

C6349018

MODEL 700TM M24

Model **SMS**TM

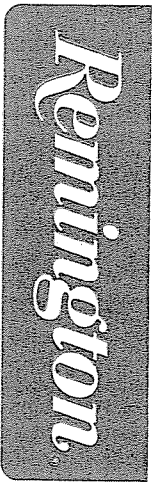
Action

Barrel Length

Capacity

Order No. **5716**

*Includes 1 in chamber.



Arms Services Repair & Estimate System

File Add Repair Estimate Repair Expedite Repair Inquiry Repair Tools CSR Tools Reports Table Maintenance System Maintenance Help

Repair Inquiry

Repair Number: RE00146516

Serial: C6349018 Model M24 SWS Center Fire
Caliber: 7.62 NATO

Repairman:

Verify Repair

Status:

Closed 6/17/2008 9:53:36 AM

Address Information

Customer:

Received From

Return To:

Received From

Name: DEF DIST DEPOT

DEF DIST DEPOT

Address 1: 7 FRANKFORD AVE BLDG 362

7 FRANKFORD AVE BLDG 362

Address 2: PO Box:

PO Box:

City: ANNISTON

ANNISTON

State: AL Zip Code: 36201

Country: US

State: AL Zip Code: 36201

Country: US

FFL:

Contact / Condition

Problems

Estimate

History / Status

Shipping / Billing

Contact Information

Phone: NN

Fax:

Email:

Comments:

Received Condition

Fair

Condition
Notes:CSR
Notes:

Accessories Received

Code	Desc	Qty
A007	With Stud	3
A010	Hard Case	1
A017	Scope Base	1
A026	Scope	1
A045	Bi Pod	1
A057	Fit and Rear Sgt Base	1

Repair Search

Refresh

Close

naglej

6/17/2008

10:51 AM

CAPS

NUM

INS

SCRL

start

10 M

My ...

4 M

Par ...

Ar ...

Cre ...

My ...

10:51 AM

Number: C6349018

Model: M24 SWS



RE00146516

INSPECTION CHECKLIST - REPAIRS

CONTRACT #: W52H09-07-C-0207

ISSUED 10/1/2007

R & E NUMBER

146516

SERIAL NUMBER

06349018

LOG-IN DATE

6-17-09

OPERATION #	OPERATION NAME	DATE	INITIAL
500	DIS-ASSEMBLE GUN	7-14-09	RTZ
505	RE-BARREL	7-16-09	RTZ
420	ASSEMBLE	7-16-09	RTZ
440	PROOF	7-16-09	RP
460	CHECK HEADSPACE	7-16-09	RP
470	DIS-ASSEMBLE GUN	7-16-09	RP
480	MAGNAFLUX	7-18-09	RP
510	DRILL AND TAP	7-17-09	SP
500	ROLLMARK CALIBER	7-21-09	DWD
520	GOFF BLAST BBL / REC	7-21-09	1114
530 & 540	APPLY COATINGS	7-28	-
560	FINAL ASSEMBLY	7-31-09	RTZ
640	FUNCTION TEST AND	8-4-09	RPD
650	TARGET	8-4-09	RPD
	MALFUNCTION	CORRECTION	
	MALFUNCTION	CORRECTION	
	MALFUNCTION	CORRECTION	
	MALFUNCTION	CORRECTION	
670	FINAL INSPECTION	8-17-09	RPD
	A) HEADSPACE	8-17-09	RP
	B) TRIGGER PULL	8-17-09	RP
680	F) SAFETY ON FORCE	8-17-09	RP
	G) SAFETY OFF FORCE	8-17-09	RP
	I) FIRING PIN INDENT	8-17-09	RPD
690	PACK	9-15-09	Fay

F006 REV 1/2009

SNIPER WEAPON SYSTEM - UNIQUE STATISTICAL INFORMATION

FIREARM SERIAL NUMBER / DATASET NAME: C6349018.___0
FILE DATE AND TIME: 08/05/2009 06:24

THE FOLLOWING DATA IS ALL REPORTED IN UNITS OF INCHES

The Average X Centroid of the Five Target Set:	-0.064
The Average Y Centroid of the Five Target Set:	0.060
The Average Point of Impact of the Five Target Set:	0.088
The Average Mean Radius of the Five Target Set:	0.714
The Distance from POA to Centroid Target #1:	0.046
The Distance from Centroid Target #2 to Centroid Target #1:	0.102
The Distance from Centroid Target #3 to Centroid Target #1:	0.105
The Distance from Centroid Target #4 to Centroid Target #1:	0.112
The Distance from Centroid Target #5 to Centroid Target #1:	0.185

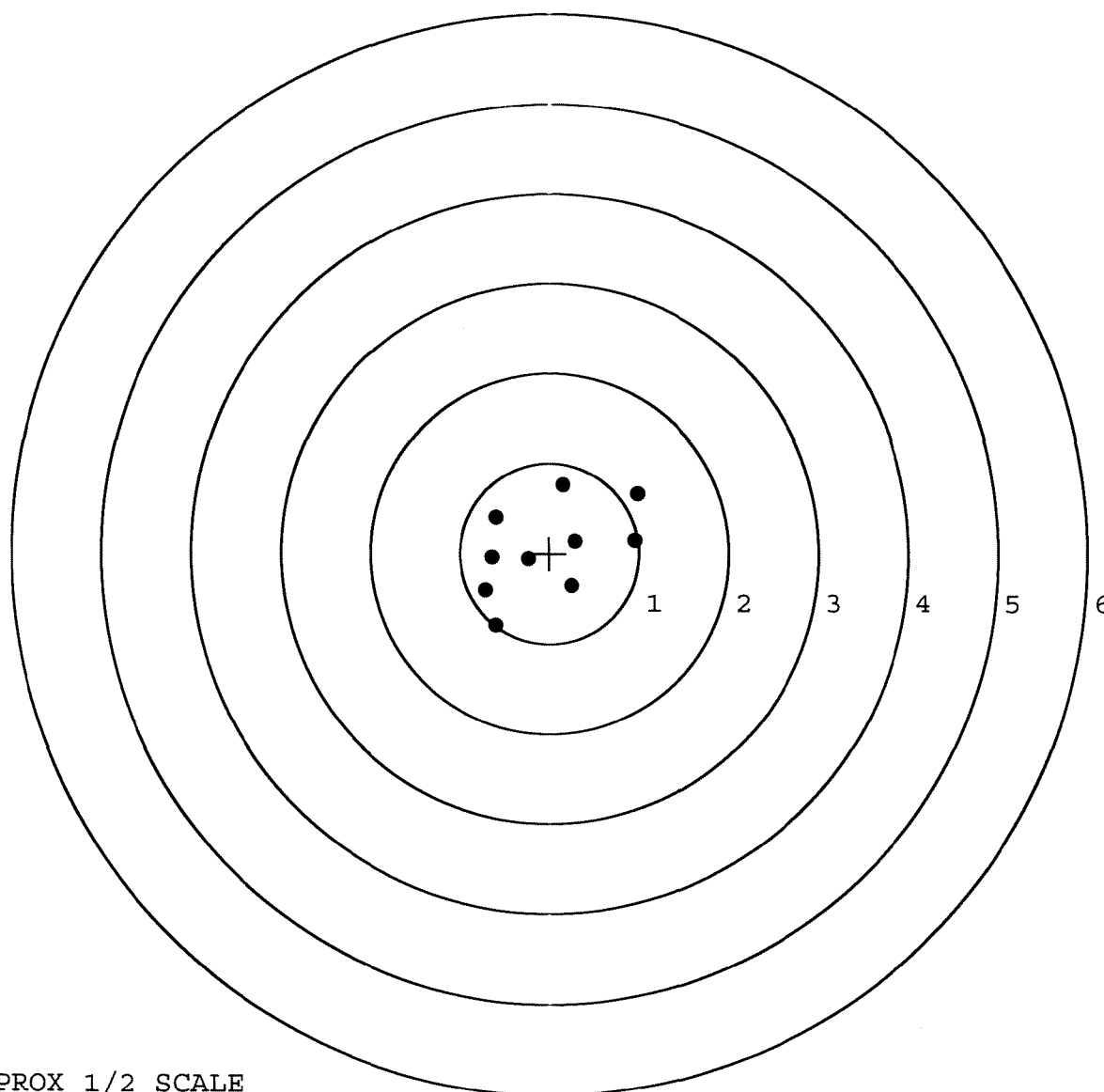
BARBER - M24 0105763

SERIAL NUMBER: C6349018. 0
 TARGET NUMBER: 1
 FILE DATE: 08/05/2009
 FILE TIME: 06:24

X CENTROID: -0.014
 Y CENTROID: 0.043
 POA TO CENTROID: 0.046
 HORZ SPREAD: 1.707
 VERT SPREAD: 1.549
 GROUP SPREAD: 2.160
 MIN RADIUS: 0.247
 MAX RADIUS: 1.179
 MEAN RADIUS: 0.711

IN 1 IN DIAMETER: 3
 # IN 2 IN DIAMETER: 8
 # in 3 IN DIAMETER: 10

POINT#	X	Y
1:	0.159	0.754
2:	0.992	0.659
3:	0.955	0.142
4:	0.293	0.134
5:	0.253	-0.358
6:	-0.237	-0.063
7:	-0.605	-0.795
8:	-0.715	-0.401
9:	-0.640	-0.042
10:	-0.595	0.404



TARGET APPROX 1/2 SCALE

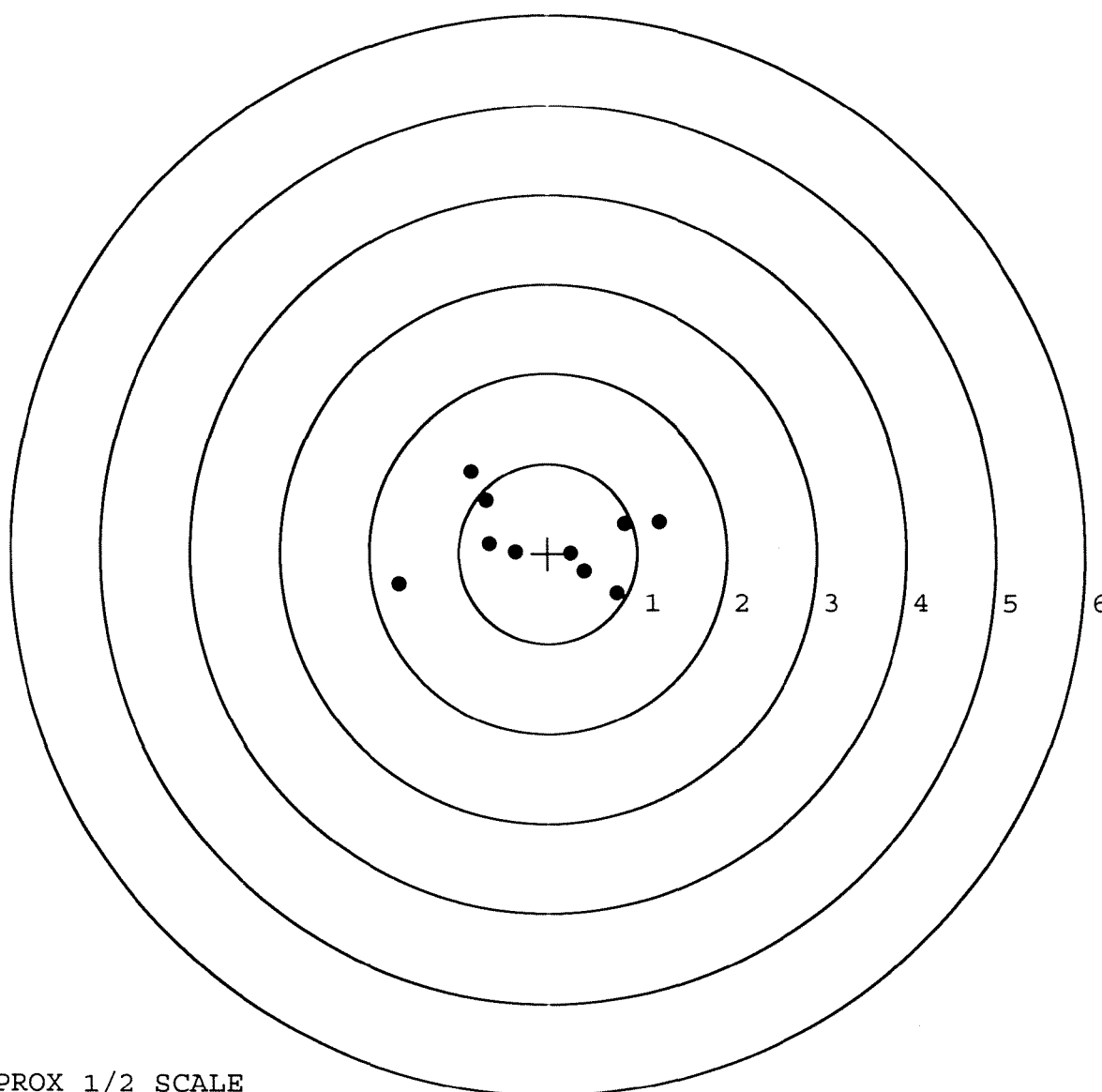
BARBER - M24 0105764

SERIAL NUMBER: C6349018. __ 0
 TARGET NUMBER: 2
 FILE DATE: 08/05/2009
 FILE TIME: 06:24

X CENTROID: -0.068
 Y CENTROID: 0.131
 POA TO CENTROID: 0.147
 HORZ SPREAD: 2.912
 VERT SPREAD: 1.355
 GROUP SPREAD: 2.993
 MIN RADIUS: 0.315
 MAX RADIUS: 1.672
 MEAN RADIUS: 0.869

IN 1 IN DIAMETER: 2
 # IN 2 IN DIAMETER: 6
 # in 3 IN DIAMETER: 9

POINT#	X	Y
1:	1.241	0.349
2:	0.862	0.331
3:	0.780	-0.448
4:	0.412	-0.205
5:	0.259	0.005
6:	-0.360	0.014
7:	-0.656	0.109
8:	-0.689	0.587
9:	-0.856	0.907
10:	-1.671	-0.343



TARGET APPROX 1/2 SCALE

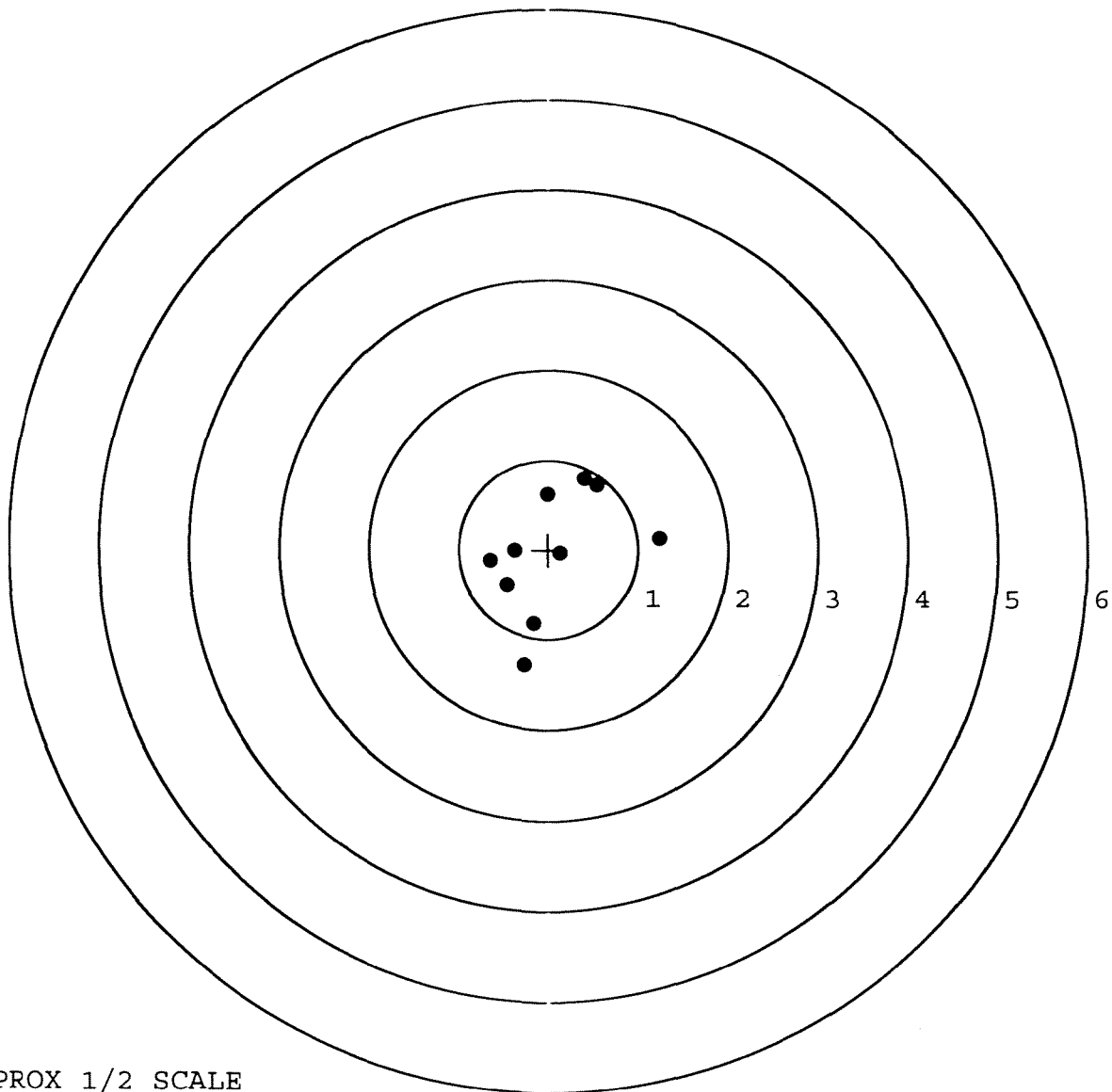
BARBER - M24 0105765

SERIAL NUMBER: C6349018. __ 0
TARGET NUMBER: 3
FILE DATE: 08/05/2009
FILE TIME: 06:24

X CENTROID: 0.039
Y CENTROID: -0.047
POA TO CENTROID: 0.061
HORZ SPREAD: 1.884
VERT SPREAD: 2.082
GROUP SPREAD: 2.190
MIN RADIUS: 0.090
MAX RADIUS: 1.282
MEAN RADIUS: 0.761

IN 1 IN DIAMETER: 2
IN 2 IN DIAMETER: 8
in 3 IN DIAMETER: 10

POINT#	X	Y
1:	-0.008	0.615
2:	0.407	0.791
3:	0.548	0.717
4:	1.234	0.120
5:	0.129	-0.043
6:	-0.163	-0.833
7:	-0.272	-1.291
8:	-0.374	-0.017
9:	-0.650	-0.129
10:	-0.461	-0.401



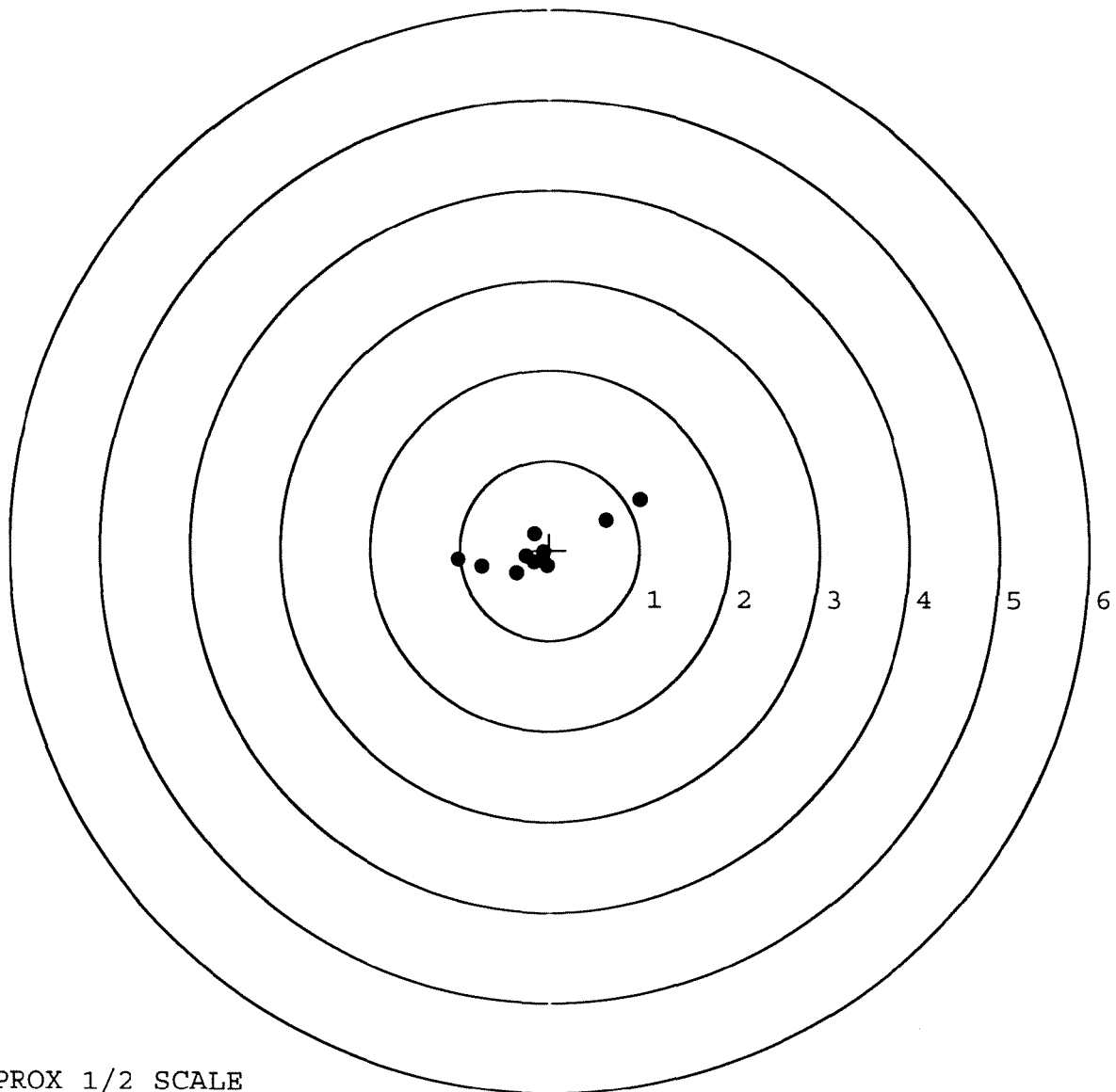
TARGET APPROX 1/2 SCALE

BARBER - M24 0105766

SERIAL NUMBER: C6349018. __ 0
TARGET NUMBER: 4
FILE DATE: 08/05/2009
FILE TIME: 06:24

X CENTROID: -0.121
Y CENTROID: 0.011
POA TO CENTROID: 0.122
HORZ SPREAD: 2.036
VERT SPREAD: 0.814
GROUP SPREAD: 2.141
MIN RADIUS: 0.062
MAX RADIUS: 1.258
MEAN RADIUS: 0.479
IN 1 IN DIAMETER: 6
IN 2 IN DIAMETER: 9
in 3 IN DIAMETER: 10

POINT#	X	Y
1:	1.013	0.554
2:	0.634	0.332
3:	-1.023	-0.109
4:	-0.756	-0.191
5:	-0.172	0.186
6:	-0.031	-0.175
7:	-0.367	-0.260
8:	-0.263	-0.067
9:	-0.071	-0.025
10:	-0.178	-0.138



TARGET APPROX 1/2 SCALE

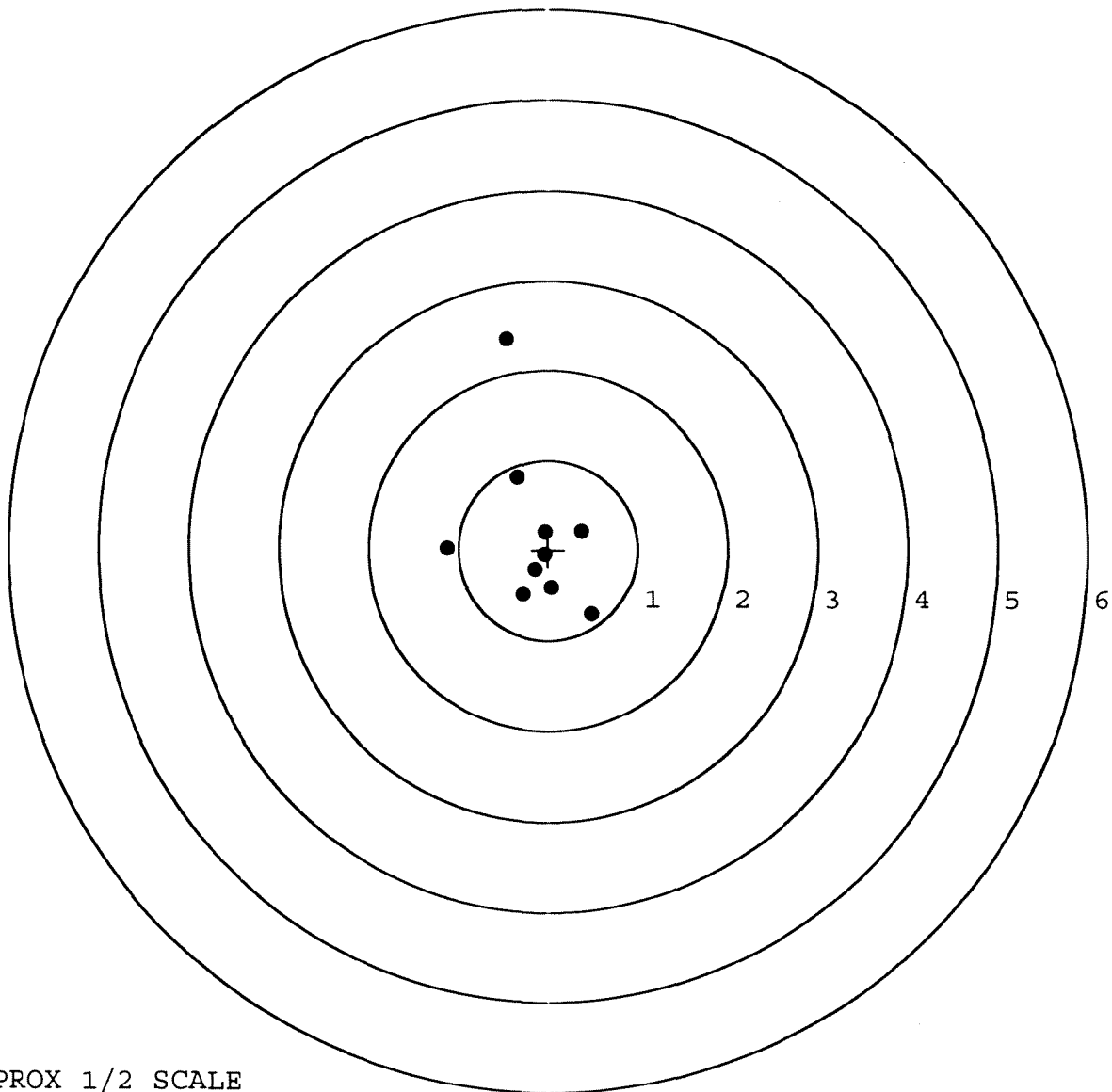
BARBER - M24 0105767

SERIAL NUMBER: C6349018. __0
TARGET NUMBER: 5
FILE DATE: 08/05/2009
FILE TIME: 06:24

X CENTROID: -0.153
Y CENTROID: 0.165
POA TO CENTROID: 0.225
HORZ SPREAD: 1.614
VERT SPREAD: 3.059
GROUP SPREAD: 3.203
MIN RADIUS: 0.118
MAX RADIUS: 2.201
MEAN RADIUS: 0.751

IN 1 IN DIAMETER: 3
IN 2 IN DIAMETER: 8
in 3 IN DIAMETER: 9

POINT#	X	Y
1:	-0.461	2.344
2:	-0.340	0.801
3:	-1.127	0.019
4:	0.487	-0.715
5:	-0.274	-0.495
6:	0.036	-0.426
7:	0.377	0.202
8:	-0.039	0.194
9:	-0.042	-0.056
10:	-0.151	-0.220



TARGET APPROX 1/2 SCALE

Small Arms Services Repair & Estimate System

File Add Repair Estimate Repair Expedite Repair Inquiry Repair Tools CSR Tools Reports Table Maintenance System Maintenance Help

Repair Inquiry

Repair Number: **RE00092682** Serial: C6349018 Model: M24 SWS Center Fire Caliber: 7.62 NATO Repairman: Status: Closed 2/8/2005 7:42:19 AM

Verify Repair

Address Information

Customer: ☐ Received From: ☒ Return To: ☐ Received From: ☐

Name: DEF DIST DEPOT ANNISTON DEF DIST DEPOT ANNISTON

Address 1: Address 2: PO Box: PO Box:

City: ANNISTON ANNISTON

State: AL AL Zip Code: 362014199 362014199 Country: US US

FFL: ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐

Contact / Condition Problems Estimate History / Status Shipping / Billing

Contact Information: Phone: Fax: Email: Comments:

Received Condition: Good Condition Notes: CSR Notes:

Accessories Received:

Code	Desc	Qty
A007	With Stud	3
A010	Hard Case	1
A017	Scope Base	1
A026	Scope	1
A057	Fit and Rear Sgt Base	1

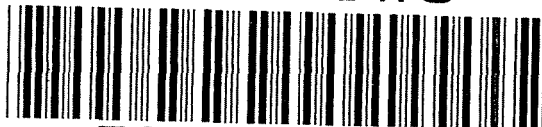
Repair Search Refresh Close

maglet 2/8/2005 9:44 AM CAPS NUM INE SCFL

start 3 4

Serial Number: **C6349018**

Model: **M24 SWS**



RE00092682

SNIPER WEAPON SYSTEM - UNIQUE STATISTICAL INFORMATION

FIREARM SERIAL NUMBER / DATASET NAME: C6349018.___1
FILE DATE AND TIME: 03/17/2005 09:11

THE FOLLOWING DATA IS ALL REPORTED IN UNITS OF INCHES

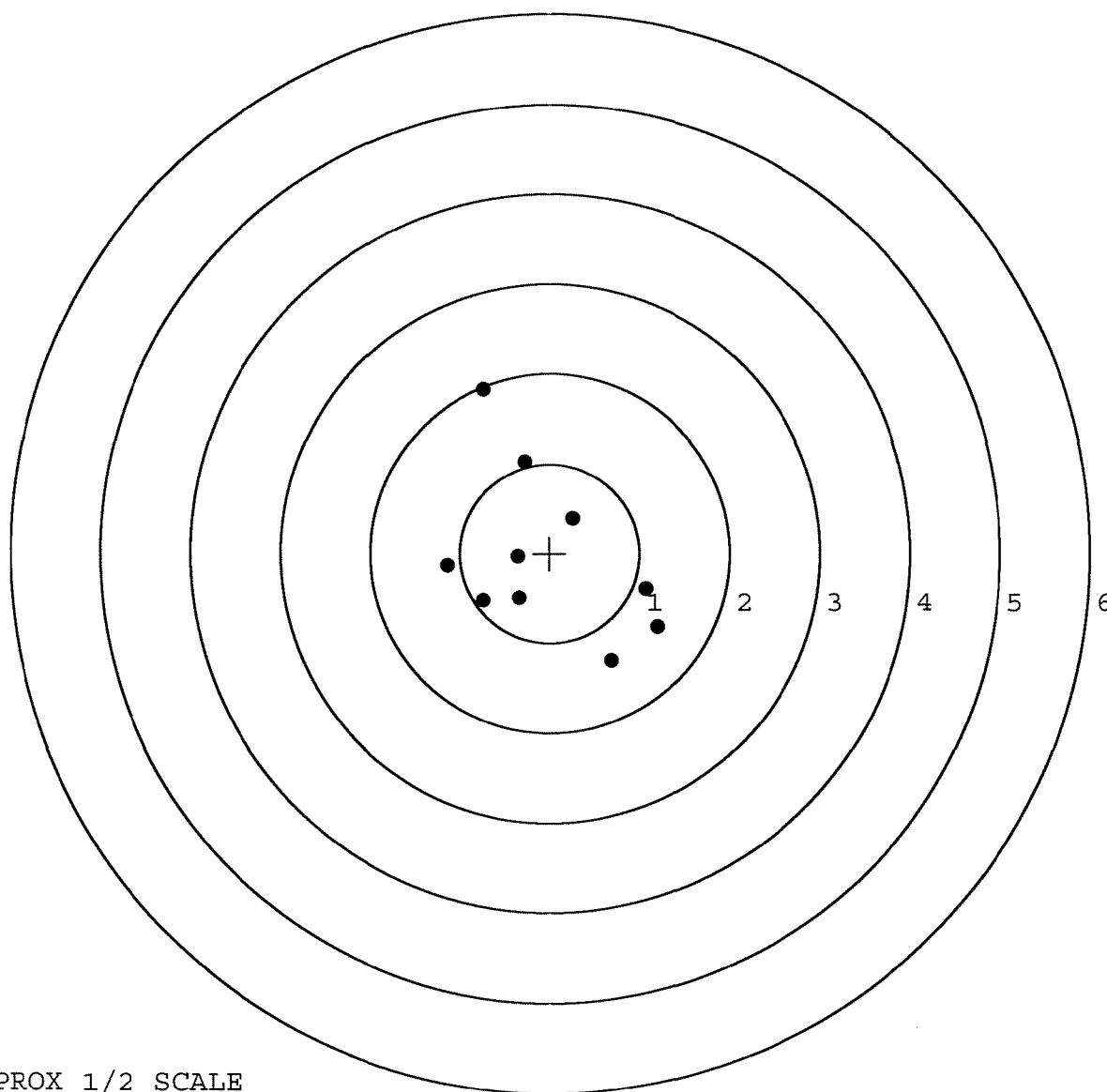
The Average X Centroid of the Five Target Set:	0.039
The Average Y Centroid of the Five Target Set:	-0.103
The Average Point of Impact of the Five Target Set:	0.110
The Average Mean Radius of the Five Target Set:	0.949
The Distance from POA to Centroid Target #1:	0.055
The Distance from Centroid Target #2 to Centroid Target #1:	0.420
The Distance from Centroid Target #3 to Centroid Target #1:	0.172
The Distance from Centroid Target #4 to Centroid Target #1:	0.076
The Distance from Centroid Target #5 to Centroid Target #1:	0.093

BARBER - M24 0105770

SERIAL NUMBER: C6349018. __1
TARGET NUMBER: 1
FILE DATE: 03/17/2005
FILE TIME: 09:11

X CENTROID: -0.038
Y CENTROID: -0.040
POA TO CENTROID: 0.055
HORZ SPREAD: 2.339
VERT SPREAD: 3.027
GROUP SPREAD: 3.347
MIN RADIUS: 0.317
MAX RADIUS: 1.994
MEAN RADIUS: 1.045
IN 1 IN DIAMETER: 1
IN 2 IN DIAMETER: 4
in 3 IN DIAMETER: 9

POINT#	X	Y
1:	1.197	-0.827
2:	1.071	-0.403
3:	0.687	-1.202
4:	-0.345	-0.506
5:	-0.741	-0.530
6:	-0.355	-0.035
7:	-1.142	-0.138
8:	0.265	0.392
9:	-0.274	1.022
10:	-0.742	1.825



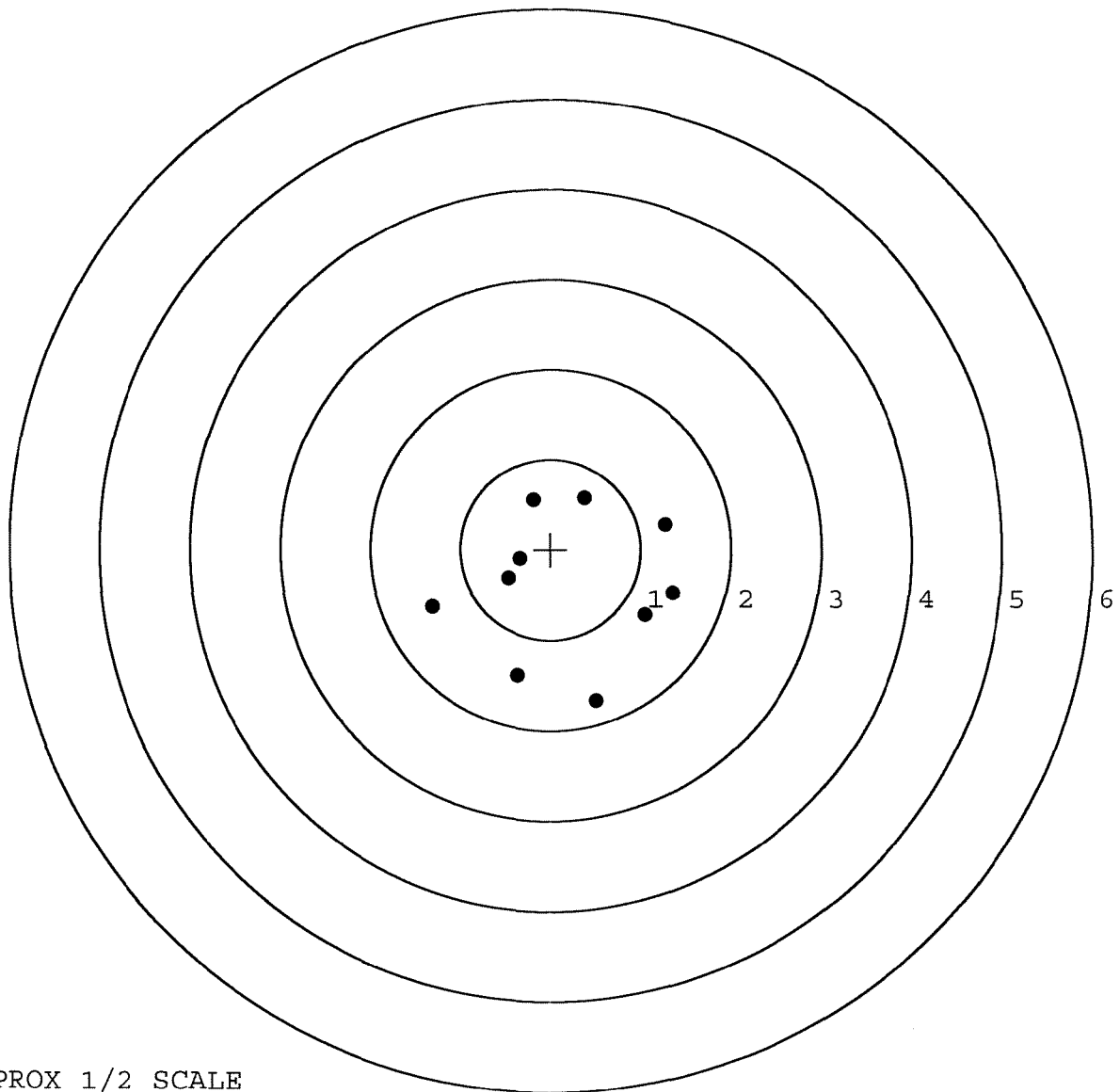
TARGET APPROX 1/2 SCALE

BARBER - M24 0105771

SERIAL NUMBER: C6349018. __1
TARGET NUMBER: 2
FILE DATE: 03/17/2005
FILE TIME: 09:11

X CENTROID: 0.188
Y CENTROID: -0.394
POA TO CENTROID: 0.437
HORZ SPREAD: 2.662
VERT SPREAD: 2.236
GROUP SPREAD: 2.736
MIN RADIUS: 0.604
MAX RADIUS: 1.519
MEAN RADIUS: 1.060
IN 1 IN DIAMETER: 0
IN 2 IN DIAMETER: 4
in 3 IN DIAMETER: 9

POINT#	X	Y
1:	1.351	-0.483
2:	1.047	-0.728
3:	1.271	0.269
4:	0.385	0.569
5:	-0.189	0.551
6:	-0.341	-0.104
7:	-0.470	-0.320
8:	-0.367	-1.390
9:	0.509	-1.667
10:	-1.311	-0.637



TARGET APPROX 1/2 SCALE

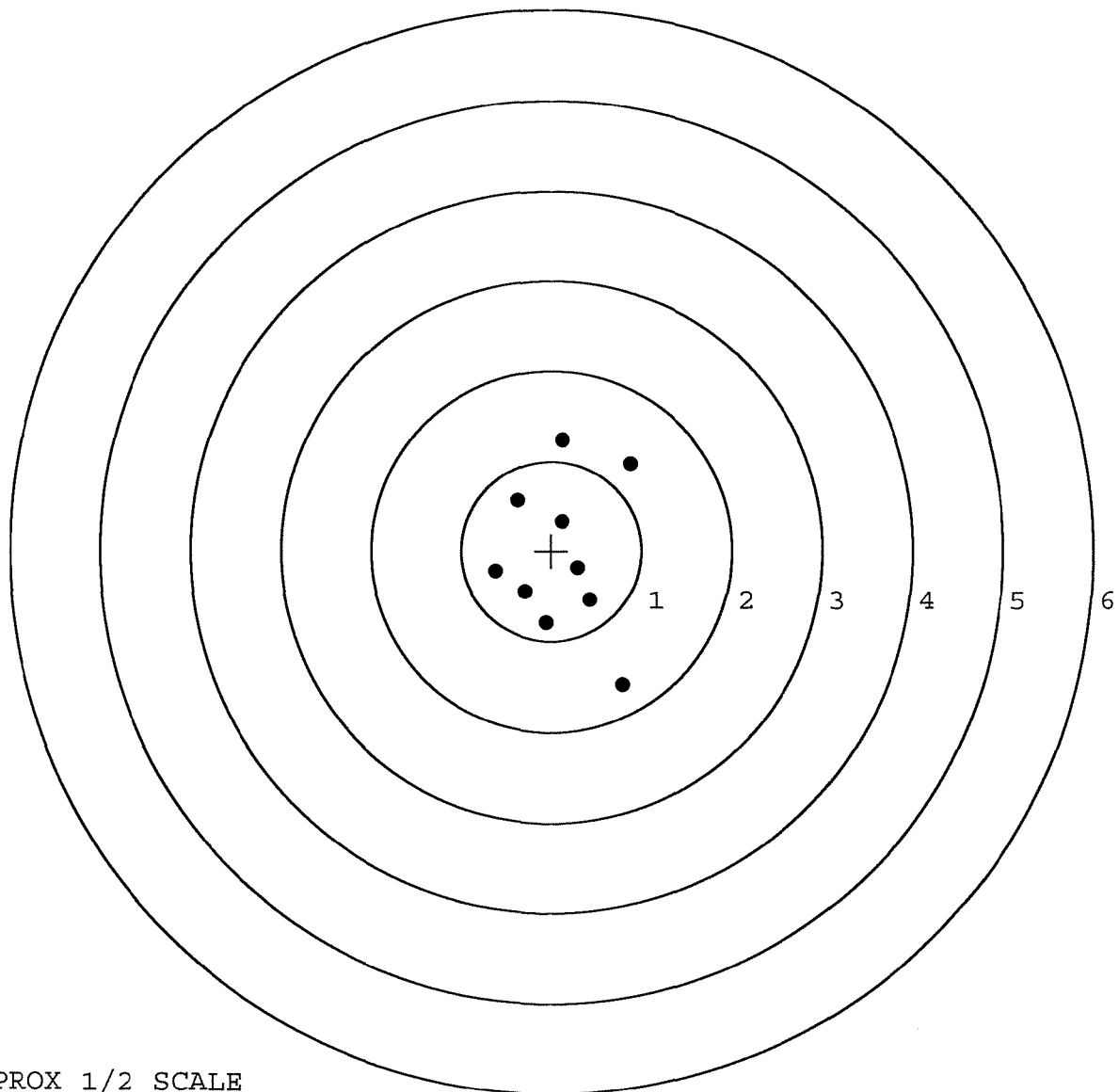
BARBER - M24 0105772

SERIAL NUMBER: C6349018. __1
TARGET NUMBER: 3
FILE DATE: 03/17/2005
FILE TIME: 09:11

X CENTROID: 0.132
Y CENTROID: -0.066
POA TO CENTROID: 0.147
HORZ SPREAD: 1.508
VERT SPREAD: 2.722
GROUP SPREAD: 2.803
MIN RADIUS: 0.213
MAX RADIUS: 1.568
MEAN RADIUS: 0.825

IN 1 IN DIAMETER: 2
IN 2 IN DIAMETER: 7
in 3 IN DIAMETER: 9

POINT#	X	Y
1:	0.797	-1.486
2:	0.884	0.967
3:	0.129	1.236
4:	-0.379	0.556
5:	0.126	0.320
6:	0.298	-0.199
7:	0.440	-0.553
8:	-0.059	-0.805
9:	-0.294	-0.459
10:	-0.624	-0.234



TARGET APPROX 1/2 SCALE

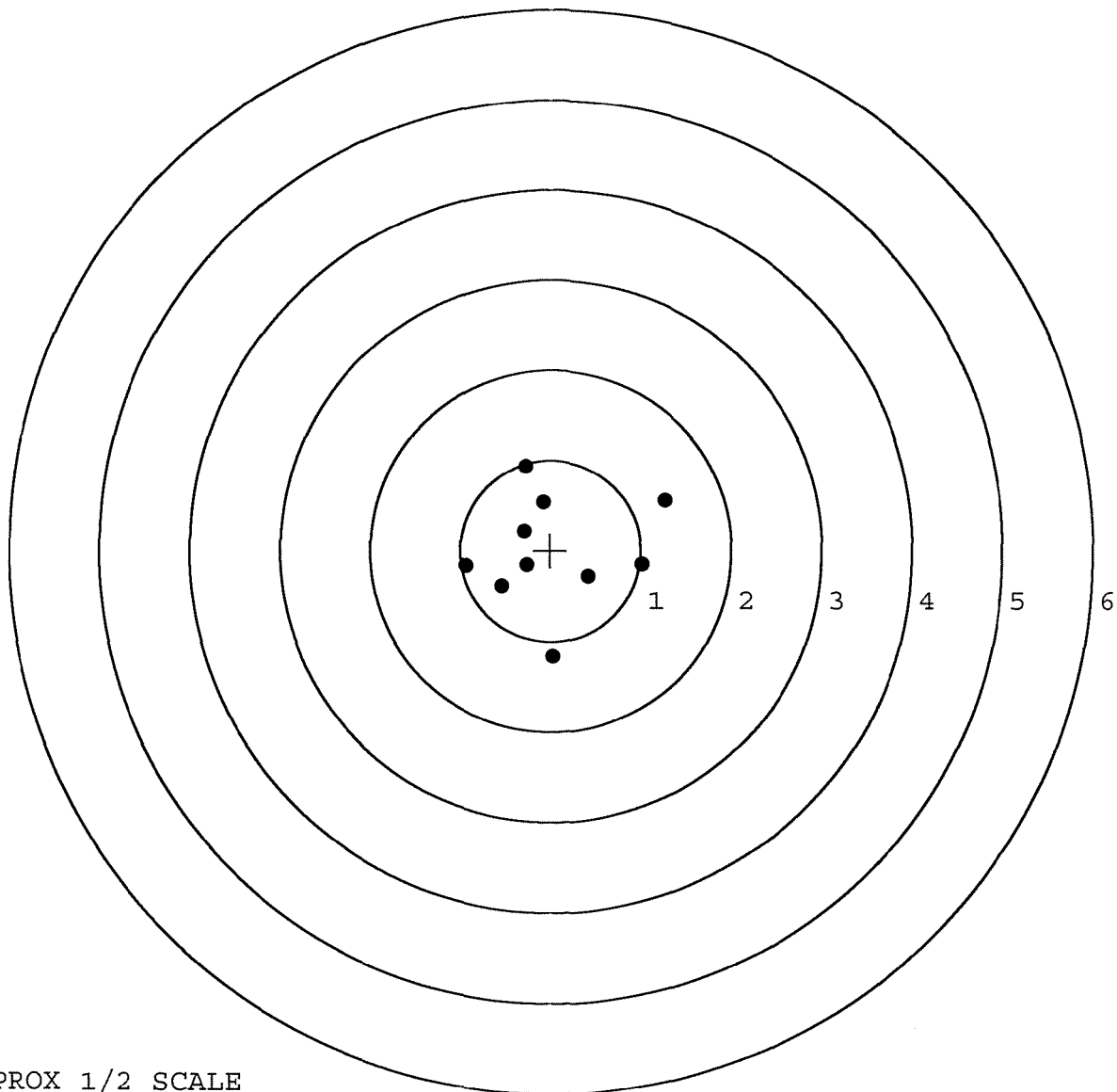
BARBER - M24 0105773

SERIAL NUMBER: C6349018. __1
 TARGET NUMBER: 4
 FILE DATE: 03/17/2005
 FILE TIME: 09:11

X CENTROID: 0.033
 Y CENTROID: -0.012
 POA TO CENTROID: 0.035
 HORZ SPREAD: 2.202
 VERT SPREAD: 2.104
 GROUP SPREAD: 2.315
 MIN RADIUS: 0.335
 MAX RADIUS: 1.352
 MEAN RADIUS: 0.794

IN 1 IN DIAMETER: 3
 # IN 2 IN DIAMETER: 8
 # in 3 IN DIAMETER: 10

POINT#	X	Y
1:	1.018	-0.160
2:	0.423	-0.283
3:	1.263	0.549
4:	0.029	-1.173
5:	-0.266	-0.165
6:	-0.546	-0.393
7:	-0.295	0.208
8:	-0.086	0.533
9:	-0.276	0.931
10:	-0.939	-0.167



TARGET APPROX 1/2 SCALE

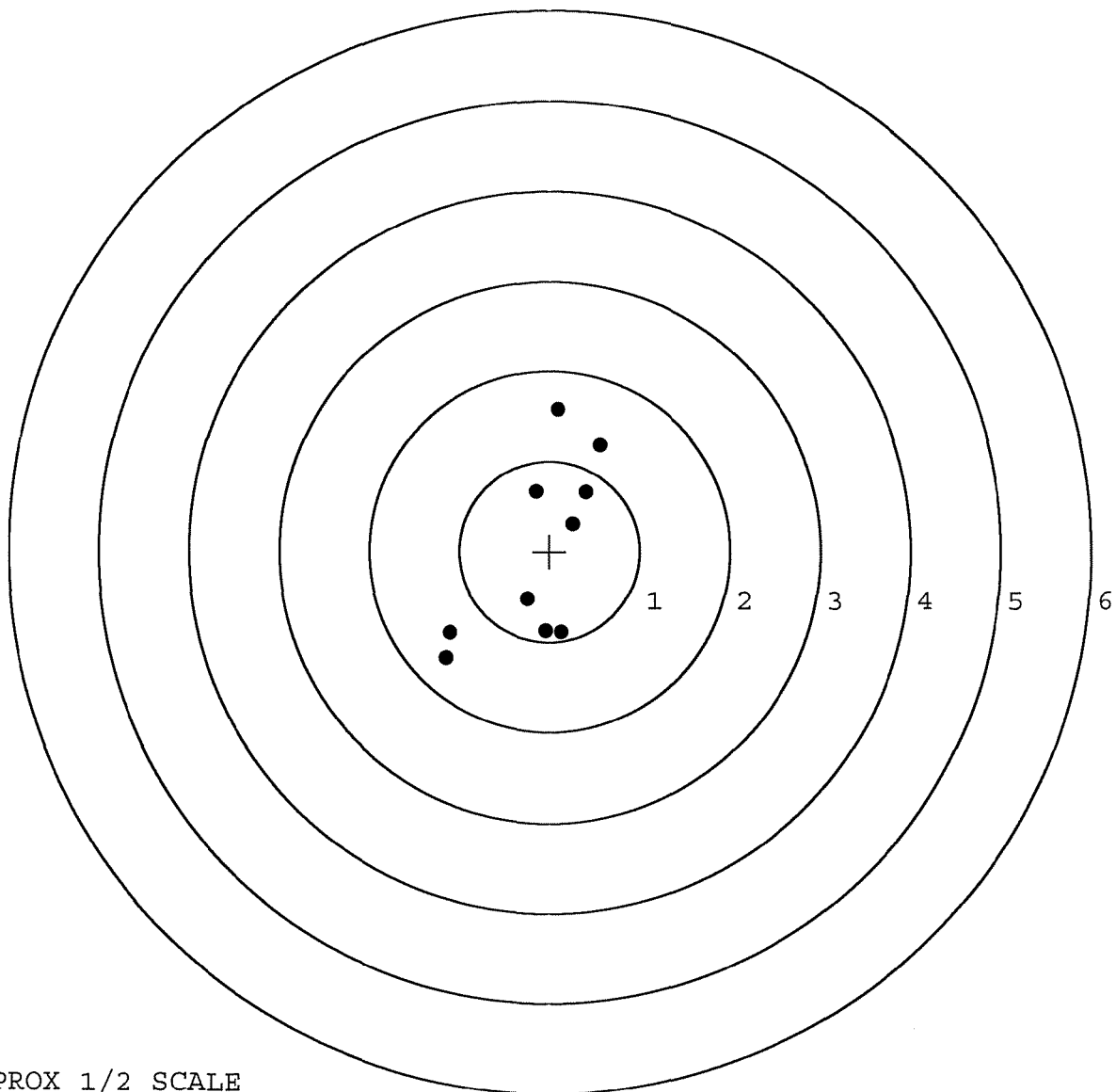
BARBER - M24 0105774

SERIAL NUMBER: C6349018. __1
TARGET NUMBER: 5
FILE DATE: 03/17/2005
FILE TIME: 09:11

X CENTROID: -0.122
Y CENTROID: -0.002
POA TO CENTROID: 0.122
HORZ SPREAD: 1.717
VERT SPREAD: 2.754
GROUP SPREAD: 3.022
MIN RADIUS: 0.495
MAX RADIUS: 1.589
MEAN RADIUS: 1.022

IN 1 IN DIAMETER: 1
IN 2 IN DIAMETER: 6
in 3 IN DIAMETER: 8

POINT#	X	Y
1:	0.139	-0.897
2:	-0.046	-0.882
3:	-0.242	-0.529
4:	0.266	0.306
5:	0.407	0.656
6:	-0.152	0.663
7:	-1.106	-0.904
8:	-1.149	-1.182
9:	0.568	1.179
10:	0.094	1.572



TARGET APPROX 1/2 SCALE

R & E NUMBER	92682		
SERIAL NUMBER	C6349018		
LOG-IN DATE	2-8-05		
INSPECT AND VERIFY:			
OPERATION #	OPERATION NAME	DATE	INITIAL
550	DIS-ASSEMBLE GUN	2-14-05	RTZ
560 A	RE-BARREL	2-16-05	RTZ
B	DRILL AND TAP	2-17-05	TRW
575	ASSEMBLE	2-16-05	RTZ
600	PROOF	2-17-05	MAGNAFLUX INSPECTED
605	CHECK HEADSPACE	2-17-05	AC
610	DIS-ASSEMBLE GUN	2-17-05	RTZ
612	MAGNAFLUX		OPERATOR
615	ROLLMARK CALIBER	2-18-05	CW
618	ROTO-BLAST	2-18-05	LB
620	APPLY COATINGS	3-1-05	HP
625 A	FINAL ASSEMBLY	3-9-05	RTZ
B	TRIGGER PULL TEST	3-17-05	TRW
C	SAFETY "ON" FORCE	3-17-05	AC
D	SAFETY "OFF" FORCE	3-17-05	AC
E	FIRING PIN INDENT	3-17-05	AC
640	TARGET	3-16-05	TRW
655	FINAL INSPECT	3-17-05	AC
660	PACK	3-17-05	DA
		SHIP DATE	
		QAR INSPECTION DATE	

Remington ®		DUPONT REG. U.S. PAT. & TM. OFF.	VERY IMPORTANT: Instruction Book enclosed to assure safe use of this firearm.
MODEL 700™ H24		SERIAL NO. C6349018	ORDER NO. 5716
MADE IN ILION, N.Y. U.S.A. Reg. U.S. Pat & Tm. Off, Marca Registrada Marque Deposee.		01	



5716 C6349018



CONTRACT # DAAA21-87-C-0086

GUN SERIAL #

C6349018

OP. #	OP. NAME	READINGS	DATE	INIT
575 & 580	Assemble Action and Stock	1 12	90	RW
600	Proof	1 12	90	RW
607	Check Headspace	1 12	90	RW
610	Dis-assemble Gun	1 12	90	RW
612	Magnaflux Barrel Action	1-16-90		KCR
	Magnaflux Bolt	1-17-90		KCR
615	Rollmark Caliber		1/17/90	JS
617	Drill and Tap Sight Holes		1/19/90	WB
618	Polish Barrel RB		1/22/90	WB
620	Apply Coatings (Barrel Action)		1-30-90	JA
	Apply Coating (Bolt)			
625	Final Assembly			
	A) Clean inside of Bolt Assembly		2/2/90	WB
	B) Inspect Rear Firing Pin Hole for Chamfer in Bolt Head		2/6/90	RW
	C) Inspect Ejector Hole for Chamfer		2/6/90	RW
	D) Oil Firing Pin Ass'y		2/6/90	RW
	E) Adjust Trigger Pull to Min Setting and Stake		2-9-90	JA

op. #	OP. NAME	READINGS					DATE	INIT
625 cont.	F) Safety On Force	4	4	4			2-12-90	JM
	G) Safety Off Force	2	2	2			2-12-90	JM
	H) Trigger Pull Test & Retainability						2-9-90	JM
	I) Firing Pin Indent	.020	.020	.0205			2-12-90	JM
	J) Assemble Stock						4/18/90	RW
	K) Assemble Swivel Studs						4/30/90	WB
	L) Attach Front and Rear Sight Assemblies						4/18/90	RW
	M) Iron Sight Alignment						4/18/90	RW
	N) Detach Front & Rear Sights & place in numbered container						4/18/90	RW
	O) Attach Scope to Rifle						4/19/90	WB
	P) Detach & Attach Scope 20 Times						4/19/90	WB
640	Gallery Target & Test						4-20-90	DH
	A) Time						4-20-90	DH
	B) Malfunctions						4-20-90	DH
	C) Pierced Primers						4-20-90	DH
	D) Optical Clarity of Scope						4-20-90	DH
645	Inspect for Live Ammo						4-20-90	DH
655	Final Inspection						4/26/90	WB
	A) Headspace						4/26/90	WB
	B) Trigger Pull	2.53	2.61	2.60	2.57	2.56	4/26/90	WB
	C) Function						4/30/90	WB
660	Pack						6/19/90	DH

AVERAGE PULL FORCE BETWEEN
INITIAL & CYCLE TESTS

2.50# + .50#

3.00# + .75#

4.00# + 1.00#

SERIAL NO. CG 349018

DATE 4-16-90

TESTER DH

	2.50# INITIAL	2.50# AFTER 50 CYCLES	FINAL TEST & TO RESET 2.50#		COMMENTS
PULL #1	2.43	2.25	2.31	2.53	MIN. SETTING, NO AVG. OF 5 READINGS ACCEPT- ABLE LESS THAN 2#
PULL #2	2.41	2.23	2.30	2.61	
PULL #3	2.40	2.27	2.31	2.60	
PULL #4	2.43	2.28	2.27	2.57	
PULL #5	2.38	2.17	2.26	2.56	
TOTAL	12.05	11.20	11.45		
AVG.	2.41	2.24	2.29		

	3.00# INITIAL	3.00# AFTER 20 CYCLES		COMMENTS
PULL #1	3.21	3.16		
PULL #2	3.20	3.10		
PULL #3	3.18	3.09		
PULL #4	3.19	3.10		
PULL #5	3.16	3.20		
TOTAL	15.94	15.65		
AVG.	3.18	3.13		

	4.00# INITIAL	4.00# AFTER 20 CYCLES	MAX SETTING GREATER THAN 4#	RESET TO 4# FOR TARGET & ACCURACY
PULL #1	4.12	4.22		4.14
PULL #2	4.10	4.18		4.14
PULL #3	4.13	4.19		4.10
PULL #4	4.13	4.15		4.09
PULL #5	4.11	4.13		4.09
TOTAL	20.59	20.87		20.56
AVG.	4.11	4.17		4.11

CENTROIDAL DISTANCE CALCULATIONS
FOR RIFLE # C6349018
20 Apr 1990

CENTROIDAL DISTANCES

0 TO	1	.213883
1 TO	2	.480133
1 TO	3	.623485
1 TO	4	.879701
1 TO	5	.341696

1⁵⁰ <----POA
3 4

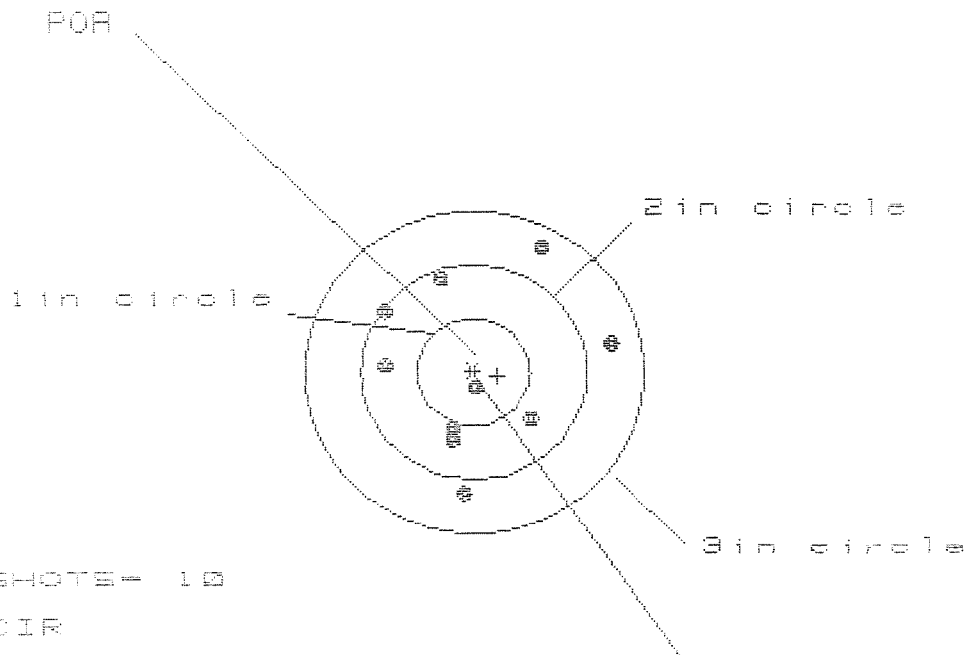
RIFLE X-COORDINATE FOR THIS RIFLE IS: .1656
RIFLE Y-COORDINATE FOR THIS RIFLE IS: -.1176
RIFLE AVERAGE POI RADIUS FOR THIS RIFLE IS: .203109
RIFLE Z-COORDINATE FOR THIS RIFLE IS: .7892

20 Apr 1998

FILE:/PATTERNING/CENTERFIRE_PATT/C6349010

CENTERFIRE PATTERNS

1



OF SHOTS = 10

IN CIR

1in = 1

2in = 7

3in = 10

CENTROID *

CS = 2.010

CS = 2.303

CS = 2.429

10	9	8
1.201	1.273	.756
-.809	-.737	-.578
1.180	.971	1.014
-1.123	-.991	-.948
-.211	-.283	-.442
.035	-.097	-.141
.213	.299	.464
.152	.042	.199
.842	.745	.668
1.349	1.321	1.015
2.010	2.010	1.334
2.303	1.962	1.962
2.429	2.020	1.968
NUMBER IN ONE INCH CIRCLE =	1	
NUMBER IN TWO INCH CIRCLE =	7	
NUMBER IN THREE INCH CIRCLE =	10	

[illegible]

FILE: /PATTERNING/CENTERFIRE_PATT/C6349018

CENTERFIRE PATTERNS

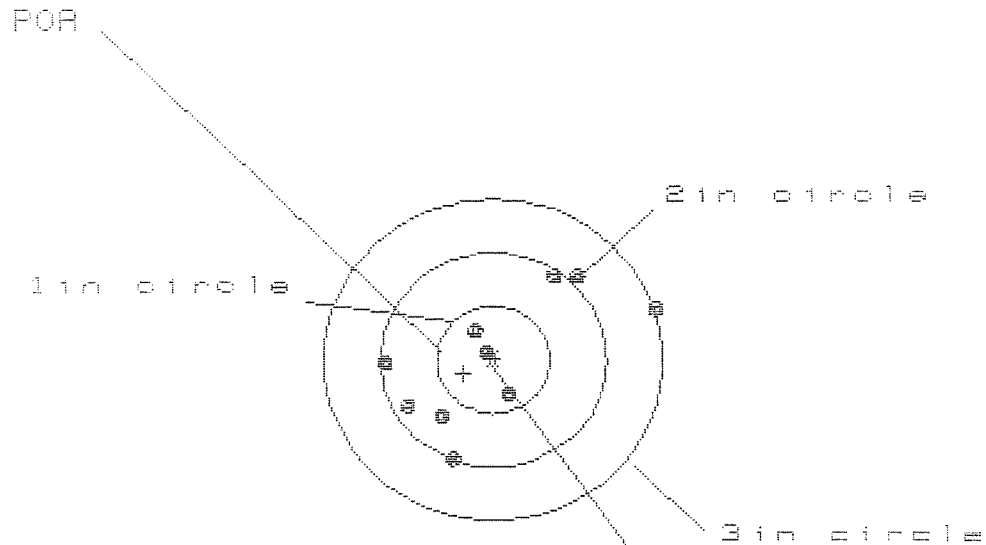
 $\neq \mathbb{Z}$ 

Figure 1. Schematic representation of the experimental design. The subjects were divided into two groups: the control group (CG) and the experimental group (EG). The CG was divided into two subgroups: the control group (CG) and the control group (CG). The EG was divided into two subgroups: the experimental group (EG) and the experimental group (EG). The subjects were divided into two groups: the control group (CG) and the experimental group (EG). The CG was divided into two subgroups: the control group (CG) and the control group (CG). The EG was divided into two subgroups: the experimental group (EG) and the experimental group (EG).

Figure 1. The structure of the proposed model. The model is composed of three parts: (a) the input layer, (b) the hidden layer, and (c) the output layer. The input layer consists of 10 nodes, the hidden layer consists of 10 nodes, and the output layer consists of 10 nodes. The model is trained using a genetic algorithm (GA) to optimize the weights and biases of the network.

Figure 1. The structure of the proposed model. The model is composed of three parts: (a) the input layer, (b) the hidden layer, and (c) the output layer. The input layer consists of 10 nodes, the hidden layer consists of 10 nodes, and the output layer consists of 10 nodes. The model is trained using the Levenberg-Marquardt algorithm.

[illegible]

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CENTRO

FACTS (BEST OF)		10	9	8
MAXIMUM	X	1.401	.941	.785
MINIMUM	X	-.990	-.835	-.717
MAXIMUM	Y	.751	.800	.895
MINIMUM	Y	-.930	-.881	-.781
CENTROID	X	.261	.106	-.012
CENTROID	Y	.123	.074	-.026
FOM TO CENTROID IN.		.289	.129	.028
M. RADIUS		.071	.177	.331
MFM RADIUS		.782	.691	.613
PM RADIUS		1.469	1.235	1.190
HORIZONTAL SPREAD		2.392	1.776	1.502
VERTICAL SPREAD		1.681	1.681	1.676
EXTREME SPREAD		2.444	2.052	1.904
NUMBER IN ONE INCH CIRCLE		=	3	
NUMBER IN TWO INCH CIRCLE		=	7	
NUMBER IN THREE INCH CIRCLE		=	10	

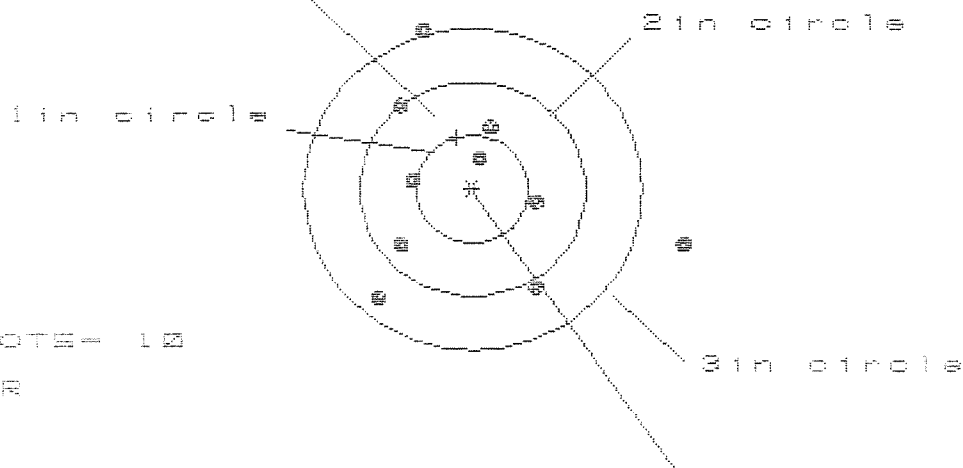
28 Apr 1998

FILE:/PATTERNING/CENTERFIRE_PATT/06349018

CENTERFIRE PATTERNS

3

POA



* OF SHOTS = 10

IN CIR

1 in = 1

2 in = 6

3 in = 8

MS = 2.728

MS = 2.510

MS = 3.056

CENTROID *

PATTERN #		10	9	8
SHOTS (BEST OF)		10	9	8
MAXIMUM X		1.879	.810	.777
MINIMUM X		-.860	-.651	-.684
MAXIMUM Y		1.447	1.391	.878
MINIMUM Y		-1.063	-1.119	-.946
CENTROID X		.136	-.073	-.040
CENTROID Y		-.483	-.427	-.600
PL TO CENTROID in.		.502	.433	.602
DI RADIUS		.306	.339	.438
MEAN RADIUS		.976	.843	.781
MAX RADIUS		1.947	1.413	1.167
HORIZONTAL SPREAD		2.739	1.461	1.461
VERTICAL SPREAD		2.510	2.510	1.824
EXTREME SPREAD		3.056	2.603	2.057
NUMBER IN ONE INCH CIRCLE	=		1	
NUMBER IN TWO INCH CIRCLE	=		6	
NUMBER IN THREE INCH CIRCLE	=		8	

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FILE:/PATTERNING/CENTERFIRE_PATT/C63459018

CENTERFIRE PATTERNS

4

POR

1 in circle

2 in circle

3 in circle

CENTROID *

OF SHOTS = 10

IN CIR

1 in = 3

2 in = 8

3 in = 10

GS1 = 1.707

GS2 = 1.482

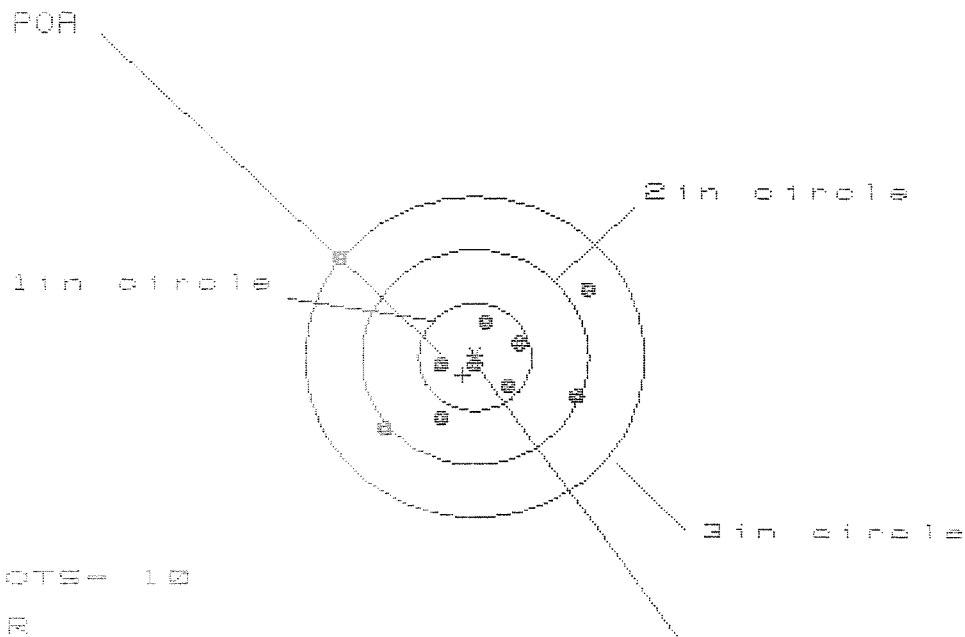
GS3 = 2.144

PATTERN #		10	9	8
SHOTS (BEST OF)	:	10	9	8
MAXIMUM X	:	.754	.649	.710
MINIMUM X	:	-.953	-.814	-.753
MAXIMUM Y	:	.829	.624	.554
MINIMUM Y	:	-.653	-.561	-.552
CENTROID X	:	.537	.642	.581
CENTROID Y	:	-.428	-.520	-.450
POR TO CENTROID in.	:	.686	.827	.735
MIN RADIUS	:	.211	.240	.256
MEAN RADIUS	:	.670	.587	.567
MAX RADIUS	:	1.263	.977	.888
HORIZONTAL SPREAD	:	1.707	1.463	1.463
VERTICAL SPREAD	:	1.482	1.185	1.106
EXTREME SPREAD	:	2.144	1.708	1.651
NUMBER IN ONE INCH CIRCLE	=		3	
NUMBER IN TWO INCH CIRCLE	=		9	
NUMBER IN THREE INCH CIRCLE	=		10	

28 Apr 1998

FILE:/PATTERNING/CENTERFIRE_PATT/C8349018

CENTERFIRE PATTERNS # 5



OF SHOTS= 10

IN CIR

1in = 5

2in = 7

3in = 10

HS= 2.146

VS= 1.565

GS= 2.422

CENTROID #

PATTERN #	1	2	3
SHOTS (BEST OF)	10	9	8
MAXIMUM X	.965	.834	.881
MINIMUM X	-1.181	-.903	-.798
MAXIMUM Y	.889	.759	.501
MINIMUM Y	-.675	-.578	-.483
CENTROID X	.105	.236	.132
CENTROID Y	.165	.067	-.028
POA TO CENTROID in.	.196	.245	.135
MIN RADIUS	.081	.100	.146
MEAN RADIUS	.676	.579	.505
MAX RADIUS	1.478	1.128	.933
HORIZONTAL SPREAD	2.146	1.737	1.679
VERTICAL SPREAD	1.565	1.337	.984
EXTREME SPREAD	2.422	2.192	1.713
NUMBER IN ONE INCH CIRCLE =	5		
NUMBER IN TWO INCH CIRCLE =	7		
NUMBER IN THREE INCH CIRCLE =	10		