

APPENDIX E

COUNTERING MINES

You must be able to move on- or off-road as needed. You take action to counter mines whenever intelligence and terrain analysis show the likelihood of mines or that mines have been discovered. You may need to counter mines when conducting quartering parties. Or you may need to do so when setting up holding areas for defiles and river crossing. Operations to counter mines include—

- Denying the enemy the chance to use mines.
- Spotting mine-emplacement teams and reporting their activity.
- Using metallic and nonmetallic mine detectors.
- Detecting mines by having troops make a visual inspection.

DENIAL

MP area security measures like continuous, aggressive patrolling routinely help deny the enemy the chance to emplace mines along MSR. Patrols—

- Look for suspicious persons along MSR.
- Check with the local populace for information on unusual activities along the MSR.
- Maintain surveillance of the MSR while operating static posts.

- Watch approaches to critical points like bridges or defiles.
- Use night-vision devices to maintain surveillance of the road and critical points along the MSR. Mines usually are emplaced at night under cover of darkness.
- Use PEWS to detect activity around an area.
- Take immediate action upon detecting a mine-emplacing team.

DETECTION

If you must check an area you believe may be mined, detecting can be done by one or more teams. You will need mine detectors, demolition equipment, rope, wire, and, perhaps, night-vision devices. To visually detect mines—

- Watch for trip wires. Do not wear sunglasses; they reduce the ability to detect trip wires.
- Look for foreign material on roads (grass, dirt, sticks).
- Look for signs of recent road repair. These areas can conceal mines.
- Watch for wire leading away from the road. It could be a command firing wire.

To probe for buried mines, use a sharp nonmetallic object like a sharp piece of wood. Careful probing is the best way to find buried mines. But it is slow work, especially in hard or frozen ground. Be sure no one —

- Uses metal probes — some enemy mines have magnetic detonators that would be set off by a metal probe.
- Carries any iron or steel near the mines. (Keep items like bayonets, weapons, and cartridge belts outside a mined area.)

Mine detectors can supplement your visual inspection and probing. Detectors signal mine locations by changes in the tone heard in the operator's headset. Mine detectors can be used standing, kneeling, or prone.

All mine detectors give some false signals. Experience in using each type of detector helps you interpret the signals you receive. A metallic detector will react to any kind of buried metal (a nail, a can). A nonmetallic detector may give a false signal when it passes over a tree root or an air pocket. Areas strewn with small metal fragments like shrapnel make it harder to operate metallic detectors, but do not affect nonmetallic detectors. When using a detector—

- Do not use within 6 meters of another detector. They may interfere with each other's signals.
- Be on guard for trip wires and booby traps.
- Have a second soldier help watch for booby traps and trip wires.
- Work no more than 20 minutes at a time. You must keep from becoming tone deaf to the signals in the headset.
- When the detector indicates a possible mine, use the probing technique to verify the presence of a mine.

Breaching a minefield (neutralizing the mines) is best done by Engineers. If you find enemy mines, put up temporary warning signs. Later, replace the signs with standard markings. Report detection of enemy mines through your unit's chain of command. Inform higher HQ each time you locate emplaced mines or discover additional lanes or gaps.

Understand Land Mine Characteristics

You must understand how land mines function in order to counter mines. A land mine consists of—

- A fuse.
- A detonator.
- A booster (sometimes).
- A main charge.
- A body or a case.

A mine is set off when an initiating action causes the fuse to function, starting the explosive train. The explosive train begins when a flame or concussion caused by electrical or mechanical means is applied to the detonator. The detonator sets off the booster (if there is one) or the main charge. If the sequence is broken at any point, the mine may not go off.

The main type of initiating actions that cause a mine to explode are—

- Pressure—downward force; a man's foot or the wheel or track of a vehicle.
- Pull—a pull on a trip wire attached to the fuse.
- Tension release—release of tension that keeps the fuse from acting, such as cutting a trip wire.
- Pressure release—removal of a weight that keeps the fuse from acting.
- Electrical—closing of an electrical circuit that activates the fuse.
- Timer run-down—a preset timer activates the fuse.

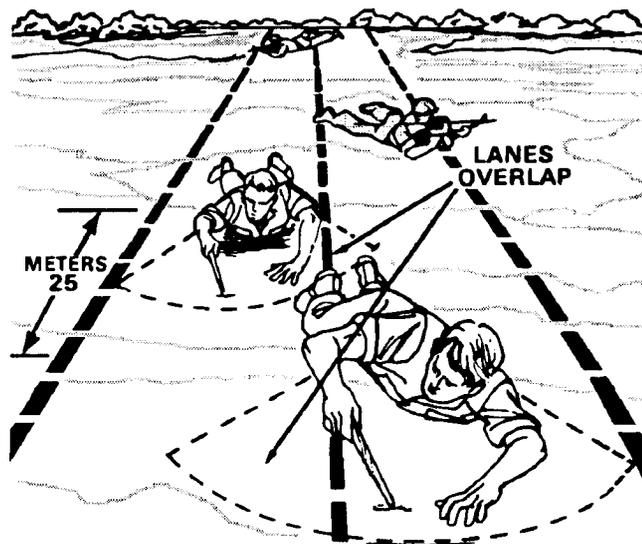
Take These Actions If You Find Yourself in a Minefield

- Find mines by looking and probing.
- Move slowly and carefully. Do not panic.
- Mark mines with whatever is available (rocks, sticks, tissue).
- Report the location of the mines after leaving the minefield.

Report Enemy Minefield Locations

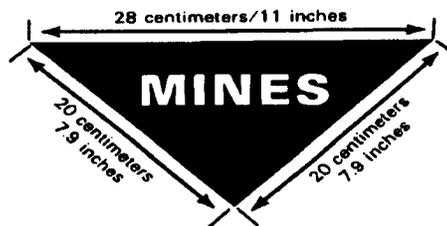
- ALPHA Map sheet designation.
- BRAVO Date and time of collection of information.
- CHARLIE Type of minefield (AT, AP).
- DELTA Coordinates of minefield boundaries.
- ECHO Depth of minefield.
- FOXTROT Enemy weapons or surveillance.
- GOLF Estimated time to clear minefield.
- HOTEL Estimated material and equipment required to clear minefield.
- INDIA Routes for bypassing a minefield if any.
- JULIET Coordinates of lane exit.
- LIMA Width of lanes (meters).
- ZULU Other, such as type of mines, new mines, or booby traps.

Probing



Mark Minefields With Warning Signs

Front side, white letters on red background



Back side, red background with no markings

(Emplace mine warning signs at intervals around perimeter of mined area)

