

CHAPTER 4

Observation

GENERAL

During all types of operations, you will be looking for the enemy. However, there will be times when you will be posted in an observation post (OP) to watch for enemy activity.

An OP is a position from which you watch an assigned sector of observation and report all activity seen or heard in your sector. Chapter 6 provides guidance on collecting and reporting information learned by observation.

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HOW TO OBSERVE

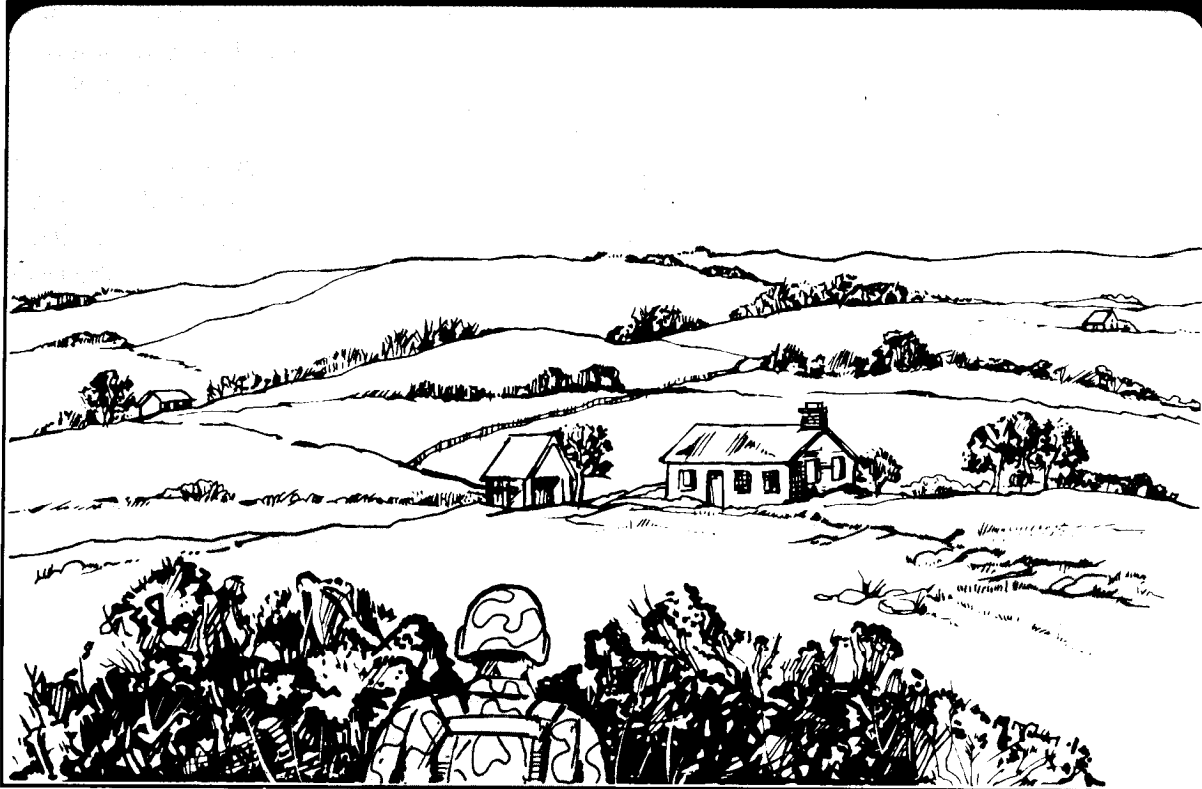
This section discusses the techniques you will use for day and night observation.

DAY OBSERVATION

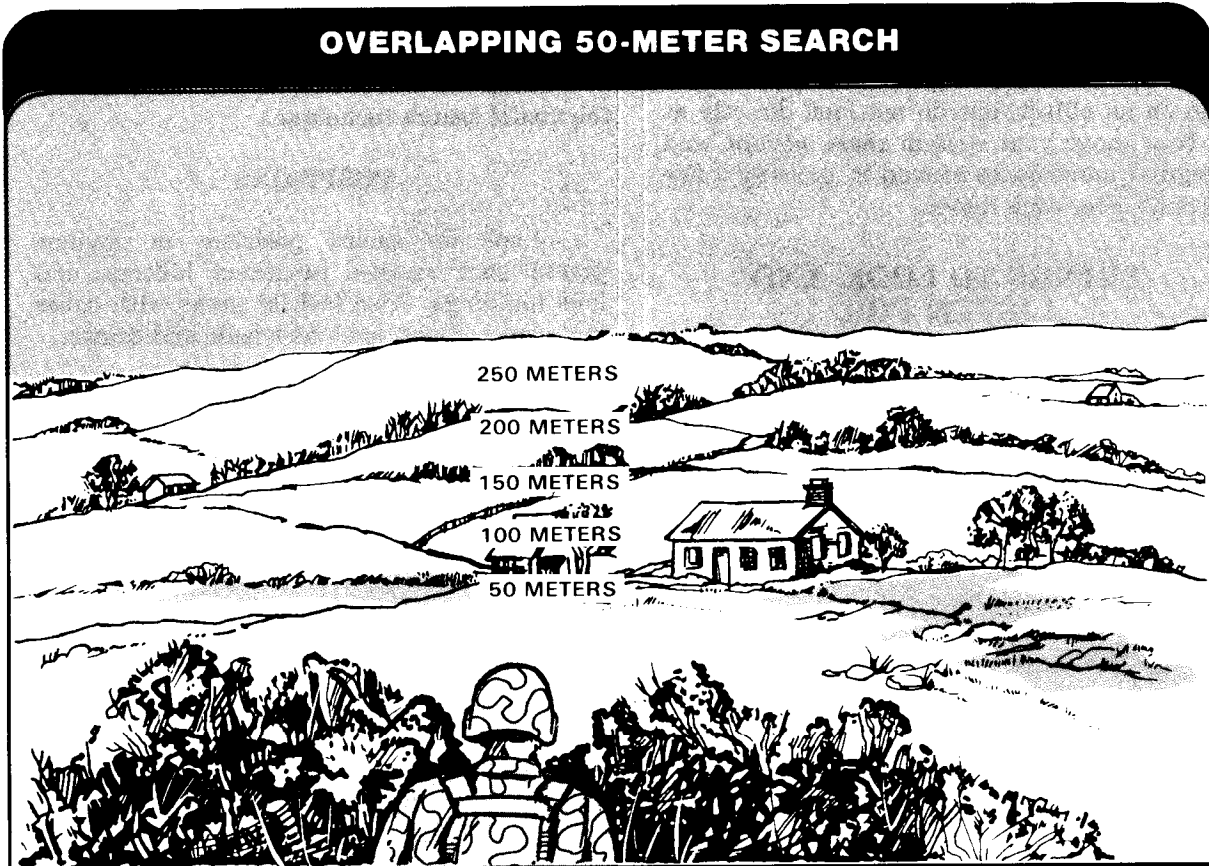
In daylight, use the **visual search technique** to search terrain. **Do this in two steps:**

- **Step 1.** Make a quick, overall search of the entire sector for obvious targets and unnatural colors, outlines, or movements. Look first at the area just in front of your position, and then quickly scan the entire area out to the maximum range you want to observe. If the sector is wide, divide it and search each subsector as in **Step 2.**

OVERALL SEARCH



- **Step 2.** Observe overlapping, 50-meter-wide strips, alternating from left to right and right to left, until you have searched the entire sector. When you see a suspicious spot, search it well.



NIGHT OBSERVATION

At night, use any one of three night observation techniques to search terrain.

Dark Adaptation Technique. First, let your eyes become adjusted to the darkness. Do so by staying either in a dark area for about 30 minutes, or in a red-lighted area for about 20 minutes followed by about 10 minutes in a dark area. The red-lighted method may save

time by allowing you to get orders, check equipment, or do some other job before moving into darkness.

Off-Center Vision Technique. Focus your attention on an object but look slightly away from it. The object will be more visible this way than when you look straight at it.

Scanning Technique. Again focus your attention on an object, but do not look directly at it. Now move your eyes in short, abrupt, and irregular movements around it, pausing a few seconds after each move.

THINGS TO LOOK AND LISTEN FOR

In trying to find the enemy in a sector of observation, look and listen for **these signs of his presence**:

- Sounds.
- Dust or vehicle exhaust.
- Movement.
- Positions.
- Outlines or shadows.
- Shine or glare.
- Contrasting colors.

SOUNDS

Listen for such things as footsteps, limbs or sticks breaking, leaves rustling, men coughing, and equipment or vehicle sounds. These may be hard to distinguish from other battlefield and animal sounds.

Sounds can alert you to the direction or general location of the enemy. They may not pinpoint his exact location. However, if a sound alerts you, you are more apt to spot the enemy.

DUST OR VEHICLE EXHAUST

Moving foot soldiers or vehicles often raise dust. Vehicle exhaust smoke also rises. You can spot dust and vehicle smoke at long ranges.

MOVEMENT

Look for movement in your sector. Use the visual search technique.

POSITIONS

Look for enemy positions in obvious places, such as road junctions, hilltops, and lone buildings. Also look at areas with cover and concealment, such as woods and draws.

OUTLINES OR SHADOWS

Look for outlines or shadows of enemy soldiers, equipment, vehicles, or guns. The enemy may use the shadows of trees or buildings to hide himself and his equipment. Look for him in shaded areas.

SHINE OR GLARE

In darkness, look for light sources such as burning cigarettes, headlights, or flashlights. In daylight, look for reflected light or glare from smooth, polished surfaces such as windshields, headlights, mess gear, watch crystals, or uncamouflaged skin.

CONTRASTING COLORS

Look for contrasts between background color and the colors of uniforms, equipment, and skin. For example, a soldier's T-shirt or towel may contrast with its background.

RANGE ESTIMATION

You must often estimate ranges. Your estimates will be easier to make and more accurate if you use the 100-meter unit-of-measure

method, the appearance-of-objects method, or the flash-and-sound method. This section discusses the use of these methods.

100-METER UNIT-OF-MEASURE METHOD (DAYTIME)

Picture a distance of 100 meters on the ground. For ranges up to 500 meters, count the number of 100-meter lengths between the two points you want to measure. Beyond 500 meters, pick a point halfway to the target, count the number of 100-meter lengths to the halfway point, and then double that number to get the range to the target.

Sloping ground changes the appearance of 100-meter lengths. Ground that slopes upward makes them look longer than 100 meters, and ground that slopes downward makes them look shorter than 100 meters. Thus, the tendency is to underestimate 100-meter lengths on upslopes and overestimate them on downslopes.

The accuracy of the 100-meter method depends on how much ground is visible. This is most true at long ranges. If a target is at a range of 500 meters or more, and you can only see part of the ground between yourself and the target, it is hard to use this method with accuracy.

APPEARANCE-OF-OBJECTS METHOD (DAYTIME)

This method is a way to estimate range by the apparent size and detail of an object. It is a common method that is used in everyday life. For example, a motorist trying to pass another car judges the distance of oncoming cars based on their apparent size. He is not interested in exact distances, but only in having enough room to safely pass the car in front of him. Suppose he knows that at a distance of 1 mile an oncoming car appears to be 1 inch wide and 2 inches high, with a half inch between

the headlights. Then, any time he sees an oncoming car that fits those dimensions, he knows it is about 1 mile away.

The same technique can be used to estimate ranges on the battlefield. If you know the apparent size and detail of troops and equipment at known ranges, then you can compare those characteristics to similar objects at unknown ranges. When the characteristics match, the range does also.

To use the appearance-of-objects method, you must be familiar with characteristic details of objects as they appear at various ranges. As you must be able to see those details to make the method work, anything that limits visibility (such as weather, smoke, or darkness) will limit the effectiveness of this method.

COMBINATION OF METHODS

Battlefield conditions are not always ideal for estimating ranges. If the terrain limits the use of the 100-meter unit-of-measure method, and poor visibility limits the use of the appearance-of-objects method, you may have to use a combination of methods. For example, if you cannot see all of the terrain out to the target, you can still estimate distance from the apparent size and detail of the target itself. A haze may obscure the target details, but you may still be able to judge its size or use the 100-meter method. By using either one or both of the methods, you should arrive at a figure close to the true range.

FLASH-AND-SOUND METHOD (BEST AT NIGHT)

Sound travels through air at 300 meters (1,100 feet) per second. That makes it possible to estimate distance if you can both see and hear a sound-producing action.

When you see the flash or smoke of a weapon, or the dust it raises, immediately start counting. Stop counting when you hear the

sound associated with the action seen. The number at which you stop should be multiplied by three. This gives you the approximate distance to the weapon in hundreds of meters. If you stop at one, the distance is about 300

meters. If you stop at three, the distance is about 900 meters. When you must count higher than nine, start over again after counting nine (counting higher numbers throws the timing off).