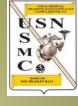
RIFLE MARKSMANSHIP





OVERVIEW

⋄ Zeroing The Service Rifle

- Elements of Zeroing
- Types of Zeros
- Sighting Systems

- Windage & Elevations Rules
- Target Dimensions
- Zero Changing Factors

♦ Effects of Weather

- Mental and Physical
- Wind Classification
- Determining Wind Velocity
- Determine Wind Adjustments

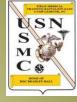
- Recording in Data Book
- Effects of Light Conditions
- Effects of Temperature
- Effects of Precipitation

⋄ Intro to Sling and Shooting Positions

- Loop Sling
- Factors of Precision Shooting
- Kneeling / Prone / Sitting and Standing Positions

⋄ Fundamentals of Rifle Marksmanship

- Aiming
- Breath and Trigger Control
- Follow Through and Recovery



LEARNING OBJECTIVES



Please Read Your

Terminal Learning Objectives

And

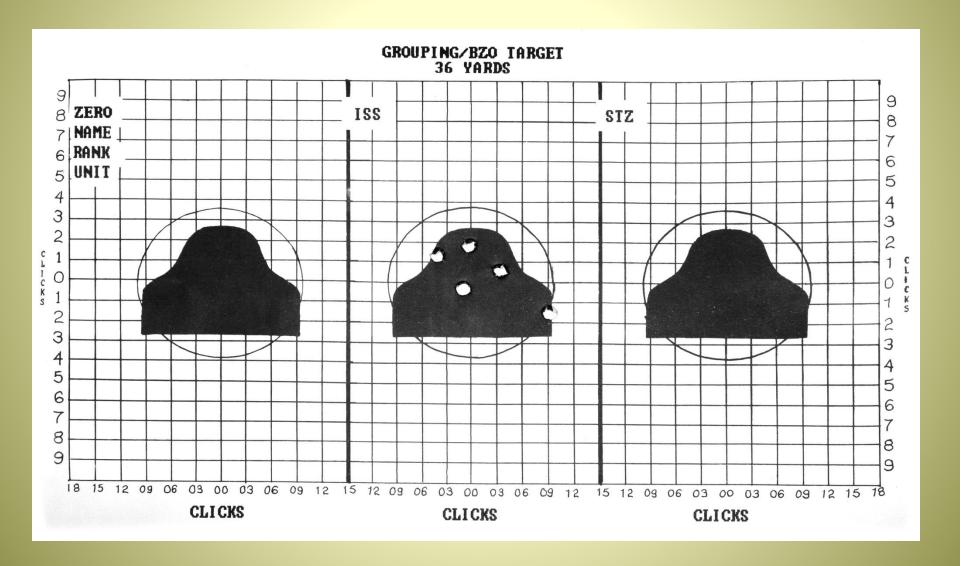
Enabling Learning Objectives



QUESTIONS

ZEROING THE SERVICE RIFLE

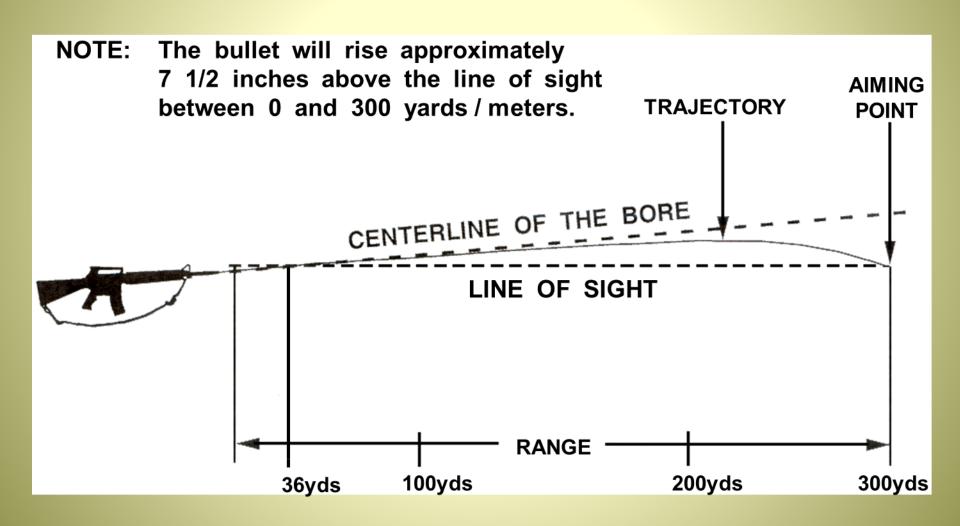




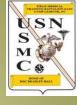
ELEMENTS OF ZEROING



The Marine Corps Role in Urban Warfare:



TYPES OF ZEROs



- -TRUE ZERO (RCO) (IDEAL CONDITIONS)
- -ZERO (RCO) (WITH WIND)
- -BATTLE SIGHT ZERO (RCO)

SIGHTING SYSTEMS



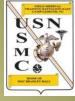
RCO Optic Elevation Adjuster:

• 1 CLICK MOVES STRIKE OF BULLET 1" AT 300 YARDS/METERST.

RCO Optic Windage Adjuster:

• 1 CLICK MOVES STRIKE OF BULLET 1" AT 300 YARDS/METERS.

WINDAGE AND ELEVATION RULES

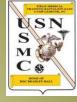


O ZEROING EXERCISE:

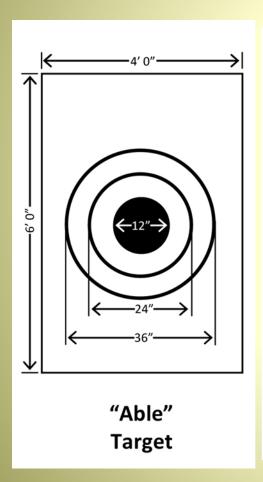
- SHOOT FIRST GROUP
- MARK GROUP
- TRIANGULATE GROUP
- ADJUST SIGHTS
- SHOOT SECOND GROUP
- MARK GROUP
- TRAINGULATE GROUP
- ADJUST SIGHTS
- SHOOT LAST GROUP
- CONFIRM GROUP
- RECORD SETTINGS

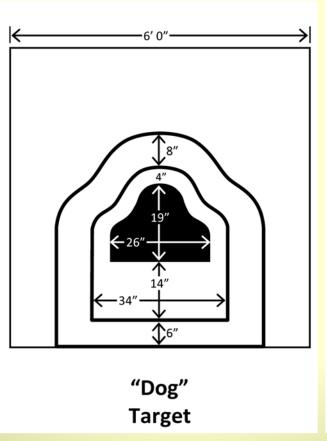


TARGET DIMENSIONS



For Known Distance Course:





"B-Modified" **Target**

FACTORS THAT CAUSE A WEAPON'S ZERO TO CHANGE



- Maintenance
- Ammunition
- Ground Elevation
- Climate
- Uniform
- Temperature





QUESTIONS

EFFECTS OF WEATHER Mental & Physical

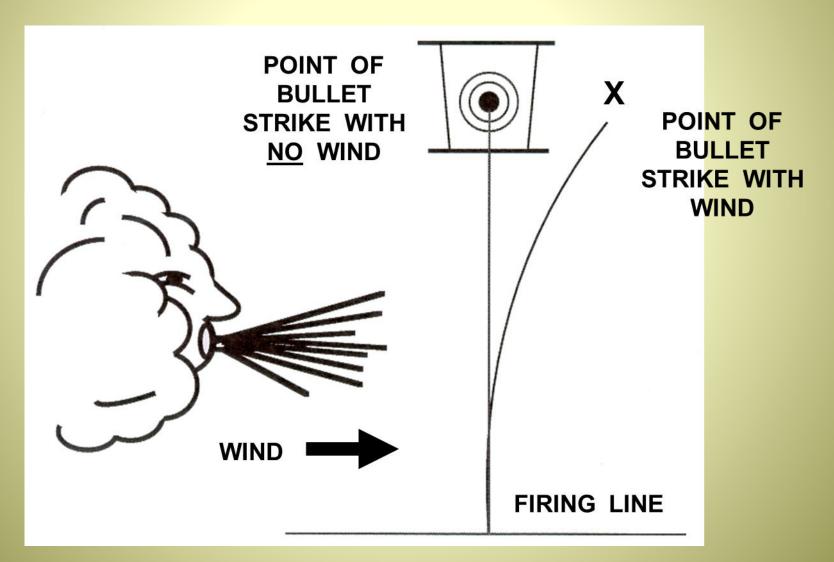




WIND CLASSIFICATION

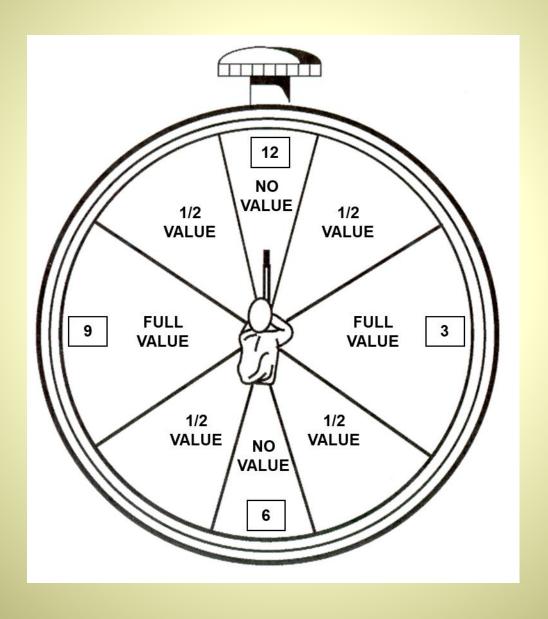


Wind Deflection of Bullet:



THE CLOCK SYSTEM





WIND VELOCITY



OBSERVATION METHOD

<u>Under 3 mph-</u> The wind can hardly be felt on the face, but the presence of a slight wind can be detected by drifting smoke.

3 to 5 mph— Wind can be felt lightly on the face.

5 to 8 mph— Wind keeps tree leaves in constant motion.

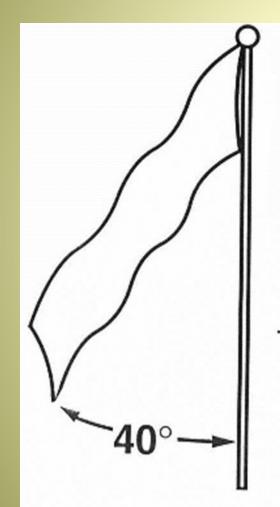
8 to 12 mph- Wind will raise dust and loose paper.

<u>12 to 15 mph-</u> Wind will cause small trees to sway.

15 to 25 mph— Wind will cause large trees to sway.

THE FLAG METHOD

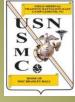




WIND VELOCITY FORMULA

$$\frac{40^{\circ}}{4} = 10 \text{ MPH}$$

WINDAGE POINTS OF AIM



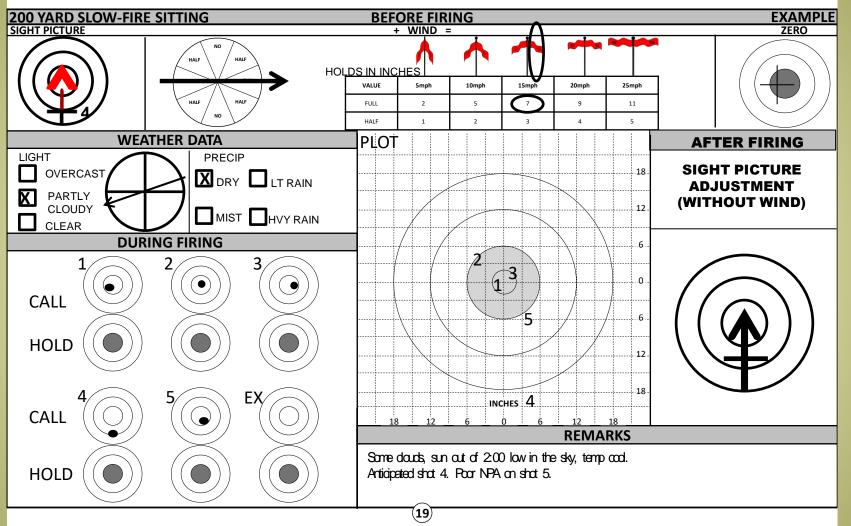
Range flags may help determine wind speed. The angle of the flags	S				63		807		607		
will increase with higher wind speeds.	will increase with higher wind speeds. 5 MPH					15 MPH		20 MPH		25 MPH	
	WIND VALUE		WIND VALUE		WIND VALUE		WIND VALUE		WIND VALUE		
RANGE (yards)	FULL	HALF	FULL	HALF	FULL	HALF	FULL	HALF	FULL	HALF	
200	2"	1"	5"	2"	7"	3"	9"	4"	11"	5	
300	5"	2"	11"	5"	16"	8"	22"	11"	27" \$\int_4\$ \$\int_4\$	13"	
500	17"	8"	35"	17"	52" \$\int_{6}^{4}\$	26"	69"	34"	87"	43"	

The values in the above table reflect the windage points of aim that should be used when the surrounding terrain does not reduce the effect wind has on the flight of the bullet. While conducting marksmanship training on known-distance ranges, these values must be adjusted in order to compensate for the wind-reducing effects of the side-berms and/or trees. The figures in the following pages have been adjusted accordingly.

(12

Recording in Data Book





EFFECTS OF LIGHT CONDITIONS





- Bright Light

- Overcast
- Scattered Clouds Haze

- Moving Clouds

EFFECTS OF TEMPERATURE





Extreme Heat
 Extreme Cold

EFFECTS OF PRECIPITATION



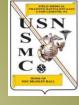


- Students, Rifle and Bullet



QUESTIONS

SHOOTING POSITIONS AND USE OF THE SLING



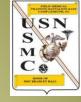


THE LOOP SLING



- PURPOSE
- DONNING
- SLING ADJUSTMENT
- SLING TENSION





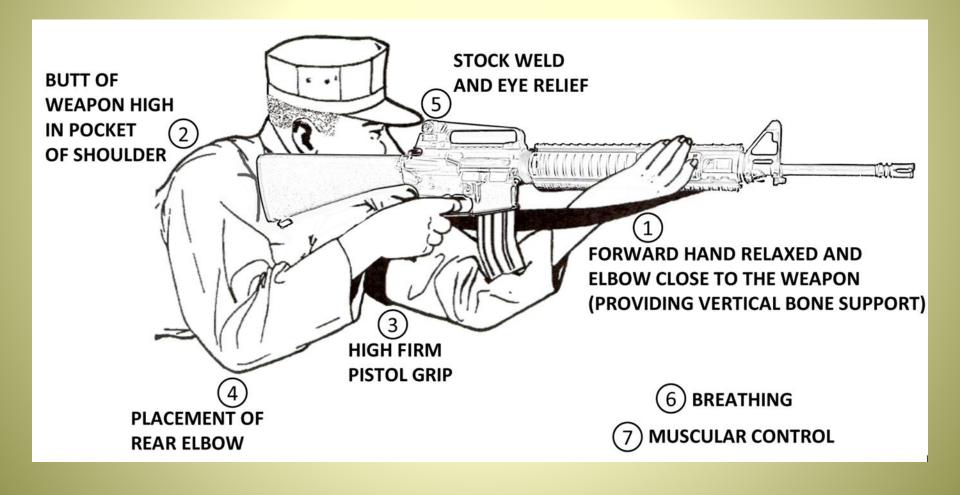
3 ELEMENTS OF A GOOD SHOOTING POSITION WITH A LOOP SLING

- BONE SUPPORT
- MUSCULAR CONTROL
- NATURAL POINT OF AIM

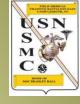


7 COMMON FACTORS OF PRECISION SHOOTING POSITIONS





7 COMMON FACTORS (Continued)





- 1. FORWAD HAND/ELBOW
- 2. HIGH FIRM PISTOL GRIP
- 3. STOCKWELD/EYE RELIEF
- 4. BUTTSTOCK HIGH IN POCKET OF THE SHOULDER

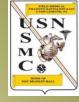
- 5. DOMINATE ELBOW
- 6. BREATH CONTROL
- 7. MUSCULAR RELAXATION





QUESTIONS

THE KNEELING POSITION REQUIREMENTS



- The weak side foot, strong side knee and foot will support the body's weight.
- The buttocks will be clear of the ground, but may rest on the strong side foot.



- Both hands, the sling, and one shoulder will support the rifle.
- The arm supporting the rifle will rest on the knee or just inside the knee.
- The strong side elbow will not be supported.
- The magazine will be allowed to touch the clothing or the arm supporting the rifle, and may be gripped along the sides but the bottom of the magazine may not be used to support the weapon.

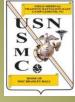
THE KNEELING POSITION CONSIDERATIONS





- Moving forward into position
- Dropping back into position

3 KNEELING POSITIONS



LOW

MEDIUM





HIGH



KNEELING POSITION ANALYSIS



- FORWARD HAND
- SUPPORT ELBOW
- MUZZLE ELEVATION
- RIFLE BUTT IN POCKET OF SHOULDER
- GRIP OF THE FIRING HAND
- FIRING ELBOW
- STOCK WELD
- BREATHING
- MUSCULAR TENSION





QUESTIONS

THE PRONE POSITION





- OPEN LEG PRONE (STRAIGHT LEG) POSITION OR
 - COCKED LEG POSITION

THE PRONE POSITION





- OPEN LEG PRONE (STRAIGHT LEG) POSITION

THE PRONE POSITION



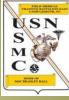


- COCKED LEG POSITION



QUESTIONS

THE SITTING POSITION





REQUIREMENTS FOR THE SITTING POSITION



 The buttocks and feet or ankles will support the body's weight.
 No other portion of the body will touch the ground.



- Both hands, the sling, and one shoulder will support rifle.
- The arms may rest on the legs at any point above the ankles.
- d. The magazine will be allowed to touch the clothing or the arm supporting the rifle, and may be gripped along the sides but the bottom of the magazine may not be used to support the weapon.

3 SITTING POSITIONS







- OPEN LEG
- CROSSED ANKLE
- CROSSED LEG



SITTING POSITION ANALYSIS



- FORWARD HAND
- RIFLE BUTT IN POCKET OF SHOULDER
- GRIP OF FIRING HAND
- FIRING ELBOW
- STOCK WELD
- BREATHING
- MUSCULAR TENSION





QUESTIONS

THE STANDING POSITION





REQUIREMENTS FOR THE STANDING POSITION



- Standing erect on both feet will support the body's weight.
- No other portion of the body will touch the ground.
- Both hands and one shoulder will support the rifle.
- The rifle sling will be adjusted to the parade configuration for web slings.
- The forward arm may rest against the body or on the cartridge belt and any attached equipment.
- The magazine will be allowed to touch the clothing or the arm supporting the rifle, and may be gripped along the sides but the bottom of the magazine may not be used to support the weapon.



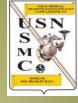
DETAILED POSITION ANALYSIS



- Stand straight and erect
- Feet should be shoulder width apart
- Face 45-90 degrees towards your strong side
- The butt or toe of the stock should be in the pocket of firing shoulder
- Relaxed firing elbow
- Grip of firing hand should be high on the pistol grip.
- Your head should be as erect as possible
- Non-firing hand is under and around the rail cover/heat shield close to the receiver
- Forearm and wrist are straight
- Non-firing elbow is placed so that it rests across your rib cage



STANDING POSITION (Forward Hand Grips)



THE PINCH





THE "L" THUMB



QUESTIONS

FUNDAMENTALS OF RIFLE MARKSMANSHIP





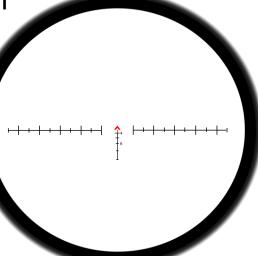
CORRECT SIGHT ALIGNMENT



AIMING

CORRECT SIGHT ALIGNMENT

FULL FIELD OF VIEW. The aiming eye aligned to the ocular lens so that no scope shadow is present. Proper stockweld and eye relief are the means for achieving correct sight alignment.



CORRECT SIGHT PICTURE

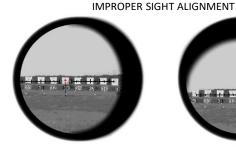
The full field of view while maintaining the desired aiming point (reticle) and hold (placement of aiming point on the target).



Improper eye relief and/or improper sight alignment will cause scope shadow and will result in improper shot placement.











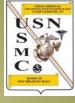
BULLET WILL STRIKE RIGHT

BULLET WILL STRIKE LEFT

BULLET WILL STRIKE LOW

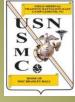
BULLET WILL STRIKE HIGH

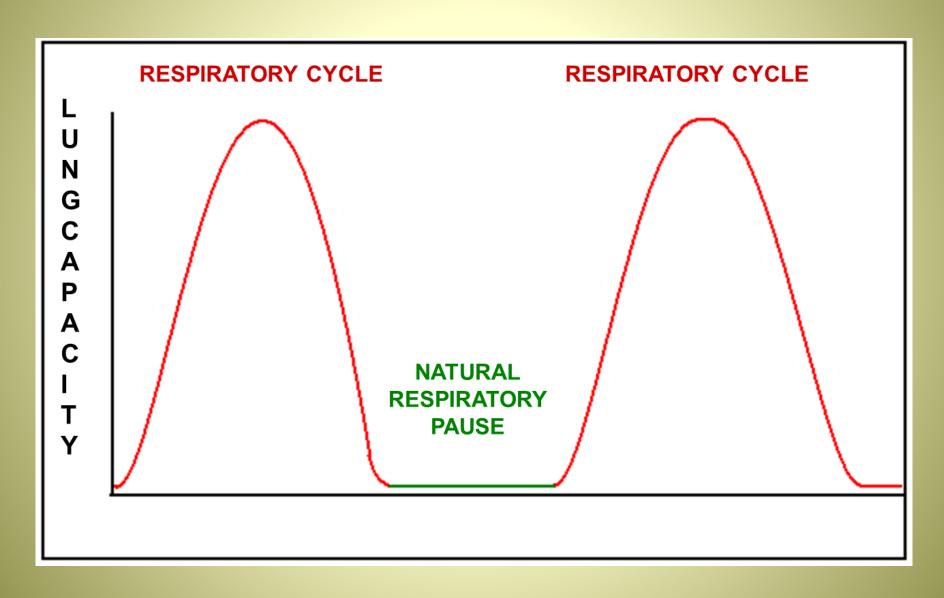
STOCKWELD / EYE RELIEF



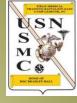


BREATH CONTROL





TRIGGER CONTROL



- Trigger Control is the skillful manipulation of the trigger that causes the rifle to fire without disturbing sight alignment or sight picture.
- There are two techniques of Trigger Control:

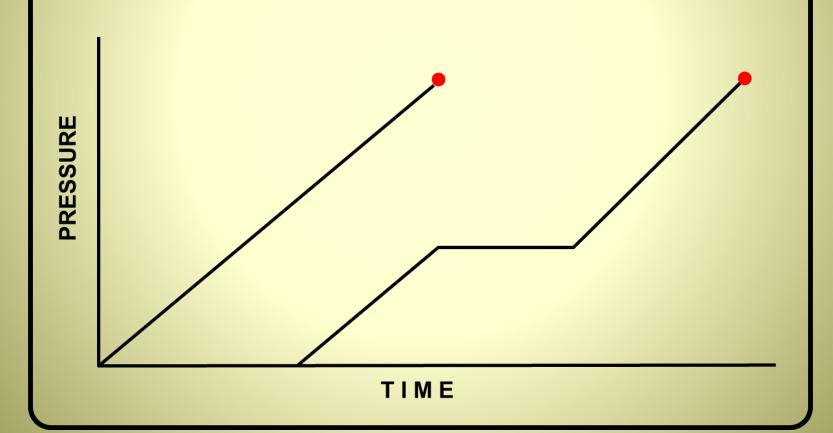
UNINTERRUPTED
TRIGGER CONTROL
&
INTERRUPTED
TRIGGER CONTROL



TRIGGER CONTROL



INTERRUPTED AND UNINTERRUPTED TRIGGER CONTROL



FOLLOW THROUGH & RECOVERY







QUESTIONS

SUMMARY

⋄ Zeroing The Service Rifle

- Elements of Zeroing
- Types of Zeros
- Sighting Systems

- Windage & Elevations Rules
- Target Dimensions
- Zero Changing Factors

♦ Effects of Weather

- Mental and Physical
- Wind Classification
- Determining Wind Velocity
- Determine Wind Adjustments

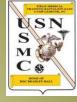
- Recording in Data Book
- Effects of Light Conditions
- Effects of Temperature
- Effects of Precipitation

♦ Intro to Sling and Shooting Positions

- Loop Sling
- Factors of Precision Shooting
- Kneeling / Prone / Sitting and Standing Positions

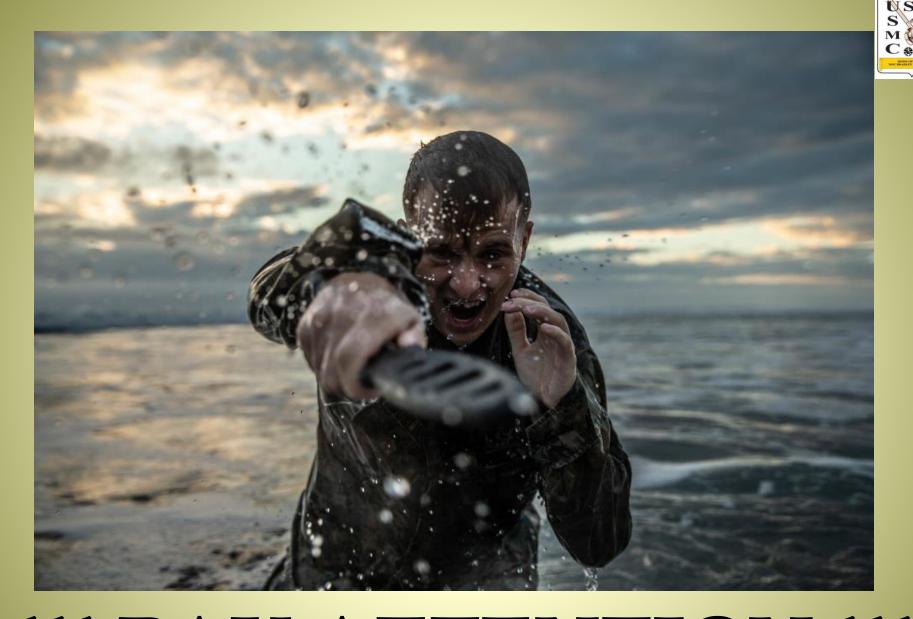
⋄ Fundamentals of Rifle Marksmanship

- Aiming
- Breath and Trigger Control
- Follow Through and Recovery





BACKUP SLIDES



!!! PAY ATTENTION !!!

