fragment No.	Weight, Grains	Velocity, f/s	Fragment No.	Weight, Grains	Velocity, f/s	Fragment No.	Weight, Grains	Velocity, f/s
1	114(2)	2785	17	N.R.		33	21	2720
2	N.R.		18	455	3003	34	262(2)	2804
3	4		19	23[illegible](3)	2866	35	5	2547
4	196	2301	20	153(2)	2933	36	9	2415
5	83		21	04	3204	37	137(2)	2304
6	197		22	303(2)	3204	38	2	
7	N.R.	2769	23	2		39	04	2330
8	1		24	2		40	90	2450
9	04		25	04		41	12	
10	133	3142	26	6		42	603	2525
11	7	2733	27	3	2918	43	22	
12	209	3142	28	9		44	35	
13	174[illegible](4)	3804	29	19	2439	45	122	
14	2		30	618	2476	46	97(2)	
15	N.R.		31	3		47	156(3)	
16	1		32	1		48	369(3)	2301

Average velocity 2751 ft/sec.
NV - no velocity recorded.
NR - not recovered.

(2) - total weight of two pieces.
(n) - total weight of n pieces.

Individual velocity inaccuracies are less than ± 3.9 % for the highest velocity and ± [illegible] % for the lowest velocity.

Sheet 1 of 2

CONFIDENTIAL

[redacted]

FRAGMENT VELOCITY DATA

Test of Shell, HE, 122mm, Soviet Side Recovery Box Data

Proof Director Mr. O. L. Rogers Date Fired 30 June 1953

Distance from detonation point to target 22.69 feet. Round No. 13

Round statistically detonated and velocity obtained by Photographic Methods.

Fragment No.	Weight, Grains	Velocity, f/s	Fragment No.	Weight, Grains	Velocity, f/s	Fragment No.	Weight, Grains	Velocity, f/s
49	8							
50	2							
51	44							
52	N.R.	3033						
53	194	3083						
54	3	3083						
55	279							
56	3	2918						
57	312	2971						
58	219	2918						
59	0+	3026						
60	N.R.							
61	124	2918						
62	N.R.	2833						
63	3							
64	.8	2415						

Average velocity 2751 ft/sec.
NV - no velocity recorded.
NR - not recovered.

(2) - total weight of two pieces.
(n) - total weight of n pieces.

Individual velocity inaccuracies are less than ± 3.9 % for the highest velocity and ± 3.3 % for the lowest velocity.

CONFIDENTIAL

ORD 1 FEB 48
FORMERLY FOTZ-F-291

PENETRATION OF SHELLS IN PANELS

LOT NUMBER | DATE 30 June 60
FIRING [illegible] NUMBER
PROJECT NUMBER
[illegible] Sheet 1 of 8
[illegible] Round No. 18
[illegible] NUMBER

PENETRATIONS OF SHELL 12[illegible], OF-462 LOADED AT/80
Soviet
IN PANELS WITH RADII OF 30' AND FEET

PANEL NUMBER	PERFORATIONS LENGTH	PERFORATIONS WIDTH	PENETRATIONS LENGTH	PENETRATIONS WIDTH	PENETRATIONS DEPTH
1.4			2	1	1
Total					1
2.5			2	1	1
Total					1
3.2			6	3	2
Total					1
3.4			8	3	2
Total					1
5.1			9	3	2
Total					1
6.3			5	3	2
Total					1
7			6	2	7
			1	1	1
Total					2
8			2	1	1
Total					1
10			16	6	5
Total					1
11			2	1	1
			1	1	1
Total					2
12			2	1	1
			2	2	1
Total					2

PANEL NUMBER	PERFORATIONS LENGTH	PERFORATIONS WIDTH	PENETRATIONS LENGTH	PENETRATIONS WIDTH	PENETRATIONS DEPTH
13			1	1	1
Total					1
14			1	1	1
Total					1
15	5	3			
Total		1			
17			1	1	2
			1	1	2
			2	1	1
Total					3
18			2	2	1
			3	1	2
Total					2
21			3	2	3
Total					1
22			3	2	4
			1	1	1
Total					2
23			1	1	1
			1	1	1
Total					2
24			1	1	1
			2	1	2
			4	2	3
Total	[redacted]				3

CONFIDENTIAL

ARMY OF AMERICAN PROVING GROUND MD 44[illegible]

OF-12-737 18 FEB 46
FORMERLY SPOTZ-F-291

PENETRATIONS OF SHELLS IN PANELS

LOT NUMBER | DATE 30 [illegible]
FIRING RECORD NUMBER
PRIORITY NUMBER
[illegible] Sheet 2 of 8
[illegible] Round No. 18
ROCKET NUMBER

PENETRATIONS OF SHELL 12[illegible], OF-4[illegible] LOADED AT/80
Soviet
IN PANELS WITH PANEL OF 30' AND FEET

PANEL NUMBERS	PERFORATIONS LENGTH	PERFORATIONS WIDTH	PENETRATIONS LENGTH	PENETRATIONS WIDTH	PENETRATIONS DEPTH
25			3	2	8
			2	2	2
			1	1	1
Total					3
26	13	6	1	1	1
	6	4	1	1	1
	7	5	1	1	1
			1	1	1
			2	2	4
Total		3			5
27	4	3	1	1	5
	30	7	3	2	3
			4	3	5
			1	1	1
Total		2			4
28	20	8	3	1	4
	6	4	1	1	1
	30	10	3	2	2
	38	8			
	8	5			
Total		5			3
	21	6	2	1	1
			3	2	2
			2	2	1
			2	1	3
			3	2	3
			6	3	4
Total		1			6

PANEL NUMBERS	PERFORATIONS LENGTH	PERFORATIONS WIDTH	PENETRATIONS LENGTH	PENETRATIONS WIDTH	PENETRATIONS DEPTH
30	12	6	3	2	2
			3	2	2
			4	2	1
			1	1	1
			1	1	1
			2	1	2
Total		1			6
31	38	6	3	2	4
	9	5	1	1	1
	8	6			
Total		3			2
32	18	8	2	1	2
	20	8	2	1	1
	16	8	5	2	4
	28	12	3	2	6
	5	4	3	2	4
			1	1	2
Total		5			6
33	3	2	3	3	6
	60	6	3	2	6
	6	5	2	2	2
	15	8	4	1	1
	6	2	6	3	6
	9	3	1	1	1
	5	4			
Total		7			6
34	11	6	5	3	7
	5	3	2	2	1
	50	11	3	2	2
	11	4	4	2	2

CONFIDENTIAL [redacted]

APMS-[illegible] ABERDEEN PROVING GROUND, MD. [illegible]

PENETRATIONS OF SHELLS IN PANELS

DATE 30 June 5[illegible]

PRIORITY NUMBER

[illegible] Sheet 3 of 8.

[illegible] Round No. 18

ROCKET NUMBER

PENETRATIONS OF SHELL 122mm, [illegible] LOADED [illegible]/60

Soviet

IN PANELS WITH RADII OF 30' AND FEET

PANEL NUMBERS	PERFORATIONS LENGTH	PERFORATIONS WIDTH	PENETRATIONS LENGTH	PENETRATIONS WIDTH	PENETRATIONS DEPTH
	20	8	1	1	1
	9	3	2	1	2
	14	10	3	2	4
	24	9	2	2	3
	8	4	4	3	4
	4	3	3	2	6
	7	3	1	1	1
	16	12			
	28	12			
	4	4			
	16	9			
Total		15			11
35	1[illegible]	3	4	2	9
	16	8	2	2	5
	64	9	3	2	4
	7	3	1	1	1
	3	3	3	2	2
	5	4	3	2	4
	13	11	4	1	1
	26	8	2	1	1
	32	11			
	20	6			
	42	9			
	12	11			
Total		12			8
36	6	4	2	2	1
	22	9	2	1	1
	8	7	4	3	4
	20	6	2	2	2
	6	4	2	2	1
	16	4	11	3	4
			9	3	4

PANEL NUMBERS	PERFORATIONS LENGTH	PERFORATIONS WIDTH	PENETRATIONS LENGTH	PENETRATIONS WIDTH	PENETRATIONS DEPTH
Total		6			7
37	6	4	1	1	1
			3	1	1
			3	2	4
			4	1	1
			6	4	8
			6	2	2
Total		1			6
38	8	5	2	1	1
Total		1			1
39	12	8	4	1	1
Total		1			1
40	16	9	2	2	3
	11	6			
Total		2			1
42	5	4	4	2	4
	9	6	2	2	2
	9	5			
	18	9			
	9	6			
Total		5			2
43			3	2	4
Total					1
44			8	3	7
[redacted]				3	3
Total					2

CONFIDENTIAL

ARMY-CO ABERDEEN PROVING GROUND NO. 445

ORDNANCE 10 FEB 47
FORMERLY AP0501-1A2

PENETRATION OF SHELLS IN PANELS

DATE 30 Jun

Soviet 122mm, D-463 Number AT/80

Sheet 4 of 8

Round No. 18

30' AND FEET

PANEL NUMBER	PERFORATIONS		PENETRATIONS		
	LENGTH	WIDTH	LENGTH	WIDTH	DEPTH
46			2	2	1
Total					1
47	12	6	3	2	1
			2	1	1
			1	1	1
Total					3
48	6	3	3	3	1
Total		1			1
50	10	7	2	2	1
			2	2	2
			2	1	1
			4	3	3
			3	2	1
Total		1			3
51			2	2	1
			1	1	1
			4	3	4
			2	2	1
			3	1	2
			1	1	1
			1	1	1
Total					7
52	4	3	5	3	2
			2	1	1
			2	1	1
			2	1	1
Total		1			2

PANEL NUMBER	PERFORATIONS		PENETRATIONS		
	LENGTH	WIDTH	LENGTH	WIDTH	DEPTH
53			1	1	1
			2	1	1
			1	1	1
Total					3
54			2	1	1
			2	1	1
Total					2
55	4	4	2	1	1
Total		1			1
56	4	3	1	1	1
	9	6	2	1	2
	7	5	4	3	7
	11	3	3	2	1
			2	1	1
Total		4			5
57	5	2	1	1	2
	8	2	1	1	1
			1	1	1
Total		2			3
59.4			4	2	2
Total					1
60.2	4	3			
Total		1			
60.3			4	3	2
			1	1	1
Total					2

[redacted]

CONFIDENTIAL

ORDNANCE 737 12 FEB 41
FORMERLY ORDNANCE 1-201

PENETRATIONS OF SHELLS IN PANELS

LOT NUMBER
FIRING NUMBER
DATE 30 June [illegible]
PRIORITY NUMBER
XXXXXXXX Sheet 5 of 8
XXXXXXXX Round No. 18
ROCKET NUMBER

PENETRATIONS OF SHELL 122mm, OF-462 LOADED TNT
IN PANELS WITH [illegible] 30' AND FEET

PANEL NUMBERS	PERFORATIONS LENGTH	PERFORATIONS WIDTH	PENETRATIONS LENGTH	PENETRATIONS WIDTH	PENETRATIONS DEPTH
61.1	20	7			
Total		1			
61.3	13	8	2	2	3
Total		1			1
61.4	8	6	3	1	1
Total		1			1
61.5	2	10			
Total		1			
62.1	5	3	3	1	2
			3	3	1
				2	1
Total		1			3
62.2			1	1	2
Total					1
62.3	30	22	2	2	2
	8	3	3	2	4
			3	3	6
Total		2			3
62.4			2	1	5
			3	2	2
Total					2
62.5	8	4	2	2	3
	5	4	3	2	3
Total		2			2

PANEL NUMBERS	PERFORATIONS LENGTH	PERFORATIONS WIDTH	PENETRATIONS LENGTH	PENETRATIONS WIDTH	PENETRATIONS DEPTH
63.2	3	3	4	3	4
	14	9	1	1	1
Total		2			2
63.3	10	4	8	8	3
	28	6	3	3	5
			1	1	1
Total		2			3
63.4	26	8	5	2	3
	15	15	2	2	2
	19	9	1	1	1
	14	3			
	5	4			
	16	8			
	9	5			
	10	7			
	6	4			
	6	4			
Total		10			3
63.5	5	4	4	3	2
	32	16			
	4	3			
Total		3			1
63.6	9	5			
Total		1			
TOTALS					
30' RADIUS		110			170

CONFIDENTIAL

[redacted]

ARMY OF ABERDEEN PROVING GROUND, MD.

PLOTTING SHEETS

Sheet 6 of 8

Round No. 13

			2	1	1	28	26	9	2	1	1
Total					1		4	4	4	2	2
									2	1	2
10			3	1	1				3	2	3
Total					1	Total		2			4
11			3	2	2	29	8	4	1	1	1
Total					1				2	2	5
									2	1	1
19			2	2	1	Total		1			3
Total					1						
						30	14	6	3	2	1
18			2	1	1				3	3	4
Total					1	Total		1			2
22			3	1	1	31	4	3	1	1	1
Total					1		12	5			
						Total		2			1
23			4	3	4						
Total					1	32	28	12	3	3	3
							6	8	2	2	1
25	8	4							5	4	6
Total		1				Total		2			3
26			2	1	2	33	24	6	8	2	2
			4	3	3		30	7	3	2	2
Total					2		13	9	2	1	1
							20	10	2	1	2
27	44	9	3	2	4				3	1	2
			2	1	1				2	1	3
			3	1	2	Total		4			6
Total		1			3						

[redacted]

PERFORATIONS SKILLS IN PANELS

Sheet 7 of 8

Round No. 18

PANEL NUMBER	PERFORATIONS LENGTH	PERFORATIONS WIDTH	PENETRATIONS LENGTH	PENETRATIONS WIDTH	PENETRATIONS
34	10	7	4	2	4
	12	6	4	3	2
	20	8			
Total		3			2
35	6	4	3	2	2
	51	8	12	5	4
			3	3	2
Total		2			3
36	8	6	2	2	1
	12	7	5	4	3
	12	3	2	2	1
	18	11			
	12	8			
	4	4			
	19	8			
	31	9			
	26	14			
Total		9			3
38	8	5	6	5	4
Total		1			1
39	10	6			
Total		1			
40			4	3	4
Total					1
41			1	1	1
Total					1

PANEL NUMBER	PERFORATIONS LENGTH	PERFORATIONS WIDTH	PENETRATIONS LENGTH	PENETRATIONS WIDTH	PENETRATIONS
43	6	5	2	1	1
			2	2	2
Total		1			2
45	8	6			
Total		1			
47	10	6			
Total		1			
48			1	1	1
			6	4	4
Total					2
51			1	1	1
Total					1
54			3	1	1
Total					1
55			4	4	6
Total					1
56			6	5	1
Total					1
59.1			5	4	3
			2	2	2
Total					2

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[redacted]

PENETRATION [illegible]

[illegible] 60'

[illegible]	[illegible]	WIDTH	[illegible]	[illegible]	[illegible]
61.1			6	3	4
Total					1
61.2	23	12	3	2	2
			4	2	2
			1	1	1
			2	1	1
Total		1			4
61.3	6	4	4	2	2
			5	2	6
Total		1			2
62.1	23	20	2	2	3
	20	9	5	3	4
Total		2			2
62.2	6	4	7	3	5
	10	6			
Total		2			1
62.3	4	4	3	2	2
	20	15	1	1	1
			2	2	4
			1	1	1
Total		2			4
63.1	18	12	4	3	2
	6	4	2	2	1
	6	4	4	3	5
Total		3			3

[illegible]	[illegible]	[illegible]	PENETRATION		
	LENGTH	WIDTH	LENGTH	WIDTH	[illegible]
63.2	6	4	5	4	[illegible]
	10	5	2	1	1
	8	4	2	2	1
	10	5	7	4	4
	16	12	3	2	3
	6	4	2	1	1
	19	12	5	4	5
	9	3	1	1	1
			1	1	1
Total		8			9
63.3	7	7	2	1	1
	12	6	2	1	1
	10	6	2	1	4
			2	1	2
			2	1	1
			1	1	2
Total		3			6
	TOTALS				
60' Radius		55			84

[redacted]

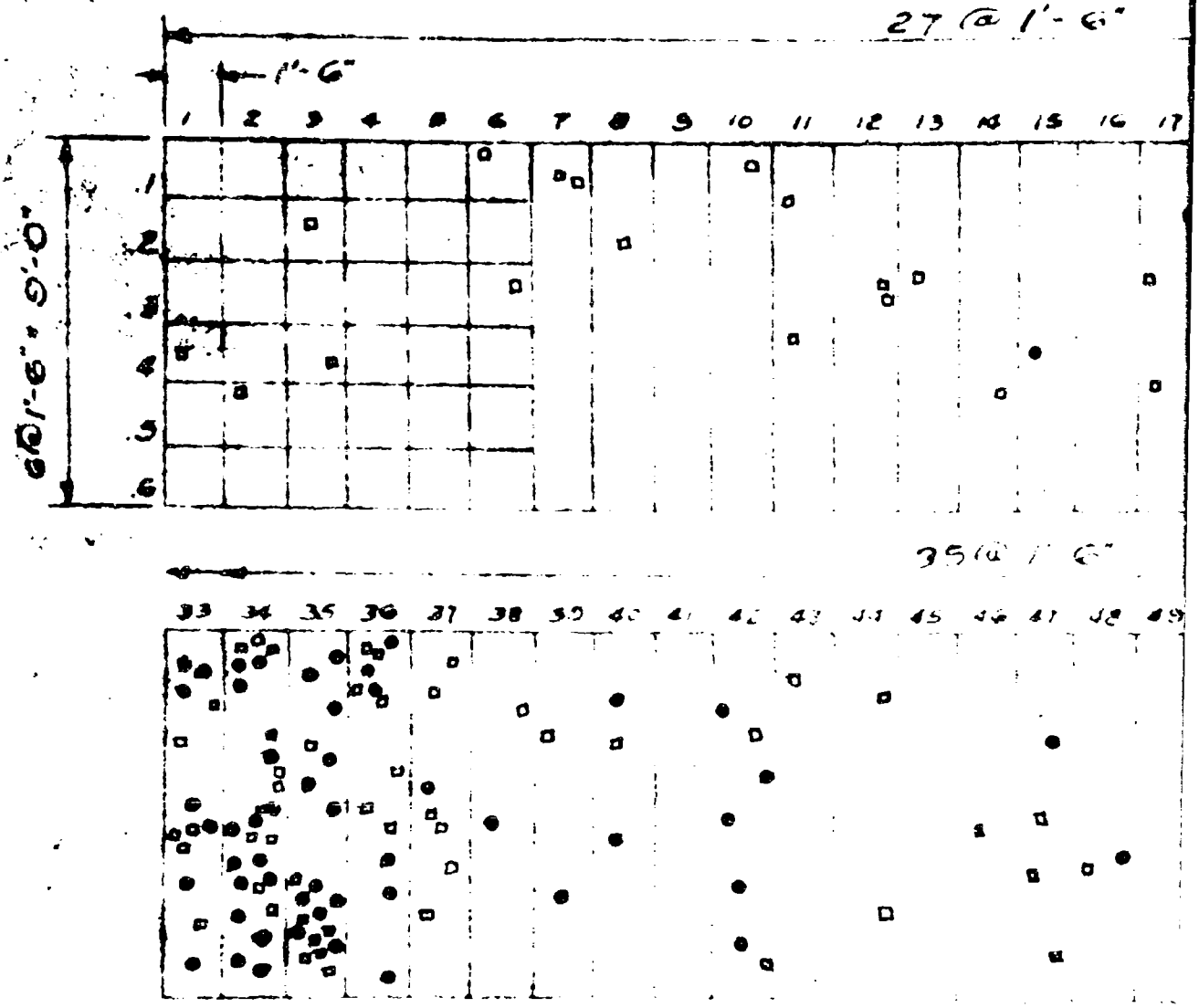
CONFIDENTIAL

ARMY [illegible] PROVING GROUND [illegible]

B-11122

CONCRETE PANEL A

30 FT RADIUS



1" NO 3 PINE BOARDS (DRESSED) PLACED

DATE: 30 JUNE 53 RD. NO. 18

PERFORATIONS:

SHELL: 122MM, SOVIET

PENETRATIONS:

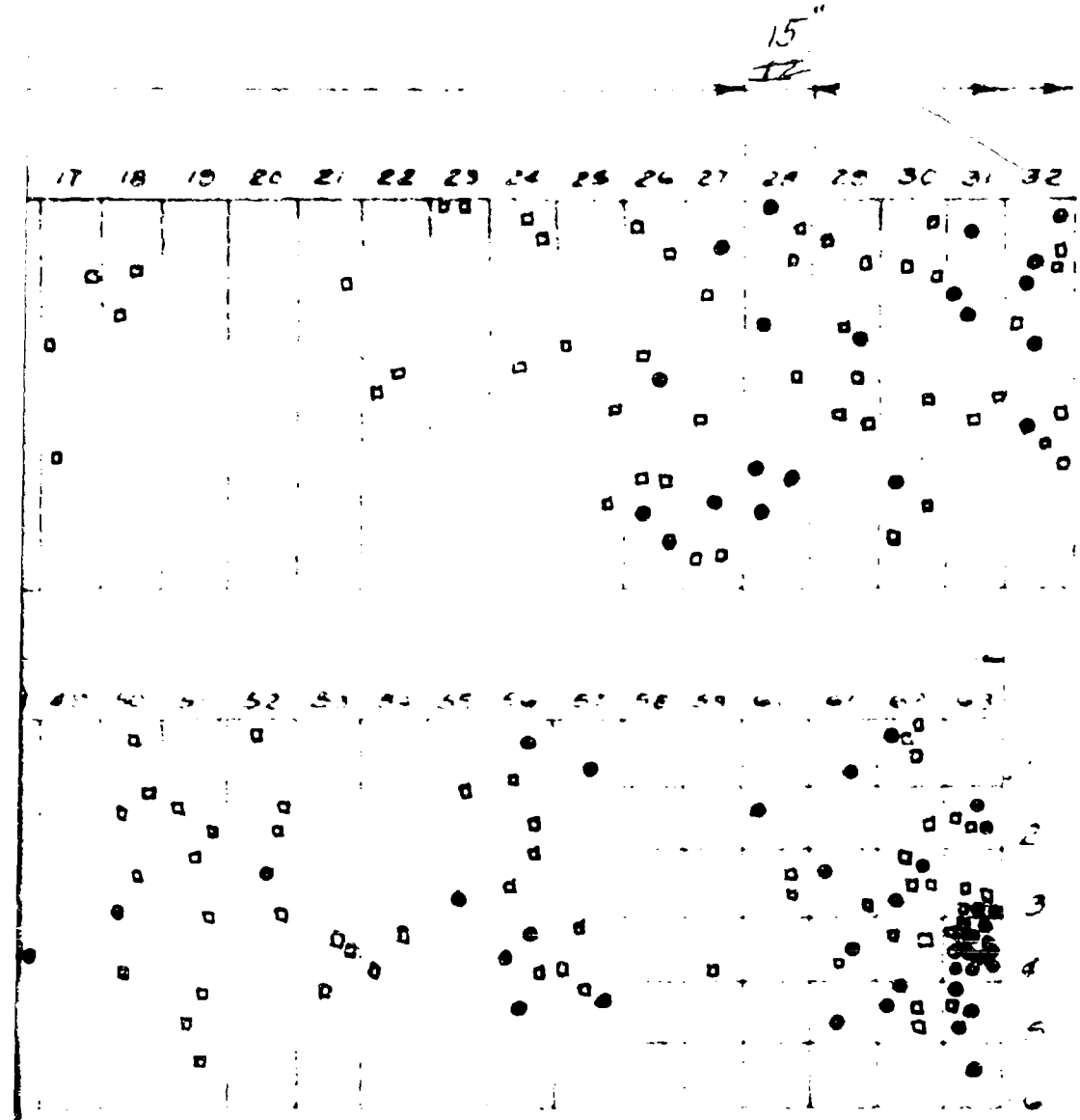
POSITION OF SHELL: HORIZONTAL

CONFIDENTIAL

1

A

180° ARC



2

ACED VERTICALLY

S: ● = 110

NS: □ = 170

AL

RANGE OPERATIONS SECTION

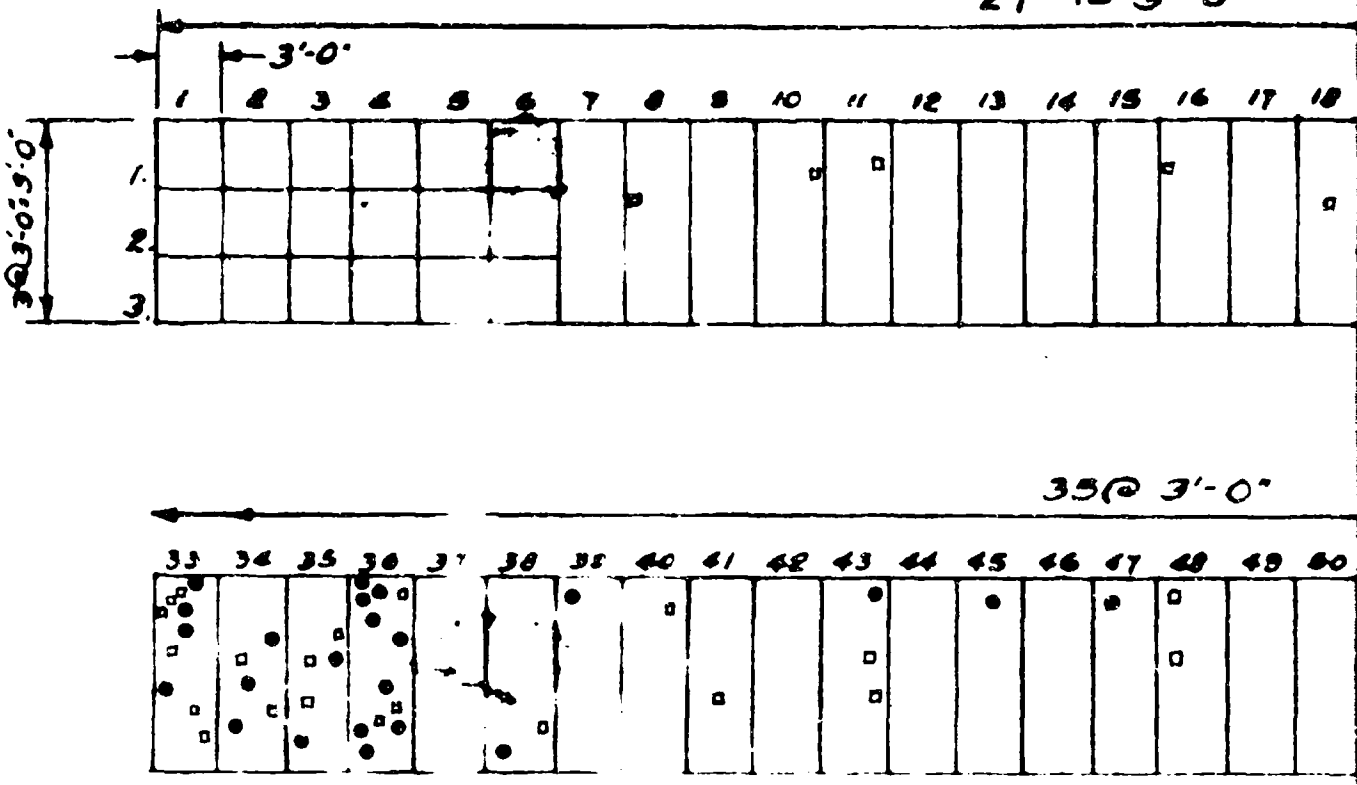
LAYOUT OF PANELS
FOR
NUMBER AND DISTRIBUTION
OF FRAGMENTS
(30 FT RADIUS)

ABERDEEN PROVING GROUND MD

OCT 27 1944 APG 11876-15

PANEL B

60 FT RADIUS 180



1" NO. 3 PINE BOARDS (DRESSED) PLACED

DATE: 30 JUNE 53 RD. NO. 18

PERFORATIONS: ●▪

SHELL: 122 MM, SOVIET

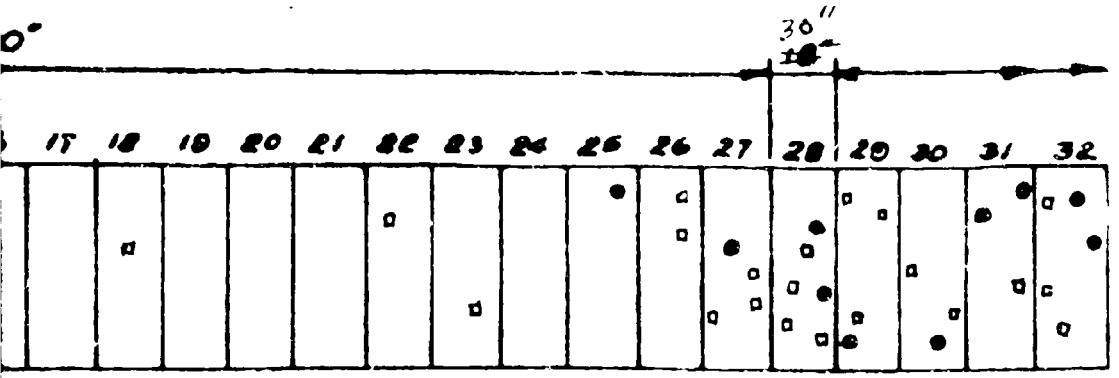
PENETRATIONS: □▪

POSITION OF SHELL: HORIZONTAL

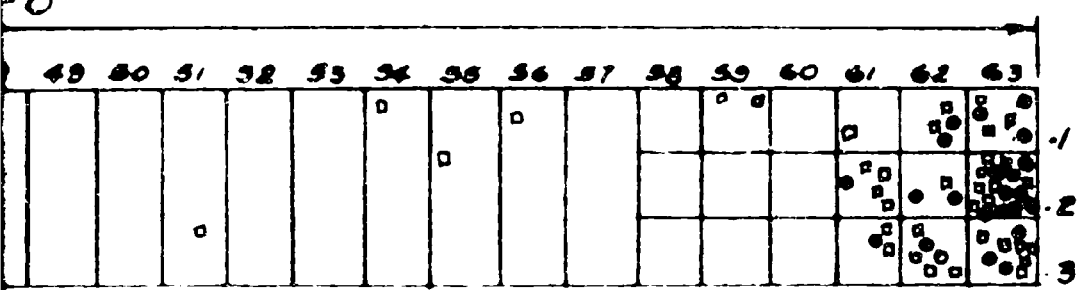
B

S 180° ARC

0°



-0°



2

LACED VERTICALLY.

: 0 = 55

: 0 = 84

RANGE OPERATIONS SECTION

LAYOUT OF PANELS
FOR
NUMBER AND DISTRIBUTION
OF FRAGMENTS
(60 FT. RADIUS)

ABERDEEN PROVING GROUND, MD
OCT. 27, 1944 APG 1876-14 PR

CONFIDENTIAL

[redacted]

FRAGMENT VELOCITY DATA

Test of Shell, HE, 120mm, Soviet AT/AP Side Recovery Box Data

Test Director Mr. O. L. Rogers Date Fired 15 July 1943

Distance from detonation point to target 22.73 feet. Round No. 10

Photoelectrically detonated and velocity obtained by Photographic Methods.

Fragment No.	Weight, Grains	Velocity, f/s	Fragment No.	Weight, Grains	Velocity, f/s	Fragment No.	Weight, Grains	Velocity, f/s
1	4	3302	17	N.R.		33	148	3405
2	14		18	N.R.		34	11	3460
3	0+		19	N.R.		35	151	3460
4	15(2)	2750	20	2		36	10	
5	N.R.		21	25	3260	37	16	2461
6	28	3065	22	0+	3065	38	N.R.	
7	2	3002	23	N.R.	3065	39	N.R.	2495
8	929(2)	3155	24	125	3155	40	N.R.	
9	171	2923	25	N.R.		41	3	
10	3	3107	26	6	3300	42	1290(3)	2384
11	13	2899	27	0+	3250	43	178	2535
12	243	3107	28	114	3158	44	2	
13	0+	2930	29	753	3155	45	117	
14	4		30	N.R.		46	3	
15	2		31	1	2899	47	50	
16	7	3065	32	2		48	339(2)	2701

Average velocity 3044 ft/sec.
NV - no velocity recorded.
NR - not recovered.

(2) - total weight of two pieces.
(n) - total weight of n pieces.

Individual velocity inaccuracies are less than ± 3.6 % for the highest velocity and ± 3.1 % for the lowest velocity.

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FRAGMENT VELOCITY DATA

Type of Shell, [illegible], 122mm. Soviet Side Recovery Box Data

Proj. Director Mr. O. L. Rogers Date Fired 15 July 195[illegible]

Distance from detonation point to target 22.73 feet. Round No. 19

Round statically detonated and velocity obtained by Photographic Methods.

Fragment No.	Weight, Grains	Velocity, f/s	Fragment No.	Weight, Grains	Velocity, f/s	Fragment No.	Weight, Grains	Velocity, f/s
49	100		65	1		81	59	
50	22		66	3	3202	82	69	3587
51	2		67	3				
52	10		68	0+	3155			
53	447		69	10				
54	N.R.		70	N.R.				
55	8		71	1				
56	0+		72	28	2930			
57	N.R.		73	N.R.	3155			
58	2		74	3	2823			
59	21	3107	75	5				
60	47	2649	76	203	3315			
61	159(2)		77	N.R.				
62	N.R.	3202	78	5				
63	103(2)		79	N.R.				
64	516	3202	80	201				

Average velocity 3044 ft/sec.
NV - no velocity recorded.
NR - not recovered.

(2) - total weight of two pieces.
(n) - total weight of n pieces.

Individual velocity inaccuracies are less than ± 3.6 % for the highest velocity
± 3.3 % for the lowest velocity.

Sheet 2 of 2

CONFIDENTIAL [redacted]

OBSOLETE IF FILLED AT FORMULEY SPOTS-F-241

PENETRATIONS IN SHELLS IN PANELS

LOT NUMBER | DATED 5 July

STRIP NUMBER | RUN NO.

FIRING RUN NUMBER

MASTER TEST Sheet 1 of 9

ATTACHMENT Round No. 19

TARGET NUMBER

GUN 120mm, M1 432 LOADED AT/60

SHELLS WITH NOSE AT 30' AND FEET

PANEL NUMBERS	PERFORATIONS		PENETRATIONS		
	LENGTH	WIDTH	LENGTH	WIDTH	DEPTH
3.3			2	1	1
Total					1
7			2	1	1
Total					1
8			6	4	4
Total					1
10			3	2	6
Total					1
11			4	3	4
			1	1	1
Total					2
12			2	1	1
Total					1
17			1	1	4
Total					1
19			1	1	1
			1	1	1
			2	2	2
Total					3
21			1	1	1
Total					1
22			1	1	1
Total					1
23	3	1			

PANEL NUMBERS	PERFORATIONS		PENETRATIONS		
	LENGTH	WIDTH	LENGTH	WIDTH	DEPTH
Total		1			
24	8	4	2	1	1
	16	6	2	2	1
			3	1	1
			4	3	5
Total		2			4
25	4	3	3	2	9
	4	3	2	1	6
			2	2	4
			3	1	4
			1	1	7
			1	1	1
Total		2			6
26	4	3	4	2	2
	13	5	2	1	1
	34	6	3	3	5
	8	5			
Total		4			3
27	19	4	4	3	3
	19	6	1	1	1
	19	8	1	1	1
	28	10			
Total		4			3
28			4	1	1
			2	1	1
			3	1	1
Total					3
29	2	1	2	1	2

[redacted]

CONFIDENTIAL

FORMERLY TO FOR 48
FORMERLY B 027-F-221

PENETRATIONS OF SHELLS IN PANELS

DOT NUMBER | DATE 15 [illegible] 50
FIRING [illegible] NUMBER
PRIORITY NUMBER
[illegible] Sheet 2 of 9
[illegible] Round No. 19
ROCKET NUMBER

PENETRATIONS OF SHELL 12 Prm. OF-462 LOADED AT/80
Soviet
IN PANELS WITH RADII OF 30' AND FEET

PANEL NUMBER	PERFORATIONS LENGTH	PERFORATIONS WIDTH	PENETRATIONS LENGTH	PENETRATIONS WIDTH	PENETRATIONS DEPTH
			2	1	2
			7	2	2
Total		1			3
30	5	3	3	1	2
	9	7	1	1	1
			2	2	4
			3	1	6
Total		2			4
31	8	8	3	1	3
	8	3	2	1	1
	20	5	1	1	1
	22	8	3	1	3
			2	1	1
			3	2	7
Total		4			6
32	12	5	1	1	3
	3	2	3	3	2
	50	8	2	1	2
	20	7	4	2	6
	11	5	2	1	2
	4	3	4	1	4
	4	2	1	1	1
	10	4	2	1	8
	10	4	2	1	2
	34	4	3	1	5
	6	4	2	1	2
	4	3	6	3	9
	23	7			
	6	6			
	3	3			
	10	3			

PANEL NUMBERS	PERFORATIONS LENGTH	PERFORATIONS WIDTH	PENETRATIONS LENGTH	PENETRATIONS WIDTH	PENETRATIONS DEPTH
32 cont	8	3			
Total		17			12
33	12	4	3	2	3
	12	6	1	1	3
	7	4	3	1	1
	14	4	1	1	1
	26	8	5	2	7
	4	3	1	1	1
	36	7	2	1	1
	18	8	3	2	8
	6	4	3	1	4
	8	3	6	3	5
	56	9			
	7	5			
	4	3			
Total		13			10
34	28	4	4	1	2
	15	4	2	1	2
	60	20	1	1	1
	24	9	4	1	2
	17	5	4	1	2
	15	3	5	4	4
	2	1	3	1	4
			1	1	3
Total		7			8
35	22	8	2	2	2
	22	9	4	1	2
	14	7	4	2	2
	14	5	3	2	2
	14	6	1	2	2
	38	8	3	3	3

CONFIDENTIAL

[redacted]

ARMY, CHESTER-SEA PROVING GROUND, MD.

DRDW-TAT 19 FEB 41
FORMERLY 3-2-1-P-201

PENETRATION OF SHELLS IN PANELS

LOT NUMBER
DATE 15 July 53
FIRING R[illegible] NUMBER
PRIORITY NUMBER
[illegible] Sheet 3 of 9
[illegible] Round No. 19
ROCKET NUMBER

PENETRATION OF SHELL 122mm, OF-462 LOADED AT/80
Soviet
IN PANELS [illegible] 30' AND FEET

PANEL NUMBER	PERFORATIONS LENGTH	PERFORATIONS WIDTH	PENETRATIONS LENGTH	PENETRATIONS WIDTH	PENETRATIONS DEPTH
35 cont	24	13	2	2	3
	17	5	2	1	1
	3	2	1	1	2
	6	4	2	1	1
	49	14	2	1	3
	25	8	5	4	4
Total		12			12
36	9	6	8	3	8
	10	6			
	34	10			
	16	5			
	5	5			
	8	4			
Total		6			1
37	11	5	5	1	4
	14	8	3	2	1
Total		2			2
39	7	6			
Total		1			
40	3	2	4	2	1
Total		1			1
41			1	1	1
			1	1	2
			1	1	1
Total					3
42		4			
Total		1			

PANEL NUMBERS	PERFORATIONS LENGTH	PERFORATIONS WIDTH	PENETRATIONS LENGTH	PENETRATIONS WIDTH	PENETRATIONS DEPTH
43	12	10	2	2	2
	11	11	1	1	1
			3	2	5
Total		2			3
44	6	2	1	1	1
	5	3	3	3	3
	8	4	1	1	1
Total		3			3
45	8	3	2	2	2
			1	1	1
Total		1			2
46			2	2	2
			4	3	9
Total					2
47			5	2	3
			2	1	1
			1	1	1
			2	1	1
			5	3	5
			1	1	1
Total					6
48			2	1	1
			1	1	1
Total					2
49			1	1	1
			2	2	1
			2	2	6
			2	1	1

CONFIDENTIAL

[redacted]

ARMY-GB-ABERDEEN PROVING GROUND, MD

OBRM 237 10 FEB 48
FORMERLY BRL-F-241

PENETRATIONS SHELLS IN PANELS

LOT NUMBER

FIRING NUMBER

PROJECTILE NUMBER

MATERIAL Sheet 4 of 9

TARGET NUMBER Round No. 19

POINT OF IMPACT OF SHELL 188 m, 05-030 LOADED AP/BC

IN PANEL WITH SIDE OF Soviet 801 AND FEET

PANEL NUMBERS	PERFORATIONS		PENETRATIONS		
	LENGTH	WIDTH	LENGTH	WIDTH	DEPTH
			3	2	3
			2	1	1
			1	1	1
			2	1	1
			1	1	1
Total					9
52	4	2	2	1	3
			1	1	1
			2	1	2
			2	1	3
			2	1	1
			1	1	7
			2	1	2
			1	1	1
			1	1	1
			1	1	1
			1	1	1
			2	1	1
			2	1	1
			1	1	1
			2	2	1
Total		1			16
51	12	5	3	1	1
	9	5	2	1	1
	4	3	3	2	2
			1	1	1
			3	2	2
			3	2	2
			2	1	2
			1	1	1
			3	1	1

PANEL NUMBERS	PERFORATIONS		PENETRATIONS		
	LENGTH	WIDTH	LENGTH	WIDTH	DEPTH
			2	1	1
			3	2	1
			2	2	2
Total		3			12
52	12	5	1	1	2
			1	1	1
			2	3	7
			2	1	1
			1	1	1
			1	1	1
			2	1	1
			2	1	1
			1	1	1
Total		1			9
53			2	1	1
			5	2	3
			1	1	1
			3	3	3
			3	3	5
			2	1	1
			2	1	2
Total					7
54			2	1	2
Total					1
55	4	3	2	1	1
			1	1	1
Total		1			2
56			2	1	1
Total					1

[redacted]

PENETRATIONS OF SHELLS IN PANELS

PENETRATIONS OF SHELL 122mm, OF-462 LOADED AT/SD

Soviet

IN PANELS WITH RADII OF 30' AND FEET

DATE 15 [illegible] 58

FIRING RANGE NUMBER

PRIORITY NUMBER

Sheet 5 of 9

Round No. 19

ROCKET NUMBER

PANEL NUMBERS	PERFORATIONS LENGTH	PERFORATIONS WIDTH	PENETRATIONS LENGTH	PENETRATIONS WIDTH	PENETRATIONS DEPTH
57			2	1	1
			2	1	1
			2	2	1
			2	1	2
Total					4
58.1			2	1	1
			4	1	1
Total					2
58.4			3	2	1
Total					1
58.5			2	1	1
Total					1
58.6			1	1	1
Total					1
59.3			2	1	1
Total					1
59.5			2	1	1
			1	1	1
Total					2
60.4	4	4	1	1	1
	6	4	2	1	2
	7	3	1	1	1
	18	12			
Total		4			3
.5			1	1	1
			1	1	1

PANEL NUMBERS	PERFORATIONS LENGTH	PERFORATIONS WIDTH	PENETRATIONS LENGTH	PENETRATIONS WIDTH	PENETRATIONS DEPTH
			3	2	4
			4	4	6
Total					4
60.6	8	5			
	4	3			
Total		2			
61.2	27	17	1	1	1
Total		1			1
61.3			2	1	2
Total					1
61.4	3	2			
Total		1			
61.5	5	3	3	2	6
	13	12	3	2	2
			1	1	1
Total		2			3
61.6	16	12			
Total		1			
62.2			1	1	1
			1	1	1
Total					2
62.3	14	3	1	1	1
	3	2			
Total	[redacted]				1
62.4	7	6			

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ARMY—DA—ABERDEEN PROVING GROUND MD 44

OSCE - 737 [illegible]
FORMERLY [illegible]

PENETRATIONS OF SHELLS IN PANELS

LOT NUMBER
TIRING NUMBER
PROJECTILE NUMBER
[illegible] Sheet 6 of 9
[illegible] Round No. 19
ROCKET NUMBER

DATE 1[illegible] July [illegible]

[illegible] OF SHELL 12[illegible] [illegible]462 LOADED [illegible]T/80
Soviet
IN PANEL [illegible] 30' AND FEET

PANEL NUMBERS	PERFORATIONS LENGTH	PERFORATIONS WIDTH	PENETRATIONS LENGTH	PENETRATIONS WIDTH	PENETRATIONS DEPTH
Total 63.3		1			
62.5			5	2	7
			1	1	1
			2	2	6
			2	2	1
			1	1	1
Total					5
62.6	8	5	2	1	1
	12	8			
Total		2			1
63.1	20	20	2	2	2
			1	1	1
Total		1			2
63.2			1	1	1
Total					1
63.3	10	4	3	2	3
	18	14	5	4	8
	4	3	5	4	9
Total		3			3
63.4	16	13	4	3	4
	16	16	5	2	7
	4	3	3	2	4
	14	9	5	3	4
	3	3	3	3	5
	12	10			
	8	5			
	12	8			
Total		8			5

PANEL NUMBERS	PERFORATIONS LENGTH	PERFORATIONS WIDTH	PENETRATIONS LENGTH	PENETRATIONS WIDTH	PENETRATIONS DEPTH
63.5	14	7	3	1	1
	20	10	3	1	4
	5	3	1	1	1
	14	14			
Total		4			3
	TOTALS				
30' Radius		124			216

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[redacted]

PENETRATIONS OF SHELLS IN PANELS

Sheet 7 of 9

Soviet

Panel Number	Perforations		Penetrations		
	Length	Width	Length	Width	Depth
12			4	3	5
Total					1
13			3	2	2
Total					1
22			1	1	1
Total					1
24			2	2	3
Total					1
25			4	3	4
			4	3	3
Total					2
26	3	8	1	1	1
	7	4			
Total		2			1
27	22	5	1	1	1
	17	4	2	1	1
			1	1	1
			5	4	5
Total		2			4
28	10	8			
	22	5			
Total		2			
29			4	2	2
Total					1

Panel Number	Perforations		Penetrations		
	Length	Width	Length	Width	Depth
30	13	7			
	10	6			
Total		2			
31	8	4	2	2	4
	9	5	2	2	5
			3	2	1
			3	2	2
Total		2			4
32	16	5	1	1	1
	15	6	1	1	1
	15	5			
Total		3			2
33	6	5	3	2	2
	4	3	4	3	4
	16	4	1	1	1
	7	3			
Total		4			3
34	26	10			
	14	8			
	8	5			
	78	13			
Total		4			
35	11	11	1	1	1
	12	8	1	1	1
	18	7	3	3	2
	5	4	4	1	1
	13	4			
Total		5			4

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PENETRATIONS OF SHELLS IN PANELS

DATE 15 [illegible]

PRIORITY NUMBER

Sheet 8 of 9

Round No. 19

[illegible] 12[illegible], OF-402 LOADED AT/[illegible]

[illegible] 60' AND FEET

PANEL NUMBERS	PENETRATIONS LENGTH	PENETRATIONS WIDTH	PENETRATIONS LENGTH	PENETRATIONS WIDTH	PENETRATIONS DEPTH
36	11	[illegible]	3	2	2
	34	10			
	6	3			
	9	5			
	18	13			
Total		5			1
37	12	3	2	1	1
	5	2	2	2	1
			3	2	8
			5	3	1
Total		2			4
38	10	4	2	2	1
	7	4	2	1	1
			3	1	1
Total		2			3
39	4	3	1	1	1
Total		1			1
40	5	3	2	1	1
Total		1			1
42	6	4	3	2	2
	11	8	3	2	3
Total		2			2
44	7	3			
Total		1			
		[redacted]			

PANEL NUMBERS	PENETRATIONS LENGTH	PENETRATIONS WIDTH	PENETRATIONS LENGTH	PENETRATIONS WIDTH	PENETRATIONS DEPTH
49	7	4	7	4	1
Total		1			1
50			2	1	1
			3	2	2
			3	2	4
Total					3
51			1	1	1
Total					1
53	8	6	1	1	1
			3	2	2
			2	1	1
			2	1	1
Total		1			4
54	11	5			
Total		1			
55			1	1	1
			12	5	6
Total					2
56			4	1	1
Total					1
59.2			4	2	2
Total					1
61.1	22	16	3	2	1
			2	2	1
			2	1	1
Total		1			3

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ARMY OF CARTRIDGE PROVING GROUND, MD.

PENETRATIONS SHELLS IN PANELS

DATE 15 July 5[illegible]

PENETRATIONS OF SHELL 122mm, OF-[illegible] LOADED [illegible]/80

Soviet

IN PANELS WITH RADII OF 60' AND FEET

Sheet 9 of 9

Round No. 19

PANEL NUMBER	PENETRATIONS LENGTH	PENETRATIONS WIDTH	PENETRATIONS LENGTH	PENETRATIONS WIDTH	PENETRATIONS DEPTH
61.2	8	4	2	2	2
	18	7			
Total		2			1
61.3	16	14	3	1	1
Total		1			1
62.1	16	12	2	1	1
			2	1	1
			3	2	1
			9	2	2
			6	4	4
			2	1	2
			5	3	2
			1	1	1
Total		1			8
62.2			2	2	1
			3	2	1
			1	1	1
Total					3
62.3			1	1	1
Total					1
63.1			1	1	1
			4	2	2
			1	1	1
Total					3
63.2	5	3	1	1	1
	21	12	1	1	1
	14	14			
Total		3			2

PANEL NUMBER	PENETRATIONS LENGTH	PENETRATIONS WIDTH	PENETRATIONS LENGTH	PENETRATIONS WIDTH	PENETRATIONS DEPTH
63.3	10	6	3	2	2
	13	6	3	2	3
	13	8	6	4	2
Total		3			3
	TOTALS				
60' Radius		54			75

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[redacted]

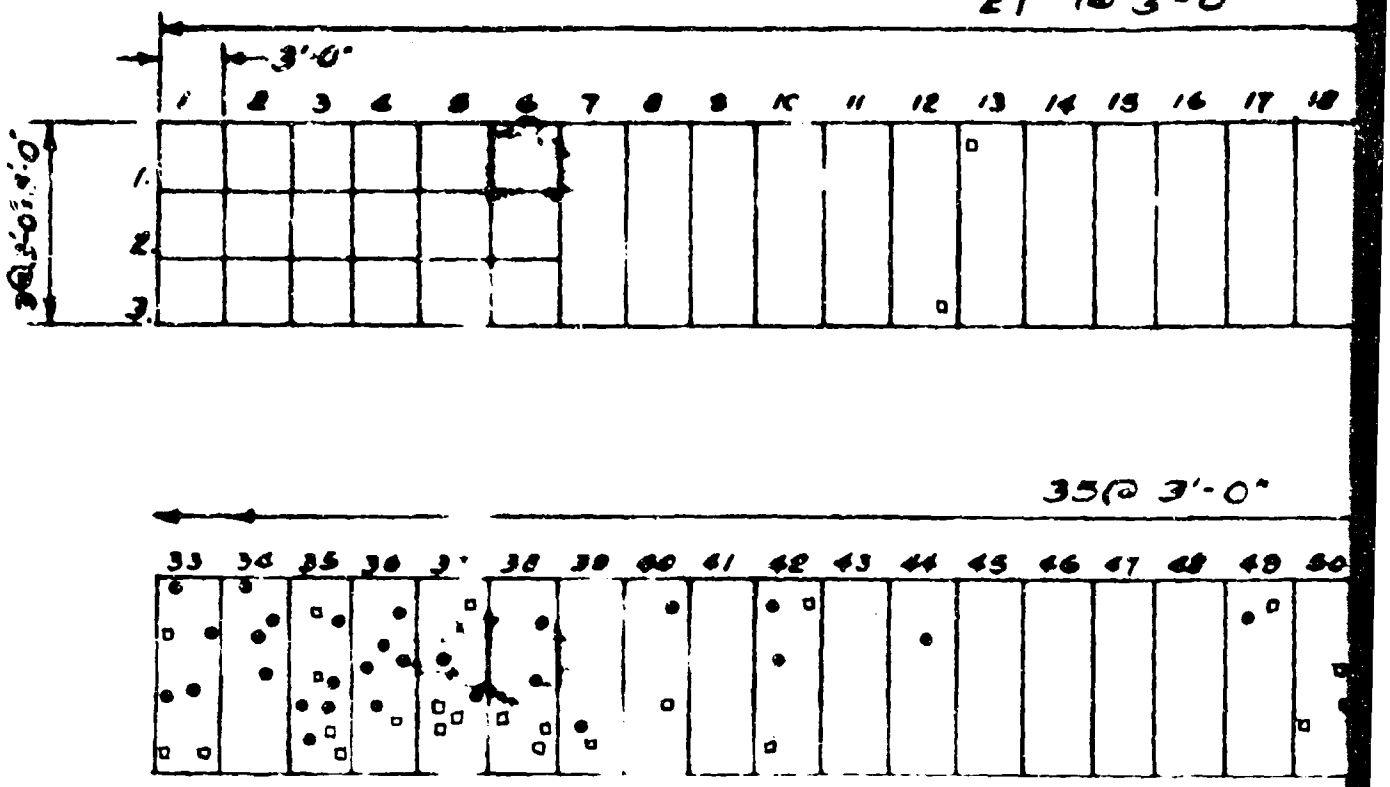
ARMY ICE-ABERDEEN PROVING GROUND MD

19

B-11822

PANEL B

60 FT RADIUS 180



1

1" NO. 3 PINE BOARDS (DRESSED) PLACED

DATE: 15 JULY 53 RD. NO. 19

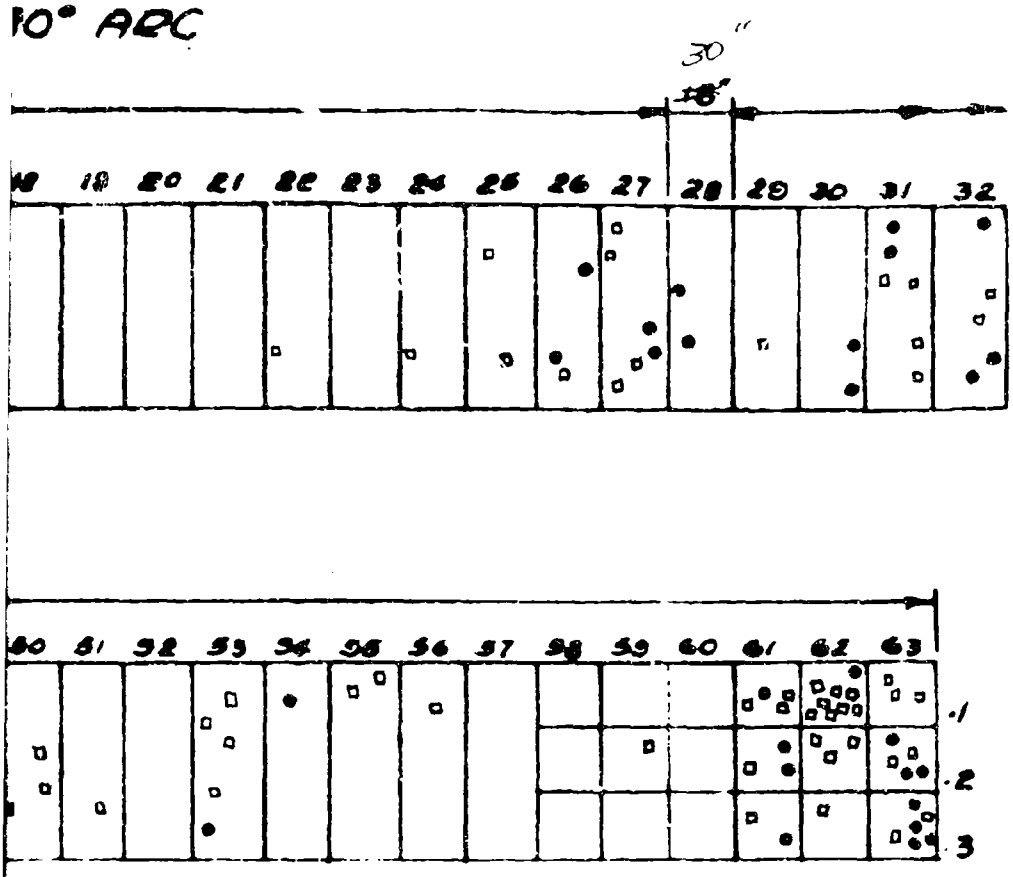
PERFORATIONS: ● =

SHELL: 122MM, SOVIET

PENETRATIONS: □ =

POSITION OF SHELL: HORIZONTAL

10° ARC



ED VERTICALLY.

2

54

75

RANGE OPERATIONS SECTION

LAYOUT OF PANELS
FOR
NUMBER AND DISTRIBUTION
OF FRAGMENTS
(60 FT. RADIUS)

2403

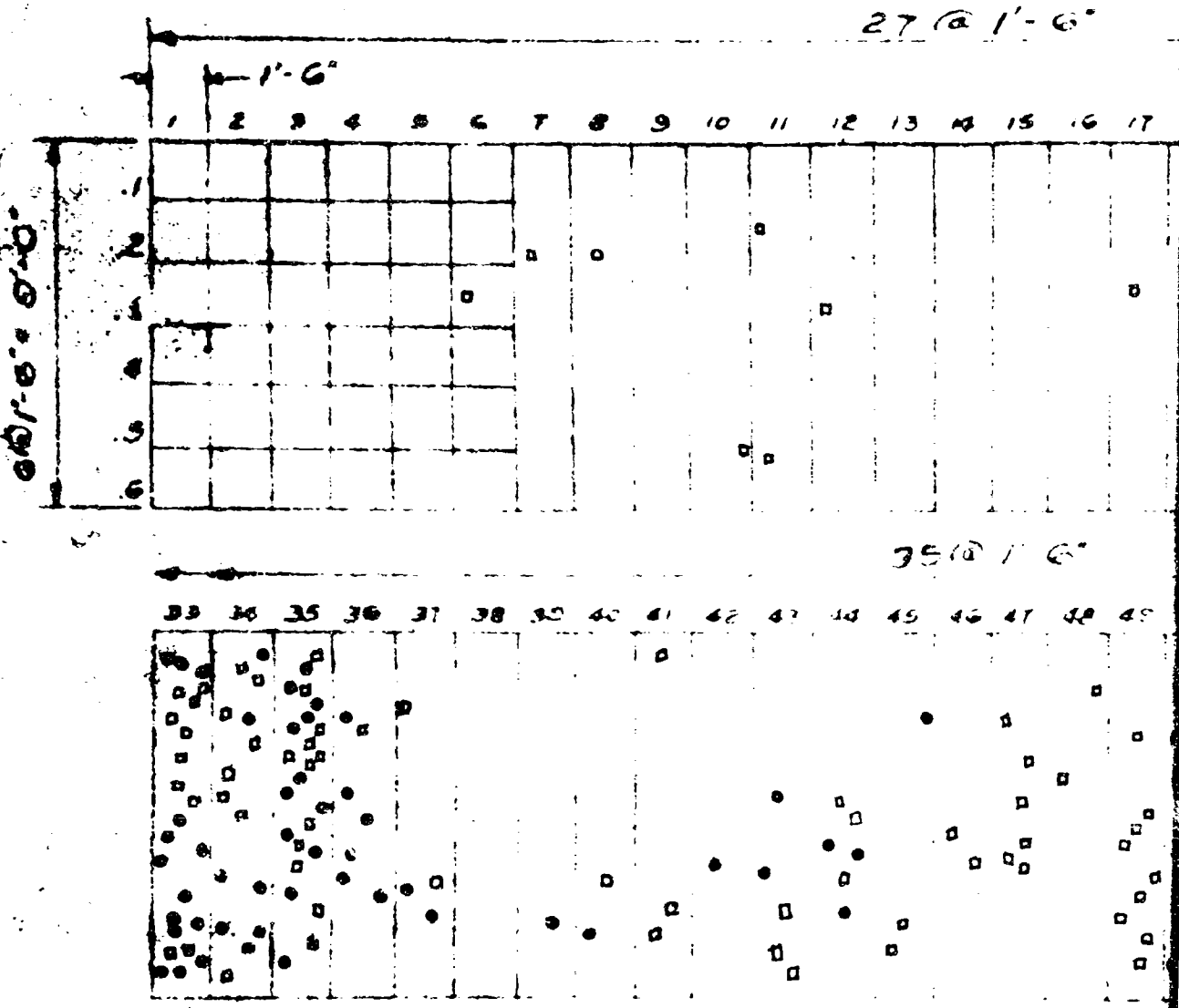
ABERDEEN PROVING GROUND, MD
OCT. 27, 1944 ANG 11876-14 PE

B-11822

CONFIDENTIAL

PANEL A

30 FT RADIUS



1" NO. 3 PINE BOARDS (DRESSED) PLAC

DATE: 15 JULY 53 RD.NO. 19

PERFORATIONS: ●

SHELL: 122MM SOVIET

PENETRATIONS: □

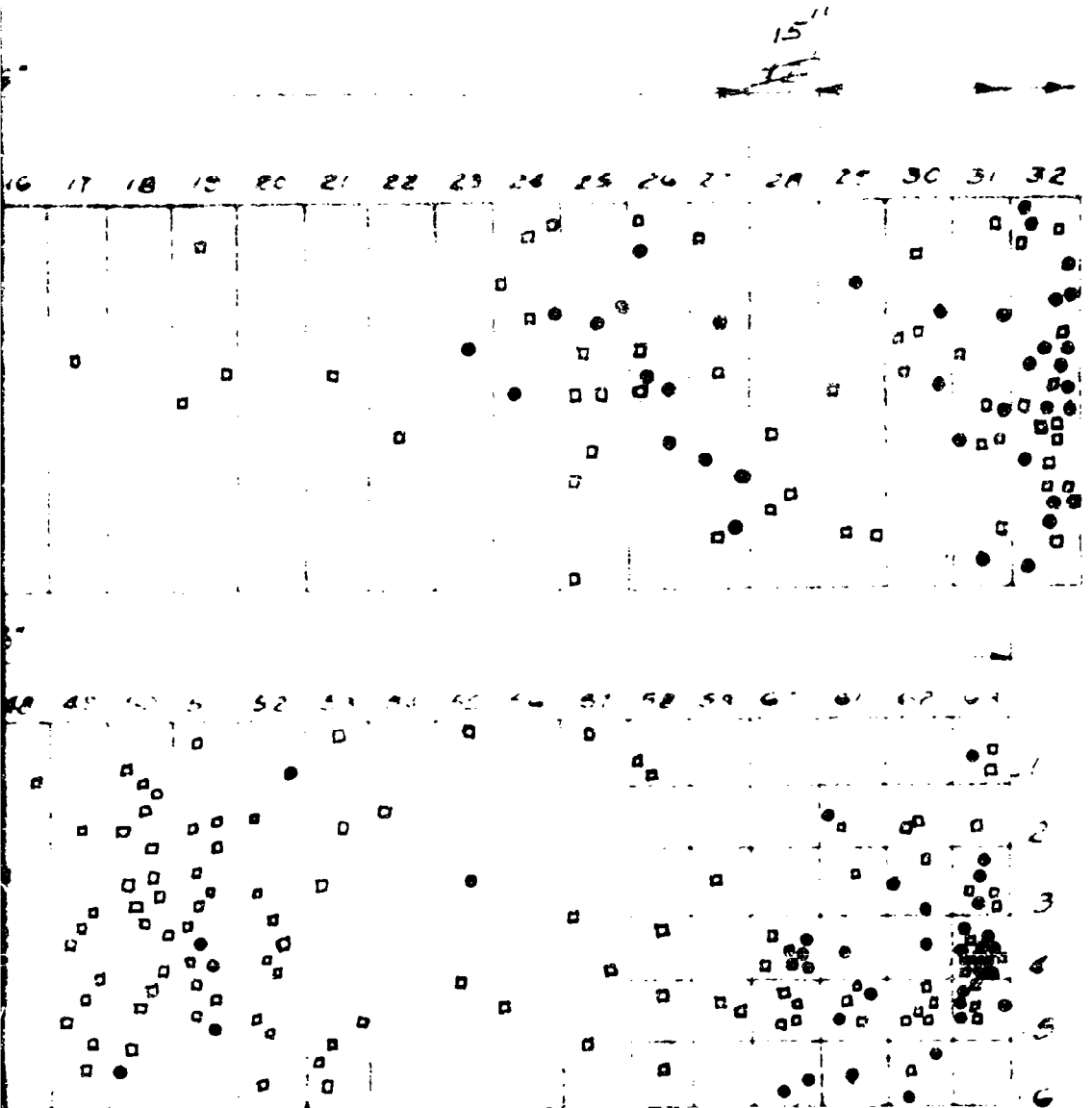
POSITION OF SHELL: HORIZONTAL

CONFIDENTIAL

1

A

15 180° ARC



2

LACED VERTICALLY

RANGE OPERATIONS SECTION

NS: ● = 124

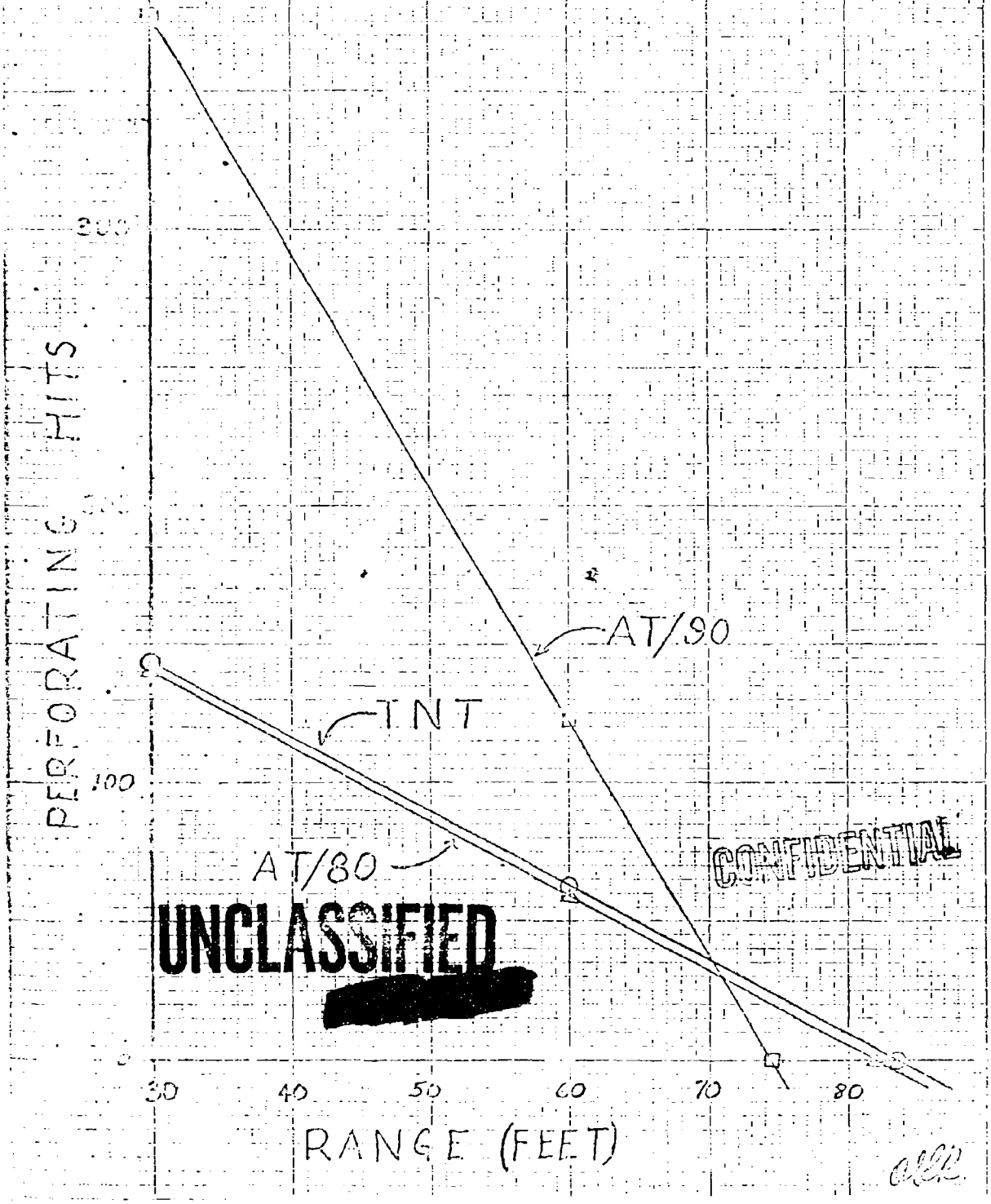
NS: □ = 216

LAYOUT OF PANELS
FOR
NUMBER AND DISTRIBUTION
OF FRAGMENTS
(30 FT RADIUS)

ABERDEEN PROVING GROUND MD
OCT 27 1944 APG 1876-15 PE

CONFIDENTIAL

COMPARISON OF LETHAL RANGE



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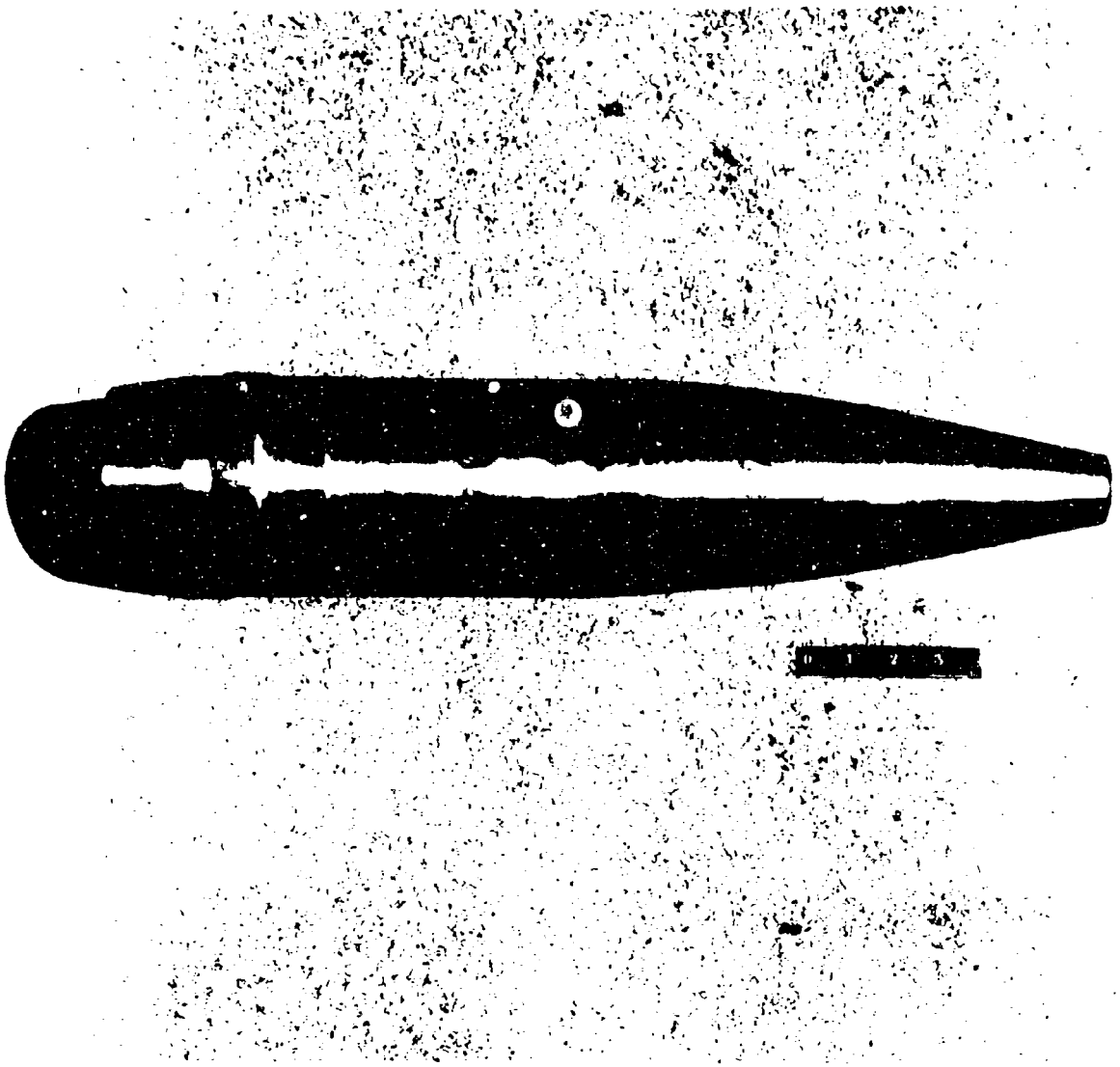
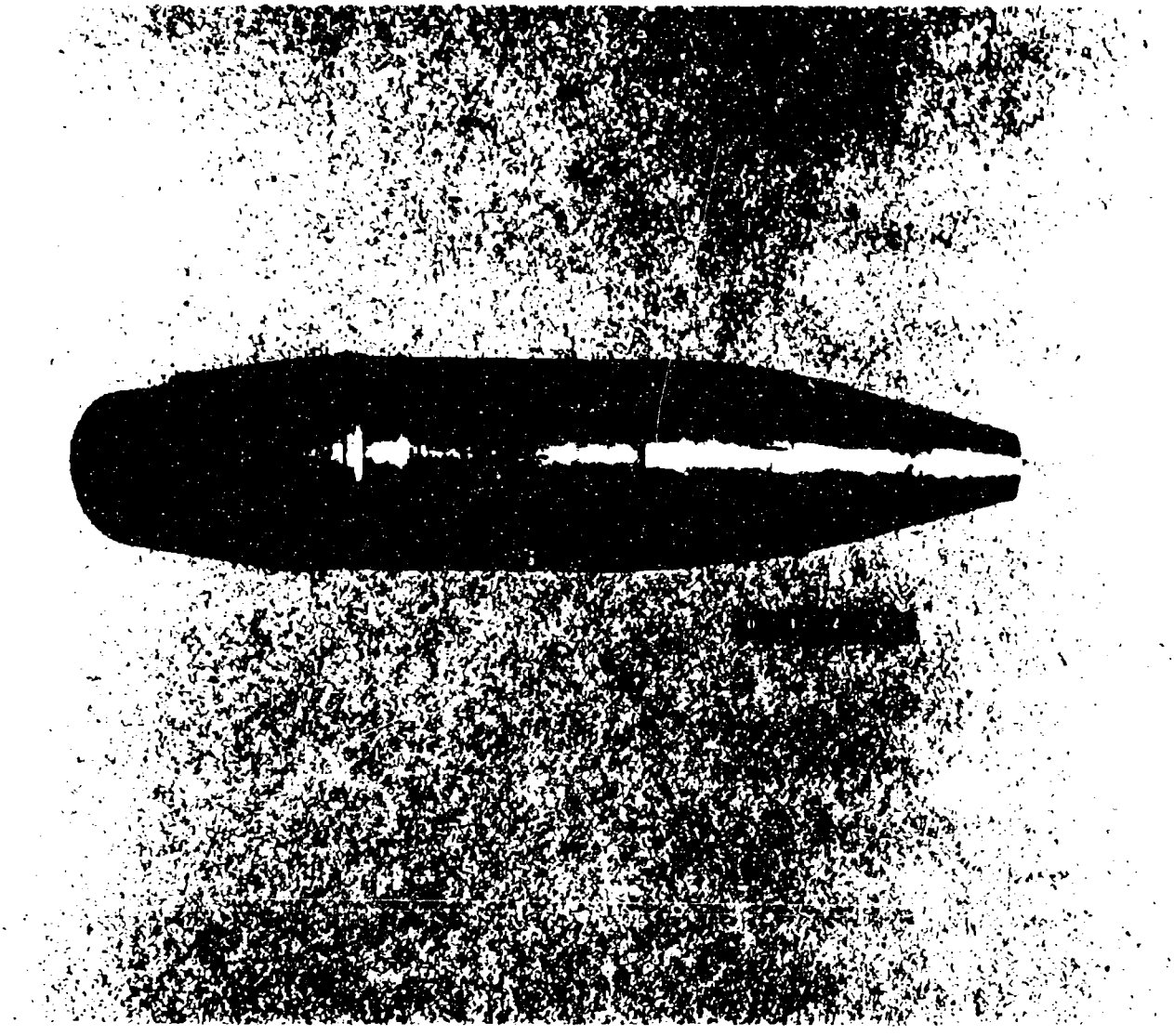
UNCLASSIFIED



APG159 — ABERDEEN PROVING GROUND — 1 May 1952

Shell, 122mm, OF-471-N (Soviet).

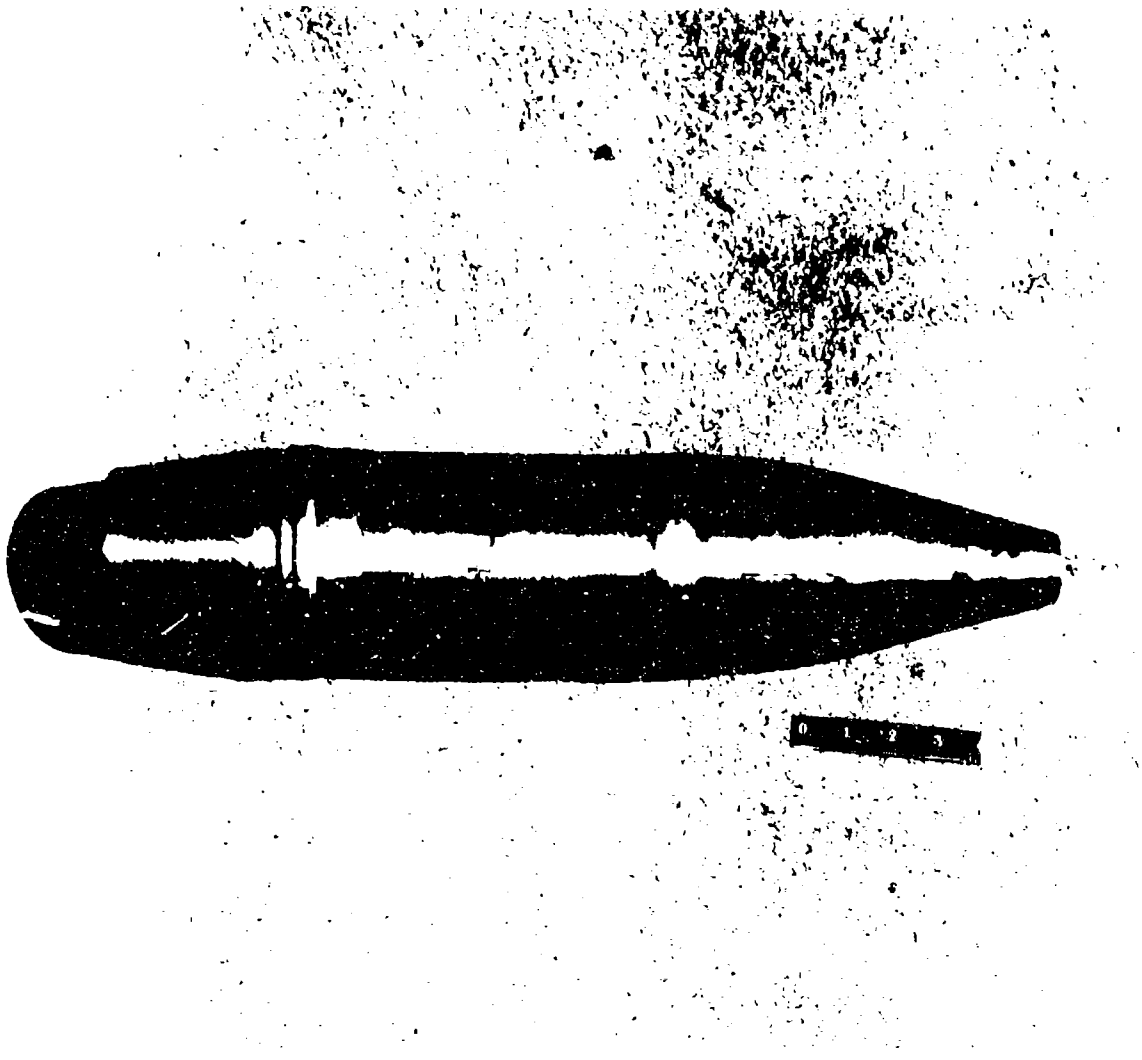
[redacted]



A78158 ABERDEEN PROVING GROUND 1 May 1952

Shell, 122mm, O-462A (Soviet).

[redacted]



A78157 ABERDEEN PROVING GROUND 1 May 1952

Shell, 122mm, OF-462 (Soviet).

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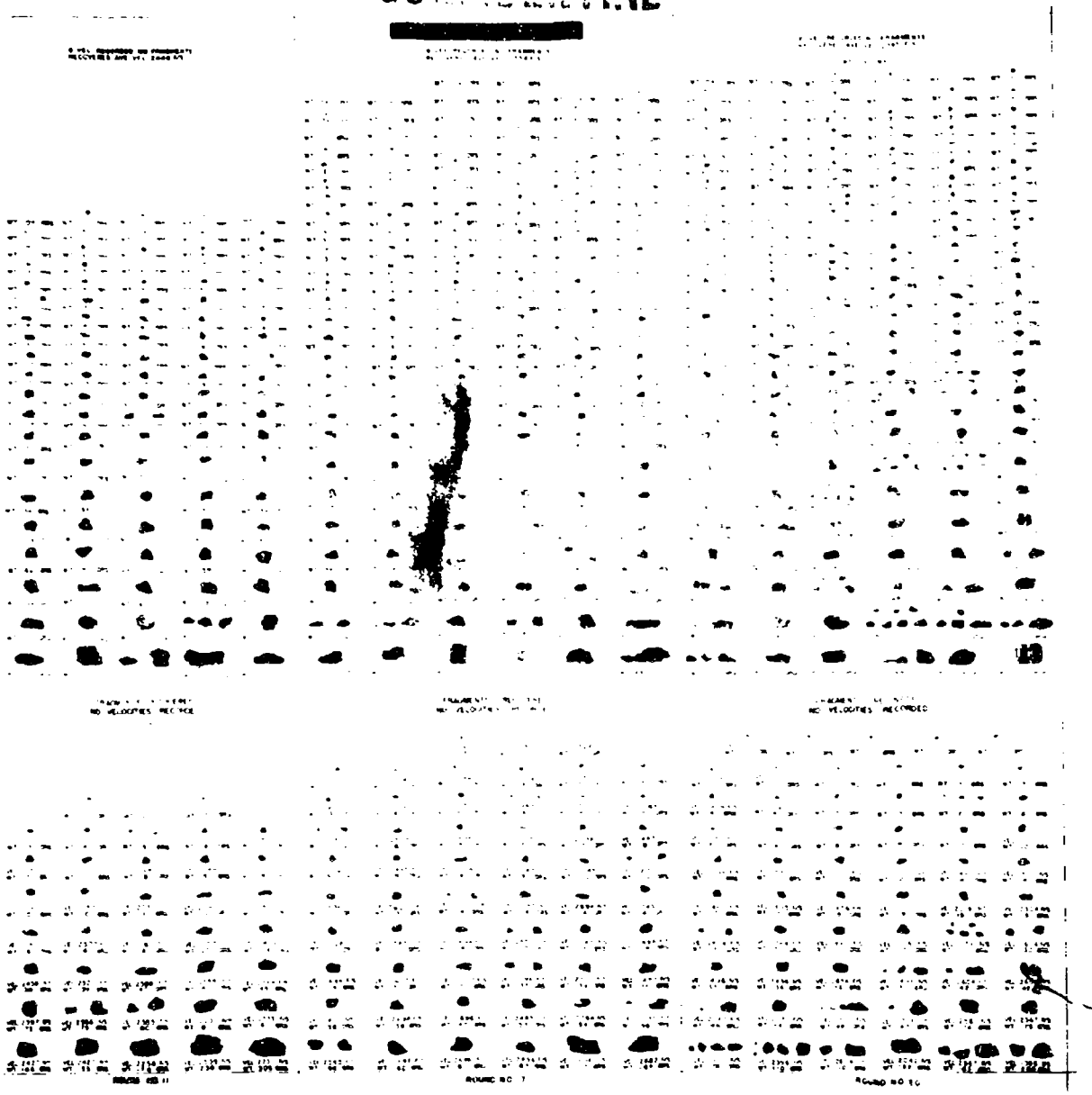
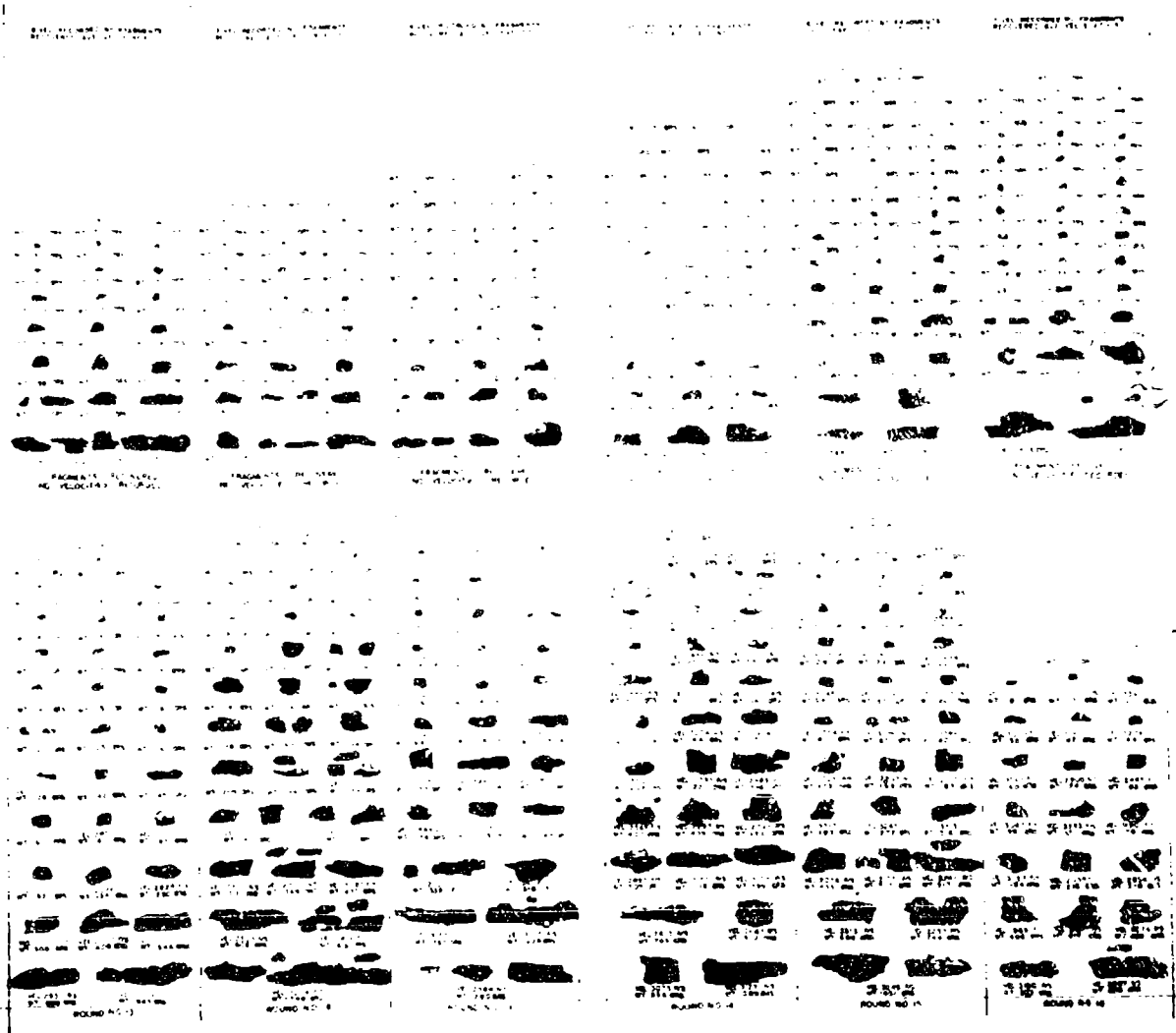


A97557 ABERDEEN PROVING GROUND 9 April 1954

Project No. TB3-0035. Shell Fragment Identification.
Fragments, with their respective velocities, of Shell, HE, 122mm, Soviet, loaded AT/90.

[redacted]

[redacted]



A97558 ABERDEEN PROVING GROUND 9 April 1954

Project No. TB3-0055. Shell Fragment Identification. Fragments, with their respective velocities, of Shell, HE, 120mm, Soviet, Rounds No. 13, 18 and 19 loaded [redacted], 14, 15 and 16 loaded TNT.

[redacted] CONFIDENTIAL