

CENTROIDAL DISTANCE CALCULATIONS  
FOR RIFLE # C6225191

## CENTROIDAL DISTANCES

|      |   |         |
|------|---|---------|
| 0 TO | 1 | 1.29867 |
| 1 TO | 2 | .759169 |
| 1 TO | 3 | .662966 |
| 1 TO | 4 | 1.10546 |
| 1 TO | 5 | 1.25735 |

$$s^2 = \frac{1}{n} \sum_{i=1}^n x_i^2 - \bar{x}^2$$

+ 3 <----POA

THE AVERAGE X-COORDINATE FOR THIS RIFLE IS: .5022  
 THE AVERAGE Y-COORDINATE FOR THIS RIFLE IS: .5606  
 THE RESULTING AVERAGE POI RADIUS FOR THIS RIFLE IS: .752647  
 THE AMR FOR THIS RIFLE IS: 1015

Initial Test

11/8/88

8 May 1988

FILE:/PATTERNING/CENTERFIRE\_PATT/CG225191

## CENTERFIRE PATTERNS # 1

POA

1 in circle

2 in circle

3 in circle

# OF SHOTS= 10

# IN CIR

1 in = 1

2 in = 7

3 in = 10

HS= 2.069

VS= 1.720

GS= 2.136

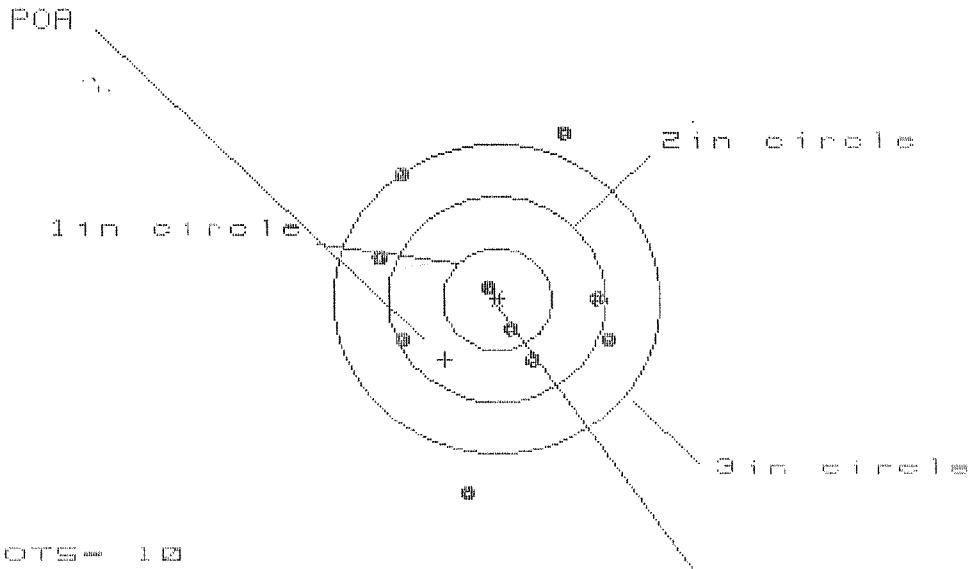
CENTROID #

| PATTERN #                     | 10    | 9     | 8     |
|-------------------------------|-------|-------|-------|
| SHOTS (BEST OF)               | 10    | 9     | 8     |
| MAXIMUM X                     | 1.333 | 1.390 | .514  |
| MINIMUM X                     | -.735 | -.587 | -.414 |
| MAXIMUM Y                     | .927  | .893  | .826  |
| MINIMUM Y                     | -.793 | -.827 | -.894 |
| CENTROID X                    | 1.224 | 1.076 | .903  |
| CENTROID Y                    | .434  | .468  | .535  |
| POA TO CENTROID in.           | 1.299 | 1.174 | 1.049 |
| MIN RADIUS                    | .286  | .420  | .432  |
| MEAN RADIUS                   | .898  | .827  | .725  |
| MAX RADIUS                    | 1.369 | 1.488 | .984  |
| HORIZONTAL SPREAD             | 2.069 | 1.977 | .928  |
| VERTICAL SPREAD               | 1.720 | 1.720 | 1.720 |
| EXTREME SPREAD                | 2.136 | 2.104 | 1.921 |
| NUMBER IN ONE INCH CIRCLE =   | 1     |       |       |
| NUMBER IN TWO INCH CIRCLE =   | 7     |       |       |
| NUMBER IN THREE INCH CIRCLE = | 10    |       |       |

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## CENTERFIRE PATTERNS # 2



# OF SHOTS= 10

# IN CIR

1in = 2

2in = 5

3in = 7

HS= 2.148

VS= 3.478

GS= 3.603

| PATTERN #                     | 2      |
|-------------------------------|--------|
| SHOTS (BEST OF)               | 10     |
| MAXIMUM X                     | 1.055  |
| MINIMUM X                     | -1.093 |
| MAXIMUM Y                     | 1.565  |
| MINIMUM Y                     | -1.913 |
| CENTROID X                    | .488   |
| CENTROID Y                    | .585   |
| POA TO CENTROID in.           | .757   |
| MIN RADIUS                    | .153   |
| MEAN RADIUS                   | 1.043  |
| MAX RADIUS                    | 1.935  |
| HORIZONTAL SPREAD             | 2.148  |
| VERTICAL SPREAD               | 3.478  |
| EXTREME SPREAD                | 3.603  |
| NUMBER IN ONE INCH CIRCLE =   | 2      |
| NUMBER IN TWO INCH CIRCLE =   | 5      |
| NUMBER IN THREE INCH CIRCLE = | 7      |

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## CENTERFIRE PATTERNS # 3

POA

1in circle

2in circle

3in circle

CENTROID \*

# OF SHOTS= 10

# IN CIR

1in = 1

2in = 4

3in = 8

HS= 2.836

VS= 2.861

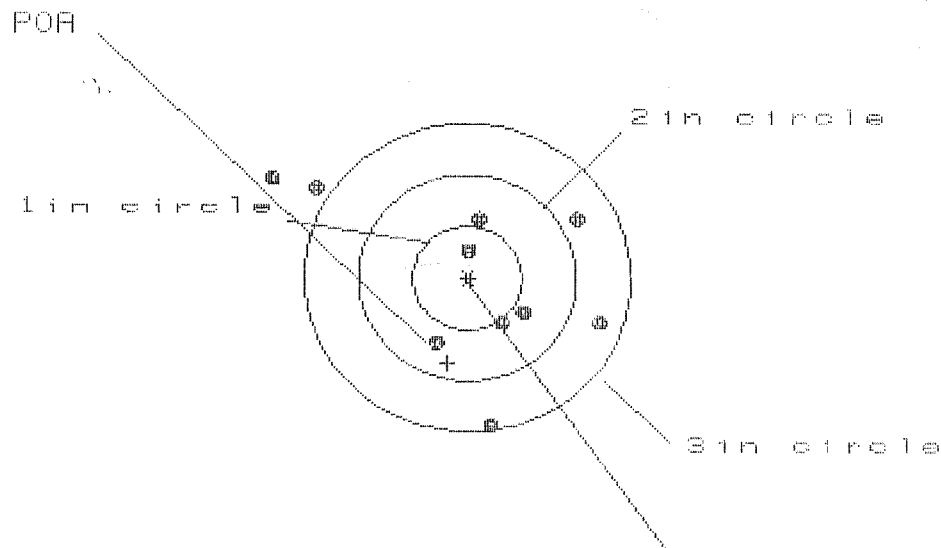
GS= 3.187

| PATTERN #                     | 10     | 9      | 8      |
|-------------------------------|--------|--------|--------|
| SHOTS (BEST OF)               | 10     | 9      | 8      |
| MAXIMUM X                     | 1.542  | 1.632  | 1.051  |
| MINIMUM X                     | -1.293 | -1.204 | -1.000 |
| MAXIMUM Y                     | .991   | .783   | .628   |
| MINIMUM Y                     | -1.870 | -1.239 | -1.208 |
| CENTROID X                    | .606   | .517   | .313   |
| CENTROID Y                    | .194   | .402   | .557   |
| POA TO CENTROID in.           | .637   | .655   | .639   |
| MIN RADIUS                    | .437   | .221   | .040   |
| MEAN RADIUS                   | 1.128  | .950   | .715   |
| MAX RADIUS                    | 2.037  | 2.049  | 1.601  |
| HORIZONTAL SPREAD             | 2.836  | 2.836  | 2.051  |
| VERTICAL SPREAD               | 2.861  | 2.022  | 1.836  |
| EXTREME SPREAD                | 3.187  | 3.187  | 2.411  |
| NUMBER IN ONE INCH CIRCLE =   | 1      |        |        |
| NUMBER IN TWO INCH CIRCLE =   | 4      |        |        |
| NUMBER IN THREE INCH CIRCLE = | 8      |        |        |

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## CENTERFIRE PATTERNS # 4



# OF SHOTS- 10

# IN CIR

1in = 2

2in = 5

3in = 8

HS= 2.980

VS= 2.402

GS= 3.301

| PATTERN #                   | : | 4      | 9      | 8      |
|-----------------------------|---|--------|--------|--------|
| SHOTS (BEST OF)             | : | 10     | 9      | 8      |
| MAXIMUM X                   | : | 1.186  | .986   | .789   |
| MINIMUM X                   | : | -1.794 | -1.581 | -.719  |
| MAXIMUM Y                   | : | 1.018  | .963   | .790   |
| MINIMUM Y                   | : | -1.384 | -1.271 | -1.151 |
| CENTROID X                  | : | .190   | .390   | .587   |
| CENTROID Y                  | : | .825   | .712   | .591   |
| POA TO CENTROID in.         | : | .847   | .812   | .834   |
| MIN RADIUS                  | : | .252   | .309   | .201   |
| MEAN RADIUS                 | : | 1.025  | .866   | .708   |
| MAX RADIUS                  | : | 2.063  | 1.851  | 1.162  |
| HORIZONTAL SPREAD           | : | 2.980  | 2.567  | 1.508  |
| VERTICAL SPREAD             | : | 2.402  | 2.234  | 1.941  |
| EXTREME SPREAD              | : | 3.301  | 2.856  | 2.105  |
| NUMBER IN ONE INCH CIRCLE   | = |        | 2      |        |
| NUMBER IN TWO INCH CIRCLE   | = |        | 5      |        |
| NUMBER IN THREE INCH CIRCLE | = |        | 8      |        |

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## CENTERFIRE PATTERNS # 5

POA

1 in circle

2 in circle

3 in circle

# OF SHOTS = 10

# IN CIR

1 in = 2

2 in = 5

3 in = 9

HS = 2.050

VS = 2.820

GS = 2.866

CENTROID #

| PATTERN #                   | 5      |
|-----------------------------|--------|
| SHOTS (BEST OF)             | 10     |
| MAXIMUM X                   | .759   |
| MINIMUM X                   | -1.291 |
| MAXIMUM Y                   | 1.517  |
| MINIMUM Y                   | -1.303 |
| CENTROID X                  | .011   |
| CENTROID Y                  | .765   |
| POA TO CENTROID in.         | .765   |
| MIN RADIUS                  | .303   |
| MEAN RADIUS                 | .979   |
| MAX RADIUS                  | 1.522  |
| HORIZONTAL SPREAD           | 2.050  |
| VERTICAL SPREAD             | 2.820  |
| EXTREME SPREAD              | 2.866  |
| NUMBER IN ONE INCH CIRCLE   | 2      |
| NUMBER IN TWO INCH CIRCLE   | 5      |
| NUMBER IN THREE INCH CIRCLE | 9      |

CENTROIDAL DISTANCE CALCULATIONS  
FOR RIFLE # C6225191 E2

CENTROIDAL DISTANCES

|      |   |         |
|------|---|---------|
| 0 TO | 1 | 1.42239 |
| 1 TO | 2 | 1.03706 |
| 1 TO | 3 | .875552 |
| 1 TO | 4 | .854618 |
| 1 TO | 5 | .650406 |

1  
2 5 2  
+ <----POA

THE AVERAGE X-COORDINATE FOR THIS RIFLE IS: .5198  
THE AVERAGE Y-COORDINATE FOR THIS RIFLE IS: .7398  
THE RESULTING AVERAGE POI RADIUS FOR THIS RIFLE IS: .984155

THE AMR FOR THIS RIFLE IS: .9982

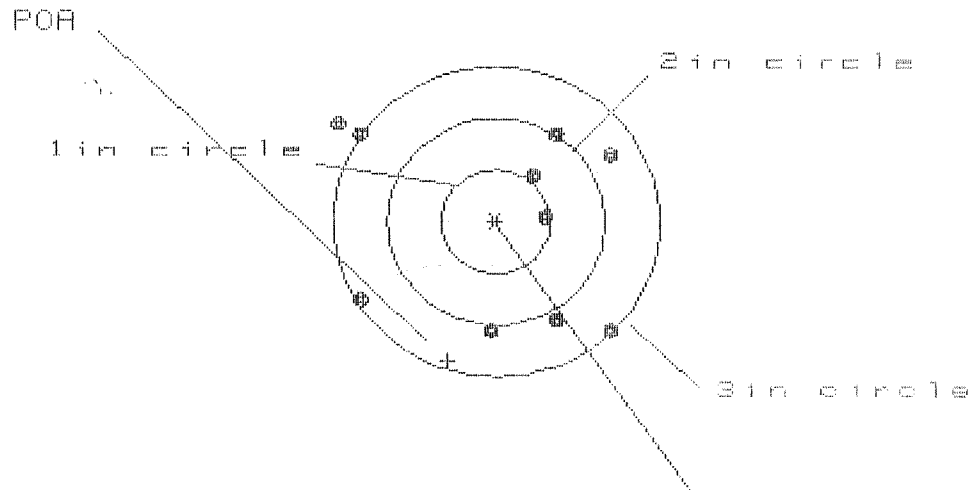
AVG POI CHANGE FROM  
0 ROUND LEVEL TO 500 ROUND LEVEL  $\approx$  .625 inches

11/14/88

14 Nov 1988

FILE:/PATTERNING/CENTERFIRE\_PATT/CG225191E2

## CENTERFIRE PATTERNS # 1



# OF SHOTS- 10

CENTROID \*

# IN CIR

1 in = 1

2 in = 2

3 in = 8

HS= 2.510

VS= 2.011

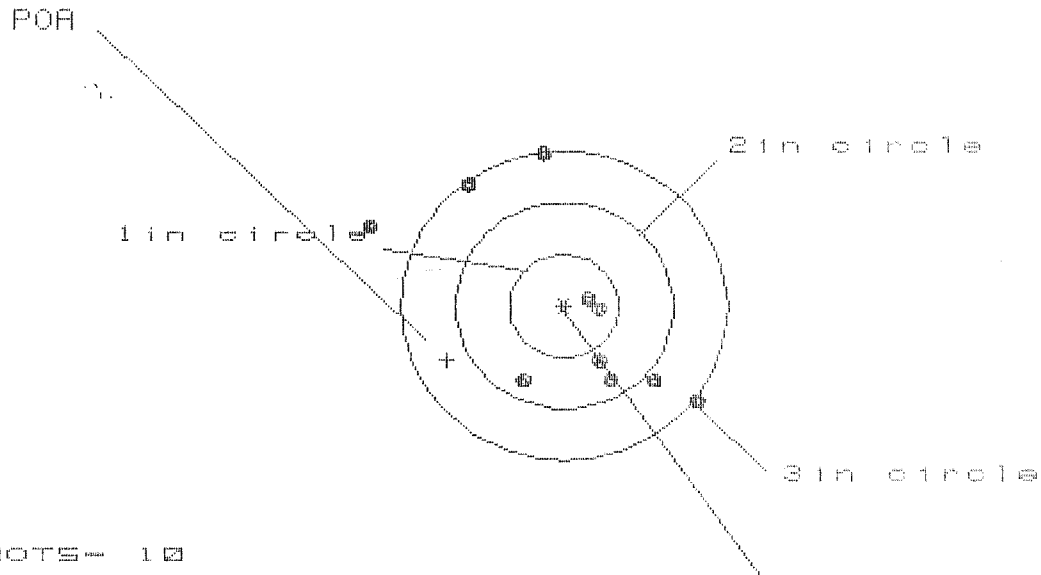
GS= 3.216

| PATTERN #                     | 10     | 9      | 8      |
|-------------------------------|--------|--------|--------|
| SHOTS (BEST OF)               | 10     | 9      | 8      |
| MAXIMUM X                     | 1.091  | .934   | .978   |
| MINIMUM X                     | -1.419 | -1.430 | -1.314 |
| MAXIMUM Y                     | .958   | .999   | .881   |
| MINIMUM Y                     | -1.053 | -.946  | -1.061 |
| CENTROID X                    | .448   | .605   | .489   |
| CENTROID Y                    | 1.350  | 1.243  | 1.361  |
| POA TO CENTROID in.           | 1.422  | 1.383  | 1.446  |
| MIN RADIUS                    | .415   | .292   | .373   |
| MEAN RADIUS                   | 1.162  | 1.068  | 1.040  |
| MAX RADIUS                    | 1.712  | 1.684  | 1.521  |
| HORIZONTAL SPREAD             | 2.510  | 2.364  | 2.292  |
| VERTICAL SPREAD               | 2.011  | 1.945  | 1.942  |
| EXTREME SPREAD                | 3.216  | 3.000  | 2.656  |
| NUMBER IN ONE INCH CIRCLE =   | 1      |        |        |
| NUMBER IN TWO INCH CIRCLE =   | 2      |        |        |
| NUMBER IN THREE INCH CIRCLE = | 8      |        |        |

14 May 1988

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## CENTERFIRE PATTERNS # 2



# OF SHOTS- 10

# IN CIR

1 in = 2

2 in = 5

3 in = 8

HS= 2.903

VS= 2.459

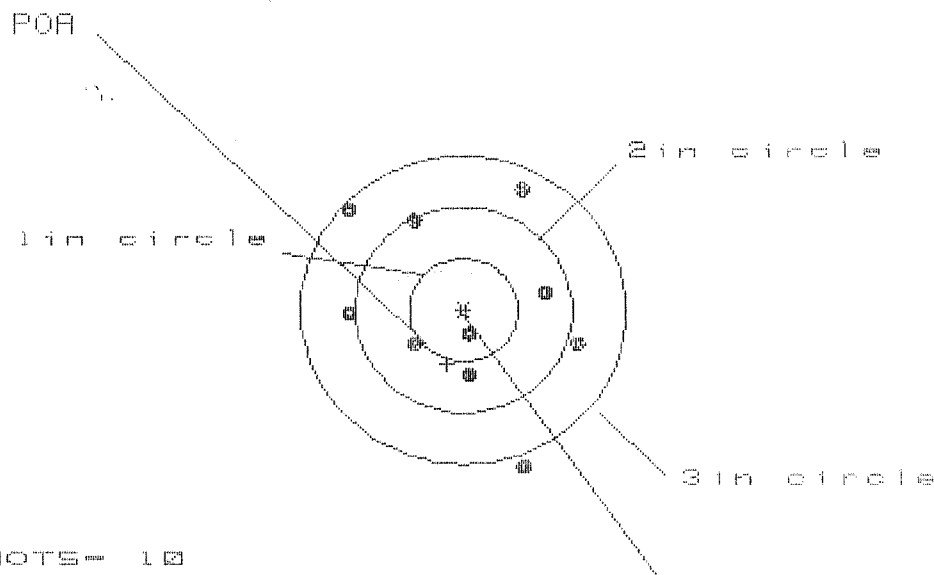
GS= 3.368

| PATTERN #                     | 1      | 2      | 3      |
|-------------------------------|--------|--------|--------|
| SHOTS (BEST OF)               | 10     | 9      | 8      |
| MAXIMUM X                     | 1.172  | .979   | .932   |
| MINIMUM X                     | -1.731 | -1.073 | -1.120 |
| MAXIMUM Y                     | 1.522  | 1.608  | 1.489  |
| MINIMUM Y                     | -.937  | -.851  | -.650  |
| CENTROID X                    | 1.079  | 1.272  | 1.319  |
| CENTROID Y                    | .527   | .441   | .240   |
| POA TO CENTROID in.           | 1.201  | 1.346  | 1.341  |
| MIN RADIUS                    | .280   | .133   | .223   |
| MEAN RADIUS                   | 1.030  | .869   | .734   |
| MAX RADIUS                    | 1.896  | 1.676  | 1.864  |
| HORIZONTAL SPREAD             | 2.903  | 2.052  | 2.052  |
| VERTICAL SPREAD               | 2.459  | 2.459  | 2.139  |
| EXTREME SPREAD                | 3.368  | 2.964  | 2.964  |
| NUMBER IN ONE INCH CIRCLE =   |        | 2      |        |
| NUMBER IN TWO INCH CIRCLE =   |        | 5      |        |
| NUMBER IN THREE INCH CIRCLE = |        | 8      |        |

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## CENTERFIRE PATTERNS # 3



# OF SHOTS- 10

# IN CIR

1in = 1

2in = 5

3in = 9

HS= 2.119

VS= 2.709

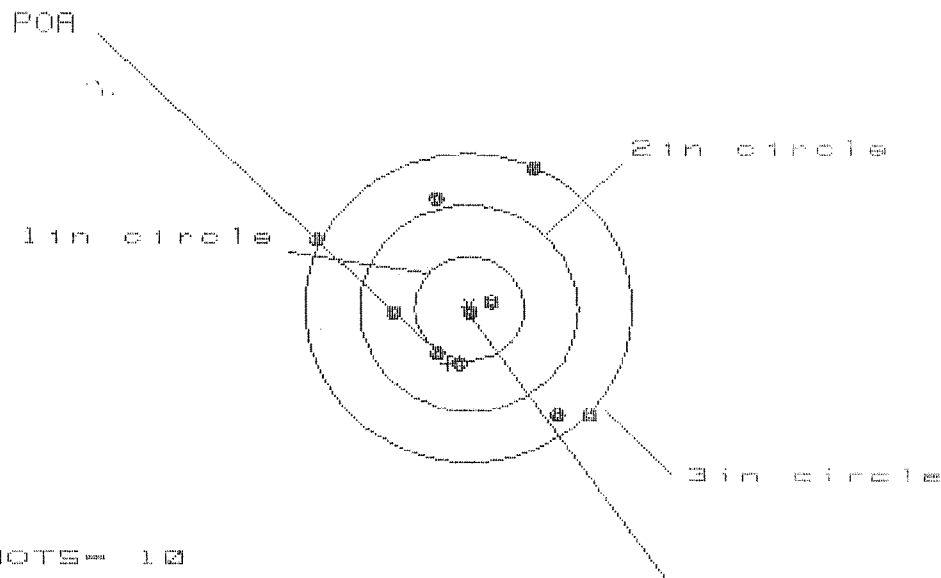
GS= 2.963

| PATTERN #                   | : | 3      |
|-----------------------------|---|--------|
| SHOTS (BEST OF)             | : | 10     |
| MAXIMUM X                   | : | 1.039  |
| MINIMUM X                   | : | -1.080 |
| MAXIMUM Y                   | : | 1.135  |
| MINIMUM Y                   | : | -1.574 |
| CENTROID X                  | : | .152   |
| CENTROID Y                  | : | .526   |
| POA TO CENTROID in.         | : | .548   |
| MIN RADIUS                  | : | .285   |
| MEAN RADIUS                 | : | .960   |
| MAX RADIUS                  | : | 1.671  |
| HORIZONTAL SPREAD           | : | 2.119  |
| VERTICAL SPREAD             | : | 2.709  |
| EXTREME SPREAD              | : | 2.963  |
| NUMBER IN ONE INCH CIRCLE   | = | 1      |
| NUMBER IN TWO INCH CIRCLE   | = | 5      |
| NUMBER IN THREE INCH CIRCLE | = | 9      |

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## CENTERFIRE PATTERNS # 4



# OF SHOTS= 10

# IN CIR

1in = 2

2in = 5

3in = 7

HS= 2.577

VS= 2.435

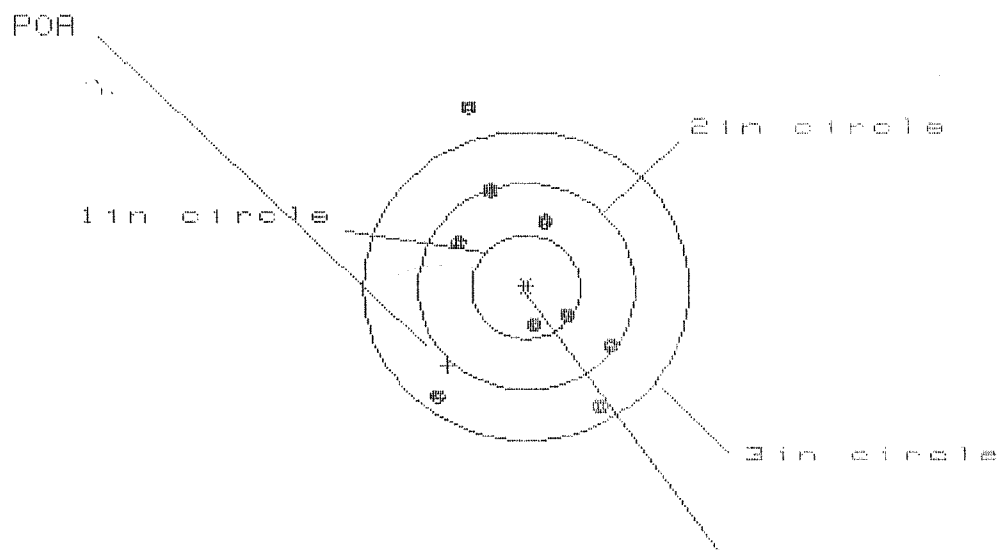
GS= 3.078

| PATTERN #                     | 10     | 9     | 8      |
|-------------------------------|--------|-------|--------|
| SHOTS (BEST OF)               | 10     | 9     | 8      |
| MAXIMUM X                     | 1.149  | .991  | .818   |
| MINIMUM X                     | -1.427 | -.867 | -.743  |
| MAXIMUM Y                     | 1.399  | 1.471 | 1.351  |
| MINIMUM Y                     | -1.036 | -.964 | -1.085 |
| CENTROID X                    | .194   | .352  | .228   |
| CENTROID Y                    | .534   | .462  | .583   |
| POA TO CENTROID in.           | .568   | .581  | .626   |
| MIN RADIUS                    | .096   | .105  | .129   |
| MEAN RADIUS                   | .926   | .847  | .776   |
| MAX RADIUS                    | 1.568  | 1.524 | 1.448  |
| HORIZONTAL SPREAD             | 2.577  | 1.858 | 1.561  |
| VERTICAL SPREAD               | 2.435  | 2.435 | 2.435  |
| EXTREME SPREAD                | 3.078  | 2.593 | 2.453  |
| NUMBER IN ONE INCH CIRCLE =   | 2      |       |        |
| NUMBER IN TWO INCH CIRCLE =   | 5      |       |        |
| NUMBER IN THREE INCH CIRCLE = | 7      |       |        |

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## CENTERFIRE PATTERNS # 5



# OF SHOTS- 10

# IN CIR

1 in = 3

2 in = 5

3 in = 9

HS= 1.619

VS= 2.833

GS= 3.064

CENTROID \*

| PATTERN #                     | 5      |
|-------------------------------|--------|
| SHOTS (BEST OF)               | 10     |
| MAXIMUM X                     | .822   |
| MINIMUM X                     | -.797  |
| MAXIMUM Y                     | 1.716  |
| MINIMUM Y                     | -1.117 |
| CENTROID X                    | .726   |
| CENTROID Y                    | .762   |
| POA TO CENTROID in.           | 1.052  |
| MIN RADIUS                    | .377   |
| MEAN RADIUS                   | .913   |
| MAX RADIUS                    | 1.793  |
| HORIZONTAL SPREAD             | 1.619  |
| VERTICAL SPREAD               | 2.833  |
| EXTREME SPREAD                | 3.064  |
| NUMBER IN ONE INCH CIRCLE =   | 3      |
| NUMBER IN TWO INCH CIRCLE =   | 6      |
| NUMBER IN THREE INCH CIRCLE = | 9      |

CENTROIDAL DISTANCE CALCULATIONS  
FOR RIFLE # C6225191

CENTROIDAL DISTANCES

|      |   |         |
|------|---|---------|
| 0 TO | 1 | .193631 |
| 1 TO | 2 | .460114 |
| 1 TO | 3 | .242217 |
| 1 TO | 4 | .722524 |
| 1 TO | 5 | .741631 |

5<sup>4</sup>  
31 2 <----POA

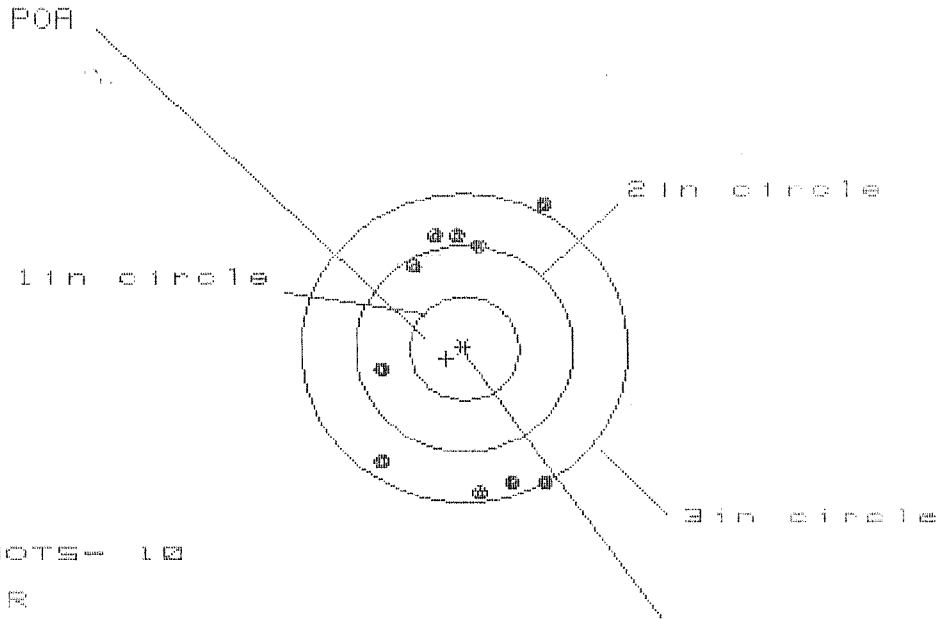
THE AVERAGE X-COORDINATE FOR THIS RIFLE IS: -.0034  
THE AVERAGE Y-COORDINATE FOR THIS RIFLE IS: .3006  
THE RESULTING AVERAGE POI RADIUS FOR THIS RIFLE IS: .300619  
THE AMR FOR THIS RIFLE IS: 1.145

4500 Round Test Nov 30, 1988

30 Nov 1988

FILE:/PATTERNING/CENTERFIRE\_PATT/C8225191.1

## CENTERFIRE PATTERNS # 1



# OF SHOTS- 10

# IN CIR

1in - 0

2in - 2

3in = 8

HS= 1.534

VS= 2.769

GS= 2.925

| PATTERN #                     | 10     | 9      | 8      |
|-------------------------------|--------|--------|--------|
| SHOTS (BEST OF)               | 10     | 9      | 8      |
| MAXIMUM X                     | .779   | .863   | .607   |
| MINIMUM X                     | -.755  | -.671  | -.563  |
| MAXIMUM Y                     | 1.356  | 1.234  | 1.091  |
| MINIMUM Y                     | -1.413 | -1.262 | -1.405 |
| CENTROID X                    | .167   | .083   | -.025  |
| CENTROID Y                    | .098   | -.053  | .090   |
| POA TO CENTROID in.           | .193   | .098   | .094   |
| MIN RADIUS                    | .751   | .652   | .562   |
| MEAN RADIUS                   | 1.208  | 1.163  | 1.098  |
| MAX RADIUS                    | 1.554  | 1.436  | 1.444  |
| HORIZONTAL SPREAD             | 1.534  | 1.534  | 1.170  |
| VERTICAL SPREAD               | 2.769  | 2.496  | 2.496  |
| EXTREME SPREAD                | 2.925  | 2.584  | 2.523  |
| NUMBER IN ONE INCH CIRCLE =   | 0      |        |        |
| NUMBER IN TWO INCH CIRCLE =   |        | 2      |        |
| NUMBER IN THREE INCH CIRCLE = |        | 8      |        |

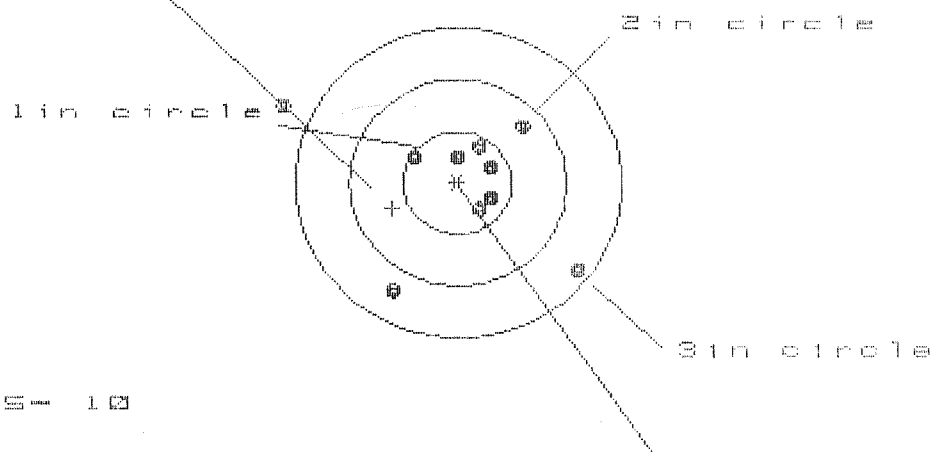
30 May 1988

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## CENTERFIRE PATTERNS

# 2

POA



# OF SHOTS- 10

# IN CIR

1in = 6

2in = 7

3in = 9

HS= 2.619

VS= 1.759

GS= 3.032

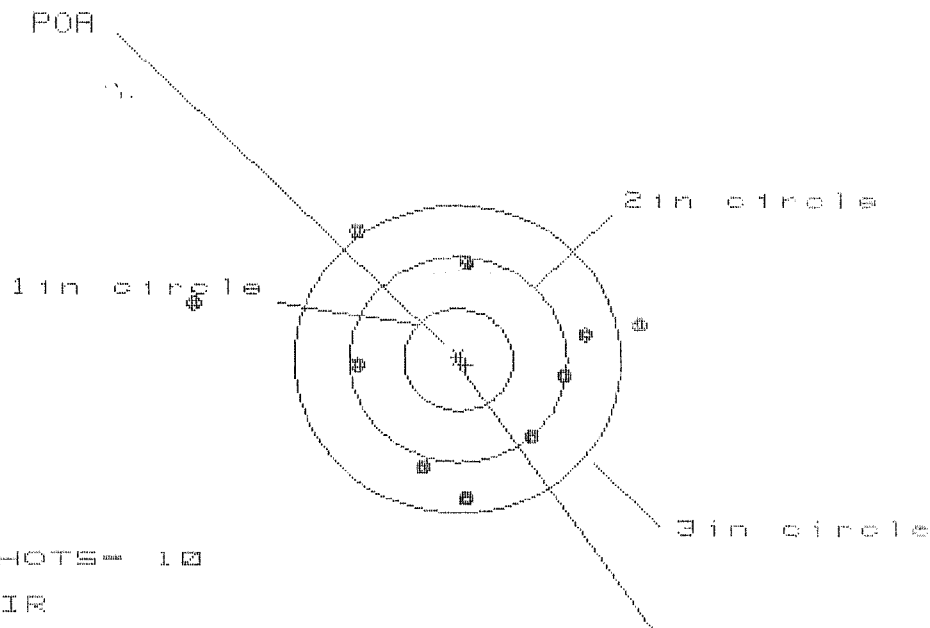
CENTROID \*

| PATTERN #                     | 1      | 2     | 3      |
|-------------------------------|--------|-------|--------|
| SHOTS (BEST OF)               | 10     | 9     | 8      |
| MAXIMUM X                     | 1.048  | .874  | .516   |
| MINIMUM X                     | -1.571 | -.808 | -.699  |
| MAXIMUM Y                     | .712   | .659  | .567   |
| MINIMUM Y                     | -1.047 | -.968 | -1.060 |
| CENTROID X                    | .603   | .777  | .668   |
| CENTROID Y                    | .245   | .166  | .258   |
| POA TO CENTROID in.           | .650   | .794  | .716   |
| MIN RADIUS                    | .297   | .152  | .289   |
| MEAN RADIUS                   | .731   | .592  | .518   |
| MAX RADIUS                    | 1.724  | 1.261 | 1.269  |
| HORIZONTAL SPREAD             | 2.619  | 1.682 | 1.215  |
| VERTICAL SPREAD               | 1.759  | 1.627 | 1.627  |
| EXTREME SPREAD                | 3.032  | 2.031 | 2.031  |
| NUMBER IN ONE INCH CIRCLE =   |        | 6     |        |
| NUMBER IN TWO INCH CIRCLE =   |        | 7     |        |
| NUMBER IN THREE INCH CIRCLE = |        | 9     |        |

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## CENTERFIRE PATTERNS # 3



# OF SHOTS= 10

# IN CIR

1in = 0

2in = 3

3in = 7

HS= 4.104

VS= 2.543

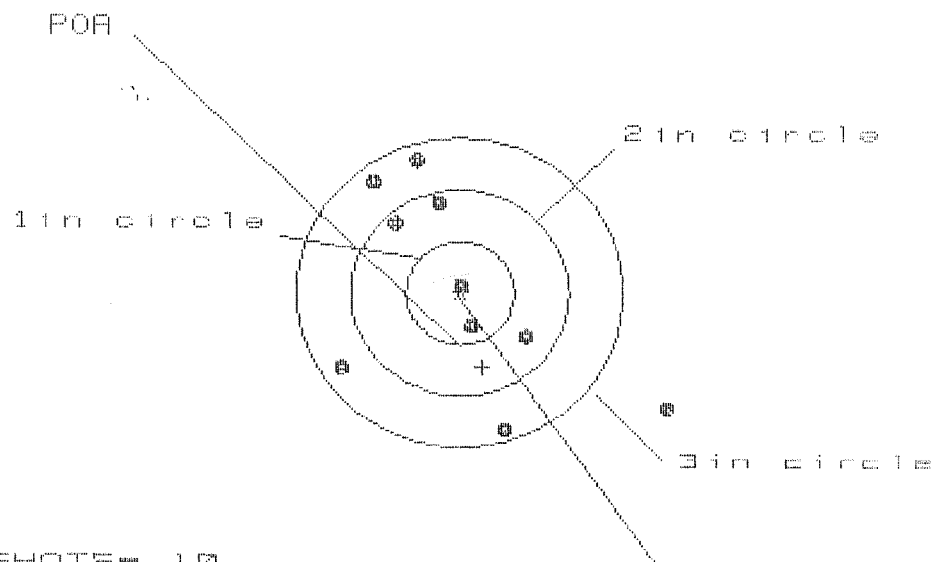
GS= 4.100

| PATTERN #                     | 3      |
|-------------------------------|--------|
| SHOTS (BEST OF)               | 10     |
| MAXIMUM X                     | 1.665  |
| MINIMUM X                     | -2.439 |
| MAXIMUM Y                     | 1.234  |
| MINIMUM Y                     | -1.309 |
| CENTROID X                    | -.070  |
| CENTROID Y                    | .048   |
| POA TO CENTROID in.           | .085   |
| MIN RADIUS                    | .914   |
| MEAN RADIUS                   | 1.326  |
| MAX RADIUS                    | 2.502  |
| HORIZONTAL SPREAD             | 4.104  |
| VERTICAL SPREAD               | 2.543  |
| EXTREME SPREAD                | 4.100  |
| NUMBER IN ONE INCH CIRCLE =   | 0      |
| NUMBER IN TWO INCH CIRCLE =   | 3      |
| NUMBER IN THREE INCH CIRCLE = | 7      |

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## CENTERFIRE PATTERNS # 4



# OF SHOTS- 10

# IN CIR

1in = 2

2in = 5

3in = 8

HS= 3.020

VS= 2.650

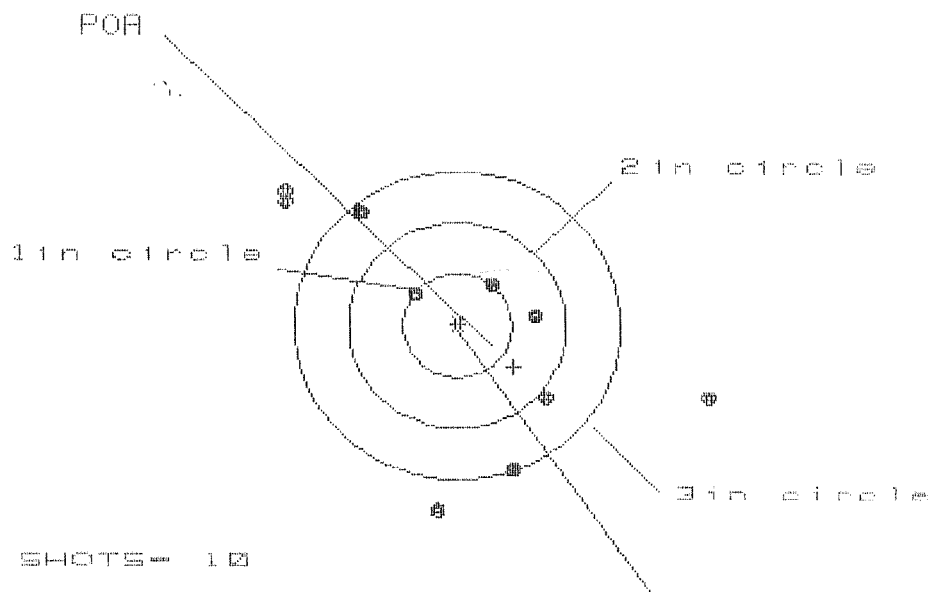
GS= 3.492

| PATTERN #                     | 10     | 9      | 8      |
|-------------------------------|--------|--------|--------|
| SHOTS (BEST OF)               | 10     | 9      | 8      |
| MAXIMUM X                     | 1.902  | .813   | .886   |
| MINIMUM X                     | -1.118 | -.906  | -.833  |
| MAXIMUM Y                     | 1.291  | 1.162  | .976   |
| MINIMUM Y                     | -1.359 | -1.488 | -1.030 |
| CENTROID X                    | -.204  | -.416  | -.489  |
| CENTROID Y                    | .718   | .847   | 1.033  |
| POA TO CENTROID in.           | .747   | .944   | 1.143  |
| MIN RADIUS                    | .038   | .223   | .392   |
| MEAN RADIUS                   | 1.056  | .924   | .823   |
| MAX RADIUS                    | 2.229  | 1.598  | 1.325  |
| HORIZONTAL SPREAD             | 3.020  | 1.719  | 1.719  |
| VERTICAL SPREAD               | 2.650  | 2.650  | 2.006  |
| EXTREME SPREAD                | 3.492  | 2.757  | 2.134  |
| NUMBER IN ONE INCH CIRCLE =   | 2      |        |        |
| NUMBER IN TWO INCH CIRCLE =   | 5      |        |        |
| NUMBER IN THREE INCH CIRCLE = | 9      |        |        |

30 Nov 1988

FILE:/PATTERNING/CENTERFIRE\_PATT/C6225191.1

## CENTERFIRE PATTERNS # 5



# OF SHOTS= 10

# IN CIR

1in = 0

2in = 3

3in = 6

HS= 3.897

VS= 3.074

GS= 4.348

CENTROID +

| PATTERN #                     | 5      |
|-------------------------------|--------|
| SHOTS (BEST OF)               | 10     |
| MAXIMUM X                     | 2.302  |
| MINIMUM X                     | -1.595 |
| MAXIMUM Y                     | 1.275  |
| MINIMUM Y                     | -1.799 |
| CENTROID X                    | -.513  |
| CENTROID Y                    | .394   |
| POA TO CENTROID in.           | .647   |
| MIN RADIUS                    | .526   |
| MEAN RADIUS                   | 1.403  |
| MAX RADIUS                    | 2.393  |
| HORIZONTAL SPREAD             | 3.897  |
| VERTICAL SPREAD               | 3.074  |
| EXTREME SPREAD                | 4.348  |
| NUMBER IN ONE INCH CIRCLE =   | 0      |
| NUMBER IN TWO INCH CIRCLE =   | 3      |
| NUMBER IN THREE INCH CIRCLE = | 6      |

CENTROIDAL DISTANCE CALCULATIONS  
FOR RIFLE # C6225191

CENTROIDAL DISTANCES

|      |   |         |
|------|---|---------|
| 0 TO | 1 | 1.25263 |
| 1 TO | 2 | 1.16789 |
| 1 TO | 3 | 1.44148 |
| 1 TO | 4 | .763535 |
| 1 TO | 5 | 1.44659 |

+ 5<sub>2</sub> <----POA  
4  
1

THE AVERAGE X-COORDINATE FOR THIS RIFLE IS: .2906  
THE AVERAGE Y-COORDINATE FOR THIS RIFLE IS: -.5272  
THE RESULTING AVERAGE POI RADIUS FOR THIS RIFLE IS: .601987  
THE AMR FOR THIS RIFLE IS: 1.012

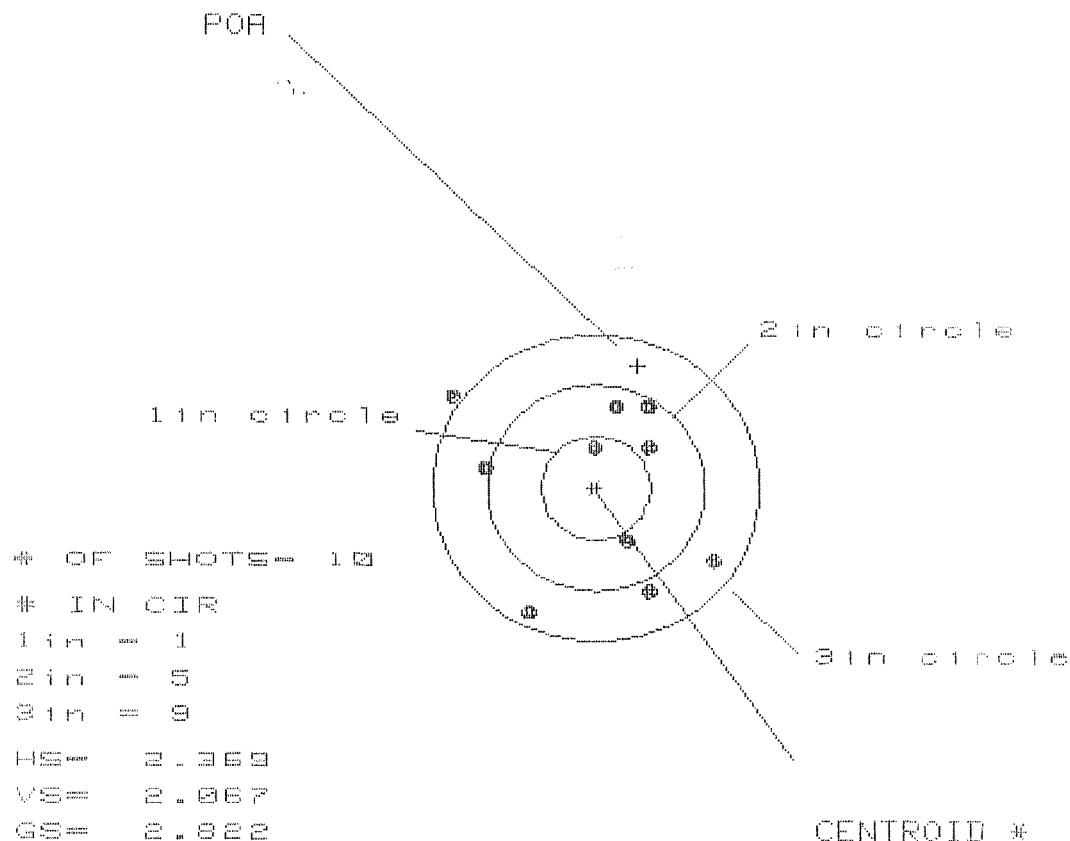
*5000 Round Test*

*Dec 1, 1988*

1 Dec 1988

FILE:/PATTERNING/CENTERFIRE\_PATT/C6225191.1.1

## CENTERFIRE PATTERNS # 1



| PATTERN #                   | : | 10     | 9      | 8      |
|-----------------------------|---|--------|--------|--------|
| SHOTS (BEST OF)             | : | 10     | 9      | 8      |
| MAXIMUM X                   | : | 1.049  | .902   | .805   |
| MINIMUM X                   | : | -1.320 | -1.203 | -1.300 |
| MAXIMUM Y                   | : | .850   | .905   | .764   |
| MINIMUM Y                   | : | -1.217 | -1.122 | -1.061 |
| CENTROID X                  | : | -.385  | -.238  | -.141  |
| CENTROID Y                  | : | -1.192 | -1.287 | -1.146 |
| POA TO CENTROID in.         | : | 1.253  | 1.308  | 1.155  |
| MIN RADIUS                  | : | .387   | .434   | .408   |
| MEAN RADIUS                 | : | .975   | .893   | .801   |
| MAX RADIUS                  | : | 1.570  | 1.367  | 1.310  |
| HORIZONTAL SPREAD           | : | 2.369  | 2.105  | 2.105  |
| VERTICAL SPREAD             | : | 2.067  | 2.027  | 1.825  |
| EXTREME SPREAD              | : | 2.822  | 2.283  | 2.283  |
| NUMBER IN ONE INCH CIRCLE   | = | 1      |        |        |
| NUMBER IN TWO INCH CIRCLE   | = | 5      |        |        |
| NUMBER IN THREE INCH CIRCLE | = | 9      |        |        |

1 Dec 1988

FILE:/PATTERNING/CENTERFIRE\_PATT/06225151.1.1

## CENTERFIRE PATTERNS # 2

POA

1 in circle

2 in circle

3 in circle

CENTROID \*

# OF SHOTS = 10

# IN CIR

1 in = 1

2 in = 1

3 in = 7

HS = 3.331

VS = 3.242

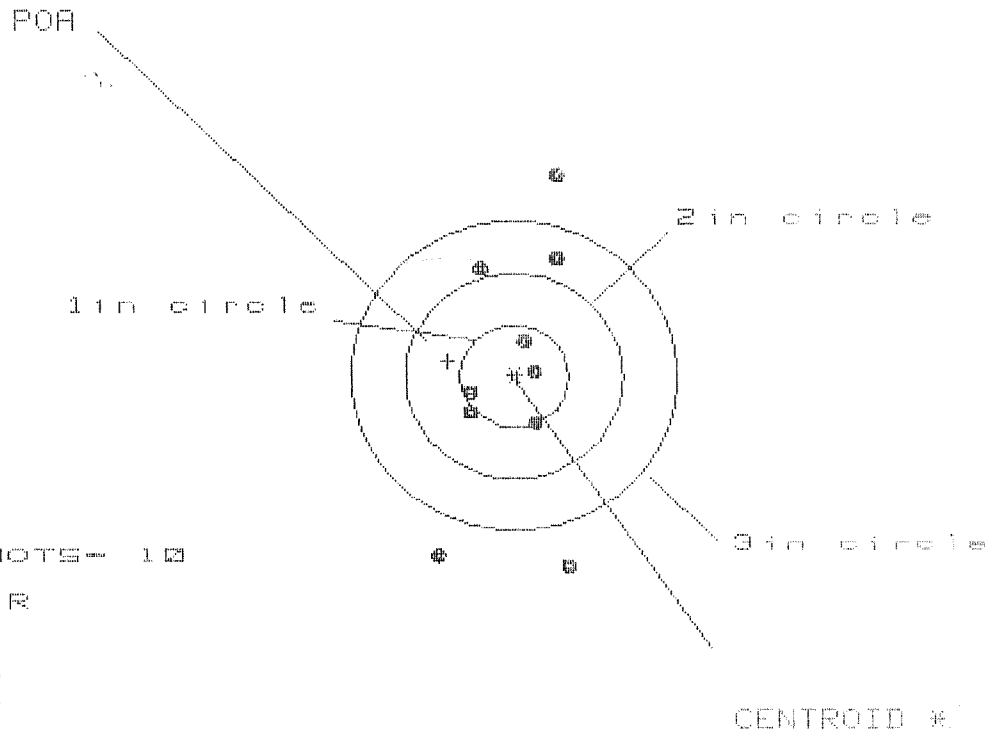
GS = 3.333

| PATTERN #                   | : | 2      |        |        |
|-----------------------------|---|--------|--------|--------|
| SHOTS (BEST OF)             | : | 10     | 9      | 8      |
| MAXIMUM X                   | : | 1.431  | 1.220  | 1.227  |
| MINIMUM X                   | : | -1.900 | -.947  | -.940  |
| MAXIMUM Y                   | : | 1.704  | 1.683  | 1.618  |
| MINIMUM Y                   | : | -1.538 | -1.559 | -1.348 |
| CENTROID X                  | : | .558   | .769   | .762   |
| CENTROID Y                  | : | -.503  | -.482  | -.693  |
| POA TO CENTROID in.         | : | .751   | .908   | 1.030  |
| MIN RADIUS                  | : | .453   | .654   | .606   |
| MEAN RADIUS                 | : | 1.353  | 1.287  | 1.209  |
| MAX RADIUS                  | : | 1.909  | 1.684  | 1.640  |
| HORIZONTAL SPREAD           | : | 3.331  | 2.167  | 2.167  |
| VERTICAL SPREAD             | : | 3.242  | 3.242  | 2.966  |
| EXTREME SPREAD              | : | 3.333  | 3.242  | 2.983  |
| NUMBER IN ONE INCH CIRCLE   | = |        | 1      |        |
| NUMBER IN TWO INCH CIRCLE   | = |        | 1      |        |
| NUMBER IN THREE INCH CIRCLE | = |        | 7      |        |

1 Dec 1988

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## CENTERFIRE PATTERNS # 3



# OF SHOTS- 10

# IN CIR

1in = 4

2in = 5

3in = 7

HS= 1.243

VS= 3.794

GS= 3.862

| PATTERN #                   | : | 3      | 9      | 8      |
|-----------------------------|---|--------|--------|--------|
| SHOTS (BEST OF)             | : | 10     | 9      | 8      |
| MAXIMUM X                   | : | .498   | .541   | .478   |
| MINIMUM X                   | : | -.745  | -.702  | -.635  |
| MAXIMUM Y                   | : | 1.916  | 1.332  | 1.124  |
| MINIMUM Y                   | : | -1.878 | -1.665 | -1.770 |
| CENTROID X                  | : | .610   | .567   | .500   |
| CENTROID Y                  | : | -.149  | -.362  | -.154  |
| POA TO CENTROID in.         | : | .628   | .673   | .523   |
| MIN RADIUS                  | : | .231   | .315   | .283   |
| MEAN RADIUS                 | : | 1.008  | .907   | .774   |
| MAX RADIUS                  | : | 1.955  | 1.751  | 1.880  |
| HORIZONTAL SPREAD           | : | 1.243  | 1.243  | 1.113  |
| VERTICAL SPREAD             | : | 3.794  | 2.997  | 2.894  |
| EXTREME SPREAD              | : | 3.862  | 3.101  | 3.101  |
| NUMBER IN ONE INCH CIRCLE   | = | 4      |        |        |
| NUMBER IN TWO INCH CIRCLE   | = | 5      |        |        |
| NUMBER IN THREE INCH CIRCLE | = | 7      |        |        |

1 Dec 1988

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## CENTERFIRE PATTERNS

# 4

POA

1in circle

2in circle

3in circle

# OF SHOTS= 10

# IN CIR

1in = 3

2in = 8

3in = 9

HS= 2.786

VS= 2.082

GS= 3.197

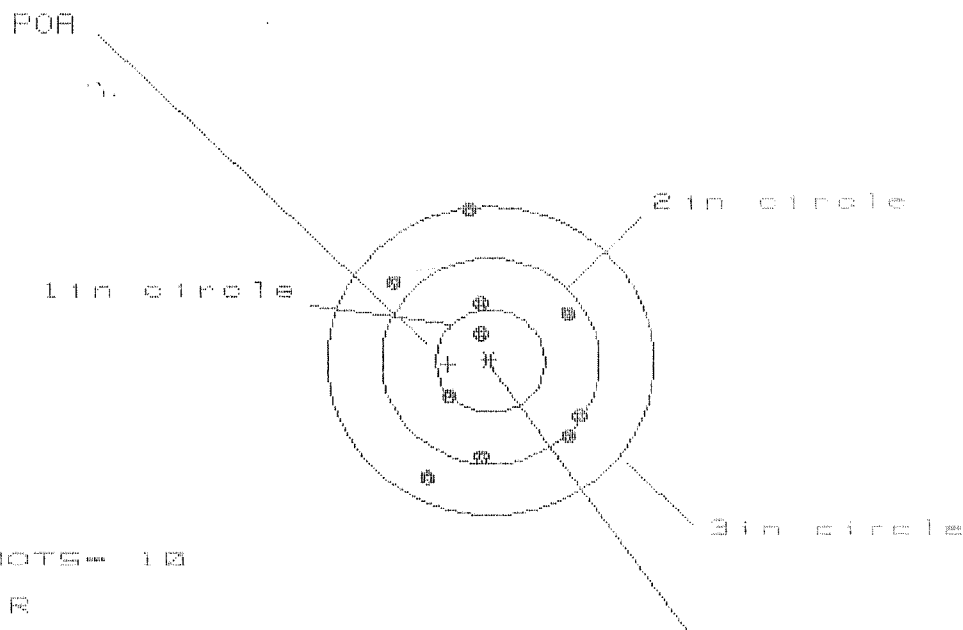
CENTROID \*

| PATTERN #                     | 1      | 2     | 3     |
|-------------------------------|--------|-------|-------|
| SHOTS (BEST OF)               | 10     | 9     | 8     |
| MAXIMUM X                     | 1.790  | 1.103 | 1.003 |
| MINIMUM X                     | -.996  | -.797 | -.804 |
| MAXIMUM Y                     | .684   | .528  | .500  |
| MINIMUM Y                     | -1.398 | -.514 | -.542 |
| CENTROID X                    | .284   | .085  | .185  |
| CENTROID Y                    | -.824  | -.668 | -.640 |
| POA TO CENTROID in.           | .871   | .674  | .666  |
| MIN RADIUS                    | .185   | .087  | .039  |
| MEAN RADIUS                   | .825   | .614  | .577  |
| MAX RADIUS                    | 2.271  | 1.216 | 1.140 |
| HORIZONTAL SPREAD             | 2.786  | 1.900 | 1.807 |
| VERTICAL SPREAD               | 2.082  | 1.042 | 1.042 |
| EXTREME SPREAD                | 3.197  | 1.924 | 1.924 |
| NUMBER IN ONE INCH CIRCLE =   | 3      |       |       |
| NUMBER IN TWO INCH CIRCLE =   | 9      |       |       |
| NUMBER IN THREE INCH CIRCLE = | 9      |       |       |

1 Dec 1988

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## CENTERFIRE PATTERNS # 5



# OF SHOTS= 10

# IN CIR

1in = 2

2in = 5

3in = 10

HS= 1.705

VS= 2.558

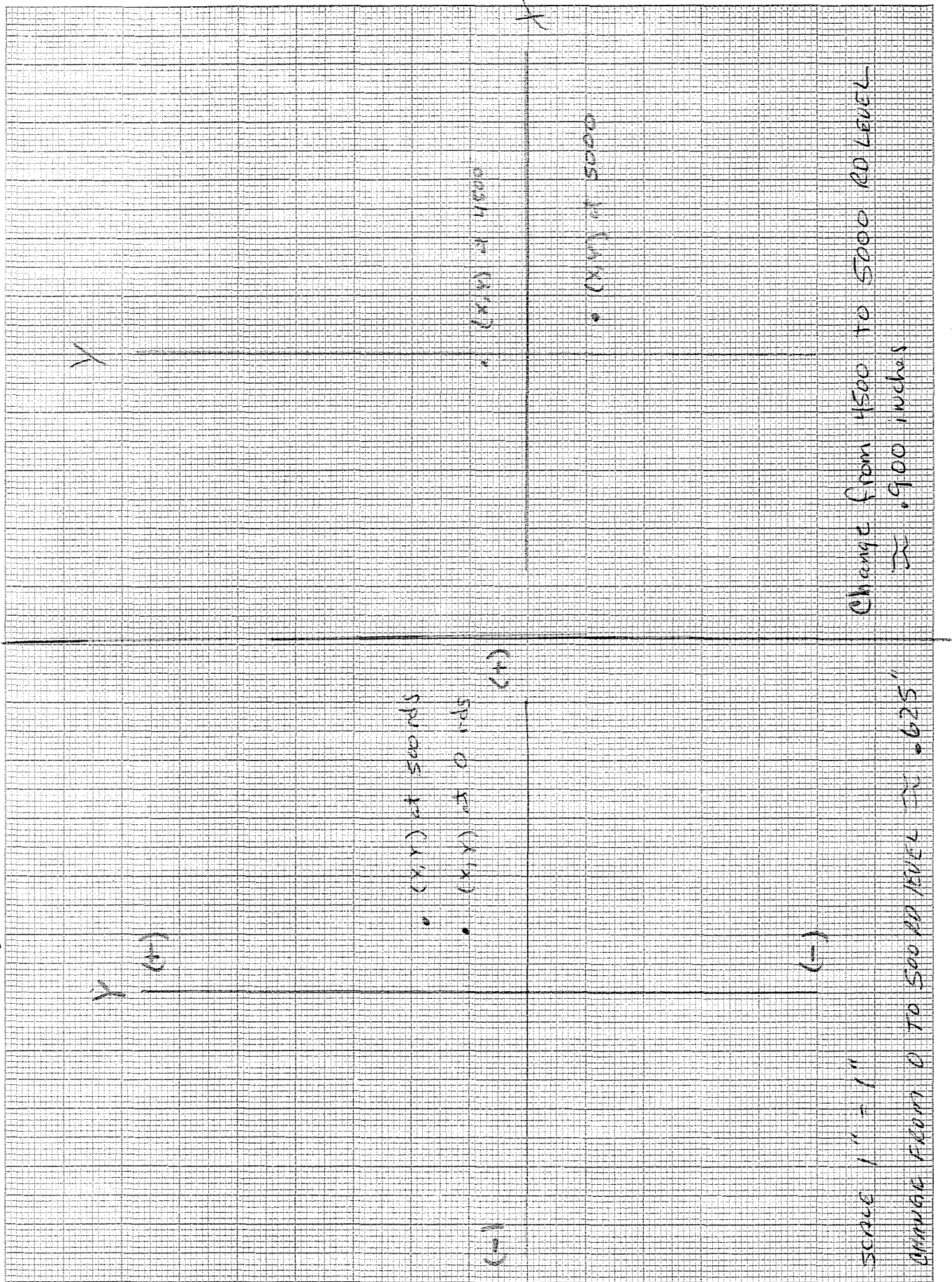
GS= 2.581

CENTROID \*

| PATTERN #                     | 5      | 9     | 8     |
|-------------------------------|--------|-------|-------|
| SHOTS (BEST OF)               | 10     | 9     | 8     |
| MAXIMUM X                     | .809   | .785  | .713  |
| MINIMUM X                     | -.896  | -.920 | -.992 |
| MAXIMUM Y                     | 1.466  | .922  | .806  |
| MINIMUM Y                     | -1.092 | -.929 | -.873 |
| CENTROID X                    | .386   | .410  | .482  |
| CENTROID Y                    | .032   | -.131 | -.015 |
| POA TO CENTROID in.           | .388   | .430  | .483  |
| MIN RADIUS                    | .275   | .410  | .364  |
| MEAN RADIUS                   | .900   | .831  | .789  |
| MAX RADIUS                    | 1.481  | 1.302 | 1.278 |
| HORIZONTAL SPREAD             | 1.705  | 1.705 | 1.705 |
| VERTICAL SPREAD               | 2.558  | 1.851 | 1.679 |
| EXTREME SPREAD                | 2.581  | 2.204 | 2.204 |
| NUMBER IN ONE INCH CIRCLE =   | 2      |       |       |
| NUMBER IN TWO INCH CIRCLE =   | 6      |       |       |
| NUMBER IN THREE INCH CIRCLE = | 10     |       |       |

Dec. 4, 1988

C6225191 ENDUANCE











# SWS ENDURANCE TEST REPORT

SERIAL NO. C6225191 SHOOTER AC-DH DATE 11/17/88

[illegible]





# SWS ENDURANCE TEST REPORT

SERIAL NO. C6225191 SHOOTER AC-DH DATE 11/29/88

[illegible]

## SWS ENDURANCE TEST REPORT

 SERIAL NO. C6225191 SHOOTER DH-AC DATE 11/30/88

| AMMO<br>CODE | AMMO<br>TYPE | RDS. | RESULTS | OBSERVATIONS |
|--------------|--------------|------|---------|--------------|
|              | 7.62         | 30   | OK      | NONE         |
|              | 11           | 30   | 11      | 11           |
|              | 11           | 30   | 11      | 11           |
|              | 11           | 30   | 11      | 11           |
|              | 11           | 30   | 11      | 11           |
|              | 11           | 30   | 11      | 11           |
|              | 11           | 30   | 11      | 11           |
|              | 11           | 30   | 11      | 11           |
|              | 11           | 30   | 11      | 11           |
|              | 11           | 30   | 11      | 11           |
|              | 11           | 30   | 11      | 11           |
|              | 11           | 30   | 11      | 11           |
|              | 11           | 30   | 11      | 11           |
|              | 11           | 30   | 11      | 11           |
|              | 11           | 30   | 11      | 11           |
|              | 11           | 30   | 11      | 11           |
|              | 11           | 30   | 11      | 11           |
|              | 11           | 20   | 11      | 11           |
|              | TOTAL        | 470  |         |              |
|              |              | 60   | TARGET  |              |
|              |              | 530  |         |              |
|              |              |      |         |              |
|              |              |      |         |              |
|              |              |      |         |              |
|              |              |      |         |              |
|              |              |      |         |              |

## SWS ENDURANCE TEST REPORT

SERIAL NO. C6225191 SHOOTER AC & DH DATE 12/1/88

| AMMO<br>CODE | AMMO<br>TYPE | RDS. | RESULTS | OBSERVATIONS |
|--------------|--------------|------|---------|--------------|
|              | 7.62         | 30   | OK      | NONE         |
|              | "            | 30   | "       | "            |
|              | "            | 30   | "       | "            |
|              | "            | 30   | "       | "            |
|              | "            | 30   | "       | "            |
|              | "            | 30   | "       | "            |
|              | "            | 30   | "       | "            |
|              | "            | 30   | "       | "            |
|              | "            | 30   | "       | "            |
|              | "            | 30   | "       | "            |
|              | "            | 30   | "       | "            |
|              | "            | 30   | "       | "            |
|              | "            | 30   | "       | "            |
|              | "            | 20   | "       | "            |
| Total Rds    |              | 380  |         |              |
| Total Rounds |              | 5000 |         |              |

# SWS ENDURANCE TEST REPORT

SERIAL NO. C6225191 SHOOTER AC <sup>ENC</sup> DH DATE 12/5/88

| AMMO<br>CODE | AMMO<br>TYPE | RDS. | RESULTS | OBSERVATIONS |
|--------------|--------------|------|---------|--------------|
| .            | 7.62         | 30   | OK      | NONE         |
|              | "            | 30   | "       | "            |
|              | "            | 30   | "       | "            |
|              | "            | 30   | "       | "            |
|              | "            | 30   | "       | "            |
|              | "            | 30   | "       | "            |
|              | "            | 30   | "       | "            |
|              | "            | 30   | "       | "            |
|              | "            | 30   | "       | "            |
|              | "            | 30   | "       | "            |
|              | "            | 30   | "       | "            |
|              | "            | 30   | "       | "            |
|              | "            | 30   | "       | "            |
|              | "            | 30   | "       | "            |
|              | "            | 30   | "       | "            |
|              | "            | 30   | "       | "            |
|              | "            | 30   | "       | "            |
|              | "            | 30   | "       | "            |
|              | "            | 30   | "       | "            |
|              | "            | 30   | "       | "            |
|              | "            | 30   | "       | "            |
|              | "            | 30   | "       | "            |
| Total Rounds |              | 660  |         |              |

# SWS ENDURANCE TEST REPORT

SERIAL NO. C6225191 SHOOTER AC & DH DATE 12/5/88

| AMMO<br>CODE | AMMO<br>TYPE | RDS.              | RESULTS | OBSERVATIONS |
|--------------|--------------|-------------------|---------|--------------|
| .            | 7.62         | 30                | OK      | NONE         |
|              | "            | 30                | "       | "            |
|              | "            | 30                | "       | "            |
|              | "            | 30                | "       | "            |
|              | "            | 30                | "       | "            |
|              | "            | 30                | "       | "            |
|              | "            | 30                | "       | "            |
|              | "            | 30                | "       | "            |
|              | "            | 30                | "       | "            |
|              | "            | 30                | "       | "            |
|              | "            | 30                | "       | "            |
|              | "            | 30                | "       | "            |
| Total Rds.   |              | 340<br><u>660</u> |         |              |
|              |              | 1000              |         |              |
|              |              | <u>5000</u>       |         |              |
| Total        |              | <u>6000</u>       |         |              |



# SWS ENDURANCE TEST REPORT

SERIAL NO. C6225191 SHOOTER DH-AC DATE 12/8/88

[illegible]



## SWS ENDURANCE TEST REPORT

SERIAL NO C6225191 SHOOTER AC DATE 12/12/88

| AMMO CODE | AMMO TYPE    | RDS.   | RESULTS | OBSERVATIONS          |
|-----------|--------------|--------|---------|-----------------------|
|           | 17.62        | 100    | OK      | NONE                  |
|           | "            | 100    | "       | "                     |
|           | "            | 100    | "       | "                     |
|           | "            | 100    | "       | "                     |
|           | "            | 100    | "       | "                     |
|           | "            | 100    | "       | "                     |
|           | "            | 100    | "       | "                     |
|           | "            | 100    | "       | "                     |
|           | "            | 100    | "       | "                     |
|           | "            | 100    | "       | "                     |
|           |              |        |         |                       |
|           | Total        | 1000   |         |                       |
|           |              | 9000   |         |                       |
|           |              |        |         |                       |
|           | Total Rounds | 10,000 |         |                       |
|           |              |        |         | REAR SIGHT BASE SCREW |
|           |              |        |         | TWISTED OFF AT HEAD   |
|           |              |        |         | ON DISASSEMBLY        |
|           |              |        |         | AFTER 10,000 ROUNDS   |
|           |              |        |         |                       |
|           |              |        |         | 12/13/88              |
|           |              |        |         |                       |
|           |              |        |         |                       |
|           |              |        |         |                       |