

Footnotes

1. Andrei D. Sakharov, "A Letter from Exile", translated Raymond H. Anderson, *The New York Times Magazine*, 8 June 1980. (Extracts reprinted with permission.) The letter is dated May 4, 1980.
2. *Washington Post*, 23 Jan. 1980.
3. Quoted Robert Kaiser, "Sakharov: Gentle professor who fought Kremlin", in *Washington Post*, 23 Jan. 1980. Compare Khrushchev's words with today's official Soviet description. In response to letters protesting Sakharov's exile, the Soviet embassy in Ottawa issued duplicated letters describing him as "a frantic opponent of the Soviet State, an instrument in the hands of the enemies of the Soviet people . . . advocates of the cold war and opponents of detente".
4. See also Amnesty International Report (updated and revised edition), *Prisoners of Conscience in the USSR: Their Treatment and Conditions*, (London, 1980).
5. Tatyana Velikanova was sentenced to four years in a labour camp, as well as five years' internal exile, by a Soviet judge on August 29th, 1980. Spectators in court, described by Velikanova's family as "hand picked" by the authorities, cried "not enough, not enough", when sentence was pronounced. See AP report, (Moscow), 20 Aug. 1980.
6. Viktor Nekipelov was sentenced in June 1980 to seven years in a Siberian labour camp to be followed by five years internal exile. AP (Moscow), 23 June 1980.

PRACTICAL HELP FOR AFGHANISTAN

by G.P. Armstrong

Ten months have passed since the Soviet Army invaded and occupied Afghanistan. Although news reports about the fighting remain sketchy, one fact is clear: armed resistance to the Soviet occupation continues. An earlier article in *Conflict Quarterly* argued that the West has a moral duty to support this opposition movement, even to the extent of supplying arms.¹ This article will suggest a practical means of arming the Afghan freedom fighters.

Apart from a small but growing number of officers and men who have served as "advisers" in low-intensity conflicts,² the Soviet Army is not oriented to counter-insurgency. Developed, trained and battle-tested in the European military tradition, it relies heavily on modern mobility and massive firepower. From the outset the Soviets have applied these techniques to the Afghan war and, like the Americans in Vietnam, have found them wanting. They are able to control the main cities to a limited degree, but their hold on the rest of Afghanistan is tenuous at best.³ The nature of the war and the geography of the country do not favour the Soviet method: the freedom fighters rarely offer targets suitable for massed firepower and the mountainous terrain which dominates most of Afghanistan limits the off-road mobility of Soviet armoured forces. Thus far then, modern technology has not made the pacification task any easier. Nowhere is this more clear than in the "battle for the highways".

Although the army is reinforced and supplied by air from the Soviet Union and relies heavily on air mobility to fight the resistance,⁴ the highway system remains an important lifeline for the occupation forces. Furthermore, if the

Soviets are to restore any semblance of normality to the administrative, commercial and social life of the country, they must keep the highways open. But the resistance seems able to sever this important line of communications almost at will, ambushing convoys and individual vehicles and blowing up bridges.⁵ The vulnerability of the road system exposes a crucial weakness in the Soviet technique and modern technology offers a simple weapon which could allow the resistance to exploit that weakness—the anti-tank mine.

Anti-tank mine warfare began shortly after the debut of tanks on the Western Front in 1917. Faced with a severe tank threat, the Germans countered by burying boxes of high explosive on the verges of roads which they had blocked.⁶ These early mines were set off by simple pressure fuses; that is, a pressure corresponding to the weight of a tank would trigger the firing mechanism. This line of development was continued in the Second World War and large minefields became commonplace. As mines became more frequent, counter-mine devices like flails and rollers were developed. Land mines, which had been invented in the earlier war as an *ad hoc* defence, by 1945 were part of a complicated branch of military engineering.⁷

But these later mines were little changed from the originals, although significantly smaller and handier. A typical anti-tank mine of the Second World War was about 30 or 40 cm in diameter, 10 cm thick and weighed about 10 kg. The mine was filled with high explosive and the fuse was a simple pressure plunger which would be depressed by an object weighing as much as a tank. Consequently, the tank had to actually run over the fuse to set off the mine. Although these mines were undeniably effective, they posed major problems. The quantity required strained the supply system; they had to be hand-emplaced and camouflaged; they were dangerous to friend and enemy and therefore had to be recorded so that they could be taken out. In summary, it was a waste of time and effort to lay a minefield which the enemy might never encounter.

After the war, mine developments continued in much the same way with more sophisticated fuses being developed — double impulse or anti-disturbance, for example. At the same time countermeasures advanced, at least in the Soviet Army. A plow attachment for tanks to clear away mines from the front of the tracks exists on a scale of one set for every third tank in that army.⁸ These plows are effective because all of the mines so far described have track attack fuses, that is, they work only if the tank track actually runs over the fuse. Belly-attack fuses have been developed (a rod sticking up out of the ground which the tank pushes over) but there is a simple counter-measure to that too. Most anti-tank mines in modern armouries are, therefore, very much like the mines of the Second World War; a mass of high explosive set off by direct pressure on the fuse. Countermeasures for these mines are well advanced.

Clearly, mines like these, large and requiring a lot of effort, are too cumbersome for hillmen making hit and run raids and, in any case, Soviet armoured units are reasonably well protected against them. But technology does not stand still. About ten years ago a revolution began in mine warfare. In the United States researchers began looking at alternate means of emplacing mines. The first attempts were to drop them from helicopters but with the current artillery-delivered mines the development has reached maturity. These mines are generically known as “scatterable mines” which is a very evocative name:

they are indeed scattered from artillery rounds or aircraft.

These mines have many advantages which would make them ideal for use by the Afghan freedom fighters. They are excellent defensive weapons. First, they are very small: the American artillery-delivered anti-tank mine is about 15 cm in diameter, about 8 cm high and only weighs a couple of kg. Second, their fuses are set off by a disturbance in the magnetic field such as that caused by a tank. It is very difficult, if not impossible, to counter this by disguising the tank's magnetic signature. Third, these mines are killers. The older mines with their pressure-activated fuses generally broke the track of the tank leaving the crew concussed but usually unhurt. These new mines, despite their tiny size, are very much more effective. Their payload is a variation of the shaped charge which, when detonated, fires a self forged fragment up into the belly of the tank which disturbed the fuse. This fragment — a small high velocity bullet accompanied by a high temperature gas stream — causes great damage to the interior of the tank and severe casualties to the crew. Fourth, bearing in mind that these mines are meant to be fired out of guns, they are rugged and foolproof and either side is "up". Finally, they are very difficult to see because they are so small. Clearly, mines designed for delivery by artillery have safing and arming mechanisms *unsuitable for guerrillas, but they can be modified during factory production to permit arming by a simple switch or pin like a hand grenade.* Similarly, scatterable anti-personnel mines exist which are also small enough to be held and thrown by hand. They are very effective weapons: upon actuation a number of long invisible strings are dispersed in all directions; tripping one of the strings causes the mine to fire its warhead into the air where it explodes. In any case, all these mines will explode eventually as their timing circuits run down, obviating the problem what to do with a minefield when it is no longer needed.⁹

These mines could give the resistance a clear advantage in the battle for control of the strategic roads. Scattered by the bag-full into the mountain passes they could trap Soviet armoured columns and convoys in precarious ambush positions. Their mine plows would be useless against this type of mine and soldiers would probably be reluctant to leave the safety of their vehicles to *attempt manual mine clearance while under accurate fire from the guerrillas.* The columns would not be able to advance or retreat and all the mines would explode eventually, at a time set by the insurgents. By the time the Mi-24 Hind helicopter gunships arrived, the insurgents would have fled, leaving behind a convoy reduced to smoldering wreckage. All the lessons of counter-insurgency suggest that there is no substitute for "feet on the ground" to control terrain and people. But if mine warfare was to make even the roads impassible, the Soviet army might find itself in the same position as the American army in Vietnam — controlling little more than their helicopter landing zones. Although the direct killing effect of these mines is considerable, they could exert a powerful psychological effect as well. The Soviets are undoubtedly aware of this: they have started using scatterable anti-personnel mines against the insurgents, apparently with the desired results.¹⁰ But the Soviets are not invulnerable; there have been credible reports that the morale and discipline of Soviet troops have broken down on several occasions since the invasion.¹¹ Were the resistance able to inflict casualties at a constantly increasing rate through mine warfare they could not help but erode further morale which has been sorely tested already.

Scatterable mines are not a panacea, but they could help to equalize the struggle between the Soviet Army and the Afghan freedom fighters. In the face of a likely Soviet propaganda attack on the suppliers, the West could reply that it is morally bound to provide such "defensive" weapons to a genuine national liberation movement. Whatever the result, it might drive home to the hard men in the Kremlin that there are no easy little wars: once started, all wars are difficult to stop. That lesson alone would serve the cause of peace. If it did nothing else, it would be worth the price.

Footnotes

1. David Charters, "Resistance to the Soviet Occupation of Afghanistan: Problems and Prospects", *Conflict Quarterly*, vol. 1, no. 1 (1980), p.13.
2. There is some evidence to suggest that those with experience in low intensity conflict are being promoted rapidly. Angola and Ethiopia are the proving grounds. See Lawrence Whetten, "The Soviet-Cuban Presence in the Horn of Africa", *Royal United Services Institute Journal for Defence Studies*, vol. 123, no. 3 (1978), pp. 39-45; Avigdor Haselkorn, "Soviet Military Casualties in Third World Conflicts", *Conflict: An International Journal*, vol. 2, no. 1 (1980), pp. 73-86.
3. R.D.M. Furlong and Theodor Winkler, "The Soviet Invasion of Afghanistan", *International Defence Review*, vol. 13, no. 2 (1980), pp. 168-70 describes in detail the tactics and equipment employed during the initial invasion; Edgar O'Ballance, "Soviet Tactics in Afghanistan", *Military Review*, vol. 60, no. 8 (1980), pp. 49-50 offers a view of Soviet tactics employed against the resistance fighters themselves.
4. Peter Niesewand, "Dodging Soviet Firepower in Nangahar Province", *Guardian*, 29 June 1980; *Time*, 25 August 1980.
5. Martin Woollacott, "Unfinished Battle for the Highways", *Guardian*, 24 July 1980.
6. R.E. Jones et. al., *The Fighting Tanks from 1916-1933* (Greenwich, Conn., 1969), p. 262.
7. C. Chant, ed., *How Weapons Work* (London, 1976), p. 227 gives a cut-away view of the American M6A2 anti-tank mine, representative of the simpler pressure fuse mine; Michael Carver, *Alamein* (Glasgow, 1975), p. 205 says that although the anti-tank mine might not do much lasting damage, "it was in fact the dominating feature of the battle."
8. C.N. Donnelly, "Soviet Tactics for Overcoming NATO Anti-tank Defenses", *International Defense Review*, vol. 12, no. 7 (1979), p. 1099.
9. P.M. McDavitt, "Scatterable Mines: Superweapon", *American Defense Preparedness Association Journal* (Sept./Oct. 1979); Major B. Prehar, "Artillery Scatterable Mines", *US Artillery Magazine* (1979).
10. *Daily Telegraph*, 7 July 1980.
11. *International Defense Review*, vol. 13, no. 5 (1980), p. 651. Soviet troops apparently refused to fire on demonstrating school children in Kabul in May. Earlier reports indicate that Soviet Moslem troops were removed from Afghanistan after contact with the local population raised concern about their reliability.