National Defence / Défense nationale

B-GL-309-001/FT-001

INFANTRY

VOLUME 1

THE INFANTRY BATTALION IN BATTLE

WARNING

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Issued on Authority of the Chief of the Defence Staff
Publiée avec l'autorisation du Chef d'état-major de la Défense

Canada

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THE INFANTRY BATTALION IN BATTLE

(BILINGUAL)

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Original . . .	0	. . . . .	1992-03-31	Ch . .	3	. . . . .
Ch	1	. . . . .	1995-11-13	Ch . .	4	. . . . .
Ch	2	. . . . .		Ch . .	5	. . . . .

Zero in Change No. Column indicates an original page. Total number of pages in this publication is 463 consisting of the following:

Page No.	Change No.	Page No.	Change No.
Cover	0	2-6-1 to 2-6-3/2-6-4	0
Title Page	1	2A-1/2A-2	0
A to C	1	2B-1/2B-2	0
i/ii	0	2C-1/2C-2	0
iii/iv	0	3-1-1 to 3-1-8	1
v/vi	0	3-2-1, 3-2-2	0
vii to xxix/xxx	1	3-3-1 to 3-3-4	0
1-1-1 to 1-1-8	0	3-4-1 to 3-4-6	0
1-2-1/1-2-2	0	3-5-1 to 3-5-4	0
1-3-1, 1-3-2	0	3-6-1 to 3-6-24	1
2-1-1 to 2-1-3/2-1-4	0	3-7-1 to 3-7-4	0
2-2-1 to 2-2-3/2-2-4	0	3A-1 to 3A-3/3A-4	0
2-3-1/2-3-2	0	3B-1/3B-2	0
2-4-1, 2-4-2	0	3C-1 to 3C-5/3C-6	0
2-5-1/2-5-2	0	3D-1/3D-2	0

Page No.	Change No.
13-1-1 to 13-1-5/13-1-6	0
13-2-1 to 13-2-6	0
13-3-1 to 13-3-16	0
13-4-1 to 13-4-4	0
13-5-1 to 13-5-8	0
13-6-1 to 13-6-6	0
13-7-1 to 13-7-6	0
A-1 to A-4	0

Contact Officer: G3 Inf

LIST OF EFFECTIVE PAGES (Cont'd)

Page No.	Change No.
10-4-1 to 10-4-7/10-4-8	0
10-5-1 to 10-5-9/10-5-10	0
10-6-1 to 10-6-7/10-6-8	0
10-7-1, 10-7-2	0
11-1-1 to 11-1-5/11-1-6	0
11-2-1 to 11-2-11/11-2-12	0
11-3-1 to 11-3-17/11-3-18	0
11-4-1 to 11-4-4	0
11-5-1 to 11-5-2	0
11-6-1, 11-6-2	0
11-7-1 to 11-7-5/11-7-6	0
11-8-1 to 11-8-3/11-8-4	0
11-9-1, 11-9-2	0
11-10-1 to 11-10-14	0
12-1-1 to 12-1-6	0
12-2-1 to 12-2-8	0
12-3-1, 12-3-2	0
12-4-1, 12-4-2	0
12-5-1 to 12-5-5/12-5-6	0
12-6-1 to 12-6-3/12-6-4	0
12-7-1 to 12-7-3/12-7-4	0
12-8-1, 12-8-2	0
13-1-1 to 13-1-5/13-1-6	0
13-2-1 to 13-2-6	0
13-3-1 to 13-3-16	0
13-4-1 to 13-4-4	0
13-5-1 to 13-5-8	0
13-6-1 to 13-6-6	0
13-7-1 to 13-7-6	0
A-1 to A-4	0

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CONSEIL DE DOCTRINE ET DE TACTIQUE DE L'ARMÉE DE TERRE

FMC 2910-PFC 309(1) (SCEM EDMC)

Quartier général de la force mobile
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J3Y 5T5

le 24 février 1992

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INFANTERIE, VOLUME 1, LE
BATAILLON D'INFANTERIE AU COMBAT

Référence : B-GL-309-001/FT-001
5 octobre 1980

1. Cette révision est autorisée par le Conseil de doctrine et de tactique de l'Armée de terre (CDTAT).

2. Elle entre en vigueur dès réception et remplace la référence.

3. La qualité des publications du CDTAT est la responsabilité de tous les membres de l'Armée de terre. À cette fin, je demande à tous les lecteurs de cette publication d'aviser, par la voie règlementaire l'OSEM Infanterie du QGFMC des erreurs ou des omissions qu'ils pourraient y trouver.

FMC 2910-CFP 309(1) (DCOS CD)

Mobile Command Headquarters
St-Hubert, Quebec
J3Y 5T5

24 February 1992

LETTER OF PROMULGATION

REVISION TO B-GL-309-001/FT-001
INFANTRY, VOLUME 1, THE INFANTRY
BATTALION IN BATTLE

Reference: B-GL-309-001/FT-001
5 October 1980

1. This revision is authorized by the Army Doctrine and Tactics Board (ADTB).

2. It is effective on receipt and supersedes the reference.

3. The responsibility for the quality of ADTB publications is shared by all members of the army. To this end, I ask all users of this publication to report any errors or omissions, through normal channels, to Mobile Command Headquarters, attention SSO Infantry.

Le président
Conseil de doctrine et de tactique
de l'Armée de terre
Le colonel R.E. Acreman

R.E. Acreman
Colonel
Chairman
Army Doctrine and Tactics Board

FOREWORD

1. B-GL-309-001/FT-001, Infantry, Volume 1, The Infantry Battalion in Battle, is issued on the authority of the Chief of the Defence Staff.

2. This publication is effective upon receipt and supersedes B-GL-309-001/FT-001, Infantry, Volume 1, The Infantry Battalion in Battle, dated 27 October 1980.

3. This publication is the basic reference for the employment of the infantry battalion in battle.

4. Any gender references in this publication are considered to have both masculine and feminine meanings.

5. Comments and suggestions for changes shall be forwarded through normal channels to Headquarters Mobile Command, Attention SSO Infantry.

RECORD OF CHANGES

Identification of Change		Date Entered	Signature
Ch No	Date		
1	13/11/95	28/02/96	

CONTENTS

CONTENTS (Cont'd)

CHAPTER 2 (Cont'd) **PAGE**

ANNEXES

CONTENTS (Cont'd)

CONTENTS (Cont'd)

CONTENTS (Cont'd)

CHAPTER 3 (Cont'd) **PAGE**

ANNEXES

CONTENTS (Cont'd)

CONTENTS (Cont'd)

CONTENTS (Cont'd)

CONTENTS (Cont'd)

CONTENTS (Cont'd)

CONTENTS (Cont'd)

CONTENTS (Cont'd)

CONTENTS (Cont'd)

CONTENTS (Cont'd)

CONTENTS (Cont'd)

CONTENTS (Cont'd)

CONTENTS (Cont'd)

CONTENTS (Cont'd)

CONTENTS (Cont'd)

CONTENTS (Cont'd)

CHAPTER 11 (Cont'd) **PAGE**

CONTENTS (Cont'd)

CONTENTS (Cont'd)

CONTENTS (Cont'd)

CHAPTER 12 (Cont'd) **PAGE**

CONTENTS (Cont'd)

CONTENTS (Cont'd)

LIST OF ANNEXES

CONTENTS (Cont'd)

LIST OF FIGURES

SECTION 2

ROLE AND TASKS

ROLE

6. The role of the infantry is to close with and destroy the enemy.

7. Well armed individuals with fighting spirit and dogged determination constitute the backbone of the infantry battalion. All the rest — vehicles, stores and equipment — merely exist to assist the infantry soldier to carry out the mission. It is by determination and the skilful use of weapons and ground that the battalion succeeds in battle.

TASKS

8. The infantry battalion may be assigned the following tasks:

a. to destroy the enemy in close combat;

b. to defend a position by the holding of ground;

c. to fight as covering force troops;

d. to act as all or part of a reserve to counter-attack or block;

e. to participate in airmobile, airborne and amphibious operations;

f. to establish surveillance and conduct patrols;

g. to conduct security tasks, including rear area security; and

h. to exploit the effects of NBC weapons.

SECTION 3

CHARACTERISTICS

GENERAL

9. All infantry battalions possess the following characteristics:

a. mobility,

b. firepower,

c. flexibility,

d. communications, and

e. vulnerability

MOBILITY

10. Infantry is capable of moving over any type of terrain, in all types of weather and degrees of visibility, carrying for short distances enough support weapons and ammunition to achieve limited tasks. Terrain and weather may restrict the battalion's mobility when conditions are severe but they will not stop a well-trained unit.

11. This basic mobility may be enhanced by the addition of vehicles (wheeled or tracked), oversnow vehicles, skis, snowshoes, boats, parachutes, helicopters or fixed wing aircraft, depending on the task.

FIREPOWER

12. The battalion has the organic small arms and support weapons to accomplish the close destruction of enemy ground forces, including mechanized infantry and armour.

13. The battalion cannot undertake sustained close combat operations without the additional fire support provided by armour, artillery and, where possible, air. The battalion's direct fire capability is limited to small

arms, machine guns and anti-armour weapons when moving. Indirect fire support is essential for extensive manoeuvring.

FLEXIBILITY

14. The combination of the battalion's mobility, firepower, communications and organizational structure give it the flexibility to cope with almost any situation. It is a versatile unit.

15. The battalion, or its sub-units, can operate independently for short periods and, with augmentation from other arms and services, can operate as an independent battle group for longer periods. For special tasks it can provide self-contained company groups based on its rifle companies. Various forms of transport may be used to move the infantry battalion to battle.

CONTROL AND COMMUNICATIONS

16. The officers of battalion headquarters form a staff capable of sustained operations. Good communications exist between the battalion and its companies, and between companies and their platoons.

17. When, for security reasons or due to enemy interference, the radio network becomes unusable, the battalion is capable of maintaining communications and passing orders and information through personal contact, dispatch riders, runners and telephone.

VULNERABILITY

18. Infantry is vulnerable to the effects of enemy weapons. The types of vehicles used by the infantry provide, at best, only limited protection.

19. To reduce this vulnerability, the battalion uses concealment, rapid movement and covering fire. When halted, it digs in for protection. This can be a slow process but the infantryman becomes difficult to kill when dug in.

CHAPTER 2

ORGANIZATION

SECTION 1

THE BATTALION

COMPOSITION

1. The infantry battalion is composed of:

   a. battalion headquarters;

   b. four identical rifle companies, each of three platoons;

   c. a combat support company;

   d. an anti-armour company or platoon; and

   e. an administration company.

2. This organization is shown at Annex A to this Chapter.

BATTLE ORGANIZATION

3. The infantry battalion is grouped for battle in the following echelons:

   a. **F Echelon.** It includes all the personnel, weapons, vehicles and equipment essential for combat — usually manoeuvre and fire support elements with the necessary command and control elements.

   b. **A Echelon.** It consists of the personnel, vehicles, equipment and stores which must be readily available for the administrative support of F echelon. It is often usual to organize A echelon into two parts to enable it to better support, but not interfere with, F echelon elements, nor provide an obvious target:

1) **Al Echelon.** This contains the minimum number of personnel, vehicles, equipment and stores to meet the hour-to-hour replenishment needs of F echelon. It consists mainly of ammunition and fuel vehicles.

2) **A2 Echelon.** This contains the personnel, vehicles, equipment and stores required to support F echelon, other than that immediate replenishment of ammunition and fuel done through Al echelon. Al echelon is, in turn, replenished from A2 echelon. In summary, A2 echelon contains stores and repair vehicles, and the balance of the unit's basic load of combat supplies.

c) **B Echelon.** This contains the vehicles and troops not in F and A echelons. These are the personnel, vehicles, equipment and stores not required to support the immediate battle needs of the battalion, but which are needed for the general administrative support of the unit. Personnel records, clerical equipment and left out of battle personnel are normally found here.

TACTICAL GROUPING

4. To make best use of the fighting and administrative resources the unit is organized into effective fighting groups within F echelon. These company groups normally consist of the rifle companies with allotted elements of other arms and services exclusive of armour.

5. When armour is allotted to either a battalion or a rifle company, they are called battle group and combat team respectively:

a. **Battle Group.** An operational group based on either an infantry battalion or armoured regiment, each with at least one squadron or company of the other arm and with elements of other arms and services allocated according to need. Battle groups may be infantry or armour heavy and are defined as such by the predominance of infantry or armour in the battle group. So-called **square** battle groups consist of two companies and two squadrons.

b. **Combat Team.** An operational group normally consisting of an infantry company and a tank squadron with elements of other arms and services allocated according to need.

SECTION 2

BATTALION HEADQUARTERS

GENERAL

6. The Battalion Headquarters includes a command section, command post section, intelligence section, military police section and signals platoon. The purpose of the headquarters is to provide the Commanding Officer with the necessary personnel, vehicles, communications and information to enable him to command and control the unit in battle.

COMMAND SECTION

7. This section consists of the Commanding Officer (CO), the Deputy Commanding Officer (DCO) and the Regimental Sergeant-Major (RSM) with their dedicated drivers and signallers.

8. The CO is responsible for the organization, fighting efficiency, discipline and administration of the battalion. The DCO assists the CO and commands in his absence. The DCO is usually made responsible for all administration within the battalion and for planning future operations when the Operations Officer is otherwise committed.

9. The RSM advises the CO on matters of discipline and administration affecting other ranks. He may perform other duties as directed by the CO.

COMMAND POST SECTION

10. The command post (CP) is the focal point for the planning, control and coordination of unit operations. The staff consists of the Operations Officer (Ops O), the Intelligence Officer (IO), a number of duty officers drawn from the combat support company and intelligence clerks, drivers and signallers.

11. The CP may be established using anywhere from two to four vehicles depending on the tactical situation and attachments to the battalion.

INTELLIGENCE SECTION

12. The Intelligence Section consists of the Battalion IO and a small number of infantry ranks non-commissioned members. The IO is responsible for receiving, collating and analyzing information obtained from all battalion and supporting sources and disseminating the resulting intelligence and information to the companies, flanking units and higher headquarters.

MILITARY POLICE SECTION

13. The Battalion Military Police (MP) Section is commanded by a senior NCO/WO and consists of two or three military policemen augmented, as directed by the CO, by infantry regimental policemen.

14. The section's tasks in battle are:

a. to assist in route reconnaissance, signing and traffic control;

b. to assist in the protection of battalion headquarters;

c. to form part of the headquarters reconnaissance party;

d. to control traffic in and out of battalion headquarters; and

e. to supervise and control, with any necessary infantry assistance, prisoners of war while the prisoners are in the battalion F echelon area.

SIGNALS PLATOON

15. The platoon, commanded by the Signals Officer (Sig O), consists of a small headquarters and signals office, a radio section, a line section, and a stores and repair section. The platoon contains a mix of radio operators, radio technicians and infantry communicators and drivers.

16. The radio operators work in the CP, the administrative CP at A echelon and operate any necessary radio rebroadcast. The platoon pro-

vides operational and technical supervision over all battalion communications. Unit repair of communications equipment is performed by radio technicians located at A echelon.

17. The line section lays line from the headquarters to companies and combat support platoons and attachments when conditions permit. Motorcycles may be used for a signal dispatch service.

18. The Sig O is responsible to the CO for planning and implementing communications throughout the battalion and with attached supporting arms. He provides the necessary signals orders, instructions and codes.

SECTION 3

THE RIFLE COMPANY

GENERAL

19. The four rifle companies of the infantry battalion are the minimum number required for balance in both defensive and offensive operations. In the defence balance means the capability of providing depth, all-round protection, mutual support and spontaneous counter-attack capability. In the attack, balance means that four rifle companies can maintain the momentum, provide a degree of flank protection and a reserve.

ORGANIZATION

20. Each rifle company consists of a company headquarters and three identical rifle platoons. Each company is normally commanded by a major.

21. Company headquarters normally consists of four vehicles: a command post, a crew served weapons vehicle, a rover and a cargo carrier.

22. The rifle platoon consists of a platoon headquarters (commander, second-in-command and communicator) and three identical 10 man sections. Each platoon is normally equipped with four identical vehicles. In addition to small arms the platoon is equipped with a light mortar, short range anti-armour weapons and a general purpose machine gun.

23. In battle, the company quartermaster sergeant with his driver and vehicle and the mobile kitchen and cooks are located in A echelon. The company clerk, and possibly a driver, are in B echelon. The rest of the company is located in F echelon.

SECTION 4

COMBAT SUPPORT COMPANY

GENERAL

24. Combat Support Company does not operate as a tactical sub-unit in operations. Rather its platoons (mortar, reconnaissance and assault pioneer) operate as independent platoons under the direct command of the CO. Out of battle, the company may operate as a sub-unit for ease of administration and training. The organization is at Annex B to this Chapter.

HEADQUARTERS COMBAT SUPPORT COMPANY

25. The company is commanded by a major who usually also acts as the Battalion Ops O, working out of the battalion CP. See Battalion Headquarters Section — Chapter 3.

26. Combat Support Company headquarters personnel provide administrative support to Battalion Headquarters. Normally in operations this administrative support group is commanded by the Combat Support Company sergeant major.

27. All Combat Support Company personnel are in F echelon except:

a. company quartermaster sergeant, storemen, drivers, clerks, mobile kitchen and cooks — A echelon; and

b. the platoon warrant officers, stores/ammunition vehicles and drivers — A echelon.

COMBAT SUPPORT PLATOONS

28. **Mortar Platoon.** The platoon is commanded by a captain, with a lieutenant second-in-command, and consists of a headquarters and two mortar groups. The platoon CP is the Fire Support Coordination Centre (FSCC) in the battalion CP complex. The platoon headquarters includes a reconnaissance capability and an ammunition section.

29. **Reconnaissance Platoon.** Commanded by a captain, with a lieutenant second-in-command, the platoon consists of:

a. a headquarters;

b. five reconnaissance groups (each of two detachments); and

c. two sniper detachments.

30. **Assault Pioneer Platoon.** Commanded by a captain, the platoon consists of a headquarters and three identical sections.

SECTION 5

ANTI-ARMOUR COMPANY

GENERAL

31. This company provides the medium range anti-armour support to the battalion. It is commanded by an infantry major and consists of:

a. a headquarters; and

b. four anti-armour platoons each of three sections (6 detachments).

32. The company is located entirely in F echelon, except for the 2IC, CQMS, storeman and ammunition resupply vehicles which are held in A echelon.

ORGANIZATION

33. **See Annex B.** Certain battalions may only have one anti-armour platoon.

SECTION 6

ADMINISTRATION COMPANY

GENERAL

34. This company provides the combat service support to the battalion. It is commanded by an infantry major and consists of:

a. a headquarters,

b. maintenance platoon,

c. logistics platoon,

d. ration platoon,

e. medical platoon, and

f. a personnel section.

35. To perform their functions in battle, the company elements are spread through F, A and B echelons. The organization is shown in Annex C to this Chapter. The operation of the company is discussed in detail in Chapter 5.

COMPANY ORGANIZATION

36. **Administrative Operations Centre.** The company headquarters provides the administrative operations centre, more simply called the A echelon CP, located at A2 echelon. The company commander commands from this location. The CP vehicles and the administrative rear-link vehicle and their signallers are provided by the Signals Platoon.

37. **Maintenance Platoon.** The platoon is commanded by an LEME captain and is manned by EME and Log personnel. It consists of:

a. a headquarters;

b. seven mobile repair teams (MRTs);

c. two recovery teams; and

d. eight specialist technical sections handling the functions of:

1) control,

2) inspection,

3) metal and canvas repair,

4) battery,

5) tools,

6) repair parts,

7) weapons, and

8) fire control systems.

38. **Logistics Platoon.** The platoon, commanded by a LOG captain, carries on transport, the battalion's reserve of clothing, weapons, equipment and combat supplies, including fuel and ammunition.

39. **Ration Platoon.** Commanded by a WO Cook, the platoon consists of six mobile kitchens and controls the indenting, accounting, supply and preparation of rations for consumption. The unit reserve of hard rations is carried on transport in the Logistics Platoon.

40. **Medical Platoon.** The platoon is commanded by a Med captain and consists of:

a. a headquarters,

b. a unit medical station (UMS), and

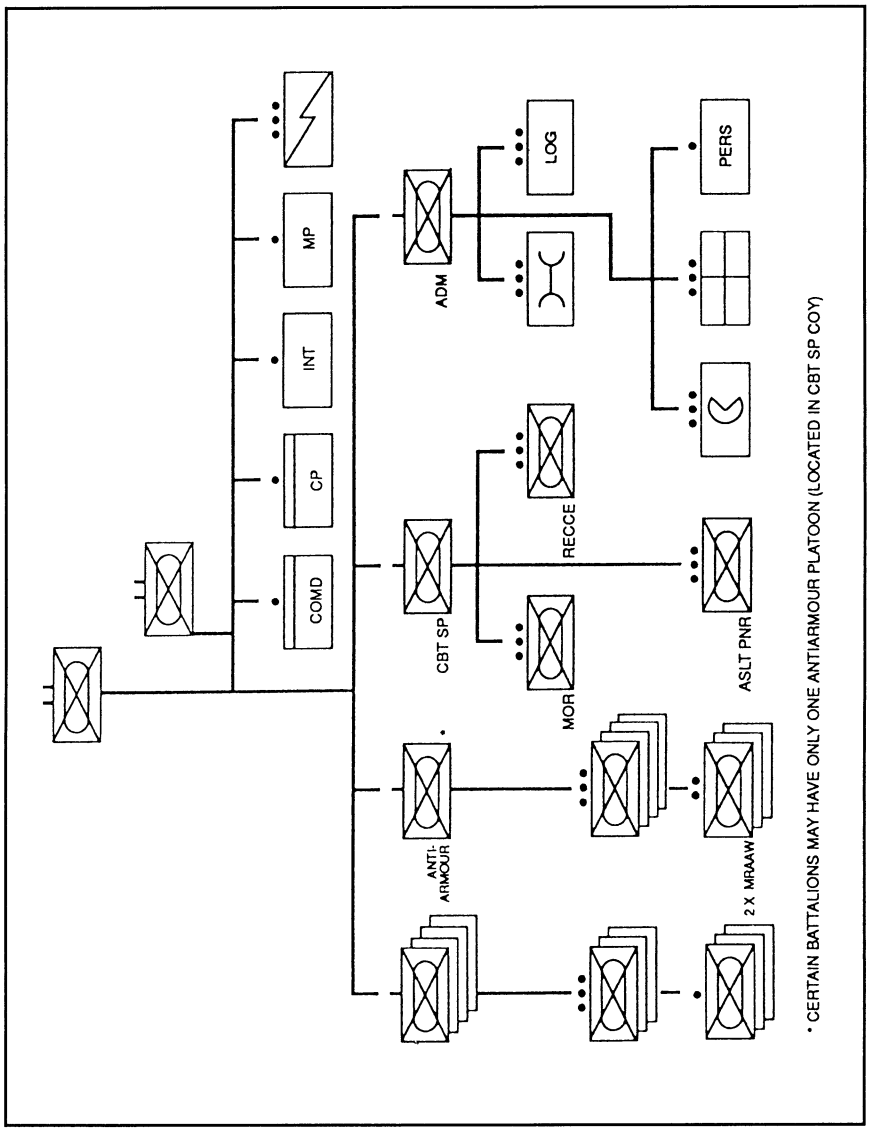
c. five ambulance teams.

41. **Personnel Section.** This section is commanded by the Adjutant and is located in B echelon. It maintains personnel records and initiates required records action.

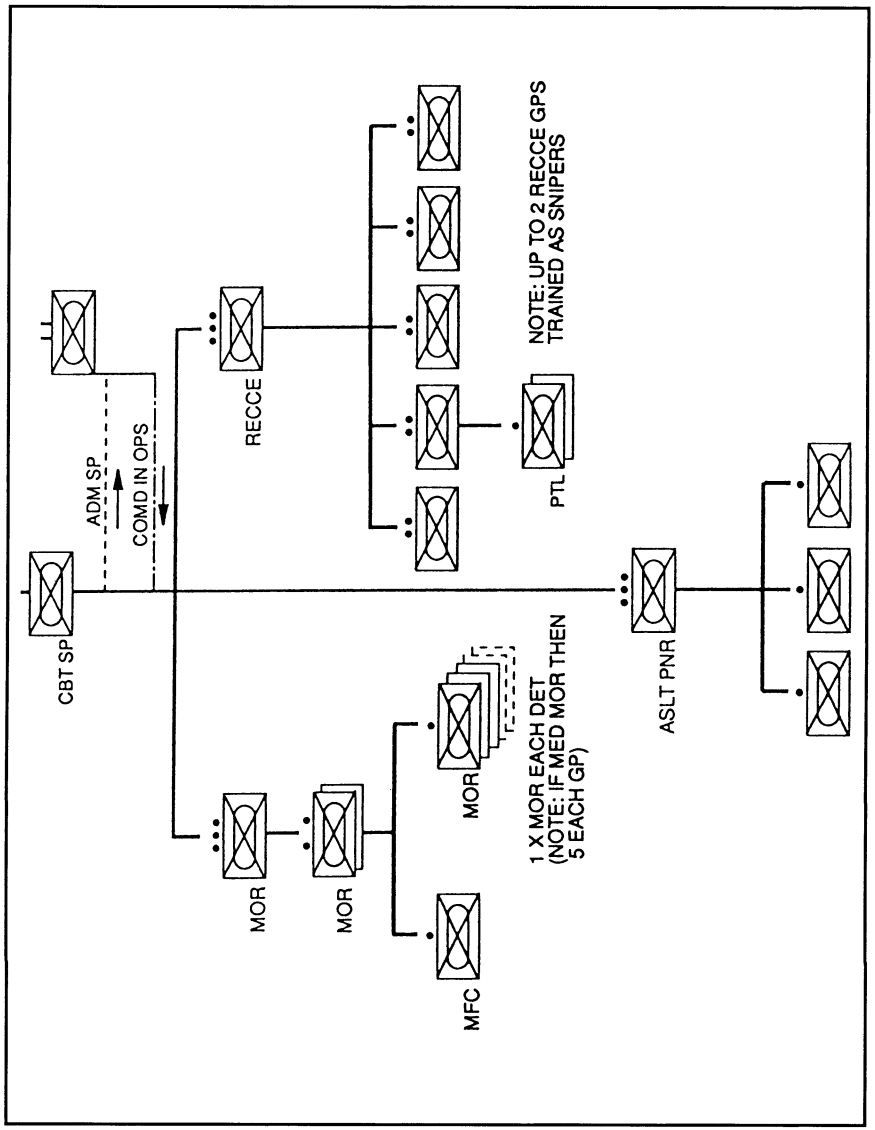
OTHER ADMINISTRATIVE SERVICE

42. Other services such as pay, welfare, and chaplains are not organic to the battalion. In battle, chaplains will be attached to the unit and will normally operate from A2 echelon.

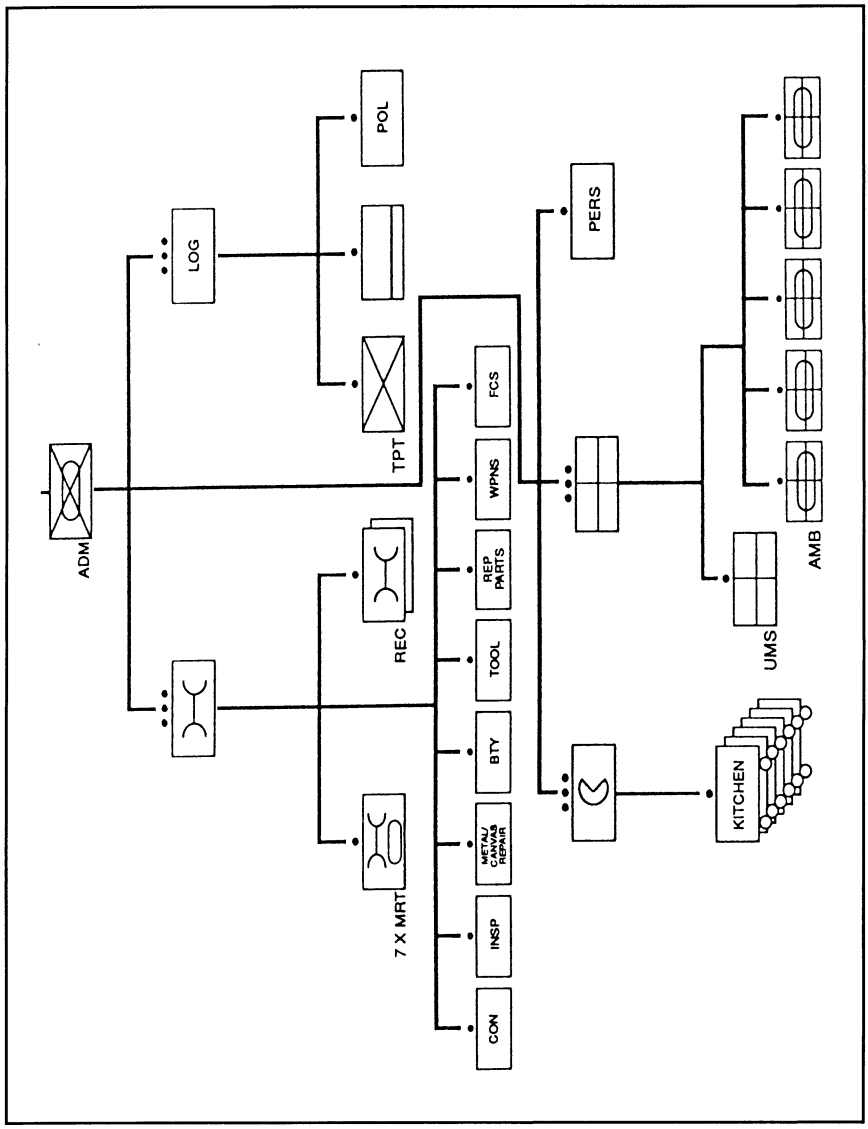
INFANTRY BATTALION ORGANIZATION



INFANTRY BATTALION SUPPORT COMPANY ORGANIZATION



INFANTRY BATTALION OUTLINE RADIO DIAGRAM



CHAPTER 3

COMMAND AND CONTROL

SECTION 1

COMMAND

COMMAND PHILOSOPHY

1. Command and control is the exercise of authority and direction by a designated commander over assigned forces to accomplish the force's mission. The functions of command and control are performed through an arrangement of personnel, equipment, communications, facilities and procedures which are employed by a commander and his staff in planning, directing, co-ordinating and controlling operations.

2. The Canadian Army's philosophy of command and control was formulated to enable units, sub-units and small units to function faster and more responsively than the enemy. The philosophy is known as **decentralized command** and comprises both the procedural aspects of command and control and the human dimensions of leadership. The central idea of decentralized command is that subordinate leaders should normally be allowed considerable latitude in accomplishing the mission. It promotes the maximum use of initiative and the decentralized execution of tasks. The philosophy accommodates the more traditional style of **positive control**, realizing that at times subordinates must be closely controlled through the use of detailed orders and multiple control measures. However, it stresses that the use of positive control should be the exception and not the norm.

3. The purpose of decentralized command is to speed up the decision making-execution cycle of units in operations. Decentralized command can reduce and help exploit the increased friction, uncertainty, fluidity and disorder inherent on the modern battlefield, and give commanders at all levels the capability of acting correctly in

the absence of orders and faster than the enemy can respond. The essential elements of decentralized command are:

a. mission orders,

b. commander's intent,

c. mission analysis,

d. initiative,

e. command presence, and

f. trust, respect and cohesion.

4. **Mission Orders**. Decentralized command stresses the use of mission orders. Mission orders are orders that give a subordinate a mission to accomplish without specifying how it must be done. Whereas detailed orders give lengthy descriptions about how subordinates will carry out a task - prescribing the techniques, drills and procedures to be used - mission orders, in contrast, **focus only on the results desired**. The means used to achieve these results are not prescribed. Mission orders use a shortened orders process which stresses the purpose behind the task and the results envisioned. **The purpose and result are called the "commander's intent"** (described below). From orders a subordinate will receive a task from his commander, this is the "what" of the mission; but also he will receive the "why" of the mission (the purpose or intent). This is what the commander and his superior intend for the assigned task to accomplish. The "what" (the task), and especially the "when" and the "where" (coord instructions), are all flexible. The "why" (the intent) is not. It remains the one constant from the orders given. If during an operation the subordinate sees that the original assigned task will no longer achieve the commander's intent, he must take the initiative and do something that will. He reports his actions as soon as possible, but he does not wait for permission to act.

5. Mission orders differ from detailed orders in that they avoid giving detailed coordinating instructions and control measures, and because they emphasize that the accomplishment of the commander's intent is more important than achieving the task. This type of orders may not always be possible or desirable, particularly when the requirement for detailed co-ordination necessitates positive control. However, whenever possible mission orders should be practiced.

6. **Commander's Intent**. Commanders at all levels are responsible for achieving assigned missions. A mission is a clear and concise statement of the task of the command and its purpose (AAP-6 NATO Glossary of Terms and Definitions). Traditionally, using positive control, the assigned task has been the primary consideration in accomplishing a mission. In contrast, in decentralized command it is the purpose of a mission which is more important. The purpose is expressed in a **mission statement** and explained in the **concept of operations** paragraph. In the following explanations the Brigade Commander's Intent is to "**prevent enemy advance through approach A**", and the unit task is to "**defend left forward**". The following apply:

a. **The mission statement**. The mission statement expresses the assigned task (received in orders) and the purpose behind this task (as determined through mission analysis of those orders), e.g. :

> "Mission. To defend left forward **in order to fix and kill elements of the enemy lead regiment in Kill zones E and F .**"

b. **The concept of operations**. It is now accepted practice in the Canadian and allied armies to include a statement of the commander's intent as part of the concept of operations paragraph of formal orders. This paragraph should explain the mission statement. It comprises the following:

(1) **The purpose**. This explains, within the context of the mission of the next higher commander, the 'why' of the

mission. This can be an elaboration of the mission statement.

(2) **The method.** This explains the concept of 'how' the operation is to be conducted without assigning specific tasks. It is here that the Brigade and Battle group main efforts are identified.

(3) **The end state.** This describes the desired effect on the enemy force and the **posture** of the unit on completion of the operation, e.g. :

> "2. Mission. to defend left forward in order to fix and kill two battalions of the enemy lead regiment in Kill zones E and F"
>
> 3. Execution.
>
> a. Concept of operations. We must fix and kill two battalions of the lead enemy regiment in Kill zones E and/or F and prevent their further advance through approach A. We will deploy to two of the left forward battle positions (101, 102 or 103 and 104) once the route of advance of the enemy is confirmed, and stop the enemy advance in the kill zones. Our main effort is kill zone F. Once we have deployed, the RCD BG, who are the Brigade main effort, will carry out a counter-attack from the right to destroy the enemy's second echelon battalions in Kill zone E. As an end state I want no enemy penetration (including recce elements) beyond Battle position 103; I want at least one enemy battalion destroyed in Kill zone F; and I want to be able to consolidate quickly and move to depth battle positions if required."

7. When a CO receives his orders (or his warning order) he should find the intent of the superior commander (the commander two levels

up) expressed as part of the friendly forces paragraph (para 1.b.). The intent of his immediate higher commander is expressed in the mission statement, and is explained in the concept of operations paragraph of these orders. By conducting mission analysis of the higher mission statement and concept of operations, the CO will be able to formulate his own mission statement. This will become the pivot around which the CO plans, directs and fights his unit. It will provide the guidance, set the limits and provide the reference which will help the CO make the immediate decisions required on the battlefield. When writing his orders a CO will put the Brigade commander's intent (mission statement and concept) in paragraph 1. b. This will insure his subordinates understand the context of the operation two levels up. He will put his own mission statement in paragraph 2, and will explain his intent and his plan within his concept of operations paragraph (3. a.). It is essential that the mission statement and the concept of operations paragraph clearly articulate his intent.

8. **Mission Analysis**. In order to capture his statement of intent within a clear mission statement and concept of operations paragraph, the CO must conduct a mission analysis. Upon receipt of a mission (whether in a warning order or in formal orders), he should analyze the task assigned and the superior commander's intent and the higher commander's intent. This will allow him to see the relationship of the task to both higher intents and guide him in the articulation of his own mission statement. He conducts his mission analysis by finding the answers to the following questions:

a. What is the intent of my superior commander, and that of my commander, and what is my role in the overall plan to achieve this intent?

b. What are my assigned tasks and my implied tasks in this plan? Which is the most important task (the main effort) for the formation and for my unit?

c. What freedom of action and restraints do I have? and

d. Has the tactical situation changed so much since I received orders that the plan and my task must be modified?

9. The answers to these questions provide the CO with the information he requires to formulate his own mission statement - which should comprise his task(s) received from higher orders along with the purpose behind the task (intent of his commanders), as determined by mission analysis. This mission statement will become paragraph 2 of his orders and will provide a common start point for further planning by the CO and his Ops O. In pressing circumstances, this mission statement may be used as the basis for quick fragmentary orders. In all circumstances, as battle procedure progresses and the operation commences the mission analysis must be conducted again in the light of further direction either requested from or imposed by the superior commander, or in light a drastically changed situation. The CO should regularly assess the progress of the operation against his mission statement to determine whether the situation has changed to the point where further decisions are necessary.

10. **Initiative**. Mission analysis will produce a clear mission statement and will help guide the estimate process toward a clear concept of operations paragraph. Once these are articulated and promulgated, the limitations for the use of low level initiative should become clear to sub-unit commanders. The mission statement and the concept of operations paragraph will define the tasks assigned to sub-units in the context of the results desired - the intent. Subordinate commanders at all levels use the procedure of mission analysis to ensure they understand exactly how these assigned tasks relate to the higher commander's intent and to the commander's intent. Once the intent of a task is clearly understood, subordinate commanders have a responsibility to take the initiative to act in accordance with the demands of the situation, without waiting for further orders, to produce the results required, even if their actions differ from the tasks assigned.

11. Commanders should encourage this use of initiative by providing clear mission statements, by limiting the control measures

assigned, and by intervening in the execution of tasks only if the failure of a subordinate to accomplish a task endangers the overall mission.

12. Command Presence. Once a CO has issued his orders he must position himself to influence the most important task (the main effort). This will require him at times to exercise forward command. Forward command means demonstrating a command presence by being visible to the troops and by getting information firsthand from subordinates at the main effort. It does not mean that a CO should get wrapped up in the soldiers' fight. Nor does it mean regular interference with a subordinate's command. Although he is forward, a CO must at all times distance himself mentally in order to read the battle, to anticipate the next event and to seize opportunities as they unfold. If a CO cannot stay informed and exert a constructive influence on the operation while in a position of forward command, he should return to his headquarters, where he has the resources to take command decisions and effect changes if required.

13. Trust, Respect and Cohesion. For decentralized command to work, there must be explicit trust up and down the chain of command and laterally within the unit. There are several dimensions to this trust:

a. **Leaders must trust and respect their soldiers.** Decentralized command demands commanders who are capable of letting go and allowing subordinates to use their own initiative. This may mean that **a commander must live with a degree of uncertainty and the expectation that subordinates will sometimes make mistakes.** Uncertainty will diminish with time and should not deter commanders from pushing decision thresholds down to the lowest levels possible.

b. **Subordinates must be worthy of trust and respect.** A subordinate leader must be capable of taking the initiative. He must be loyal and aggressively dedicated to accomplishing the spirit of the mission statement (the commander's intent) as well as the task. He must have the ability and discipline to work without close supervision, and strive in these conditions

to achieve the best results and not the minimum standard prescribed.

c. **Subordinates must trust and respect leaders.** In order for soldiers to work wholeheartedly to support orders, they must be convinced of the competence and good intentions of the chain of command above them. Small unit and sub-unit commanders are the most important part in this chain. Lack of competence at their level will be immediately recognized. For this reason these commanders must have mastery of the techniques outlined in this manual and of unit SOPs. As well, they must have an ability to adapt to changing circumstances by using initiative and sound tactical sense. Above all these commanders must be manifestly loyal to the higher commander's intent and demonstrate this to their subordinates by remaining aggressively dedicated to high standards in the pursuit of results.

14. Trust and respect are critical to decentralized command. They promote cohesion. They are enhanced by the retention of individuals for long tours with the same small unit and sub-unit, and by the establishment of common techniques, procedures, drills and tactics.

15. The process of selection and training of leaders must emphasize the demonstrated qualities of determination and initiative. There is no place in combat units for unthinking commanders who lack the ability or desire to pursue the highest standards in the execution of their mission.

CHAPTER 3

COMMAND AND CONTROL

SECTION 1

GENERAL FACTORS

GENERAL

1. Efficient command and control are essential prerequisites for the effective coordination of resources and eventual success in battle. The CO must provide himself with the means to command his battalion and to direct and control the actions and fire-power of his sub-units — even when direct communication is not possible.

2. The command and control system is an arrangement of people, facilities and information used by a commander in planning, directing and controlling operations. While the system is becoming more and more equipment oriented to meet the demands of the modern battlefield, its purpose remains the same: to assist the commander in making correct, timely decisions, to provide him with the means of disseminating his orders quickly and to assist him in controlling operations in progress.

3. The successful exercise of command and control in a battalion depends on:

a. accurate and up-to-date information;

b. the exercise of effective and visible personal command and all levels (and especially by the CO);

c. good communications;

d. an efficient, well-organized, well laid-out and properly sited battalion headquarters; and

e. good battle procedure, especially deployment drills.

SECTION 2

INFORMATION

SOURCES

4. Operations based on insufficient or inaccurate information are rarely successful and can waste men and effort needlessly. Information will often be incomplete, imprecise and its accuracy unproven when planning an operation. Active measures to obtain the necessary information may be needed.

5. At battalion level, information can only be obtained by inquisitiveness. All ranks must be imbued with the desire to find out what the situation is, where our own troops are, where the enemy is, what he is doing and what the surrounding terrain is like? This demands a high degree of alertness and the aggressive and sensible tasking of the Reconnaissance Platoon, foot patrols and observation posts.

6. Whatever information is required must be collated in a formal collection plan.

THE INTELLIGENCE SECTION

7. Information about the enemy is critically important for a commander to assess with accuracy the enemy intentions and capabilities. Battalion and company commanders require information and intelligence on:

a. enemy dispositions, strengths, intentions and capabilities;

b. battle area topography, particularly where detailed maps or air photographs are not available;

c. the tactics, habits and morale of the enemy; and

d. weather.

8. The Intelligence Section is an integral part of the battalion operations staff. The Intelligence Officer (IO) works closely with the Ops O and is responsible for:

a. receiving, collating and analyzing information; and

b. disseminating the resulting intelligence and information to sub-units, higher headquarters, and flanking units.

9. The CO directs the IO to list those items of information which need to be collected and processed in order to present a meaningful picture. Much of this information will be gained from intelligence summaries and reports passed down from higher headquarters. Where there are obvious deficiencies in knowledge that may affect the battalion, the CO may order a specific activity to gather the information.

RECONNAISSANCE PLATOON

10. The Reconnaissance Platoon provides the CO with a dedicated information gathering organization. While the IO produces the collection plan, he will rely on the Reconnaissance Platoon Commander to advise on the areas that must be covered by surveillance, the means available and the length of time surveillance is required. See Chapter 4 also.

LIAISON

11. A battalion never operates in a vacuum. Whenever possible continuous mutual liaison and exchanges of information must take place with adjacent units to the flanks, and to the front and rear on certain operations.

12. When liaison is not reciprocal it takes place as follows;

a. from left to right;

b. from rear to front for units of the same level of command;

c. from higher to lower headquarters;

d. from supporting to supported unit or formation; and

e. from the moving force to the force in place during a passage of lines (when the headquarters of the two forces are not colocated).

SECTION 3

THE COMMANDING OFFICER

PERSONAL INFLUENCE

13. At battalion level the effectiveness of command depends finally on the CO's personal influence — in essence on his powers of leadership. His personal influence and leadership are of paramount importance. The unity, morale and overall effectiveness of the battalion depend on his personality and his professional ability.

14. Both in training and in war, the CO's presence must be felt throughout the unit in all its activities. All ranks must have trust in his abilities and this can best be achieved through personal contact and the sharing of demanding training and operational experiences.

15. The style of COs will vary but it is his authority and his professionalism which will set the basic standards of leadership, performance and battle discipline throughout the battalion. His main tasks are to read and plan the battle correctly. To deal with the unexpected he needs to anticipate well, position himself at the right place and be decisive. His appearance at a critical moment and place in the battle can be of great significance, both in the making of timely decisions and the imposition of his will on the conduct of the operation and on individual soldiers.

16. Although the CO exercises command through his subordinate commanders and often via telephone, radio or written orders, there is no substitute for personal contact during visits forward.

17. The demands on a CO, both mental and physical, mean that he must be fit and pace himself with care, in particular ensuring that he has enough sleep, if he is not to become ineffective.

LOCATION OF THE CO

18. Throughout the battle the CO must position himself where he can best direct and control his complete battalion. Often this will be at the main CP where communications and access to broad sources of infor-

mation are available. At other times the CO will be with his rover group where he can read the battle for himself and exert his personal influence and leadership.

19. Achieving the correct balance is a matter of judgement by each individual CO. In deciding where to be, the CO must consider the following:

a. the reliability and adequacy of communications to link the CO with all sub-units, to brigade HQ and back to the main battalion CP;

b. the possibility of achieving better results by moving the whole headquarters forward;

c. the requirement to avoid usurping the functions of his subordinates;

d. the need for personal protection; and

e. the possible need for an accompanying officer.

20. The CO may form a small tactical headquarters forward, near the critical point of the battle, manned and equipped according to his requirements. This should be deployed only when it will increase the CO's ability to control the operation.

PERSONAL VISITS

21. Visits to sub-units and attached elements provide the CO with the best means of making personal contact. Visits also offer the ideal opportunity to assess morale and to feel the battle. The morale value of visits forward, both to the fighting troops and to the CO himself, is of the greatest importance.

22. As a guide, the CO should visit:

a. during quiet periods, at least once every 24 hours;

b. after the capture of an objective, when consolidation is underway;

c. when the situation is critical and personal intervention may affect the outcome; and

d. when a battle is over, especially when heavy casualties have been suffered.

SUBORDINATES

23. The CO must be aware of the strengths and weaknesses of his subordinates and advisors. Some will require guidance and encouragement and all must feel they are part of a team. There will be some who, for a variety of reasons, are a danger to themselves and their subordinates. For the man suffering from excessive battle strain and fatigue this may simply mean leaving him out of battle for a short time. The incompetent, however, need to be quickly removed.

24. The CO must know the tactical ability of his subordinates. To ensure that they can continue to act on their own initiative when out of contact with him, the CO should:

a. involve them in operational planning;

b. give them the opportunity to express their ideas;

c. never leave them in doubt as to his concept of operations; and

d. give them the maximum possible responsibility and freedom of action appropriate to their task.

ALTERNATE COMMAND

25. It is possible that Battalion Headquarters could be either partially or completely destroyed by enemy action. At battalion level there are insufficient personnel and radios to man a second or alternate headquarters with anything more than a skeleton staff. In the event of damage to Battalion Headquarters, command and control of the battalion must be regained quickly as follows:

a. **CO a Casualty but HQ Intact.** The DCO assumes command. If the DCO is absent or has to move forward from A Echelon, the Ops O commands in the interim.

b. **CO and HQ Destroyed.** The DCO assumes command from A Echelon CP or from a forward rifle company.

c. **CO Away from Battalion HQ when it is Destroyed.** The CO commands from his rover group or from a rifle company HQ until he can make arrangements to organize a new headquarters.

26. The CO designates an alternate headquarters for each operation, separate from the main HQ with the role of ensuring continuity of control, as well as an alternate commander should both the CO and DCO become casualties.

SECTION 4

BATTALION HEADQUARTERS

ROLES

27. No battalion can be effectively controlled without an efficient, smoothly working headquarters. The functions of the headquarters are:

a. to provide the CO with the information and facilities which he requires to exercise effective command;

b. to carry out the essential staff work and coordination to turn the CO's plans and decisions into orders and actions;

c. to provide sub-units with the information and assistance they need to carry out their tasks;

d. to keep brigade headquarters and flanking units informed of battalion activities and intentions; and

e. to leave the CO free to fight the battle.

28. To fulfil these functions effectively, Battalion Headquarters staff must gain the confidence of both brigade staff and unit officers.

RESPONSIBILITIES OF KEY PERSONNEL

29. See Annex A to this Chapter.

TACTICAL ORGANIZATION

30. As explained in Chapter 2, Section 2, Battalion Headquarters is divided into a command section, CP section, intelligence section, MP section and signals platoon. In operations, Battalion Headquarters personnel and attachments are broken into tactical groups as follows:

a. **Rover Group.**

I) The constitution of the rover group varies according to the area and type of operation. Normally, the CO is accompanied

by one officer and the direct support battery commander. The officer might be the Adjutant or one of the combat support platoon commanders. For certain operations the group may be joined by the IO, the engineer troop commander and any of the other combat support platoon commanders.

2) The group requires protection possibly under the RSM, and good forward and rear link communications.

b. **Command Post (CP).** The CP consists of a number of cells and may be located in vehicles, trenches, bunkers or buildings (including cellars). The cells are —

1) **The Command Cell.** This operates under the Ops O's direction and is permanently manned by duty officers and radio operators. It controls the battalion command radio net and rear links. It is from here that the CO exercises command when he is not with the Rover Group.

2) **Fire Support Coordination Centre (FSCC).** The FSCC is staffed by the direct support battery commander and the mortar platoon commander, or their representatives. The FSCC coordinates all indirect fire, air support and air defence resources available to the battalion.

3) **Intelligence Cell.** This cell provides the CP with essential, timely information about enemy locations, movements, capabilities and intentions. The cell monitors the battalion command and surveillance radio nets for current information on the enemy, and combines this information with intelligence gained from adjacent units and higher formations. The cell is also responsible for the coordination, briefing and debriefing of patrols and for weather information.

OPERATION

31. The efficiency and survival of Battalion Headquarters depends on its small size and simple, well-rehearsed drills for movement, concealment, defence and working routine. If casualties occur, if operations

are prolonged or if there is a great deal of movement requiring all to be on duty the strain on the personnel can be difficult.

32. It is essential that everyone be able to do at least one other job and that periods of rest for individuals are planned and actually take place.

SITING AND LAYOUT

33. The principal factors affecting the siting of battalion headquarters are:

a. **Communications.** The location of the site selected should permit good communications to sub-units, preferably without the need for a rebroadcast station. It should also be screened from enemy electronic warfare (EW) devices. Communications with higher formation are the responsibility of that formation headquarters and they will if necessary provide rebroadcast stations. Access to a civil telephone is useful but it must be remembered that it is a most insecure form of communication.

b. **Concealment.** Woods and villages offer the best cover, with the latter helping to counter thermal image and infra red surveillance. Isolated or predictable cover must be avoided.

c. **Protection.** Some battalions may not have the integral protection afforded by an armoured vehicle. To achieve a degree of protection from artillery, the headquarters will have to dig in or use cellars, underground car parks or narrow, steep sided pieces of ground.

d. **Defence.** Battalion Headquarters must always provide its own security. However, it will also rely on concealment and on selecting sites shielded by sub-unit defences. Helicopters should never be allowed to land within several hundred metres of the headquarters.

e. **Accessibility.** The site should be easily accessible by wheeled vehicles preferably with a covered final approach. Hard standing traffic circuits and a concealed parking area are all useful but may not always be possible.

34. The factors will frequently conflict. Circumstances will determine the weight to be given to each. Normally, good communications take precedence, but the loss of the headquarters would considerably reduce the battalion's ability to fight as a cohesive force. An alternate site must always be selected and reconnoitred, and all must know the drill for its occupation.

35. A sample diagrammatical layout of a battalion headquarters is shown at Annex B to this Chapter.

PROTECTION

36. Clear provision must be made for a defence force of battalion headquarters at all times. An ad hoc defence force can be found by using the miscellaneous personnel of the headquarters.

37. Often the assault pioneer platoon has the task of headquarters defence but this limits the platoon in its primary role. A compromise solution is to locate the pioneer platoon at battalion headquarters so that it is part of the headquarters defence during platoon rest periods. Resting reconnaissance platoon patrols may also be located near or in battalion headquarters. The danger of all this is that the headquarters may grow too large, with too much traffic in and out, to permit proper concealment.

38. On occasions it may be desirable to locate the headquarters near a rifle company for additional protection but care must be taken not to create a concentration which might endanger both sub-units. Good concealment and keeping the headquarters size as small as possible are also important elements of protection.

39. The RSM or CSM Combat Support Company may be responsible to the Ops O for the local protection of the headquarters. This will include:

a. siting the positions of the headquarters defence forces;

b. the posting of sentries by day and night;

c. the siting of alarm positions for every officer and man in the headquarters (sited to back up the defence force positions);

d. the action to be taken in the event of air attack; and

e. the practice manning of alarm positions, as soon as possible after the headquarters is set up in its new location, and at irregular intervals after that, both by day and night.

MOVEMENT

40. A drill must exist for the move of the headquarters. Normally vehicles will move in packets and a standard order of march for each of the functional groups will help to ensure quick and efficient movement, for example:

a. reconnaissance party,

b. rover group,

c. CP group,

d. fire support coordination centre (FSCC),

e. signal group,

f. protection group,

g. combat support company HQ, and

h. miscellaneous group.

41. The drill for movement includes such things as the operation of a step-up, route signing, laying and recovering line, removing signs, packet commanders, orders for reconnaissance party, action on arrival in the new area, etc. The drill must also include provision for a stay-behind party who re-direct visitors, dispatch riders, etc, to the new location.

42. The headquarters reconnaissance party will normally consist of:

a. the Sig O,

b. the RSM (or CSM Combat Support Company),

c. military or regimental policemen, and

d. members of the pioneer platoon as a working party and escort.

43. On arrival in the new location, the grid reference is passed immediately to Brigade Headquarters, to the flanking units and to all sub-units. The track plan made before the arrival of the main body must be rigidly enforced.

44. Immediately upon arrival of the main body sentries are posted. The CP is then re-established as a matter of top priority. When this has commenced, camouflage and the digging of trenches starts (and continues until properly done).

ROUTINE

45. There is always a duty officer who understands the current battle situation and the current codes and codewords. He must know the location of all officers of the headquarters.

46. Rest periods should be organized for all.

47. Visitors, including officers coming for orders, should first report to the duty officer or IO to ensure all have the latest information before seeing the CO.

48. All incoming personnel with messages must first report to the signal centre. Unit officers proceeding to another headquarters, and visitors at the headquarters, should call at the signal centre for any messages which they could deliver.

49. Standing Operating Procedures — Battalion Headquarters. See Annex C.

SECTION 5

COMMUNICATIONS

RESPONSIBILITIES/METHODS

50. The battalion is responsible for its own internal communications. The higher headquarters is responsible for maintaining contact with the subordinate headquarters. The battalion Sig O is responsible for coordinating communications to supporting arms. At all levels, lateral communications are the responsibility of the headquarters on the LEFT to the headquarters on the RIGHT. The organization providing a communications system is responsible for its command and control, for the issue of technical instructions and for the maintenance of the equipment.

51. The main methods of communication within the battalion are:

a. radio — VHF Voice (mix of secure and insecure radios);

b. line;

c. personal contact — liaison officers and visits by unit officers; and

d. signal dispatch service — motorcycles and rover vehicles may be used routinely and on special runs to hand carry messages between Battalion Headquarters and all F, A and B echelon elements.

RADIO

52. Radio is the primary means of communication. Infantry signallers and all others likely to use the radio must be proficient in voice procedure and the operation of the sets they use. Users include:

a. all officers and NCOs,

b. infantrymen operating sets on the company command nets, and

c. all members of combat support platoons.

53. The rear link radios (to brigade) are provided and manned by the battalion Signals Platoon. The allotment of radios is flexible and can be varied to suit specific operations. An outline radio diagram of the infantry battalion is shown at Annex D.

LINE

54. Line communication will be used as often as possible during periods of reduced movement. It is particularly useful for observation posts and standing patrols. Line, however, takes time to lay and maintain and is susceptible to being cut by enemy patrols and shellfire.

DISPATCH RIDERS

55. These are an essential complementary means of communication. They carry bulky orders, maps, packages and (to save time) long messages. They require rest, however, and their liability to wounds and capture is considerable due to the exposed nature of their work.

56. The main principles to be observed in their employment are:

a. They must have definite orders concerning the disposition of documents they are carrying if capture appears unavoidable.

b. It is more economical to hold traffic and send the dispatch riders to sub-units at regular intervals, following a timetable.

c. All ranks must help them find the headquarters or individuals whom they seek.

d. Dispatch riders must always inquire for any signal or message which they could take back with them.

SECURITY

57. Any potential enemy must be expected to have an extensive and sophisticated electronic warfare (EW) capability. The battalion must maintain high standards of radio discipline and security and must be ready to continue operations when enemy EW has disrupted normal radio com-

munications. Orders and drills must include contingency plans for the continuation of operations without radio.

58. Counter-measures at battalion level are:

a. the observation of proper voice procedure and strict radio discipline (including keeping all transmissions as brief as possible);

b. challenging suspicious stations to authenticate;

c. using means other than radio;

d. being able to identify types of EW and trained to take proper electronic counter-measures; and

e. extensive use of standing operating procedures to minimize the need for lengthy orders.

59. Care must be taken to safeguard signals instructions against capture. It is most important that patrols and rovers only carry the absolute minimum codes and instructions. The greatest danger is that our own forces may be unaware for some time that a compromise has occurred.

THE SIGNALS PLATOON

60. The Sig O is trained to anticipate communication disruptions and to find effective remedies. Once his communication plan is in place, he must be kept reasonably free to trouble-shoot communication problems. Under normal circumstances he should be able, for example, to take his turn as a CP duty officer but he should never be so tasked during a headquarters move, in the first few hours after a move or during any period when enemy EW is being experienced or is anticipated.

61. The signals platoon is responsible for:

a. providing operators for battalion headquarters;

b. coordinating communications with supporting arms, services and flanking units;

c. providing a message centre at battalion headquarters;

d. providing operational and technical supervision of all radio nets in the unit;

e. providing line communication between battalion headquarters, A echelon and the rifle companies and combat support platoons;

f. establishing and operating radio rebroadcast stations as necessary; and

g. conducting first level repair on unit telephones and radios.

SECTION 6

BATTLE PROCEDURE

PREPARATION FOR BATTLE

1. Canadian Army tactical doctrine demands that our formations, units, sub-units and small units be capable of conducting battle procedure and executing operations faster than the enemy. Only by this means can CF maintain the tactical initiative in battle. Speed and effectiveness in operations can only be achieved if formation and unit decision making-execution cycles are well practiced. A critical part of this cycle is unit battle procedure. Battle procedure is the process by which a commander receives his orders, makes his reconnaissance and plan, prepares and issues his orders, and prepares and deploys his troops for battle. It should be executed to make best use of time by having concurrent activity at each level of command.

2. Battle procedure is a continuous cycle revisited every time a warning order is issued. Before hostilities commence, or during lulls in operations, there may be enough time to complete each step of the procedure. During these periods the emphasis should be on thorough preparation of the battlefield and detailed planning, with efforts being made to produce well coordinated plans. However, during operations there will not always be time for this same thoroughness. It will be more important in these circumstances for units to plan and execute operations faster than the enemy, pre-empting enemy moves and forcing the enemy to react to his own disadvantage. For this reason, **the CO and OCs must know how to streamline battle procedure to suit the time constraints of rapidly changing situations**. At these times commanders must focus on only those essential steps necessary to produce and issue simple and aggressive plans, with clear statements of intent. On these occasions commanders must rely upon the exercise of decentralized command at all levels for the effective execution of these plans. To allow units to operate in the demanding environment of the modern battlefield, or in the uncertainty of low level operations

the process of battle procedure and its use in decentralized command must be thoroughly understood and well practiced by all commanders.

SEQUENCE

3. Sequence. There are twelve steps to unit battle procedure, the most important of which are dealt with in the remaining articles of this chapter. They begin with the receipt of the warning order (Wng O). At that point, a CO takes some or all the following sequential steps:

a. Conduct mission analysis (1). Once the full mission is received, a CO must analyze this mission to ensure he understands both the task he has been given and the higher commander's intent. From this he can formulate his mission statement.

b. Make a quick map study and time appreciation (2). The solution to all tactical problems lies in an understanding of the relationship between time and space and the combat power at hand. Therefore, the CO must acquire, as early as possible, some perspective of the time and space aspects of the mission. He should consider distances to be covered and the time constraint he is under. He may determine at this point whether or not every step of battle procedure can be followed or if streamlining and decentralized command are required. If the time constraints are severe, a commander should limit his actions to only the essential steps of battle procedure. These are marked in bold below.

c. **Issue a Wng O** (3). This step allows the sub-units and unit HQ to begin preparations for combat. At this stage the R Group should be alerted and if resources and time allow the Intelligence Preparation of the Battlefield (IPB) process should begin by requesting IPB products from formation HQ.

d. **Receive orders** (4). With the receipt of formal orders a commander should receive information about the what, where, when and why of a mission. If changes to the task and

purpose have occurred since the warning order a CO should again conduct a mission analysis to ensure a clear understanding of the mission and a confirmation of the initial mission statement.

e. Make a detailed time appreciation (5). After orders a CO should revisit the time and space aspects of his mission, looking closely at the constraints of the higher commander's plan. He must ascertain distances to be covered and, if time allows, complete a detailed time appreciation. The unit Ops O and IO, who have been working on the IPB process, should be able to help with this appreciation.

f. Make a map study and prepares an outline plan (6). A map study (conducted if possible with the unit Ops O working with IPB products), together with the time appreciation contribute to a clear understanding of the relationship of time and space to the tactical problem. This understanding will help in the designation of priority intelligence requirements (PIRs), and critical decision points. It may also lead to the formulation of an initial plan or of several viable courses of action (COAs), and will allow the CO to begin considering how best to synchronize sub-unit actions and to coordinate direct and indirect fire.

g. Prepare a reconnaissance plan (7). Reconnaissance should be planned to either confirm an initial plan or one of several COAs. The reconnaissance should verify initial assumptions made about the ground and determine if control measures are adequate, or if adjustments are needed. This knowledge will help considerably in bringing the principles of surprise, concentration of force and flexibility into the estimate and the plan.

h. Issue a supplementary warning order (8). If the CO has any further information which can assist his men or staff in their preparations, or if he has part of his plan already confirmed

(i.e., a preliminary move to an RV), he may issue a supplementary Wng O.

i. Conduct recce (9). During a reconnaissance a CO must do everything he can, within the time available, to confirm those points outlined in his reconnaissance plan. He should also seek to build a mental picture of the situation and of the enemy, isolating particularly those points where the enemy is weak, where the enemy may expose weakness in some form, and where the commander can achieve maximum synchronization of combat systems to exploit enemy weakness. If the battle procedure has been abbreviated, he may conduct his reconnaissance after issuing orders.

j. Do estimate, complete plan and prepare and issue orders(10). This is the point in battle procedure where the CO must make decisions. He may decide to continue developing his initial plan, with or without adjustments. He may quickly decide the best COA from existing contingencies, and develop this into a plan. Alternately, his estimate may be lengthy, and he may work in conjunction with unit Ops O and IO, conducting IPB, to consider and wargame several COAs. In either case the CO must follow the same pattern of mental checks to ensure he is taking advantage of every means available to ensure success of the mission and survival of his soldiers. The formulation and promulgation of a plan is the most important step in battle procedure. It is the means by which the intention is transmitted clearly to subordinates. Competence at issuing timely orders is the primary requirement for all COs and unit HQ personnel, and requires constant practice.

k. Co-ordinate activities and requirements of subordinates (11). It is never enough to simply give orders. COs and OCs are also responsible to ensure that orders are adequately understood, and that sub-units are ready and able to carry them out. To this end the CO should supervise particular preparations which are important and which require much coordination. The

conduct of rehearsals will help bring out details of coordination. The formulation of a synchronization matrix will also assist in the co-ordination of combat functions.

l. Supervise deployment (12). A CO is responsible to ensure that his force arrives at the right place with the correct grouping, at the right time, properly equipped, briefed and ready to fight. Before commencement it is important that a CO brief his subordinates on recent developments which may effect the operation.

FUNDAMENTALS OF BATTLE PROCEDURE

4. As a general rule COs should take no more than 1/3 of the time remaining to H Hour in the preparation and passage of orders. This leaves 2/3 of time remaining for sub-units to prepare properly for battle. Other elements which contribute to efficient battle procedure are:

a. anticipation of future tasks at all levels,

b. early warning and concurrent preparation at all levels,

c. thorough knowledge of the grouping system,

d. the use of aids to decision making (IPB and wargaming), and

e. efficient drills for reconnaissance and the issue of orders.

5. The Grouping System. Battle procedure is simplified by the use of standard groups at all levels of command. Unit and formation SOPs will specify the exact composition of each group. Generally, the groups will consist of the following:

a. Reconnaissance Group (R Gp). It consists of the CO and those representatives of supporting arms or attached elements whose advice he needs to prepare his plan. In addition, he should

have a communications and a protective party accompanying him;

b. Orders Group (O Gp). It consists of the R Gp, sub unit and support small unit commanders and supporting arms representatives who are not part of the R Gp, and administrative subunit commanders; and

c. Main Body. This group includes the following:

(1) Reconnaissance parties. These are drawn from the main body and consist of the personnel who will reconnoitre and lay out assembly areas, harbours, waiting areas or other tactical control areas. Reconnaissance parties usually include representatives from all sub-units, support platoons, support arms, attached elements and military police if required;

(2) The remainder of F Echelon;

(3) A1 and A2 Echelons; and

(4) B Echelons.

MISSION ANALYSIS

6. Mission analysis is the first and most important element of the decision making-execution cycle. In planning, it forces the CO to focus on the results desired, and not on the mere mechanics of an operation. This focus will allow the CO to formulate his mission statement. A clear mission statement will promote good battle procedure, and help produce a simple, aggressive and flexible plan. The analysis of a mission may begin with the receipt of the Wng O, if it includes the assigned task and a statement of the commander's intent - a mission statement or outline concept of operations. If the CO does not receive these in the warning order, he must wait to receive them in formal orders. Whenever they are received the CO should conduct a mission

analysis. This analysis is done by finding the answers to the following four questions:

a. **"What is the intention of my commanders and what is my role in the overall plan?"** Discern the superior and the higher commanders' intent. Ascertain the purpose behind his assigned task, the method which will be used to accomplish the mission, and the end state envisioned by the formation commander. These things must be absolutely clear before continuing.

b. **"What am I required to do, or, what essential tasks do I have to complete in order to carry out the mission?"** Some tasks will be clearly specified in the orders. One of these may have been designated as **the main effort**, giving it priority over all other tasks. Regardless, all assigned tasks should be looked at to determine their importance to the overall plan. If the relevance of a task to the intent is not clear, then clarification must be sought. As well, analysis could reveal other implied tasks which are essential to, or will assist in, accomplishing the overall plan. These must be included in the CO's plan.

c. **"What freedom of action do I have and are there any constraints?"** Control measures such as H Hours, boundaries or limits of exploitation may have been imposed on the operation which will restrict your plan. These, along with other restrictions (such as the requirement to conform to other unit movements) must be considered in the formulation of the plan. By understanding the stated restrictions a CO will know the freedom of action he has to formulate bold aggressive plans, and what restraints are required to achieve co-ordination and synchronization.

d. **"Has the tactical situation changed in principle and would the higher commander still have given me these tasks had he known about the changed situation?"** This is the final question, and one constantly applied throughout the operation,

since battles rarely unfold as planned. At all levels it must be understood that orders are to be obeyed and are not a matter for discussion. The only exception to this is when the situation has so changed that the tasks originally given are no longer applicable. In this situation the CO and his sub-unit commanders must be prepared to act on their own initiative. Commanders can only make this judgement if they have a good grasp of the intention of their superior commander and thoroughly understand their higher commander's plan. A decision to supplement, modify, change priorities or alter tasks will inevitably affect other sub-units and units. Such a decision therefore should be reported to the higher commander as soon as possible. The following apply:

(1) no change to situation - continue as planned; or

(2) new situation - the options are:

(a) minor changes - same mission, same plan, change minor task,

(b) significant change - same mission - new plan, or

(c) major changes - new mission, new plan, refer back to the commander or, if not possible, re-examine the commander's intention.

7. In many instances when the fluidity of the situation demands, at sub unit-level and below, mission analysis might be the only consideration of commanders in arriving at a mission statement and simple plan. Commanders issue fragmentary orders with the mission statement and rely upon subordinates to exercise initiative by modifying their tasks in order to achieve the results desired. In this manner leaders at all levels may exploit opportunities without waiting for orders, or react appropriately to a changed situation of which superior commanders may be unaware.

MAP STUDIES

8. If time allows for complete battle procedure, a CO will conduct an initial map study after his mission analysis, and also a detailed map study after he has received orders. In the initial study he should acquire an understanding of the time and space problems concerning the operation. He must consider distances to be travelled and the general terrain to be covered. He may decide at this point if preliminary moves are required. The detailed map study will be more comprehensive. The unit Ops O and IO should be able to conduct a simplified IPB and assist the CO in his map study by providing him details of terrain and weather analysis. IPB data should be provided by Formation Headquarters or may be acquired from intelligence gathered by the unit. Initial IPB steps include:

a. **Defining the battlefield.** All battlefields (or areas of operations) are defined in the four dimensions of width, depth, height and time by identifying the unit's areas of interest and influence as dictated by the mission. Unit and sub-unit commanders must clearly understand their assigned tasks in the context of the Formation mission in the **Close, Deep and Rear Battle Areas.** By understanding the four battlefield dimensions in the context of his mission, a CO can focus more clearly on what ranges he can acquire and engage the enemy, how far his vehicles can/must move, how much he is can rely upon aviation and air resources to support his operation, and what impact distances will have on the coordination of fire and the synchronization of combat functions.

b. **Describing the battlefield.** COs need to identify the limitations and opportunities of the area of operations and their impact on the friendly and enemy forces. The following must be considered:

(1) Terrain analysis. If a CO/Ops O does not have access to detailed terrain analysis data he should use the FLOCARK technique to analyze the ground. The effects of weather on

ground should also be considered. This type of analysis is not a substitute for physical reconnaissance, but it does allow the CO to focus his limited time for reconnaissance on those portions of the battlefield that are critical to the success of his mission.

(2) Weather analysis. Weather has implications on air and aviation support, Surveillance and target Acquisition (STA) systems, communications, equipment performance and the ability of the soldier to fight. The acquisition of timely METREPs is essential, and the inclusion of weather effects factors in operation planning is necessary if the CO wants the operation to proceed as planned.

(3) Other factors. The characteristics of local geography such as politics, civilian press, local population and the civilian infrastructure will have a great impact on the area of operations and must be considered in a description of the battlefield.

TIME APPRECIATIONS

9. Time is the other critical element of the operational planning. It must always be used efficiently. Time appreciations must become an automatic thought process. They should be conducted in an initial form when a warning order has been received, after mission analysis is complete, and after formal orders. Critical questions are:

a. By what time must the mission be accomplished?

b. How much time is available to complete the mission?

c. How fast is the situation changing?

d. What must be done at all levels in the time available; and which level needs the most time?

e. Can I afford to do complete battle procedure, or do I streamline the processes?

f. Which tasks can be done simultaneously? and

g. If the enemy acts in an unexpected manner can we rapidly adapt whilst carrying out our battle procedure?

10. Time appreciations are prepared by listing all actions that must be done, in reverse order from the time by which the mission or tasks must be accomplished, then assigning time periods to each. Some timings will be dictated (i.e., orders group and movement timings), and a CO will need to calculate from these the travel time to and from orders and how much time he can afford to spend on reconnaissance. This will permit the CO to decide on essential timings such as H hour (if this has not been given in the orders). When the H hour is given, the time appreciation begins and works back from it.

11. When making his time appreciation, the CO must evaluate the time needed for the movement and deployment of troops. This time can be affected by the terrain, tactical situation, mode of transport and weather.

OUTLINE PLANS

12. The process of conducting a detailed map study and time appreciation might lead to the development of an outline plan or several possible courses of action (COAs). A CO will want to confirm or adjust these during his reconnaissance. The outline plan or COAs should aim to synchronize all combat functions in the best possible way to achieve the commander's intent. Synchronization is the arrangement of battlefield activities in time, space and purpose to produce overwhelming combat power at the critical points on the battlefield at the critical times. If the CO has an outline plan in mind he should, if possible, discuss this with his Ops O and his IO so that they may begin to wargame this plan. Wargaming is covered below.

RECONNAISSANCE

13. The CO will carry out a reconnaissance to obtain information about the enemy and the ground. This will permit him to commit himself to his outline plan, confirm COAs or reconsider his initial perception of the tactical problem. Rarely will there be enough time for him to see all he would like to see. He must therefore make a reconnaissance plan that will permit him to see the ground from the best vantage point in the time available. Before conducting his reconnaissance the CO should:

a. obtain all available information about the situation;

b. be certain about the aim of his reconnaissance;

c. decide what to look for to achieve his mission;

d. study the map and any air photographs available to get as much information as possible about the terrain, likely view points, routes and obstacles;

e. consider the time available for the reconnaissance and the best means of transportation; and

f. if in contact with the enemy, pay strict attention to routes taken and personal concealment.

14. From the reconnaissance the CO should aim to find out how best to synchronize his activities to best exploit any known enemy weakness. He should attempt to determine how he can employ the principles of surprise, concentration of force and offensive action into a plan which targets this weakness. To do this he first needs to know details of the enemy and ground. The types of things he should ascertain for different operations are as follows:

a. **attack:**

(1) location, identification, disposition and strength of enemy;

(2) known or suspected DF tasks;

(3) location of obstacles;

(4) lines of advance and covered approaches to the objective; and

(5) fire positions; and

(6) point, position or approach where enemy is weakest, or the capture of which could break the enemy's will to resist.

b. **defence;**

c. fields of fire;

d. good observation posts;

e. concealment;

f. concealed routes to other areas; and

g. locations where enemy may be deceived, forced to expose a flank or become vulnerable to surprise by ambush or counter attack.

ESTIMATES

15. **General**. The estimate of the situation is a logical process of reasoning by which a CO considers all the circumstances affecting the military situation and decides on to the course of action to be taken to accomplish his mission. The procedure facilitates clear thinking. The CO considers what must be done and analyzes the factors that affect

how it can be done. This analysis will help him decide upon a sound COA.

16. **Sequence for an estimate**. Whatever the level of command, the sequence is the same:

a. conduct mission analysis;

b. identify and consider the relevant factors;

c. consider and wargame courses open; and

d. select the best course of action and translate it into a plan.

17. **Mission Analysis**. Mission analysis may have already been conducted on receipt of the Wng O or immediately after receiving orders. Despite this it should also be done at the start of the estimate process in order to clear the mind of the CO, to confirm his mission statement and to ensure that he clearly understands the higher commander's intent, his assigned and implied tasks, and restrictions applied.

18. **Factors**. The CO should consider only those factors that will directly influence the achievement of the mission, as defined in his mission statement. Each factor must lead to a useful deduction, pertinent to the use of the available forces, weapons, ground and time. The factors most likely to be considered are:

a. Enemy. At Formation level there will be an ongoing evaluation of the enemy based on historical databases and models. The formation G2 will provide units with enemy doctrinal templates, descriptions of tactics and lists of High Valued Targets. The unit Ops O and IO will use these to wargame enemy COAs and to establish their own intelligence collection and STA plans. If little is known of the enemy, unit resources may be more frequently tasked to acquire intelligence and unit planning will need to embed a greater degree of flexibility.

b. Ground. Those factors identified in the CO's map study and reconnaissance need to be reviewed in light of knowledge about the enemy. If enemy doctrinal or situational templates are available, they should be superimposed on the FLOCARK to get clearer picture of the enemy's options. Also from this assessment, the Ops O and IO may determine those points or areas on the ground where intelligence collection assets (e.g. OPs) should look for indicators which will verify or deny that an enemy is following a specific COA. These points are called **Named Areas of Interest (NAIs)**:

c. Time and space. The superimposition of enemy doctrinal or situational templates and FLOCARK, together with those factors covered in the CO's time appreciation could lead to a clear understanding of several possible sequences of events for the upcoming operation. These sequences of events should be articulated and incorporated into the COAs to be wargamed.

d. Assessment of tasks. An understanding of the time-space problems and possible enemy and friendly COAs will lead the CO to assess which tasks must be done to achieve the mission in each COA.

19. **Courses**. The CO then weighs up the deductions derived from the factors and examines courses open to him and to the enemy. The unit Ops O and IO, and even the CO himself, should mentally wargame each COA against the likely enemy response. It is best if two or more individuals are involved, each playing a side. However, if this is not possible the same method can be used by one person playing both sides alternately. The wargame should force those involved to visualize the flow of operations from the initial dispositions through each critical event as far as possible for each COA. Each critical event is examined in turn, starting with the side who has the initiative. The other side will describe his reactions to pre-empt his opponents actions. The first side then describes his counteraction, starting the action-reaction-counteraction process over again. During the process the sides discuss and record the synchronization of friendly actions to best

achieve the mission for each COA. The record of wargame results should give the CO an idea of his best COA upon which he can develop his plan and contingency plans.

20. Wargaming allows the planners to think about the operation from an enemy perspective in order to ascertain his likely actions and reactions and how best these can be defeated. If the best COA is dependant on a specific enemy movement, approach or unconfirmed disposition, then the CO may not want to commit himself to one detailed COA for the entire operation, and choose instead to have one or more contingency. He must in this case attempt to isolate what criteria he needs to confirm in order to commit himself to one of these. He should have already established several NAIs where an enemy's COAs might be confirmed. From the wargame the planner should also isolate the following:

a. Target Areas of Interest (TAI). These represent an area where the CO can influence the battle by destroying, delaying or disrupting the enemy. It is a location where the enemy may be attacked with the certainty that he will have already committed himself to a specific COA and will be vulnerable (i.e., crossing a defile). Attacking an enemy at a TAI will depend on confirmation of an enemy's COA at a NAI.

b. Decision Points (DP). A DP represents a point on the map where a CO must make a decision to commit himself to a COA based on information gathered at a NAI, or regardless of his knowledge of the enemy situation. Ideally a DP will be located between a NAI where an enemy commits to a COA, and a TAI where he is vulnerable to attack. The DP will represent the point at which the commander will decide to attack the enemy or not. All subordinate commanders must be aware of the COAs which will result from a DP, and be able to act quickly upon short orders to effect the necessary changes should the commander wish to synchronize his combat systems to attack the enemy at a TAI. The greater the number of COAs, the more reliance a CO must place upon decentralized command.

Mastering the art of mental wargaming, contingency planning and picking NAIs, DPs, and TAIs are a first step toward acquiring skill at tactics.

21. **Plan.** The CO decides upon the best course or the contingencies open to him and translates the deductions made in the estimate into a plan. The plan should be as simple as possible. It should focus on the achievement of the results desired within the commander's intent. It should attempt to achieve these results in the most expeditious manner, exploiting known or perceived enemy weakness through surprise, coordination and concentration of force and aggressive offensive action. Lastly, the plan should be sufficiently flexible to accommodate the unexpected.

COMBAT ESTIMATE

22. In fast changing situations, in close contact with the enemy, the CO may not have sufficient time to make a complete estimate of the situation. He may be required to make an immediate plan based on a short estimate. A proven sequence is as follows:

a. Step 1 - Conduct a mission analysis and formulate a mission statement.

b. Step 2 - Conduct a map study (FLOCARK).

c. Step 3 - Consider the enemy and outline his COAs on the map.

d. Step 4 - Consider the factors Time and Space, and Assessment of Tasks and write the major deductions out (on the map if necessary).

e. Step 5 - Establish your own COAs and determine which is the best to counter the most likely and the worst case enemy COAs. Mark out any NAIs, TAIs and DPs on the map.

f. Step 6 - Use figure 3-1 as a guide to produce a quick set of orders.

OP ORDER PARAGRAPHS (a)	ESTIMATE HEADINGS (b)
1. SITUATION A. ENEMY B. FRIENDLY FORCES (1) SUPERIOR COMD'S INTENT (2) HIGHER OUTLINE PLAN (3) ATTS AND DETS	 ENEMY HIGHER COMD'S MISSION STATEMENT HIGHER COMD'S CONCEPT OF OPS HIGHER COMD'S ORDERS
2. MISSION STATEMENT	MISSION ANALYSIS
3. EXECUTION A. CONCEPT OF OPS (1) PURPOSE (2) METHOD (3) ENDSTATE B. GROUPINGS AND TASKS (1) ASLT FORCE (2) FIRE BASE (3) RESERVE (4) ETC (?) CONTINGENCY TASKS C. COORD INSTRS, i.e., (1) TIMINGS (2) NAIs, TAIs AND DPs (3) ROUTES (4) LD (5) BOUNDARIES (6) ASLT POSN (7) FIRE PLAN ...ETC	 MISSION ANALYSIS OUTLINE PLAN HIGHER COMD'S INTENT MISSION ANALYSIS ASSESMENT OF TASKS GROUND, AND ENEMY COAs FROM COURSES OPEN TIME AND SPACE ASSESMENT OF TASKS, GROUND GROUND ENEMY ASSESMENT OF TASKS
4. SERVICE SUPPORT	ASSESMENT OF TASKS
5. COMMAND AND SIGNALS	HIGHER COMD'S ORDERS ASSESMENT OF TASKS TIME AND SPACE

Figure 3-1 Combat Estimate Headings and Orders

ORDERS

23. Unit orders may be written, oral or graphic. At the beginning of an operation, orders may be written but are likely to be given verbally followed by confirmatory notes. Radio orders will be a frequent method of issuing orders especially while operations are in progress. The format follows the headings of an operations order, but deletes those parts that are not required and simply confirms other parts previously given that have not changed. Overlay orders can be used to depict the CO's direction graphically. They are useful to show alternate COAs, to adjust control measures, or to give further direction regarding a stage in an operation which was only described in outline in the initial order.

24. Operations instructions are normally used by formation headquarters. They are issued to unit COs in operations where the tempo is too fast for normal orders. They contain outline information only, emphasizing the brigade commander's statement of intent and the tasks of subordinates. They rely on decentralized command, allowing the unit commander as much latitude as possible in carrying out his task.

CO-ORDINATION

25. After issuing orders COs must spend time ensuring the necessary co-ordination of activities is conducted. Efforts to co-ordinate a plan can be made easier by the conduct of rehearsals and by the development of a synchronization matrix.

26. **Rehearsals**. Regardless of how well orders have been given there is always need to ensure that these orders have been disseminated properly and clearly understood. One of the best means to ensure this is through rehearsals. Rehearsals can be small and informal with the subordinate commanders giving briefbacks using sand tables, sketches, or chalkboards to talk through the plan. Contingencies should be verbally rehearsed, and likely enemy reactions should be covered and planned for. This will prepare everyone

mentally for most possible enemy COAs. This type of rehearsal should be conducted as an open forum with subordinates bringing up suggestions and questions. This is where the larger points of coordination will occur, and details added to contingency plans.

27. Physical rehearsals should also be conducted, if possible, on mock-ups of the objective. A verbal talk-through should be followed by walk-through and finally, if possible, full-speed exercises. Many finer points of co-ordination will occur at this stage and it is important that these are recorded and included into the final details of the plan.

28. **Decision Support Template.** Synchronization of all combat functions is the aim of all co-ordination in planning. Synchronization is defined as the arrangement of battlefield activities in time, space and purpose to produce overwhelming combat power at critical points on the battlefield. Synchronization requires that planners reduce battlefield activities to the common denominator of time. The time of each battlefield activity can then be linked by using NAIs, DPs and TAIs. NAIs, DPs and TAIs should be identified during the estimate process and confirmed during rehearsals. They are the focal points for all related activity. From them a matrix (template) can be made to show the timelines for each activity, making co-ordination easier.

29. The template is developed by first putting down the timeline for the operation (e.g., H Hour - 12 to H Hour + 12). Under this a timeline is made illustrating how the foreseen enemy activity will occur in relation to the operation timeline. Under this an intelligence timeline is drawn to show when it will be possible to confirm which COA an enemy is taking. A COA will be confirmed by intelligence gathered in a NAI, and these NAIs will be plotted in this intelligence timeline. Under this a DPs timeline will be plotted in accordance with the timings established in the wargaming during the estimate. Once these are shown it will be possible to include under them a timeline for each of the combat functions. Each timeline will illustrate what activity must be conducted by each combat function in response to the activities plotted in the enemy, Intelligence and DP timelines.

Time	260800	260900	261000
Enemy activity	elms of MRR on Approaches A + B at LIVE BAIT	MRR main effort on Approach A	lead MRB in KZ A 2nd MRB in DEFILE 1 (TAI 7)
Intelligence	NAI A2 (Approach A confirmed)		NAI A5 (KZ A confirmed)
Decision points		DP 2	DP 6
CCIS	Tac HQ move to UE 123456 (on main effort)		
Close combat Sub-unit 1 Sub-unit 2 Sub-unit 3		depl to Battle Posn 102 (move time - 32 mins) ajust to KZ A stage to WA 3	engage lead MRB move to aslt posn 2 prep tp C atk 2nd MRB
Fire Support	Div MLRS on Approach B	ZT232 ZT236	ZT241 Regt Fire msn TAI 7
Combat Engineers	Fire LAST GAP		
Air Defence			WEAPONS TIGHT
EW			Div barrage Jam EAST HIGH STAR
Aviation		AH flight DS 30 mins	AH sp to C atk
NBCD	TOPP medium on Battle Posns 102, 103,104		
CSS			replen cbt team 3

Figure 3-2 The Decision Support Template

30. The matrix template format provides focus for the activity-time-decision relationship. It assures that all the combat capabilities are synchronized in order to maximize their contribution to the operation.

31. It also serves to deconflict and co-ordinate the activities of each of the battlefield activities. When every activity has been included in the process, the matrix can be adjusted as the battle progresses in order to maintain the synchronous relationship.

32. **Synchronization entails the mental flexibility to envision the best way to coordinate all activities on the battlefield, and the template matrix is but a means, not the end.** COs must retain flexibility and balance in order to act decisively when the enemy fails to react as predicted in the plan. Therefore, **the Decision support template should be used as a planning tool, and not a control device**. It is formulated to assist in the efforts to focus combat power at a decisive point at the correct time. The achievement of synchronization will require much more than the matrix can be expected to deliver. Effective synchronization can only come if the key elements of the army's command philosophy are applied. Above all, synchronized operations require:

a. clear, concise mission statements and orders that describe the commander's intent, and assign critical tasks;

b. IPB to determine enemy time-lines, NAIs, TAIs and DPs;

c. the use of wargaming to determine the best COAs;

d. planning in advance to identify and exploit enemy weakness by the rapid massing of combat power without reliance on lengthy orders;

e. the detailed co-ordination of plans; and

f. the decentralized execution of these plans using decentralized command.

33. If however, the situation is developing quickly, or an unforeseen opportunity arises for which there is no contingency plan, efforts at synchronization should be subordinated to the requirement for decentralized decision making and the maintanence of high tempo. The IPB process and detailed plans should not be adhered to for their own sake, but must be modified or truncated in the interests of sucessful maintenance of the initiative.

FINAL DEPLOYMENT

34. Once the CO is sure he has done all he can within the time available to ensure that his intent is well understood, he must then begin to oversee the deployment of his troops. This is a critical phase of any operation. If things go wrong during this phase the operation could be in jeopardy. It is the responsibility of leaders at every level to ensure that their soldiers are given every chance of success in close combat. This is best achieved by being certain that troops are deployed properly, at the right location, at the proper time and with maximum available support to ensure victory with minimal loss. COs must be confident that, once in position, their subordinates have the ability and means to carry out the operation without close control. Should things go wrong a good CO should know that his forces are well capable of reacting to new situations quickly and decisively in accordance with the commanders intent. This is the essence of decentralized command.

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SECTION 7

ORDERS

LOCATION

80. On completion of his reconnaissance, the CO gives orders at the O Gp rendezvous named in his warning order (or at a more suitable position found during his reconnaissance). The site chosen should be near a suitable viewpoint.

81. Subordinate commanders should not be required to retrace their steps. Movement of the companies and platoons should be left to the seconds-in-command at all levels.

TYPES OF ORDERS

82. Operation orders (Op O) are issued for the execution of a specific operation in the following forms:

a. **Written Operation Order or Instruction.** It is used to provide the initial framework for a series of operations and is rarely necessary or desirable at battalion level.

b. **Formal Verbal Orders.** They are given by the CO prior to an operation or a new phase of an operation. For complicated operations, the CO may have confirmatory notes or an operation overlay issued, although the resources for producing these are scarce at battalion headquarters.

c. **Radio Orders.** These become the norm during fast moving operations. They can never, however, replace the effectiveness, clarity and motivational impact of verbal orders, issued face-to-face and, if necessary, one-on-one.

83. The test of any order is that, afterwards, all concerned know exactly what the CO intends to do, how he intends to do it, and what part they themselves have to play. If there is time, a formal orders group has many advantages. It enables the CO to explain his design for battle

in some detail to those who are to carry it out, and it ensures that individual problems can be aired and solved. It further ensures that all know what the sub-units on their flanks are doing.

84. If time is short, or the company commanders are actively engaged, it may be impossible for the CO to give his orders to all concerned at one location. Then the CO may have to go to that company location to speak directly to the company commander. The CO must ensure that the company commander concerned, in addition to understanding his own tasks, understands the overall battalion plan and the coordinating measures.

85. A less satisfactory means of passing orders to an engaged subunit is by liaison officer. The liaison officer chosen must be an experienced officer such as the DCO or adjutant.

86. **Preliminary Orders.** There may be times when the battle procedure process must be further compressed. A CO may have to issue preliminary orders without first seeing the ground, and then conduct his reconnaissance at the same time as his subordinates. In the course of his reconnaissance he may find it necessary to amend his orders — he will certainly want to add to them. This he can do by either visiting each company in turn or by issuing confirmatory orders at a central point. The first method saves his subordinates' travelling time, the second ensures that all are aware of all changes and additions.

87. Points to Remember are:

a. In the defence, the coordination of plans should occur before the soldiers start digging. Nothing is more infuriating to a soldier than to be told to change a position he has half completed.

b. Formal verbal orders must not be allowed to destroy the momentum of fast moving operations.

c. **All Ranks Briefings** —

I) Nothing ensures the soldier's awareness of the overall battalion plan and the CO's concept for the operation better than

an all ranks briefing by the CO himself. It is clearly impossible to assemble the whole battalion for this but, when time is available, the CO may wish to speak to each rifle company in turn.

2) This is not meant to by-pass the individual company commander, rather it is to let the soldiers hear the CO describe what the entire unit is doing. This procedure was used by certain Canadian COs in World War II with great success. It pays dividends when soldiers become separated from their sub-unit (and they most certainly will) and link up with another sub-unit or with battalion headquarters.

UNIT STANDING OPERATING PROCEDURE5 (SOP)

88. Battalion SOPs deal with battle procedure and drills and are valid for extended periods of time. If well practised and properly applied they can:

a. minimize the need for lengthy operation orders; and

b. make possible concurrent activity and quick reaction throughout the battalion.

89. Subjects that should be covered in battalion SOPs are listed at Annex C to this Chapter.

STAFF DUTIES

90. The CO has only a few staff officers. They must be high quality. They relieve the CO of routine work such as:

a. issuing warning orders;

b. preparing detail orders, sitreps, patrol reports, etc; and

c. being alert for radio or verbal orders given by the CO to individual subordinates ensuring that these are passed to all others who need to know them.

91. When the CO gives his orders at a location other than battalion headquarters, it is vital that those orders (perhaps a copy of the CO's notes) get back to the CP as rapidly as possible. The CP will perform much of the coordination.

CONTROL DURING BATTLE

92. The rifle company commanders fight the battle as planned. The CO monitors it from a forward position, his tactical headquarters, or from the CP. All information and requests are directed or monitored by the CP. The CO influences the battle by:

a. redeploying sub-units and supporting arms;

b. committing the battalion reserve; and

c. determining priorities of fire support.

93. It is the CO's responsibility to formulate the complete tactical plan, including the fire plan. He must say when and where fire is needed and what it is to achieve. The direct support battery commander and the mortar platoon commander advise him, arrange the fire support and prepare the fire plan in detail.

BATTALION HEADQUARTERS

RESPONSIBILITIES OF KEY PERSONNEL

1. **The CO.** The CO commands all elements of the battalion including attachments. He maintains direct contact and a close relationship with his subordinate commanders.

2. **The DCO.** The duties of the battalion DCO include:

   a. assuming command of the battalion if the CO becomes a casualty or is absent from the unit;

   b. responsibility to the CO for overall administration within the battalion; and

   c. planning future operations for the CO when the Operations Officer is otherwise committed.

3. **Operations Officer (Ops O).** The Operations Officer is responsible to the CO for the functioning of the Battalion Headquarters. His duties include:

   a. responsibility for all operational staff work;

   b. assisting the CO in the preparation of tactical plans;

   c. co-ordinating all patrol activity (he may be the battalion patrol master);

   d. co-ordinating support from the other arms and services;

   e. co-ordinating all unit in-theatre training; and

   f. assuming command if the CO becomes a casualty during the absence of the DCO.

4. **Adjutant.** The Adjutant may be the CO's personal staff officer. He may act as the assistant operations officer and as such his duties normally include:

a. responsibility for the detailed running of the battalion CP; and

b. processing recommendations for decorations and awards.

5. **Intelligence Officer (IO).** The Intelligence Officer commands the Intelligence Section in Battalion Headquarters. His duties include:

a. commanding the battalion navigation party;

b. producing the battalion intelligence estimate and, from that, the intelligence collection plan and the collation system;

c. disseminating intelligence throughout the battalion and keeping the CO informed of the enemy situation, topography and forecast weather;

d. liaison with the Operations Officer, or the patrol master if appointed, on information collection aspects of the battalion patrol programme and conducting patrol briefing and debriefing;

e. briefing the battalion orders group on topography and the enemy situation and issuing maps and overlays as required;

f. compiling the commander's diary;

g. monitoring PW handling and overseeing any screening conducted in the battalion area;

h. establishing an information centre as required;

j. acting as the CO's personal staff officer if the Adjutant is unavailable;

k. advising the CO on possible NBC operations which have been detected by the intelligence system; and

m. liaison with intelligence officers of flanking units and Brigade Headquarters.

6. **Assistant Adjutant.** The Assistant Adjutant is responsible for all personnel administration in the battalion, particularly reinforcement, replacement and casualty documentation. His duties include:

a. preparation of strength states and casualty returns;

b. preparation and issue of routine orders;

c. processing routine correspondence;

d. individual movement;

e. handling all welfare matters; and

f. pay.

7. **RSM.** His duties include:

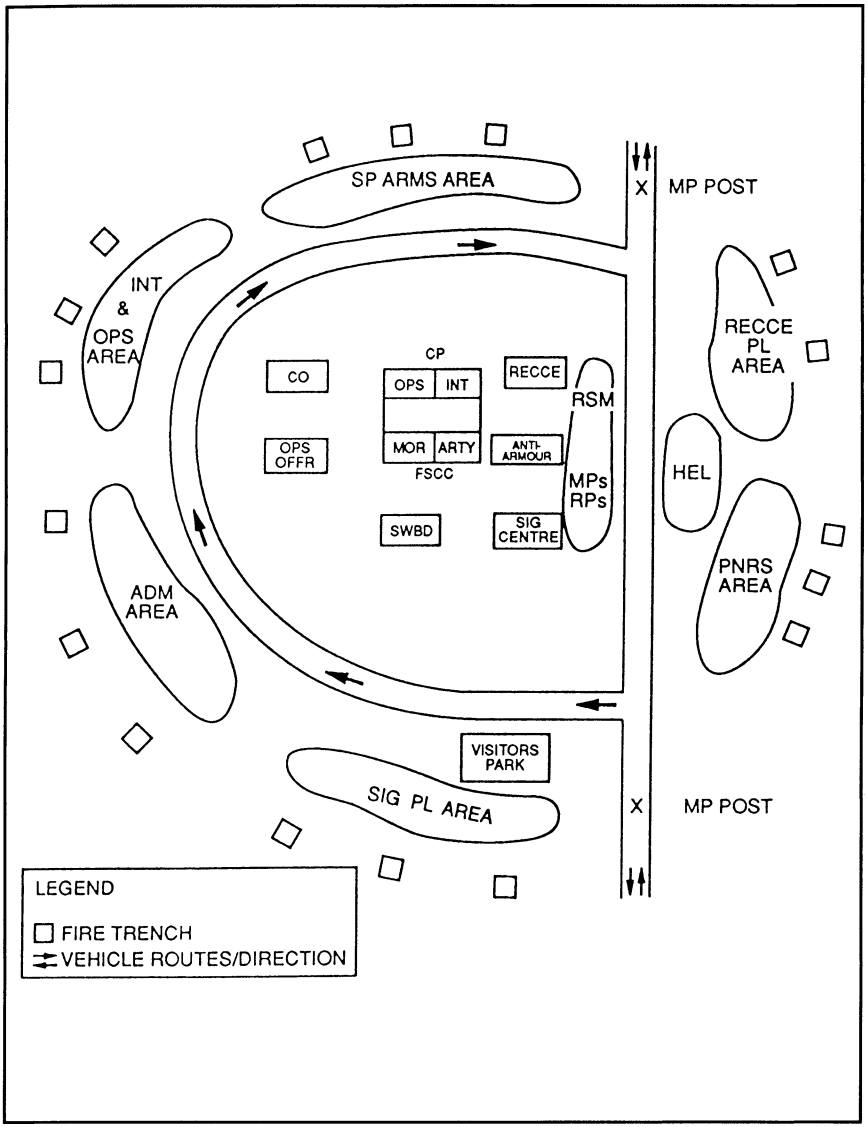
a. advising the CO on all matters affecting the soldier;

b. assisting as a duty officer in the battalion CP;

c. being a member of the CO's tactical headquarters; and

d. controlling the battalion MP Section and any regimental police.

BATTALION HEADQUARTERS LAYOUT



BATTALION HEADQUARTERS

STANDING OPERATING PROCEDURES

INTRODUCTION

1. Battalion Headquarters should have SOPs to cover the following:

   a. the organization of the headquarters;

   b. duties and responsibilities of individuals;

   c. the composition of the headquarters reconnaissance party;

   d. a standard layout which can be adapted to each situation;

   e. a drill for moving into and out of an assembly area or harbour;

   f. local protection;

   g. daily routine; and

   h. action to be taken if the headquarters is attacked or destroyed.

ORGANIZATION

2. With the addition of attached supporting arms representatives, Battalion Headquarters may consist of up to 30 vehicles, thus its siting requires great care. When the headquarters is reduced to ideal size — from 10 to 15 vehicles, the surplus men and vehicles should be sent to A Echelon. The Headquarters is normally organized as follows:

   a. **Police Post.** This is at or near the entrance and exit.

   b. **Visitors' Car Park.** This is concealed near the entrance.

   c. **Operations Area.** This contains the command and control element and normally includes the signals centre and exchange. Locations on the perimeter of the operations area will be allocated for combat support personnel and vehicles, supporting arms and

headquarters personnel and vehicles not required within the operations area. These locations assist in the all round defence of the headquarters and also provide for sleeping, feeding and maintenance.

d. **Administrative Area.** Any vehicle which is not essential for the operation of the headquarters will be sent to A Echelon. However, there will be occasions when it will be both possible and convenient for certain administrative functions to be carried out at the headquarters. On such occasions, an administrative area can be established, eg, the headquarters kitchen.

3. To assist control during movement, it may be convenient to further divide these elements into small functional groups. A suggested grouping is:

a. **Command Element**

1) CO's tactical HQ (may travel separately),

2) CP,

3) FSCC,

4) Signal group, and

5) Reconnaissance Platoon Headquarters;

b. **Combat Support and Supporting Arms**

1) Antiarmour Company Headquarters,

2) Assault Pioneer Platoon Headquarters, and

3) Armour and engineer representatives; and

c. **Administrative Element**

1) CSM Combat Support Company,

2) Kitchen, and

3) Signal Platoon.

DUTIES

4. All ranks in a headquarters must be given clearly defined duties.

SITING, LAYOUT, AND MOVEMENT

5. The four main requirements affecting the selection of a site for a battalion headquarters are:

a. good communications within the battalion;

b. concealment from ground and air observation;

c. good access routes; and

d. protection.

6. These four factors will frequently conflict and circumstances will determine which is to take precedence.

7. Other considerations affecting the selection of a site are:

a. it should be on, or adjacent to, the main battalion axis; and

b. whenever possible, it should afford concealment from the air, but be accessible to helicopters.

8. Buildings are often the most suitable site, because they permit more efficient operation in bad weather, and lights are more easily concealed at night. The great disadvantage of buildings is that they are vulnerable to blast. A basement or cellar offers the best place for a CP, but special measures must be taken to ensure that this does not result in an undue loss of radio efficiency. Where a basement is not available, the walls of rooms may have to be reinforced.

9. An alternative site is required when a battalion occupies an area for any period over a few hours. This site must be reconnoitred and its occupation drill known to all. Enemy locating devices will quickly determine the general area of a headquarters; arrangements must be made for rapid evacuation to the alternative location, should the present site become untenable. During longer periods of occupation, it may be desirable to move the headquarters to its alternative site as a deceptive or precautionary measure.

10. The detailed siting and layout of Battalion Headquarters should be the responsibility of the headquarters reconnaissance party. This is normally the Signal Officer's responsibility. A suggested layout of Battalion Headquarters is given in Annex B.

11. A drill must exist for the movement of the headquarters. Normally, vehicles will move in packets and a standard order of march for each of the functional groups will help to ensure quick and efficient movement. The drill for movement should include such things as the operation of step-up, responsibility for route signing, who will command each packet, the laying and recovering of line, orders for the reconnaissance party, and the action required on arrival in the new area.

LOCAL PROTECTION

12. Clear provision must be made for a defence force at Battalion Headquarters at all times. An ad hoc defence force can be found by using the miscellaneous personnel of the headquarters. Often, the Assault Pioneer Platoon will have, as one of its tasks, headquarters defence. However, such employment limits the platoon in the discharge of its normal operational duties.

13. The RSM may be responsible for the local protection of the headquarters, with the Company Sergeant-major Combat Support Company as his back-up when the RSM is away with the CO.

ROUTINE

14. On arrival at a new location, the position of Battalion Headquarters must be notified immediately to Brigade Headquarters, the flanking units and to all sub-units.

15. The headquarters SOP must include detailed instructions on:

a. track plans,

b. camouflage,

c. protective digging,

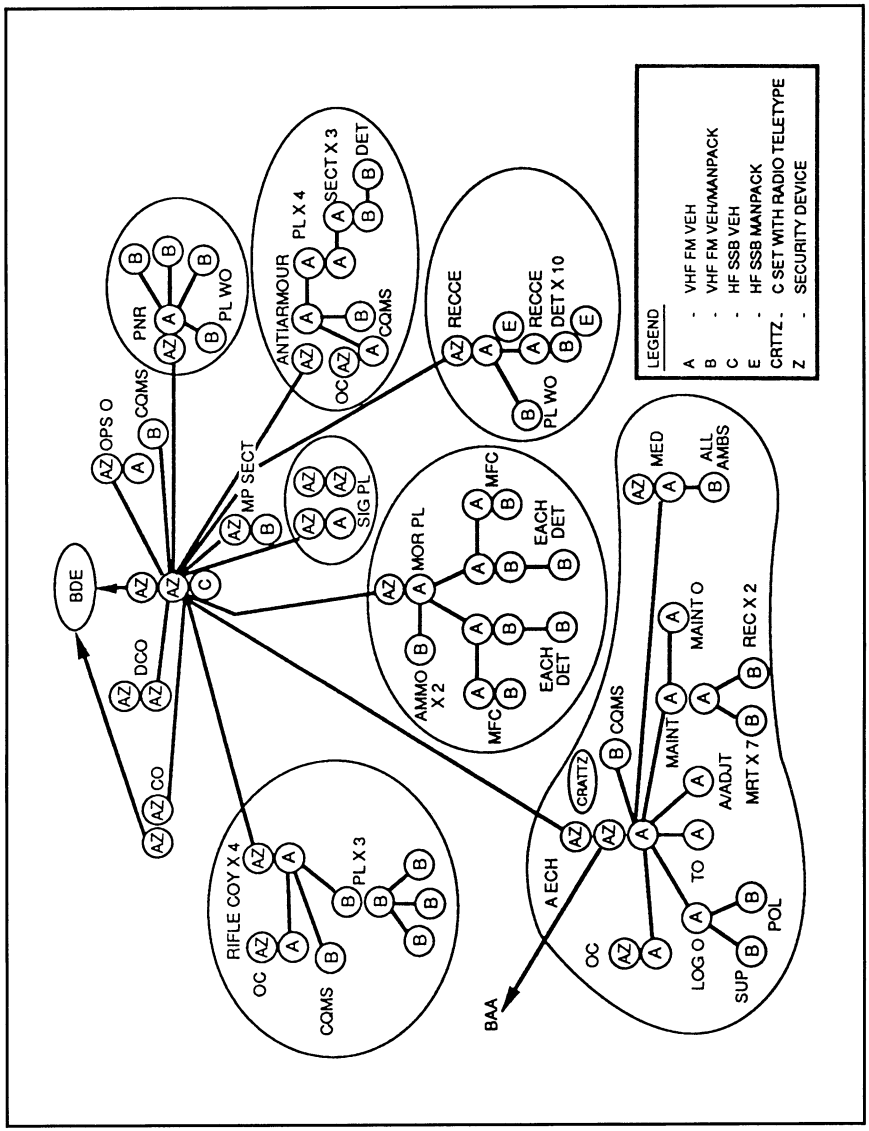
d. duty officer roasters and routine,

e. officer locations,

f. rest periods, and

g. visitors.

INFANTRY BATTALION OUTLINE RADIO DIAGRAM



SEQUENCE OF BATTALION DEPLOYMENT

Stage	Battalion Level	Company Level	Platoon Level	Main Bodies
1	CO gives warning order and leaves to attend Bde Comds O Gp.			
	CO returns and moves forward with R Gp to reconnoitre.	Coy Comds give warning order and leave with own Coy R Gp for Bn O Gp RV.		Prepare for battle in concentration area.
	CO makes plan.	To Bn O Gp RV.		Reconnaissance parties move forward to reconnoitre and lay out assembly areas.
2	CO prepares orders.	Coy Comds briefed and make preliminary reconnaissance, if possible.	Pl Comds give warning order and leave with own Pl R Gps to Coy O Gp RV.	Move from concentration area to assembly area.
	CO gives orders.			Carry out assembly area drills.
	CO co-ordinates details.	Coy Comds make detailed reconnaissance.		
3	CO returns to Bn HQ and briefs DCO and Ops O if required.	Coy Comds give orders.		Coys marry-up with supporting arms.
		Coy Comds brief coys, if possible.	Pl Comds make recce, if possible.	
4		Coy Comds supervise final preparation in assembly area.	Pl Comds give orders.	Sect Comds give orders.
			Pl Comds brief pls, if Coy Comds have been unable to do so.	

COMPOSITION OF RGP AND OGP

Battalion Level		Company Level	
RGP	**OGP**	**RGP**	**OGP**
CO Adjt or IO Armd Comd Arty Adviser RSM Protection Party	R Gp plus: DCO and/or OC Admin Cop Rifle Coy Comds OC Antiarmour IO Cbt Sp Pl Comds Sig O MO Engr Comd	Coy Comd Armd rep FOO/MFC	R Gp plus: Coy 2IC or CQMS Pl Comds CSM Comds of attached sp wpns/arms

NOTES

1. The R Gps of all levels must be kept as small as possible, but not at the expense of necessary recce detail. An operation, for example, entailing an obstacle crossing would demand that the engineer commander be part of the R Gp. If no armour is attached OC Antiarmour Coy may join the CO's R Gp.

2. The CO must ensure that the battalion is able to fight if enemy contact is made while the R Gp and O Gps are forward. Therefore it is usual for the DCO and Company 2ICs to remain with the main body. They must be briefed separately at the first opportunity.

BATTALION STANDING OPERATING PROCEDURES

SUGGESTED SUBJECT HEADINGS

ORGANIZATION FOR BATTLE

1. Headquarters, alternate headquarters and sub-unit organization for battle into echelons to include allocations of:

   a. personnel;

   b. vehicles;

   c. weapons; and

   d. vehicle loads.

2. **Normal Locations.** This will include the normal locations of combat support platoons and supporting arms. Although these are detailed in warning orders, their location prior to operations and regrouping should be standard; for example, the Assault Pioneer Platoon can be located in A2 Echelon prior to any specific operation.

3. **Duties.** The normal duties of key personnel.

4. Normal Composition of Reconnaissance and Orders Groups.

5. **Chain of Command.** Procedure for assuming command and control when all or part of the headquarters is out of action.

COMMUNICATIONS

6. **Normal Distribution.** This will include the radio nets and telephone stations normally deployed.

7. Codes.

8. **Drills to Re-establish.** Both within the battalion and to formation headquarters.

MOVEMENT

9. **Administrative Moves.** This should include the following detail:

   a. normal packets;

   b. speeds;

   c. densities;

   d. road priorities for certain vehicles such as command vehicles, ambulances, etc;

   e. convoy flags;

   f. manning of start and release points;

   g. route signing and traffic control;

   h. recovery; and

   j. halts.

10. **Tactical Moves.** This should include the following detail:

   a. formations;

   b. procedures at halts; and

   c. procedures for entering, occupying and leaving harbours, leaguers, assembly areas and attack positions.

PROTECTION

11. The following are considered:

   a. states of readiness;

   b. challenging;

c. alarm signals for ground, air and NBC attacks;

d. decontamination;

e. radiation monotoring drills;

f. passive and active air defence.

REPORTS AND RETURNS

12. **Tactical and Administrative.** The various reports needed in operations, including the times at which each is submitted.

COMBAT SERVICE SUPPORT

13. **Administrative/Re-supply Procedures.** These should cover each echelon within the battalion and include:

a. unit basic load of combat supplies and where it is carried;

b. replenishment system;

c. major equipment replacement;

d. repair and recovery;

e. casualty treatment and evacuation;

f. personnel replacements;

g. mail and censorship; and

h. prisoners.

14. A Echelon. The layout and routine in A1 and A2 echelons.

CHAPTER 4

COMBAT SUPPORT IN THE BATTALION

SECTION 1

COMBAT POWER

GENERAL

1. Success in battle depends on the CO's ability to achieve and retain superior combat power over his enemy. Combat power is the total of all destructive and disruptive forces that the battalion can bring to bear on the enemy at one time.

2. The separate but complementary elements of combat power are:

   a. **Fire-power.** This encompasses the effects of all available weapons, both those under the direct control of the CO and those available from outside the battalion.

   b. **Manoeuvre.** Freedom to manoeuvre helps to defeat the enemy as much as the destructive force of fire-power.

   c. **Morale.** Morale is a state of mind. In its positive nature it makes up for inadequacies in fire-power and numbers and creates resistence to shock and surprise. Conversely, poor morale can weaken and reduce the will to fight and negate any advantage gained through fire-power and manoeuvre. See also Chapter 5, Section 2.

SECTION 2

COMBAT SUPPORT COMPANY

ORGANIZATION AND COMMAND

3. Combat Support Company normally operates as a sub-unit for ease of administration and training when out of battle. In battle its platoons operate as independent platoons under the direct command of the CO. The platoons are organized and equipped to conduct their own replenishment from A echelon (or Al echelon). They may receive some assistance from the company quarter-master sergeant (CQMS).

4. The company commander acts as the Battalion Ops O in the battalion CP. The routine company administration of the combat support platoons is performed by the Company 2IC, if an officer can be spared for this job, or by the senior combat support platoon commander, when the company is out of battle and the company commander/battalion Ops O is occupied planning future operations.

5. The Company headquarters personnel provide administrative support to battalion headquarters. In operations this administrative support is performed under the company CSM. For more detail see Chapter 2, Section 4 and Annex B to this Chapter.

SECTION 3

MORTAR PLATOON

ROLE

6. The Mortar Platoon provides indirect fire support to the battalion. The Mortar Platoon CP is the Fire Support Coordination Centre (FSCC) within the battalion CP.

7. When the battalion has an artillery battery in direct support the battery commander will establish communications from the FSCC using his own communications equipment. The battery commander and his staff work along with the Mortar Platoon commander in the FSCC, but the battery commander is free to move in his own rover vehicle when required to accompany the CO.

8. The FSCC provides for the centralized coordination of all indirect fire, air defence and offensive air support available to the battalion. FACs or ALOs in the Tactical Air Control Post work under the direction of the FSCC.

ORGANIZATION

9. The Mortar Platoon is commanded by a captain with a lieutenant 2IC. The platoon consists of a headquarters and two mortar groups (fire units). Each mortar group consists of three heavy or five medium mortars depending on the type of battalion. See Annex C.

10. Regardless of the exact number of mortars, and this will change as mortars become casualties to enemy action, the principle of employing them in two fire-units remains the same.

11. Each mortar group is capable of deploying two mortar fire controllers (MFCs).

12. The platoon headquarters includes a reconnaissance party, to select and lay out new base plate positions, an ammunition section and a stores vehicle.

13. In battle the platoon is located as follows:

a. FSCC with battalion CP;

b. MFCs with rifle companies or combat support platoons;

c. mortar groups and reconnaissance party in F echelon;

d. ammunition vehicles, one per group, with the group base plate or in Al echelon; and

e. the platoon stores vehicle in A2 echelon.

EMPLOYMENT

14. The platoon can provide high explosive fire support, smoke and illumination. Because the mortar is a high trajectory weapon it can be sited behind high cover, engage targets behind high cover and provide overhead fire support. It can sustain a higher rate of fire than artillery.

15. The platoon is very mobile and able to move, set up and engage targets very quickly, particularly if the mortars can be fired from their vehicles. Normally, the platoon commander will ensure that only one group is moving at a time.

16. To provide maximum effective support to the battalion, the platoon makes use of several alternate positions. It also moves frequently for its own protection, especially after firing.

17. The tactical employment of the platoon in all types of operations is discussed in the appropriate chapters later in this manual.

COORDINATION

18. The platoon establishes two radio nets:

a. the platoon command net used to transmit all traffic other than fire missions and fire plans; and

b. the fire control net used to request and control fire missions and pass fire plans.

19. The platoon is also a substation on the battalion command net. If the fire control net is unavailable any member of the battalion may call for fire through the battalion net.

20. The MFC directs and controls mortar fire and other forms of indirect fire support in support of elements of the battalion. He advises the company commander and calls for and adjusts fire in accordance with the requests of the commander he is supporting.

21. The direct support battery commander is responsible for coordinating and producing the battalion fire plan, including mortar fire, in accordance with the CO's plan. The mortar platoon commander works closely with the battery commander and, in the latter's absence, he controls and coordinates all of the battalion's indirect fire support.

SECTION 4

RECONNAISSANCE PLATOON

ROLES

22. The Reconnaissance Platoon gains information by patrolling and observing from the ground and also deploys snipers to harass the enemy.

23. Platoon headquarters:

a. controls and administers the various detachments;

b. collects information;

c. assists the IO in briefing and debriefing patrols; and

d. provides technical advice on the deployment of surveillance devices.

ORGANIZATION

24. The platoon is commanded by a captain, with a lieutenant 2IC. The platoon consists of (see Annex B to Chapter 2):

a. a headquarters;

b. five groups of two detachments, each detachment vehicle-mounted and trained in both patrol and static surveillance duties; and

c. two sniper detachments (see Section 5 — Snipers).

25. In battle the platoon is normally deployed as follows:

a. The platoon commander and platoon CP are near the battalion CP.

b. The reconnaissance groups are deployed in F echelon, with uncommitted detachments resting in A2 echelon (or, on occasion, near Battalion Headquarters).

c. The platoon stores vehicle is located in A2 echelon.

EMPLOYMENT

26. Whether on patrol, surveillance or sniper duties, the watchword for all platoon members is **stealth**. The usefulness of the detachments continues only so long as they remain undetected. All detachments depend primarily on stealth and concealment for their local protection.

27. Each reconnaissance group is capable of operating on its own for extended periods of time, with resupply only every few days. The platoon is trained and equipped to conduct radiation and chemical survey within the battalion. One of the groups is normally commanded by a lieutenant.

28. On patrol duties the task of the sections is to gain information about the enemy within the battalion's area of interest. In this role the sections may sometimes be given tasks outside the battalion's area of responsibility (with brigade approval only).

29. On surveillance duties, the task of the sections is to report all enemy activity from observation positions established to cover exposed flanks and gaps between the rifle companies.

30. The tactical employment of the platoon in all types of operations is discussed in the appropriate chapters later in this manual.

COORDINATION

31. The platoon operates directly under the CO and tasks are allotted by him or the Ops O. Some tasks will often be from the brigade plan.

32. There are two vehicles, one is the CP and the other is used to administer to the groups. The battalion could be commanded temporarily from the reconnaissance platoon CP.

33. The platoon headquarters is a sub-station on the battalion command net and operates its own platoon radio net. All detachments are trained to call for and adjust artillery and mortar fire. In special circumstances an MFC may be attached to a detachment.

34. Note that detachments resting in A echelon are available, should the need arise, to form the basis of an intelligence section of a new battalion headquarters (the personnel have received some intelligence duties training).

SECTION 5

SNIPERS

ROLE

35. Snipers kill or disable individual enemy soldiers at long range. A secondary role is to gain information.

ORGANIZATION

36. For ease of administration and training, snipers are organized as a section of the Reconnaissance Platoon. The section consists of a sergeant section commander, two master corporals, one of whom is the second-in-command, and four corporal/private snipers. The section is organized into three detachments of two snipers each, and the section driver who is also a spare sniper. When deployed, each detachment is organized as a sniper and an observer.

37. The section commander is designated as the Unit Master Sniper, and is responsible for advising the commanding officer, usually through the reconnaissance platoon commander, on all matters related to sniping including counter sniping. He is also responsible for sniper training and testing.

TASKS

38. **Defence.** In the defence snipers are usually deployed in front of the battalion to cover the main approaches. They can withdraw in front of the enemy main body, along with the screen or guard, or they can remain in place to harass command posts or rear elements. Depending on the ground, snipers may be deployed in depth to fire over or between the rifle company battle positions.

39. **Advance.** In the advance, sniper detachments can leap frog from firing position to firing position as part of the advance or flank guard. One or more detachments can be held in reserve for rapid deployment to a threatened area.

40. **Attack.** In the attack, if time is available, sniper detachments can be deployed before H-hour to harass, create a diversion or to neutralize key elements. In a quick attack, detachments can be used with the flank guard, or be held in reserve, ready to deploy to harass, create a diversion or to neutralize key elements. In a quick attack, detachments can be used with the flank guard, or be held in reserve, ready to deploy to harass withdrawing enemy, or to engage a counterattack.

41. **Withdrawal.** In the withdrawal, sniper detachments can be deployed with the covering force or flank guard. They can also be deployed on intermediate positions to assist in the break clean.

42. **FIBUA.** Due to the long defiles created by city streets, a single sniper is able to dominate large areas of urban terrain.

COMMAND AND CONTROL

43. Snipers are deployed in accordance with the sniper deployment plan developed by the reconnaissance platoon commander in accordance with the commanding officer's direction. The unit master sniper may assist in the development of the plan, and, on occasion, may attend the battalion orders group. Detachments are usually controlled from the reconnaissance platoon command post. On occasion they can be controlled by the battalion command post. During independent or dispersed operations, a rifle company may be allocated one or more sniper detachments under command, or in support.

44. Depending on the task, sniper detachments can be briefed and debriefed by either the unit intelligence officer, the reconnaissance platoon commander or the unit master sniper.

SECTION 6

ASSAULT PIONEER PLATOON

ROLES

45. The platoon undertakes a variety of minor engineering tasks connected with infantry fighting primarily to do with the maintenance of unit mobility and the denial of mobility to the enemy in the battalion area. The platoon conducts limited radiation and chemical decontamination within the battalion.

46. The platoon cannot in itself provide the labour forces required for many pioneering projects and often requires assistance from the rifle companies. Its limited transport does not allow for the carriage of a mass of technical stores and it must rely to a great extent on local materials, improvisation and ingenuity.

47. The platoon is equipped and trained to fight as a rifle platoon and can secure ground.

ORGANIZATION

48. The platoon is commanded by a captain and consists of a headquarters and three identical sections. The platoon is normally equipped with special equipment vehicles to assist in the preparation of field defences.

49. In battle, the platoon headquarters is normally located at battalion headquarters. The sections, if not on task or operating in support of the companies, are held in reserve at battalion headquarters, where they share in defence duties. The platoon stores vehicle is in A echelon (See Chapter 2 and Annex B to Chapter 2 for more details).

EMPLOYMENT

50. The platoon can be employed as a formed sub-unit or may be decentralized by attaching section(s) to a company for specific tasks. The platoon may also be given the task of holding ground and may do

so under battalion control or be allocated as a fourth rifle platoon in a company area. A more usual task, once the pioneer tasks have been completed, is the defence of Battalion Headquarters.

51. The platoon can supervise or undertake the following tasks:

a. simple road and track clearance and construction;

b. use of assault bridging equipment, improvised bridges, bridging, rafting and flotation equipment;

c. construction of road-blocks, knife-rests and wire obstacles;

d. construction of the battalion CP;

e. laying, arming, neutralizing and lifting all known types of mines and booby traps, including maintenance of unit minefield records;

f. reconnaissance and breaching of a minefield area, using minefield gapping and marking equipment;

g. assault demolitions, cratering, mouseholing and tree felling;

h. hasty demolition of bridges and defiles; and

j. destruction of obstacles, enemy weapons, vehicles and equipment.

52. During periods of rest and training, the platoon can assist in giving instruction to all personnel in:

a. improvised bridging and rafting;

b. the elementary use of explosives, mines and booby traps;

c. the construction of shelters and CP; and

d. the improvement of natural obstacles.

53. The tactical employment of the platoon in various types of operations is discussed in the appropriate chapters later in this manual.

COORDINATION

54. The platoon is a sub-station on the battalion command net and operates its own platoon radio net.

55. In planning pioneer tasks the CO coordinates the work of the platoon with the work of other sub-units of the battalion, and with any attached engineer elements, to prevent duplication of effort.

SECTION 7

ANTI-ARMOUR COMPANY

ROLES

56. The Anti-armour Company provides the integral medium-range anti-armour direct fire support to the battalion. This provides the primary anti-armour defence in the unit. While some battalions may only be established for an anti-armour platoon the principles of employment and coordination are the same.

57. The CO is responsible for the overall battalion anti-armour plan. The company commander is responsible for the detailed plan, using the CO's outline as a basis.

ORGANIZATION

58. The company is commanded by a major and consists of a headquarters and four platoons, each of six detachments. There is one medium range anti-armour weapon (MRAAW) per detachment. See Annex B to Chapter 2.

59. The company CP is normally located near the battalion CP. In battle the company will operate normally under the central control of the company commander, with its platoons deployed throughout the battalion area. Same detachments may be detached to the command of a rifle company for special tasks.

EMPLOYMENT

60. The company provides the framework for the battalion's anti-armour defence and:

a. provides depth to battalion defence;

b. provides fire into gaps between rifle companies and those areas covered by integral company man-portable SRAAW(H); and

c. supplies fire support for the movement of armour and infantry during all types of operations.

61. The tactical employment of the company in all types of operations is discussed in the appropriate chapters later in this manual.

COORDINATION

62. The battalion's anti-armour defence, may be part of a framework already established by brigade and division. At the lower end, rifle companies may be directed, as part of the battalion anti-armour plan, to deploy some of the integral company weapons in certain locations with certain arcs of fire.

63. The CO will select killing grounds for enemy armour and these will be allocated to the anti-armour company as tasks, usually with an order of priority. In order to be able to meet these tasks the company commander will coordinate the siting of some integral rifle company weapons to supplement the anti-armour company weapons. He may also have to site and develop secondary or alternate positions.

64. Coordination of the fields of fire of all anti-armour weapons in the battalion is essential. The CO may designate an attached armour commander to be responsible or leave it to the anti-armour company commander. In any event these two officers must work closely together.

65. The company is a sub-station on the battalion command net and operates its own sub-unit radio net, usually with all detachments on that net. When circumstances permit the company may run line to some detachments, although often distance will preclude much of this.

66. The engagement of targets must support the battalion anti-armour plan, and this plan must include measures for the control of fire of all anti-armour weapons.

SECTION 8

MACHINE GUNS

GENERAL

67. While today's infantry battalion does not have the formed machine gun platoon found in the armies of some other countries and in Canadian battalions in the 1960's, the battalion does possess an enormous number of machine guns, from those mounted on all rifle company, command and combat support vehicles to those carried in each rifle platoon headquarters.

68. These area anti-personnel and anti-light armour weapons are a valuable asset, the use of which must not be left uncoordinated.

EMPLOYMENT AND COORDINATION

69. While the infantry vehicle provides mobility and some protection, the weapons mounted on the vehicle may be used for suppressive fire when the rifle section is dismounted. Therefore the driver and a gunner should remain with the vehicle at all times.

70. Combined with anti-armour weapons employed against tanks, and light armour the machine guns of the unit engage dismounted enemy troops. To fully employ the characteristics of machine gun the field of fire is planned, coordinated and, where possible, controlled at battalion level.

71. The machine gun fire plan is coordinated with the battalion anti-armour plan, as well as with the anti-personnel and anti-armour weapon plans of the rifle companies. Particular care must be taken to ensure that potential drop zones and helicopter landing zones are covered by machine guns, with appropriate pre-issued fire control orders. The CO may do this by including responsibility for covering a particular drop zone area, for example, as a company task.

72. Anti-armour weapons are sited to fire into killing zones on likely enemy tank approaches. Rifle companies and their machine guns are sited to cover dismounted approaches to the anti-armour weapon positions, as well as by-pass routes for dismounted infantry.

CHAPTER 5

COMBAT SERVICE SUPPORT (CSS) IN THE BATTALION

SECTION 1

INTRODUCTION

GENERAL

1. Administration is the management and execution of all military matters not included in tactics and strategy; primarily in the fields of logistics and personnel. It is also concerned with the internal management of units.

2. In Canadian Army doctrine the term **administration** is used in connection with support activities behind the combat zone. In the combat zone, and in the battalion, the term **combat service support** is used.

3. **Aim.** The aim of combat service support is to provide the matériel and supplies, technical and administrative skills to enable the unit to accomplish its mission.

PRINCIPLES

4. The principles of administration apply at all levels of command. They are:

a. **Foresight.** The battalion plan must anticipate the personnel and materiel requirements of the tactical mission. Essential battalion resources must be identified and moved to where they can best support the CO's plan. The combat service support plans must take into account the CO's future intentions and must include contingency options to be able to support changes to the operational plan — changes brought about by new circumstances, new tasks or enemy action. The A echelon commander must be reading the tactical situation and anticipating events at all times.

b. **Economy.** The battalion must ensure that its people, supplies and transport are efficiently used. Supplies that are unnecessarily

moved, stocked, consumed or abandoned are an unwanted drain on unit transport and in manpower effort. Over-insurance by one company may deprive another of essentials. Under-insurance may compromise the CO's plan. The planning must be based on what is available, and on well-balanced judgement.

c. **Flexibility.** As the grouping within the battalion can change frequently, and with little warning, the battalion A echelon must be structured to be able to react quickly to support a variety of tactical groupings. The A echelon commander must be aware of the tactical situation in F echelon at all times.

d. **Simplicity.** Battalion combat service support is a complex activity which can be greatly simplified with liberal doses of common sense. The administrative plans must be easy to understand and as easy as possible to implement. A thorough understanding by all personnel of well thought-out SOPs is most important.

e. **Co-operation.** The unit A echelon must function as a well-trained team to be able to do its job. Close co-operation between the battalion operations staff and the A echelon staff is essential to promote mutual confidence and trust. The same applies between the battalion sub-units and their respective quartermaster sergeants. There is often much that one company can do to help another. The unit operations staff must be imbued with a clear understanding of the A echelon capabilities, especially of those that have been reduced due to technical, materiel or personnel factors, or simply by enemy action.

5. Self-sufficiency is an additional fundamental of administration often grouped in with the five principles above. It refers to the fact that the CO must ensure that the battalion has sufficient resources to permit the accomplishment of his tactical mission. A CO is not necessarily restricted to specific supply scales and, where consumption rates are expected to be higher than normal, he must arrange for increases in the battalion holdings.

6. The principles above are not immutable laws. They are valid guidelines against which to measure the content of the battalion combat

service support plans and SOPs. In cases where one principle may have to be sacrificed because of the overriding priority of another, the CO must be certain that at least each was properly considered before the final decision was made.

SPECIAL FACTORS

7. The characteristics of the battlefield raise some important factors that directly affect combat service support in the battalion:

a. The pace of operations and the 24-hour battlefield carry serious fatigue implications and involve increased resupply tonnages over greater distances.

b. The battalion has more technical equipment than ever before, entailing more operator and maintenance training for all personnel and more repair and maintenance time.

c. Battlefield dispersion brought on by wide frontages, the threat of NBC weapons, enemy air attack and surveillance, all combined with disrupted communications, will raise serious morale and resupply difficulties

8. Whatever the battlefield, COs must recognize that the great majority of reinforcements come from the cities, with no youthful outdoor survival experience to fall back on.

9. In an effort to account for some of these factors and keep the size of the A echelon as small as possible, the following developments are being examined and, where possible, implemented:

a. the use of build-in test equipment on unit vehicles to permit drivers to improve preventive maintenance and reduce the load on unit maintenance personnel;

b. the use of high speed/pressure refueling pumps and armoured fuel bowsers; and

c. the use of robotic-assisted combat support ammunition handling.

PLANNING

10. Sound combat service support planning and action go hand in hand with efficient command and control. Timely support provides the wherewithal to produce fire-power and manoeuvre; efficient personnel support engenders high morale.

11. The A echelon staff must always be aware of the CO's future intentions at the same time as, if not before, the operations staff. The A echelon commander must be involved in the preliminary planning. The combat service support planning, with its necessary dependence on external agencies, will always take longer to implement than will the operational planning.

12. The administrative requirements of the infantry battalion, while increasing dramatically, remain relatively light in comparison with those of the other arms. The relatively light demands which a rifle company or an infantry battalion places on the overall combat service support system should never be seen as an indication of relative importance.

SECTION 2

MORALE AND LEADERSHIP

"The morale of the soldier is the greatest single factor in war."

(Field Marshal Montgomery)

MORALE

13. The main qualities required of the infantry soldier are:

a. **guts**, embracing courage (both moral and physical), endurance and determination;

b. discipline;

c. alertness;

d. loyalty (and with it intense pride in the ability of his section, platoon, company and battalion to acquit themselves well); and

e. comradeship.

14. His leaders must be intelligent, have initiative and the offensive spirit, be mentally and physically tough, radiate cheerfulness, enthusiasm and confidence. They must look after their men, gaining their confidence by talks to explain what lies ahead, the reason for it and what is expected of them. They must have the power to make decisions, however awkward, and inspire discipline justly and firmly.

15. It is only if these qualities, those of the soldier and of the leader, are fully developed throughout the unit that high morale can be attained and maintained. In the battalion high morale will depend on men firmly believing that they play a vital role as members of a sub-unit and unit of which they are justly proud.

LEADERSHIP

16. Commanders at all levels must do all they can to gain the confidence of those they lead. This is achieved by:

a. their example, especially in time of stress and danger;

b. their fitness for their appointment;

c. their firmness and sense of justice; and

d. their understanding of human nature.

17. They must show sincerity in the welfare and survival of their troops and must look upon this as a vocation, rather than an unavoidable duty. Under such commanders men will develop self-discipline, a stronger and more lasting form of discipline than that instilled through orders, harsh punishment or other forms of discipline forced on the soldier by virtue of his relative position in the chain of command.

18. The difficulties of battle demand that the CO give morale and discipline a high priority in the unit. He must do his utmost to ensure that:

a. all soldiers know what to expect;

b. all are trained for these conditions; and

c. all have instilled in them a well-developed sense of initiative and resourcefulness.

19. The CO must, more than ever, demand high standards from his subordinates so that they set a good example. The most important element in administrative planning is the soldier himself. The soldier must be treated fairly.

20. Platoon and company commanders, should speak to their entire groups on a regular basis to keep everyone in the picture. The CO must insist that officers are involved in helping with their troops' problems, family or financial, at home. He must also insist on the writing of letters to next-of-kin on the death or serious illness of a soldier, as well as on the accomplishment of an act of distinguished conduct.

21. Good health and hygiene, good food, properly organized rest and sleep, the provision of amenities (especially books, newspapers, and films), regular mail, regular supplies of clean clothing and proper bathing and washing facilities are vitally important to individual morale. Good battalion administration is essential if all this is to happen. It is also vital that the CO ensure that, when luxuries are in short supply, the needs of the F echelon troops are satisfied before those of A & B echelons.

22. The soldier must have abundant confidence in his own ability and in the superiority of his weapons and equipment. This calls for hard, imaginative training. Fear of the unknown must be dampened by disclosing the effects of modern weapons and the strengths and weaknesses of the enemy.

23. In battle the leader, from the CO down to the section commander, must lead from the front. Casualties among these leaders will always be high but there is no other course. A battalion must be able to provide its own replacements.

24. Finally, there is the matter of **luck**. Soldiers will develop a feeling, very real, that some commanders are lucky, and that their troops succeed in battle with few casualties. While this **luck** is usually the result of superior planning and tactical abilities, combined with a certain degree of good fortune, it will be very difficult and perhaps inadvisable to shake the soldiers' conviction. The removal of such a commander from a sub-unit, even if for a promotion, can have a most serious effect on the sub-unit's morale and must be carefully handled.

25. In battle weak commanders must not be given to previously strong sub-units and units, as they will drag the organization down with them. Rather, weak commanders must be ruthlessly weeded out by the CO and his company commanders.

SPIRITUAL WELFARE

26. Despite the low attendance at religious services usual in peacetime, the old adage that ''there are no atheists in fox-holes'' still holds largely true. The CO must understand this basic human trait and assist the chaplains in the performance of their duties. The battalion does not have a chaplain on establishment but one is provided by brigade on a permanent basis in battle.

SECTION 3

ADMINISTRATION COMPANY

RESPONSIBILITIES

27. Overall responsibility for administration within the battalion rests firmly with the CO. He normally delegates supervisory responsibility to the DCO. Certain operations may demand that the DCO be forward in F echelon in a command or reconnaissance function, but these tasks will usually be of short duration.

28. Some COs prefer that the DCO be more oriented toward operations and, in effect, make the DCO the operations officer. This is wrong — it removes the very necessary emphasis on battalion combat service support in battle and makes it too easy for the CO and DCO to both become casualties at the same time. The DCO trouble shoots any problems, administrative or operational, affecting the battalion behind the scenes. He must keep himself in tune with the tactical situation at all times.

29. The Officer Commanding Administration Company commands A echelon, working under the general direction of the battalion DCO. He is responsible for:

a. daily maintenance of the battalion;

b. detailed layout, control, administration and defence of A echelon;

c. advising brigade of the quantities required for daily replenishment and the submission of necessary demands to the brigade staff;

d. staffs the collection of all replenishment supplies from the brigade delivery points;

e. replenishing all elements of the battalion in accordance with the CO's operational plan;

f. the maintenance, recovery and repair of all unit weapons, vehicles and equipment; and

g. the planning of the replacement of casualties.

30. The company 2IC normally runs the administrative operations centre.

COMMAND AND CONTROL

31. During operations the administrative echelons are controlled as follows:

a. **Al Echelon.** It moves with the battalion (if formed), under unit control, usually commanded by the Transport Officer (TO).

b. **A2 Echelon.** It is normally under brigade control but, on occasion, may be left under unit control, (eg, during an advance) commanded by OC Administration Company.

c. **B Echelon.** It will normally be located in the Brigade Administrative Area (BAA) and will move on orders of Brigade Headquarters. Commanded by the Assistant Adjutant, or the Adjutant if not forward.

32. **Communications.** The Signals Platoon provides the radio operators and the vehicle for the A echelon CP. Normally a rear link communications detachment from the Brigade Headquarters and Signal Squadron will also be located at A echelon headquarters, for the passage of administrative traffic.

33. **CP.** Company headquarters establishes the battalion administrative operations centre at A echelon (A2 echelon when split) and the OC, 2IC and CSM work from there. The battalion DCO is also located there when not engaged elsewhere.

34. **Company Organization.** See Chapter 2 and Annex C to Chapter 2.

A ECHELON SITING AND DEFENCE

35. A echelon is normally sited in the BAA. If the battalion is operating alone it may be located behind the battalion F echelon.

36. In all cases the following factors apply:

a. The location must have good access to the company locations and to supporting administrative units.

b. It is desirable that the echelon be in a location where some protection is provided by the layout of the rest of the battalion or by other forces.

c. It must have good concealment from the air.

d. It should be out of range of enemy mortars and, if possible, enemy field artillery.

e. It should have good routes in and out.

37. All platoons in A echelon are allocated areas. These are laid out to provide maximum all-round defence, each platoon being responsible for its own defence.

MAINTENANCE PLATOON

38. **Role.** The role of the Maintenance Platoon is to provide unit repair of all weapons, vehicles and equipment (less radios and telephones) and to assist in the recovery of all vehicles and equipment.

39. Platoon Commander is an EME captain who also provides technical advice to the CO and advises him on the standard of maintenance in the unit.

40. **Employment:**

a. Most of the control and parts sections and the more technical repair sections will be located at A2 echelon because of the heavy vehicles and repair equipment involved. On occasion, individual tradesmen and vehicles from these sections may move forward to effect in situ repairs.

b. The mobile repair teams (MRTs) and recovery teams will operate wherever the requirement dictates, working on the principle that

F echelon weapons vehicles and equipment will, wherever possible, be repaired in situ. A echelon vehicles will normally be recovered to A2 echelon for repair, unless a quick on the spot repair is possible.

c. One MRT is normally attached to each rifle company. Uncommitted MRTs and recovery teams will normally be located at A1 echelon.

LOGISTICS PLATOON

41. **Role.** The role of Logistics Platoon is to provide the immediate logistic support necessary to keep the battalion in action.

42. **Platoon Commander.** The Log captain is the Quartermaster (QM) and is responsible for:

a. daily resupply of the battalion;

b. replacement of vehicles, weapons, stores and equipment as necessary;

c. liaison with the companies, the brigade supply staff and the brigade service battalion on logistic matters; and

d. disposal of the personal effects of missing or dead personnel.

43. **Employment**:

a. Most platoon vehicles remain loaded and are located at A2 echelon, except when delivering supplies forward or picking up supplies from the brigade delivery points.

b. The ammunition vehicles and one or two fuel vehicles are based at Al echelon for rapid resupply forward.

c. The Log MWO (Regimental Quarter-master Sergeant or RQMS) is usually located at B echelon in the BAA.

d. A postal clerk is part of this platoon and is located at B echelon.

RATION PLATOON

44. **Role.** The role of the Ration Platoon is to feed the battalion with fresh rations whenever the operational situation permits.

5. **Platoon Commander.** The Log MWO Cook (Kitchen Officer — KO) is responsible for:

a. daily fresh ration feeding of the battalion, when operations permit;

b. advising the CO on the feeding of the battalion;

c. liaising with the brigade service battalion, usually through the QM, on all ration and dietary matters;

d. demanding and maintaining the supply of fresh rations so that when hot meals are possible they can be provided;

e. maintaining the unit ration accounts;

f. providing trained cooks and the necessary cooking equipment to the companies when de-centralized fresh ration feeding is ordered; and

g. holding and accounting for the unit's cooking equipment.

46. **Employment**:

a. The ration platoon sections, all vehicle mounted, are normally located in A2 echelon.

b. During periods when fresh ration meals are possible, these will normally be prepared in A2 echelon and delivered forward by each CQMS.

c. In periods of rest, with the battalion out of action, ration sections with cooks may be attached to each company.

MEDICAL PLATOON

47. **Role.** The role of the platoon is to collect, sort, treat and prepare casualties for evacuation.

48. **Medical Officer (MO).** The MO acts as the CO's adviser on all medical matters, including the estimation of casualties.

49. **Employment:**

a. In battle, the headquarters and unit medical station (UMS) are normally located in A2 echelon. The UMS may be located further forward in certain operations.

b. One ambulance team is attached to each rifle company. It evacuates casualties in the company area to company headquarters or to a designated casualty collecting point where the casualty is transferred to a unit-controlled ambulance for evacuation back to the UMS.

c. Two ambulance teams evacuate casualties from the company locations to the UMS. These ambulances are normally located at Al echelon.

d. This system may be streamlined to speed evacuation and reduce casualty handling by having the company ambulance proceed directly back to the UMS. It is replaced at the rifle company by one of the platoon ambulances holding at Al echelon. There are other common sense variations possible which can quickly be implemented as each ambulance is radio-equipped. The medical platoon headquarters and A echelon operations centre must maintain close control throughout.

e. Note that the battalion medical evacuation system, under even moderate load, will only work if every infantry soldier has first aid training and rifle company members are available to act as litter-bearers.

PERSONNEL SECTION

50. **Role.** The role of the Personnel Section is to maintain personnel records, initiate required records action and process all non-operational correspondence.

51. **Organization.** The section is located in B echelon. It is commanded by the adjutant who may be located at battalion headquarters in the CP where he does a duty officer shift. The assistant adjutant, in this case, would then be located at B echelon. He is responsible for all personnel admlnistration in the battalion, particularly reinforcements and casualty documentation.

52. **Employment.** The assistant adjutant liaises with the battalion headquarters staff, usually through the adjutant, on personnel adninistration matters. If key F or A echelon personnel are unable to visit B echelon, the assistant adjutant must make regular visits to battalion headquarters and A echelon to ensure full coordination.

SECTION 4

REPLENISHMENT

THE REPLENISHMENT SYSTEM

53. The system has to cater for any tactical situation and ensure that the correct supplies reach each element within the battalion. Replenishment may be either:

a. battle replenishment (the urgent supply of fuel and ammunition as battle progresses); or

b. routine replenishment (the daily resupply of combat supplies plus any demanded commodities).

54. The system is based on routine daily maintenance for combat supplies. The provision of other commodities is on demand, either on a routine or priority basis. The resupply of even small amounts of combat supplies should occur on a daily basis to keep unit or first line holdings as high as possible and to reduce fluctuating demands which would be beyond the capacity of unit and brigade transport to move.

DAILY MAINTENANCE

55. Combat supplies (ammunition, POL and sometimes other items directed by the staff) come forward automatically, based on unit strengths and forecasts of operations. These are delivered in bulk to a delivery point (DP) established to the rear of A echelon or in the BAA.

56. A DP is normally open only for a specified period and A echelon must conform to any collection timings laid down.

57. Routine daily maintenance is almost always conducted at night in an attempt to reduce the risk of detection and interference by the enemy. In principle A echelon should deliver to the forward companies and then return to the DP established by brigade to pick up the supplies that will be delivered to the companies on the night following. In this way the complete battalion is stocked up and holding the next 24 hours' supplies in the event of a disruption in the system.

58. A echelon provides the vehicles, guides and protection parties to deliver supplies forward to the sub-units. All movement forward must be cleared by the battalion CP. Clearance for movement within and forward of the BAA will be required from Headquarters BAA.

59. If the situation demands, brigade and division transport may be used to move bulk supplies direct to the F echelon companies to avoid double-handling. For example, bulk mortar ammunition might be delivered direct to a mortar base plate position before a major assault.

SUB-UNIT REPLENISHMENT

60. Within the battalion replenishment takes place at concealed locations behind the forward company locations. The Company Quartermaster Sergeant (CQMS) is responsible for the detailed planning and implementation of replenishment, under the overall direction of the company second-in-command.

61. **Battle Replenishment:**

a. The CQMS foresees the need or responds to platoon demands sent via company headquarters. If an urgent demand, the CQMS switches to the administrative radio net and sends the request. A1 echelon then sends the supplies needed direct to the RV.

b. Platoon vehicles replenish, if necessary one by one. The echelon vehicles then return to base; empty vehicles may return direct to A2 echelon and be replaced at the A1 echelon location by a full vehicle from A2 echelon.

c. A2 echelon arranges replenishment of the empty vehicles at a brigade DP and retains them as a replacement for those already sent forward to A1 echelon.

62. **Routine Replenishment:**

a. Battalion Headquarters decides on a time for supplies to be delivered to each sub-unit. Normally all CQMSs are sent forward at the same time, but there may be instances where one or more sub-units require special times.

b. Company headquarters selects the RV and sends the request to the A echelon CP over the administrative net.

c. A echelon CP knows what stocks are available in A1 echelon and how much extra must be sent forward from A2 echelon.

d. Sub-unit resupply packets of vehicles are sent forward from A2 echelon under the control of each CQMS. These packets may pick up an additional vehicle from A1 echelon on the way forward.

e. The empty vehicles either return to A2 echelon or proceed to refill at a brigade DP. A1 echelon must be reconstituted as soon as possible.

f. It is also possible for all replenishment to come to the sub-units direct from A2 echelon, thereby leaving A1 echelon intact.

SECTION 5

MATERIEL NEEDS

AMMUNITION

63. The basic load of ammunition carried by all elements of the battalion in total (F and A echelons) represents three days' consumption at standard NATO rates. One additional day's consumption is carried by the Brigade Service Battalion and this is called the maintenance load.

64. Resupply is automatic from rear to front (push system). No indents are required but a daily report of expenditure is made by the A echelon CP as part of the administrative SITREP.

65. Ammunition is resupplied through DPs. In some cases, A echelon may draw direct from forward ammunition points. Heavy ammunition, such as mortar and anti-armour, may be delivered, under special circumstances, direct to the F echelon location to reduce handling.

PETROL, OIL AND LUBRICANTS (POL)

66. POL is also provided at DPs by service battalion vehicles, either in bulk or cans, sufficient to meet forecast expenditures. This is done on a can-for-can basis or is pumped into the battalion fuel bowsers. In an emergency, complete vehicles may be exchanged to reduce the time spent at the DP. Like ammunition, the basic load of POL equals three days' operations. The battalion with its POL reserve has a significant operating range. However, even though the unit may not be moving far, many vehicles and most generators run continuously and some POL resupply will always be necessary.

RATIONS

67. The basic load of pack rations, three days' supply, is held throughout the battalion — some on the man, some in company vehicles and some in the A echelon ration platoon. Whenever possible the men will be fed fresh rations, but when conditions do not permit this, all con-

sume individual pack rations. Rations come forward automatically, through DPs, based on strength returns submitted on administrative nets.

WATER

68. Water points are established in the brigade area by the military engineers. The battalion collects its water from the water point, usually on a time schedule established by brigade. The battalion has bulk water trailers and water cans are carried in all vehicles. Where there is a water contamination problem, water may have to be collected by can at the DP.

MEDICAL STORES

69. Medical supplies are demanded by the UMS through the brigade field ambulance and are delivered to the UMS by empty, returning ambulances. The UMS restocks the company ambulances direct, usually when the casualties are being evacuated. Some items (ie, blood, IVs, etc) will be pushed forward prior to a major operation if at all possible. Stores of a medical nature but designed for general use (litters, field dressings, etc) are demanded for and provided at the regular DP as below.

GENERAL EQUIPMENT AND STORES

70. The battalion obtains vehicle replacements, spare parts, clothing and general stores by daily demands to the Service Battalion. Normally these demands are passed by hand to the Service Battalion at the DP each night. The stores requested are then delivered at the DP the following night. Urgent items can always be delivered direct to the battalion on a priority basis. Certain equipments and stores (vehicles, weapons, radios) may be in short supply. These become controlled stores, controlled by the Brigade Headquarters operations staff. Demands for these will only be filled after approval by the operations staff.

DEFENCE STORES

71. The battalion does not have the carrying capacity for any but rudimentary defence stores. Some wire is usually carried for local obstacles around headquarters and some weapon locations. When required for the preparation of a defensive position, defence stores will

be dumped in the battalion area, where possible next to the defences. Normally the availability of defence stores, rather than the total requirement, dictates the allocation to units. It is usual in a defensive operation for the battalion and companies to be given an allocation of defence stores along with their task and no indents are necessary. In other types of operations defence stores may be demanded as are general stores.

SECTION 6

MAINTENANCE

USER MAINTENANCE — VEHICLES AND WEAPONS

72. Non-battle casualties erode the capability of the battalion and it is, therefore, essential to stress user maintenance. Wherever possible there should be dedicated drivers for all vehicles, but particularly so for critical vehicles such as weapon carriers, command and control vehicles, supply vehicles and ambulances.

73. Certain aspects of operator maintenance should be stressed:

a. During active operations, vehicles and weapons should be checked and maintained at least once a day and at every opportunity when the tactical situation permits.

b. When not engaged in active operations, a specific time should be set aside each day for maintenance.

c. Accurate log books must be kept for every vehicle.

d. Cannibalization of parts from equipment casualties will only be done on order.

e. All commanders must know how to inspect vehicles and weapons for combat readiness, maintenance and running condition.

UNIT MAINTENANCE

74. The Maintenance Platoon technicians perform first level repairs on the battalion's vehicles, weapons and technical equipment. The scope of maintenance to be done at unit level is regulated by various repair schedules for each type of equipment. The first level work consists of:

a. equipment inspections,

b. adjustments,

c. replacement of parts before failure,

d. minor modifications,

e. replacement of minor components,

f. fault finding, and

g. classification of equipment casualties.

75. Wherever possible MRTs will attempt to repair the fault in situ. When a task has been diagnosed to be beyond the Maintenance Platoon capability, assistance will be requested from the Service Battalion Maintenance Company.

76. Depending on the nature of the fault and the type of equipment, the Service Battalion may decide also to complete the repair on site. When this is to happen, the infantry battalion is responsible for preparing the equipment casualty by:

a. removing it from the battle area;

b. moving it, if possible, to an easily accessible area; and

c. ensuring that the crew is available to assist the repair team.

RECOVERY

77. Whenever the nature of the fault, the test and repair equipment needed or the length of the work involved preclude in situ repairs, the Maintenance Platoon recovery teams will recover the equipment casualty back to A2 echelon. Those beyond the repair capability or authority of the platoon will be recovered by the battalion to brigade established equipment collecting points, for subsequent recovery by the Service Battalion Maintenance Company.

78. As a general rule, drivers are required to remain with vehicle casualties to assist the repair and recovery teams. Drivers are returned once the vehicle is backloaded beyond the Service Battalion.

79. Small equipments, once examined by the company MRT, may be backloaded to A2 echelon by the CQMS when he next comes forward.

80. Note that the designation of an equipment casualty by the Service Battalion as being beyond second line repair constitutes authority for the battalion to indent for a replacement.

SECTION 7

PERSONNEL SERVICES

CASUALTIES

81. The Medical Platoon does not have the means to cope with mass casualties. In a 24-hour period, the platoon may have the capability of evacuating up to 100 casualties using its own resources. Beyond this, the platoon would require assistance from higher medical evacuation units.

82. The casualty evacuation system within the battalion consists of:

a. initial first aid by casualty himself or by his comrade;

b. recovery of casualty from where he received his wound to the company headquarters by litter or company ambulance;

c. evacuation from company headquarters to UMS by unit ambulance;

d. sustaining care by unit MO and medical assistants at UMS; and

e. evacuation from UMS to a higher medical unit by brigade ambulance where medical treatment can be administered.

83. This process may be modified by having a company ambulance evacuate direct to the UMS, the ambulance being replaced in the company by a unit ambulance. Every effort should be made in this instance to return the usual company medical assistant back to his company as soon as possible.

84. Under all circumstances casualties must not be left unattended on the battlefield, even if this means carrying them in F echelon vehicles until they can be transferred to the medical evacuation chain. While this will interfere with the fighting capability of the sub-unit the abandonment of wounded soldiers on the battlefield will have a severely adverse effect on sub-unit and unit morale — it cannot be condoned. If left, at least one soldier must remain with each group of casualties to guide in ambulances and to provide local protection.

85. **Battle Exhaustion.** Company and platoon commanders, assisted by the MO and company medical assistants, must be constantly on the alert for cases of battle exhaustion. Every effort should be made to prevent it or provide relief to the genuine cases. Attempts by individuals to pose as exhaustion cases to avoid battle should be severely dealt with. Picking the genuine cases requires knowledge of men and close contact with junior commanders.

REPLACEMENTS

86. Replacements are based on unit casualty and strength returns and, subject to availability, are sent forward with daily replenishment via the DP. New personnel are usually held in A echelon for a couple of days where any shortages in personal equipment are made up and where they are briefed on current operations in progress and on the unit itself. Individuals who are returning to the battalion having recovered from wounds or illness may be sent back to their company with the CQMS on the very next resupply.

87. In active operations, it is more likely that only key personnel will be replaced during the course of the battle. The remainder will be held in A echelon until a reasonable lull occurs or until the battalion is withdrawn from the line for a rest.

88. The importance of team morale must not be underestimated. Efficient reception arrangements and training for replacements are vital. They must be received, not as **new boys**, but as welcome additions to the battalion team. The same reception must be true at company and platoon levels.

89. Whenever possible replacements should not be sent into battle before they have been absorbed into the unit family and know its traditions. The preservation of friendships made during training is most important and friends should be kept together in sections and platoons.

PERSONNEL LEFT OUT OF BATTLE (LOB)

90. During protracted operations it is vital to leave a few unit personnel out of battle for short periods. Normally a brigade or division LOB policy will dictate this requirement.

91. This provides for a short rest for the battle weary and also provides a small nucleus on which to rebuild the battalion in the event of severe casualties. LOB personnel will normally be located at B echelon; if the system is to achieve its aim they should not be used for guards or other duties.

BURIALS

92. The dead must be buried with due respect and without delay. In mobile operations it will be rare for more than an emergency burial to take place, but these too must be conducted with all possible dignity.

93. Care must be taken to ensure that the grave is properly marked and recorded so that subsequent relocation and reinterment can occur. The details on emergency burials are contained in Annex A in this Chapter. Specific instructions, particular to a theatre of operations, will be issued by Brigade Headquarters.

PRISONERS OF WAR (PW)

94. On capture PW are to be disarmed and officers, NCOs and other ranks segregated, searched, guarded and, if necessary, protected. Any identification of unit should be passed immediately to Battalion Headquarters. No talking should be allowed and no comfort other than necessary medical attention should be given. Wounded PW are evacuated through the normal casualty evacuation system but they are clearly identified as PWs and they are guarded. Weapons and ammunition, compasses, binoculars, technical equipment and all papers, including personal money, found on a PW are clearly identified with the individual prisoner, confiscated and transported to the Intelligence Section at Battalion Headquarters by any available means. Note that PW ~~should~~ be allowed to keep their helmet and respirator. Once vetted by the Intelligence Section, equipment and documents of a valuable intelligence nature are passed to Brigade Headquarters by the fastest possible means. The remainder are sent to A echelon with the next returning resupply vehicles and put into the supply chain rearward by the QM.

95. Captured enemy equipment, especially captured communications equipment which appears to be uncommon or of a new type, are handled

in the same way as important documents. If it is too heavy for ready movement, its location and a brief description is passed to the battalion CP.

96. PW are rarely questioned at sub-unit level, although volunteered information should be noted and reported. It is more protective to speed the evacuation of the PW to the battalion prisoner collection point or PW cage where the Intelligence Section may commence screening. Here too speed is of the essence as proper interrogation cannot take place at battalion level and speedy evacuation beyond battalion is best.

97. ~~Brigade is responsible for~~ The battalion is responsible for the movement of PW rearward ~~from the battalion cage~~ to the brigade collecting point. Ideally Battalion Headquarters should organize the pick up of PW from company locations but this may not always be possible. Companies may have to be directed to start moving PW rearward under guard, either on foot or using any available transport.

98. It is best to use returning empty supply vehicles, walking wounded or reserve company troops to escort PW rearward. Note that the ratio of guards to PW shall be 1:10, with never less than two guards.

MILITARY POLICE (MP)

99. This section is discussed in Chapter 2. Its main tasks are traffic control, ~~refugee and straggler control~~ and the handling of PWs. It cannot guard PW in any numbers for any length of time without assistance.

100. When the battalion is at rest, out of action, the unit MP Section assists in the enforcement of discipline and regulations in effect under the direction of the Adjutant and RSM. They can do much to reduce the chance of trouble for battalion troops by effecting close liaison and cooperation with the MP authorities in the rest area.

OTHER PERSONNEL SERVICES

101. Other services such as pay, welfare and chaplains are not organic to the battalion but are readily available in the Brigade Service Battalion. Unit officers must take a great interest in the pay and welfare problems of their men, particularly during rest periods, and call on the appropriate experts to resolve any problems quickly.

Mod 1

102. In battle chaplains are attached to the unit and will normally operate from A2 echelon.

During operations, dental cases will be evacuated through the medical evacuation system. The nearest dental officer is located at the Brigade Field Ambulance. When the battalion is in a rest area, a dental section may be attached for a short period to conduct routine checks and perform any necessary non-emergency work.

104. Direction on censorship of mail will be promulgated by higher authority.

EMERGENCY WAR BURIAL PROCEDURES

ORGANIZATION FOR BATTLE

1. The procedures for emergency burials included in this annex have been standardized throughout NATO. Further information is included in STANAG 2070.

EMERGENCY BURIALS

2. Emergency burials are done usually on the battlefield, when conditions do not permit evacuation for interment in a cemetery.

3. Such burials are a unit responsibility. Every effort will be made to conform to the instructions given below.

METHOD OF BURIAL

4. Method of burial is as follows:

a. Burials will conform with accepted principles of hygiene and will be carried out so as to obtain the maximum protection from scavengers. Care must be taken to provide the best chance of subsequent recovery. As a guide, a desirable depth is at least 3 feet.

b. The body should be enclosed in a poncho, blanket, etc, whenever possible.

c. A brief burial service of the appropriate religion should be held when practical.

MARKING

5. Marking as follows:

a. One identity disc is buried with the body. When there is only one disc it will not be removed from the body.

b. An appropriate religious marker high enough to be seen readily will be erected. At its base, a bottle, can or other container will

be half buried, open end downwards, containing a paper recording such following information as is available —

1) Name (Surname and first name or initials),

2) Rank or grade,

3) Sex,

4) Service number,

5) Nationality, unit, and place of birth (if known),

6) Date and cause of death (if known),

7) Date buried,

8) By whom buried, and

9) Religious faith.

DOCUMENTATION

6. Documentation is as follows:

a. In all cases, an emergency burial report will be completed by the unit responsible. The number of copies made and the disposition of the emergency burial report will be as detailed by the appropriate administrative unit.

b. Where allied or enemy forces are concerned, an extra copy of the return will be dispatched to theatre headquarters for disposal to the national force headquarters concerned. The nationality of the deceased will be indicated clearly on the burial return.

DISPOSAL OF EFFECTS

7. All personal effects, including all personal and official papers, will be removed from the body and placed in a sandbag or suitable container together with the second identity disc. An inventory will be made at the

time and checked and countersigned by an officer. The bag of effects and the inventory will be sent to the appropriate administrative unit.

TRENCH BURIALS

8. This is a method of burial resorted to when casualties are heavy. A trench is prepared and individual remains are laid in it side by side. In such cases, an improvised marker high enough to be readily seen will be erected at each end of the trench. The procedures given for individual burials will be carried out as far as possible, and in addition a bottle or can will be placed at the base of each marker and the paper inside both will show the distance of each individual from the marker in question. The words **trench burial** must be clearly inscribed.

GROUP BURIALS

9. A group burial is a burial in a common grave of two or more individually unidentifiable remains, eg, after an air crash. In such cases, graves will be marked as in the case of a trench burial except that the number of bodies must be recorded, with the names of the known but unidentifiable dead listed. The words **common grave** will be clearly inscribed. All other procedures will be in accordance with those for individual graves in so far as they can be applied.

UNIDENTIFIED DEAD

10. Unidentifiable dead should be buried and reported as others except that the word **unknown** is to be used in place of the name. Particular care must be taken to list all information which may assist identification later. The fullest possible physical, especially dental, description is to be recorded and fingerprints taken, if possible. Details of numbers and markings on uniform, equipment, vehicles or aircraft, and particulars of IDENTIFIABLE DEAD in the vicinity should be noted.

LOCATION OF BURIAL

11. Graves are normally located, as near as is convenient to the scene of death. Sites should be selected to simplify subsequent relocation and identification, although in roadside burials account must be taken of the effect on the morale of passing troops.

CHAPTER 6

FUNDAMENTALS AND GENERAL TACTICAL CONSIDERATIONS

SECTION 1

GENERAL

THE PRINCIPLES OF WAR

1. The Principles of War are discussed in B-GL-300-000/FP-000, The Army at length. They are listed below for reference:

a. The Selection and Maintenance of the Aim,

b. The Maintenance of Morale,

c. Offensive Action,

d. Security,

e. Surprise,

f. Concentration of Force,

g. Economy of Effort,

h. Flexibility,

j. Co-operation, and

k. Administration.

2. The principles apply as much at battalion level as they do at division and corps levels. Infantry operations, however, are extremely demanding in both a physical and a psychological sense, and prolonged adverse conditions can sap endurance and morale. These facts together with high casualty rates and casualty evacuation difficulties make maintenance of morale one of the highest priorities.

3. Principles will often conflict and the CO must exercise his best judgement in deciding which to emphasize. He must never ignore them.

TYPES OF OPERATIONS

4. Formerly called phases of war, the types of operations are:

a. advance,

b. attack,

c. defence, and

d. withdrawal.

5. One type of operation may quickly merge with another. At brigade level and higher they may overlap with one force defending while the other attacks. At battalion level they are more likely to be distinct, even more so at company level.

6. Each type of operation is discussed in detail in later chapters in this manual.

SECTION 2

FUNDAMENTALS

GENERAL

7. The following general tactical considerations are fundamental in all types of operations:

a. the acquisition and dissemination of information,

b. combat surveillance,

c. protection,

d. mobility and manoeuvre,

e. the application of fire, and

f. surprise and deception.

SECTION 3

ACQUISITION AND DISSEMINATION OF INFORMATION

INFORMATION

8. The sources of information available to the battalion are discussed in Chapter 3, Section 2, as are the roles of the Intelligence Section and the Reconnaissance Platoon. The collection of information alone is of little value unless correct and timely deductions are drawn.

9. Capabilities can often be assessed accurately at battalion level but the information available here is often insufficient to enable the enemy's intentions to be accurately predicted. Useful intelligence will usually only result from analysis at a higher level.

10. However, during an operation there will be no lack of basic intelligence material. Its importance to the whole picture and the absolute need to record it and send it back are often overlooked. Commanders must constantly ask for information and pass it up to the next headquarters as soon as possible.

REPORTS

11. A system of reports is used for the passage of all available information to a higher headquarters. These reports are detailed in B-GL-303-002/FP-Z02 and appropriate reports should be contained in the battalion SOPs.

12. The following information about the enemy must be reported by any soldier or sub-unit finding it:

a. **Identification.** First identification of enemy units is of particular importance.

b. **Casualties.**

I) Casualties to the enemy are to be reported quickly. Reports must distinguish between counted enemy dead, wounded, prisoners and estimated casualties.

2) Enemy tank and weapon losses are to be reported as destroyed, captured or damaged. The reporting of captured enemy equipment, especially communications equipment which appears to be uncommon or of a new type, is vital.

c. **Hostile Air Activity.** Numbers and types of aircraft are important, as are weapons used.

PROCESSING

13. The processing of information requires that reports from a variety of sources and in various forms (reports, photographs) be analysed, arranged for easy reference, and built up into a more intelligible picture. The Intelligence Section is responsible for recording all battle information relevant within the battalion's area of interest. The means normally used are:

a. maps,

b. intelligence log,

c. documents, and

d. ADP.

14. **Maps.** The following maps will be maintained:

a. **Battle Maps.** Battle maps provide the latest information on enemy, own troops, including those on the flanks, supporting fire plans, hostile shelling and obstacles. They comprise a large scale map of the battalion front and a smaller scale map to show the situation on the divisional front. They are maintained in the CP and include a variety of overlays showing detail which is subject to change.

b. **CO's Map.** The CO's map is a reproduction of the battle map with the minor details omitted. Generally two of these maps are maintained, one for use by the CO, the other at the CP, being brought up to date and used as the Intelligence Officer's map when required.

c. **CO's Reconnaissance Map.** The CO's reconnaissance map is usually contained in a folding map case or on a small board. This normally shows only enemy information, since the risk of loss in the forward area precludes the marking in of further information.

d. **Air Photograph Map or Mosaic.** If air photographs are available they are aligned with the battle map and may be marked with key information.

e. **Master Patrol Map.** A large scale map is required to record the routes taken by patrols over a selected period. This may be an overlay to one of the battle maps.

15. **Combined Operations/Intelligence Log.** The log contains both operations and intelligence activities and is maintained in duplicate at the battalion CP. It is a detailed diary of events and information recorded from all sources affecting the battle. Operations/intelligence log sheets are numbered and classified SECRET, each daily series commencing at midnight. One copy goes on the battle message board. The other is used by the Intelligence Officer to aid in the preparation of intelligence reports. Other copies may be made and distributed to the FSCC and A echelon.

16. **Documents.** Paperwork must be kept to a minimum and the following documents should prove adequate:

a. intelligence officer's notebook;

b. enemy order of battle (ORBAT), tactics, weapons and personalities; and

c. records of patrol and reconnaissance reports.

17. The evaluation of information is based on the reliability of its source and the credibility of the information.

DISSEMINATION

18. Intelligence and information may be distributed verbally or in message form. These messages must be sent via secure means:

a. INTSUM is a brief summary of important items of operations intelligence.

b. INTREP are summaries of the general enemy situation.

c. SUPINTREP is a detailed review of a specific subject, such as enemy tactics or weapons, in relation to a particular operation.

19. Intelligence must reach the right place in sufficient time to be of maximum value. The passage of this information is a major task of the Intelligence Section.

20. The CO must ensure, having insisted that information be passed back quickly from the troops in contact, that the pertinent intelligence gleaned from that and other information is passed down just as quickly. This dissemination may be over the command nets, at orders, by LO or by visits to the companies by the CO.

SECTION 4

COMBAT SURVEILLANCE

PLANNING FACTORS

21. Combat surveillance involves a continuous watch over the battlefield to provide timely information for tactical ground combat operations. Its aim is to ensure that the enemy cannot enter this area without early detection.

22. Effective surveillance can only be achieved by good planning. The CO formulates his surveillance policy within the framework of the brigade surveillance plan. His plan must ensure that all resources available are used to maximum effect, including:

a. screens, if deployed;

b. patrols;

c. sniper teams;

d. observation posts (OPs);

e. listening posts;

f. air reconnaissance; and

g. night observation aids and surveillance equipment.

23. In making his estimate of surveillance requirements both by day and night, the CO should consider the following factors:

a. the task;

b. the resources available;

c. the enemy threat;

d. the allocation of surveillance aids and their command, control and communications;

e. the restrictions to be placed on the use of active systems, particularly white light;

f. the extent to which higher, adjacent, lower and supporting units can assist in surveillance including —

1) the integration of artillery OP, locating radars, etc,

2) patrols and OPs, and

3) aerial reconnaissance or surveillance;

g. alternative means for surveillance of key areas;

h. deception; and

j. restrictions on emplacement of equipment.

CONTROL

24. Surveillance in a battalion area can be controlled in three ways:

a. **Decentralized.** Companies each control an area using their own and any additional resources allotted. Control is exercised using the company command net and all information is passed back on the battalion command net.

b. **Centralized.** Battalion Headquarters controls surveillance by establishing a special net linking every OP and patrol.

c. **Shared.** The normal method: Battalion Headquarters exercises control over designated OPs and patrols which are located outside company areas of responsibility — while those within company areas are controlled by company commanders.

25. The choice for method of control is a matter for the CO who will make a decision based on the operational circumstances, manning and equipment states. Special nets should only be used when there is a danger that command nets could become overloaded with surveillance reports. Speed for the passage of information to users is the important consideration.

DEPLOYMENT/COORDINATION

26. When the CO has made his estimate of the surveillance needs within the limitation of the brigade plan, he should allot his resources according to their capabilities. The battalion's surveillance resources include:

a. thermal imagers;

b. image intensification devices;

c. unattended ground sensors;

d. ground surveillance radar; and

e. patrols, OPs and listening posts.

27. It is vital that the fire plan, surveillance plan and patrol programme be thoroughly coordinated by the battalion CP to avoid confusion and the accidental engagement of friendly troops, and to ensure that the enemy is most effectively engaged.

BATTLEFIELD ILLUMINATION

28. Resources available to the battalion are:

a. **Flares.** All sub-units are equipped with a variety of illumination devices. Illumination circles vary from 100 m to 450 m.

b. **Artillery and Mortar Illumination.** Usually the main means of battlefield illumination. Capable of illuminating up to a complete grid square.

29. **Control.** Battlefield illumination can hinder more than help if not properly controlled. The control of artillery and mortar illumination is exercised by the unit whose area is to be illuminated. Additional controls are usually imposed by Brigade Headquarters. If not, the battalion CP must exercise strict control over these types of illumination.

30. **Night Visibility Plan (NVP).** The CO must control the employment of the battalion illumination devices by means of a NVP. The NVP is set up in stages and an example is shown in Annex A to this Chapter. The plan should be issued as part of battalion orders.

SECTION 5

PROTECTION

RESPONSIBILITY

31. The CO and every company, platoon and section commander are responsible at all times for their own protection. Proper security, at rest and on the move, involves protection against:

a. ground attack from the front, rear and flanks by formed units or guerilla activity;

b. air attack;

c. indirect fire;

d. the effects of chemical weapons; and

e. enemy surveillance.

32. The essence of protection lies in drills, so practised that they are automatic, known by every soldier and fully covered in battalion SOPs. SOPs must include:

a. **Drills.** Drills must be laid down for the posting of sentries and the immediate preparation of alarm plans on arrival in a new location, standard vehicle dispersal plans, vehicle mounted and crew-served weapons always in a fire position, soldiers, equipment and personal weapons permanently within reach, respirators carried at all times, percentage manning of fighting positions, picketing, concealment, overhead cover, sentries on vehicles when moving and halted.

b. **Warning.** Early warning requires the provision of screens, flank and rear guards, patrols, OP, listening posts, sentries for ground, air and NBC alert, the employment of detection and surveillance devices, arrangements for recognizing friend from foe, the monitoring of air warning radio nets, the use of alarm signals such as whistles or sirens.

c. **Action on Attack.** All personnel must be aware of the immediate action to be taken when attacked from the air and the ground, anti-ambush drills and action on mines, opening fire drills.

CAMOUFLAGE AND CONCEALMENT

33. Good camouflage and concealment, including track discipline, are essential parts of protection. They do not provide complete protection, rather they assist in achieving it.

34. The CO must clearly direct, through orders or SOPs, the degree of concealment he wants and he must be always prepared for quick redeployment if detected.

DIGGING

35. The battalion's vulnerability to enemy fire, although reduced with modern F echelon vehicles, remains considerable especially when dismounted. This vulnerability can be minimized by digging in and the provision of overhead protection. It must be the rule throughout the battalion that personnel dig in to the maximum stage possible.

36. In mobile operations, time and the physical limitations of the soldier severely restrict the amount of digging that can be done. At anything more than a temporary halt, however, shell scrapes at least must be dug.

37. As a result of his estimate, the CO must lay down a priority of work for each operation. This policy should include orders on where positions can and cannot be dug (need for concealment) and orders on the degree of protection necessary (time available, type of soil). These orders are expressed in terms of time of occupancy and state the extent or stage of digging to be done:

COUNTER-SURVEILLANCE

38. Counter-surveillance measures can be divided broadly as follows:

a. camouflage and concealment (covered above);

b. protection against enemy surveillance devices; and

c. deception.

39. The effectiveness of enemy surveillance devices can be minimized by:

a. Active measures involve aggressive patrolling, thorough sweeps of harbours and new positions before and after occupation, the use of smoke and indirect fire.

b. Passive measures prevent the enemy from discovering the battalion's layout and the location of its surveillance devices, these measures include —

1) a thorough understanding by commanders of enemy capabilities and techniques of surveillance;

2) a thorough knowledge of the characteristics or signatures of the battalion's surveillance equipment;

3) attention to the use of ground, camouflage and concealment, and the use of alternate positions day and night;

4) siting sensors and viewing devices to detect enemy active surveillance devices;

5) imposing strict control on the use of radios; and

6) imposing strict control on the use of active devices, including white light.

40. Sophisticated electronic deception devices are not available within the battalion. A certain measure of deception can be achieved by the prudent deployment and employment of the usual surveillance devices and patrols.

PROTECTION AT REST

41. At short halts imposed by delay in front, by rests during long moves or while waiting for reconnaissance and the preparation of orders, troops must dismount and sentries must be deployed. The CO must be ruthless in insisting that company and platoon commanders enforce this.

42. The same applies to harbour areas and assembly areas. Any location occupied by a sub-unit of the battalion becomes a defended locality. Every company, platoon and section, every headquarters and every element of A echelon must be prepared to fight at a moment's notice.

AIR DEFENCE

43. Battalion air defence measures assume that the enemy can mount air operations at any time. Drills and protective measures must be known and practised. These include:

a. **Passive Measures.** Use of cover, camouflage, dispersion and digging; and

b. **Active Measures.** The use of all battalion small arms, plus MRAAW against enemy helicopters, and any attached air defence weapons.

44. Passive measures provide the best protection for battalion elements against air attack. In addition to the use of cover, camouflage, dispersion and digging the following can be employed:

a. deception by the planned use of decoys and dummy positions;

b. deployment away from prominent features;

c. deployment in areas difficult to attack from the air;

d. strict control over the movement of personnel and vehicles, especially in daylight;

e. careful selection and use of helicopter landing points; and

f. light discipline.

45. A considerable volume of fire from small arms weapons can be employed to distract enemy pilots and even damage aircraft. The training of all ranks, however, must cover fire control procedures within the battalion and aircraft recognition.

46. No matter what the defence, early warning is essential. Warning of the approach of enemy aircraft will come:

a. over the brigade command net from flanking units;

b. over the brigade net in the form of formal air defence warning conditions;

c. over the artillery nets into the FSCC; and

d. from the battalion's own air sentries.

47. Positive control in the form of air defence control orders will be issued by brigade. The CO must pass these at orders or have them passed by radio or line to all sub-units. The CO may make such a control order (weapons free, weapons tight, etc) more restrictive, but he may not downgrade it. He must make his policy for both active and passive measures absolutely clear.

NUCLEAR, BIOLOGICAL AND CHEMICAL DEFENCE (NBC DEFENCE)

48. The battalion must be capable of protecting itself from NBC attack and be able to operate in a toxic environment. Any enemy will have serious doubts about the use of such weapons if unit defensive measures are well rehearsed.

49. The keys to NBC defence lie in training, the personal protection of troops and good warning. A well-equipped and well-trained infantryman will survive to fight if he has been warned in time to take protective measures.

50. Such warnings must be passed quickly and all ranks must be trained thoroughly in individual protection drills and in the necessary post-attack defence measures. The details on NBC alert stages and warnings must be contained in unit SOPs.

51. Despite all the above an actual attack may not be known until troops show physical symptoms and start becoming casualties. It is therefore vital that sentries be posted, that the alarm signals be known and that personal protection drills be practised until they are automatic.

52. Within the battalion, the Assault Pioneer Platoon has the capability and training to conduct limited radiation and chemical decontamination.

53. The details on NBC weapons effects and protective drills are contained in the B-GS-316 series. The CO must bear in mind the threat and the need to defend against it and plan appropriate counter measures. The NBC factor must be included in any estimate as follows:

a. **Enemy.** What is the likelihood of the enemy using NBC weapons? Are the weather conditions favourable?

b. **Ground.** What protection is given by ground features against weapons effects and what problems will NBC effects add to the ground conditions?

c. **Time and space.** What will be the degradation of performance, the additional tasks to be performed, the effects on time and space, the effects of damage (blow-down) and contamination?

d. **Assessment of Tasks.** What are the implications of NBC defence measures that must be taken into account?

SECTION 6

MOBILITY AND MANOEUVRE

MOBILITY

54. The infantry battalion may be equipped with vehicles that provide personnel protection from small arms fire and shell splinters. These vehicles have good cross-country mobility. Ultimately infantry conducts close combat on foot.

55. In contact, or where contact is likely, movement in any form of soft-skinned vehicle or helicopter will likely result in casualties. Out of contact every effort should be made to use all forms of transport to save time and ensure that troops arrive as fresh as possible.

56. It must be assumed during any move that an attack is likely from ground or air. Precautions must be taken to counter these threats, including:

a. air sentries,

b. anti-ambush drills, and

c. dismounting and posting sentries at halts, however short.

MANOEUVRE

57. The skilful use of ground reduces the chance of enemy detection and provide protection against direct fire weapons. Once contact is made, enemy fire must be suppressed by using direct and indirect fire to minimize casualties and permit freedom of manoeuvre.

58. It is by manoeuvre that the battalion and its sub-units establish themselves in positions from which they can most favourably engage the enemy. Ideally, manoeuvre should be completed without the knowledge of the enemy, until engagement with fire takes place.

SECTION 7

APPLICATION OF FIRE

CONCENTRATION OF FIRE

59. Fire needs to be concentrated in sufficient quantity at the right time and place to ensure the destruction of the enemy, suppression of his weapons to permit manoeuvre or, to make him change his direction of advance. The achievement of this requires thorough and imaginative fire planning.

ECONOMY OF EFFORT

60. There are rarely enough weapons for all tasks. Commanders must be prepared to economise and therefore take risks in low priority areas. This allows for the creation of reserves which can be used both to react to the unexpected and achieve the maximum fire at the critical moment. If tactical movement on the battlefield is impossible, this can only be compensated for by the flexible application of fire.

FIRE PLANNING

61. The number, variety and differing characteristics of weapons available in the battalion demand thorough and imaginative fire planning at all levels to achieve their maximum effect. Planning should concentrate on co-ordinating and integrating tanks, anti-armour weapons, artillery, mortars, and machine guns to ensure that:

a. Each weapon is used according to its characteristics.

b. No weapon is needlessly left uncommitted and, in particular, that full advantage is taken of the ability of artillery to switch between alternative targets, and vehicle mounted weapons between alternative positions.

c. Weapons are used to complement rather than counteract each other. For example, artillery should fire at enemy armour to force them to close down before entering a killing area, but lift just before direct fire weapons engage to avoid obscuration of the targets.

SECTION 8

SURPRISE AND DECEPTION

SURPRISE

62. Every endeavour must be made to achieve surprise. This requires both imagination and cunning. It is the unexpected which causes disruption and fear. Boldness, simplicity in planning and speed of execution are all essential ingredients. Conversely, the enemy must not be expected to pursue only the most obvious course if one is to avoid being surprised one's self. All the options open to him should be considered, even if they can be fully countered, and commanders will then be mentally prepared and reserves warned.

63. At the very least, the battalion should conceal its intentions by:

a. careful camouflage, concealment and the use of ground;

b. effective radio security; and

c. avoiding indicators such as overt reconnaissance and artillery adjustment.

64. Whenever possible, the CO should actively seek surprise by:

a. rapid reaction;

b. selecting an unexpected course of action; and

c. misleading the enemy.

65. In a planned operation, surprise cannot be achieved as a last minute addendum. The CO must consider it as a factor in his initial estimate taking account of it in selecting his course of action and building it into his plan.

DECEPTION

66. Deception is essential if an obvious course of action is unavoidable. If a deception plan is to be adopted, it must be consistent with formation plans and must be incorporated into the battalion plan from the outset. Provided a deception plan is consistent with presenting an alternative course of action which the enemy will find credible, even a few simple measures, applied with imagination and cunning, can achieve great success.

SAMPLE NIGHT VISIBILITY PLAN

Serial	Stage	Phase of Engagement and Nickname	Surveillance Permitted	Auth To Use	Remarks
(a)	(b)	(c)	(d)	(e)	(f)
1	A	Early Warning. ACE CARD.	1. Ears and eyes. 2. Trip flares armed. 3. Use of passive IR to watch for enemy use. 4. Image intensifiers/ thermal imagers on. 5. FEBA alarm systems on.	CO	Designed to: a. cover period while enemy is trying to locate friendly position, and b. deny information which could be gained from use of friendly active electronic devices and white light.
2	B	Target acquisition and engagement with limited white light. DOGS BODY.	Stage A plus: a. Periodic artillery and mortar flares for area illumination and engagement of specific targets by artillery and mortars. b. Engagement of targets by tanks, etc.	CO	a. To illuminate stages of the battle without disclosing details of own main position. b. May be necessary to delegate control to a specific company.
3		Target acquisition and engagement with unrestricted white light. KING PIN.	Stage B plus: Short range illuminants (hand-held flare, Verey pistol).	CO as targets are acquired. OC at own discretion if attacked.	a. For full scale engagement. b. Delegation to OC for control likely.

CHAPTER 7

ALL ARMS COOPERATION

SECTION 1

COMMAND AND CONTROL

INTRODUCTION

1. Cooperation is the basis of all successful combined operations. It is founded on mutual understanding and respect, accomplished through the following practices:

a. Where possible a permanent affiliation should be established between infantry, armour and artillery units. Shared training experiences create a bond of trust and the attached sub-unit learns the specific drills and personalities of the unit to which it is attached.

b. The affiliation of engineer units is also encouraged.

c. The purpose of training together is to work out drills and communications and develop a thorough understanding of each other's requirements and capabilities.

d. In addition familiarization programmes are useful to teach all personnel the basic tactics and equipment of the other arms. Personnel exchanges at senior NCO and junior officer levels can be most effective.

GROUPING

2. A battalion with an armoured squadron attached is called a battle group. The terms are further defined in Chapter 2, Section 1. A detailed examination of battle group operations is contained in B-GL-301-002/FP-001 The Battle Group in Operations.

3. Command and control relationships are based on the following fundamentals:

a. **Unit of Command.** There must be only one commander, provided with the necessary authority and resources.

b. **Flexibility.** The commander must group his forces in such a way as to provide flexibility. Some types of sub-units and units may be re-tasked and redeployed quickly by virtue of their role, equipment and communications. Others require more time, coordination and support.

c. **Affiliations.** Sub-units that routinely train together operate better in battle. Established affiliations should be maintained whenever possible.

4. Command and control authority is expressed in the following terms:

a. **Command** —

1) under command,

2) in support, and

3) in location;

b. **Artillery Fire Control** —

1) at priority call,

2) in direct support, and

3) in support; and

c. **Combat Service Support** —

1) under command for administration,

2) under command for administration less ..., and

3) under command for daily maintenance.

5. **Under Command.** The CO has full authority to direct and control his unit and all other elements placed under his command. Unless specifically excluded, this includes responsibility for the combat service support of the attached elements. The CO may assign tasks to the entire attached sub-unit or to its separate elements. He may delegate all or part of his authority to a sub-unit commander.

6. **In Support.** The CO has the authority to control the operational capability of a supporting element, but no authority or responsibility for its other functions. The CO:

a. has full authority to assign tasks as he see fits;

b. may direct the movement, fire or manoeuvre of the elements of the supporting force as necessary to coordinate the conduct of operations;

c. may direct the movement of support echelons of the supporting force when they are deployed in the battalion's area of responsibility;

d. may place the gained force **in support** of a company commander; and

e. has **no** authority or responsibility for —

1) the positioning or movement of the attached element's supporting echelon if it is not located in the battalion area,

2) the positioning or movement of the firing units of **in support** artillery,

3) the administration of the supporting elements, nor

4) the assignment of separate employment of the components of the supporting force (tasks will be given to the commander

of the supporting force who will then determine the best allocation of his resources).

7. **In Location.** These forces are executing tasks assigned by brigade or higher. The CO is responsible for the coordination necessary to accommodate the **in location** elements in the battalion area.

8. Artillery Fire Control —

a. **At Priority Call.** This is an artillery fire control relationship used where quick response and priority of fire support are necessary. It is usually qualified by reference to a specific task or period of time. It does not usually include the provision of liaison, observers or communications.

b. **In Direct Support.** Artillery units/batteries **in direct support** accord the battalion priority of fire and provide liaison, observers and communications. It is almost guaranteed support, except that it may be over-ridden by a concurrent fire order from another unit which has **priority call**. Normally, direct support artillery is not also placed at priority call to another unit, except for very specific, limmited periods of time.

c. **In Support** —

1) The artillery unit does not provide the liaison, observation, communications or priority of fire characteristic of direct support units. However, all guns in range provide support when not firing on tasks of a higher priority and they will be moved, if necessary, to provide support.

2) Air defence artillery placed **in support** of the battalion provides intimate and continuous air defence.

9. Administration:

a. **Under Command for Administration.** This is implied in the "under command" relationship and is not normally a term used in groupings to the battalion. The term makes the CO fully

responsible for the combat service support of the elements so allocated.

b. **Under Command for Administration Less...** The functions not transferred will be stated. The parent unit or formation continues to provide the excluded functions.

c. **Under Command for Daily Maintenance.** The CO has responsibility for meeting the routine daily requirements for combat supplies (POL, ammunition, rations and water). Support in other areas such as medical, spare parts, recovery, etc may be provided if resources permit.

10. **Delegation of Authority.** The CO may delegate his authority over attached elements only to the same or a lesser degree than that which he received. He may detach an ''in support'' tank squadron to in support of a company. He may not place it under command of the company as it is not his to give.

SECTION 2

INFANTRY AND ARMOUR

THE ARMOURED REGIMENT

11. **Role.** The role of armour is to defeat the enemy through the aggressive use of firepower and battlefield mobility. Specific tasks include:

a. covering force operations;

b. forming part of leading elements in the advance;

c. counter-attack and blocking operations;

d. the assault and destruction of the enemy, but most particularly enemy armour;

e. penetration, exploitation and pursuit; and

f. anti-armour support to infantry.

12. **Characteristics.** The exploitation of the characteristics of armour gains the most effective results. These are:

a. **Firepower.** The tank excels at destructive, accurate direct fire at hard, pin-point targets. With its main armament and co-axial machine gun it can provide excellent close support for infantry.

b. **Protection.** Tank design is the result of a compromise between armoured protection, firepower and mobility. Canadian tanks favour firepower and great agility but can still survive against glancing enemy anti-tank fire. Tanks are by no means invulnerable but they are the only fighting vehicle able to move about the battlefield with relative impunity. They should not be sacrificed stupidly, nor should they be held back in covered fire positions while the unprotected infantry marches forward.

c. **Mobility.** The ability to regroup rapidly and appear from unexpected directions at the right moment makes armour ideal for counter-attack, blocking and exploitation operations.

d. **Flexibility.** Excellent communications and mobility, combined with sound SOPs and drills enable armoured units and sub-units to concentrate and disperse and to shift the point of attack quickly.

13. **Limitations.** Tanks are subject to the following limitations:

a. **Air Attack.** Armour, particularly in large formations, is a primary target for enemy fighter aircraft.

b. **Logistic Support and Servicing.** Tanks need large amounts of ammunition and fuel and regular servicing. Adequate time must be considered for replenishment. Although not impossible, replenishing armoured elements quietly is most difficult.

c. **Vulnerability in Close Areas.** In woods, defiles and built-up areas, tanks are extremely vulnerable to enemy infantry. Supporting infantry and well-developed defile drills are necessary.

d. **Ability to Hold Ground.** Tanks require infantry support to hold ground for any length of time.

e. **Obstacles.** Poor going and routes may limit the employment of tanks. Tanks can achieve surprise, however, by moving through apparently impassable terrain, with or without engineer assistance.

f. **Size, Weight, Noise.** These limitations may preclude certain routes and the attainment of surprise. Skilful driving and a good deception plan can do much to compensate.

14. **Organizations:**

a. The armoured regiment is organized as follows —

1) regimental headquarters including a reconnaissance troop for internal regimental reconnaissance;

2) four tank squadrons, each of a headquarters, four tank troops and an administrative troop; and

3) a combat service support squadron (Headquarters Squadron).

b. Each tank squadron consists of 19 tanks organized into —

1) four identical troops of four tanks each, and

2) squadron headquarters (two command tanks and one dozer tank). Note that squadron headquarters can be a manoeuvre element if necessary.

c. The regiment and squadrons are organized into the same F, A1 and A2 echelons as the battalion.

TACTICAL EMPLOYMENT

15. **Offensive Action.** Armour operations must be executed with particular speed, resolution and boldness. It is only when the firepower, protection, mobility and flexibility of tanks are fully exploited that they achieve their full potential. The CO must use tanks aggressively and not tie them down to static positions. The CO should never underestimate the shock action effect of armour — a product of firepower, mass, mobility and surprise. As a general rule more is better.

16. **Fire and Movement.** The basic principle is that there must be a leg on the ground to provide fire support to the other group that is moving.

17. **Ground.** Tanks need space to manoeuvre. The CO must remember this when choosing routes.

18. Fire and Manoeuvre Units:

a. The smallest fire unit is the tank troop.

b. The smallest manoeuvre unit is the tank squadron.

c. Tanks should be superimposed on the battalion's anti-armour framework so they are free to manoeuvre.

MUTUAL SUPPORT

19. **Tasks of Armour.** When working with infantry tanks:

a. provide fighting and moral support;

b. perform the direct fire destruction of neutralization of weapons, hard-points and enemy tanks;

c. in an attack, precede, accompany or shoot the infantry onto the objective (whenever the method, the tanks are required forward during consolidation); and

d. in defence, provide close fire support, anti-armour fire and a mobile reserve.

20. **Tasks of Infantry.** When working with armour, the battalion sub-units support the armour by:

a. destroying enemy short and medium range anti-armour weapons and their crews;

b. completing the destruction of enemy automatic weapons temporarily silenced by armour;

c. providing a firm base for the manoeuvre of the armoured force; and

d. providing close protection in periods of reduced visibility and in close country or towns.

COMMUNICATIONS

21. The CO must ensure that inter-communication drills with attached armour are understood and practised. Personal contact is by far the best, with one commander dismounting and speaking direct to the other. Other means are:

a. **Radio.** The Battalion Signals Officer is responsible for tying attached elements into the battalion radio nets. Normally all tanks

remain on their squadron net, with a second radio on the battalion or company net, depending on the task and grouping.

b. **Tank Telephone.** This permits an infantryman on the ground to speak to the tank commander for target indication, etc.

c. **Visual Signals.** These must be pre-arranged.

COMMAND AND CONTROL

22. Normally the commander of the predominant arm will command. In forming combat teams the CO is free to appoint the armoured commander as one of the combat team commanders.

23. Where groupings permit, the attached armoured commander should move in close proximity to the CO. If the attached element is, for example, a squadron and the CO is fighting it as a squadron, then the squadron commander stays with and fights his squadron. In this event, usually the norm, a liaison officer from Battalion Headquarters may be attached to the squadron. The use of affiliations, however, tends to make this unnecessary.

FORMATIONS AND DRILLS

24. The details of formations and low-level infantry/armour formation and drills are detailed in B-GL-301/002/FP-001, The Battle Group in Operations and B-GL-301/002/FP-Z01 Supplement 1, The Combat Team Commander's Handbook.

25. **Carriage of Infantry on Tanks.** There will be occasions when it is desirable to move dismounted infantry on tanks. It must be remembered that:

a. the leading tanks do not carry infantry;

b. the infantry have no protection from the enemy direct and indirect fire that the tanks may draw; and

c. the traversing of the turret and arcs of the tank weapons will be restricted.

COMBAT SERVICE SUPPORT

26. Not all combat service support resources needed for the operation of a tank squadron can be made available to it when it is sent to join the battalion. Liaison between A2 echelon and the parent regimental A2 echelon will be necessary to organize additional technical support as required.

27. The tank squadron commander will allot his A echelon in accordance with the groupings dictated by the battalion CO. Usually, most of the squadron A echelon will join the battalion A1 echelon. If for some reason the battalion has not deployed an A1 echelon, the squadron will probably have to deploy its own.

GROUPING PRINCIPLES

28. The inherent flexibility of armour is best maintained by allotting armour elements **in support** rather than **under command**. Because no complicated administrative arrangements have been made, the armoured force can be regrouped rapidly.

29. Although **in support** does not carry the same technical guarantee of dedicated support as **under command**, in fact the tank support is every bit as good and virtually assured for the duration of the current battle. Only under the most dire and critical circumstances elsewhere would **in support** armour be withdrawn during a battle.

30. The CO must resist any temptation to spread attached armour throughout the battalion in **penny packets**. To do so is to negate its inherent strengths to no advantage.

SECTION 3

INFANTRY AND ARTILLERY

THE ARTILLERY REGIMENT

31. **Role.** The role of field artillery is to assist in the defeat of the enemy by indirect fire. Artillery firepower is employed to harrass, destroy or neutralize the enemy, allowing the battalion to manoeuvre more freely while preventing the enemy from having the same freedom. The aim is to establish such fire supremacy that the enemy can neither interfere with the battalion operations nor effectively develop his own.

32. **Tactical Functions.** At all levels the tactical functions of artillery are:

a. close support,

b. attrition,

c. interdiction,

d. counter-battery,

e. coordination, and

f. target acquisition.

33. All these functions aid the battalion, but the primary functions employed at battalion level are close support and coordination. The remainder are more properly the tasks of formation artillery. Indirect fire tasks at battalion level include:

a. fire plans in support of offensive operatons,

b. defensive fire plans,

c. engagement of opportunity targets, and

d. provision of smoke and illumination.

34. Tactical employment considerations are:

a. **Surprise.** In carrying out its role, artillery constantly strives to increase the effect of its support by gaining surprise. Surprise increases the casualties caused and obtains a greater and more lasting neutralization. Surprise is achieved through the speedy and accurate delivery of a heavy weight of fire. The stereotyped application of fire must be avoided.

b. **Concentration.** Indirect fire should be concentrated for best result.

c. **Flexibility.** Fire planning must be simple to ensure flexibility.

d. **Economy.** The fire of field artillery and mortars should be fully integrated. Wherever possible use mortars for illumination and smoke, releasing artillery for defensive fire tasks.

35. **Organization.** The medium support artillery regiment is organized into:

a. headquarters which provides the FSCC at brigade headquarters;

b. four medium support batteries; and

c. a headquarters and service battery.

36. Each medium support battery consists of:

a. battery headquarters which provides the FSCC at unit headquarters,

b. four FOO parties, and

c. two firing troops, each of five guns.

COMMAND AND CONTROL

37. Command of artillery deals with the movement, deployment and administration of the means of fire support. Artillery is best used when

the fire of as many units as possible can be concentrated and coordinated under one boss. This means centralization under an artillery commander at as high a level as is practicable.

38. Control of artillery deals with its fire rather than the physical movement of fire units. Control is exercised through the allocation of the artillery effort in terms of equipment and/or ammunition to a particular unit or formation.

39. Both command and control must be centralized under the highest artillery commander who can exercise command and control effectively. Generally artillery does not form an integral part of brigades or battle groups (unless they are operating independently).

40. Our doctrine calls for artillery commanders to be deployed forward and fire is ordered rather than requested. While command remains at the highest practicable level, control of fire is at the lowest. The movement of guns is normally a brigade or division responsibility; fire is controlled by forward observation officers (FOOs) at sub-unit level.

41. Usually the battalion will be allocated a battery in direct support, in which case the battery commander (BC) and FOO parties join the battalion. In certain cases the BC and FOO parties only will be placed **with** the unit (when the guns cannot be moved in range but fire planning assistance and coordination are needed). A last option is the simple allocation of FOO parties only for a specific operation.

42. With a battery in direct support, the CO may allocate the FOO parties in direct support of specified sub-units, and those FOO parties with vehicle and communications move to those sub-units.

FIRE PLANNING

43. **Definitions.** Artillery fire planning is defined as the process of allocating available fire to support the tactical or movement plan. A fire plan must provide both timely and effective fire. There are two main categories of fire plan:

a. **Deliberate.** These are seldom originated below formation level and usually involve more than one regiment. The fire plan orders are normally issued in written form.

b. **Quick.** These are quickly arranged fire plans in support of operations at brigade or lower. They may involve one battery, the entire regiment or more. The essential difference between a deliberate and quick fire plan is that in a quick fire plan the artillery officer doing the detailed planning with the supported arms commander sends his orders directly to the guns concerned. The process is completed by the battery CP officers by radio.

44. **Principles.** There are five principles which apply to fire planning. Their common sense application will greatly assist the fire planner:

a. **Cooperation.** This is essential between the arms in planning and executing an operation. Maximum use must be made of the fire of all supporting weapons.

b. **Concentration of Fire.** There will normally be more targets than fire units. Fire must be concentrated on the most important targets.

c. **Flexibility.** Changes in the tactical situation will often require modification of the original movement plan hence changes in the fire plan. The plan must be flexible and capable of modification.

d. **Simplicity.** This follows on from flexibility. The plan must be simple if flexibility is to be achieved. A simple plan is quicker to arrange, easier to modify, and less liable to error.

e. **Surprise.** Preparation must be concealed and stereotyped methods must be avoided. The fire planner should carefully consider the implications of adjusting and registering targets.

45. **Responsibilities:**

a. The responsibility for making a fire plan rests with the commander making the tactical plan. This applies regardless of level of command.

b. The artillery adviser is responsible for giving technical advice, for working out the details of the fire plan, and for passing the necessary orders to the artillery CPs involved in the fire plan.

c. Although the CO and company commanders are responsible for the fire plan to support their tactical plan, it usually becomes a joint effort. If the artillery adviser knows what is required, he can proceed with the technical part of the fire plan. The artillery adviser should be brought into planning from the start and must accompany the supported arms commander on his reconnaissance. Mutual confidence is essential and must be developed. Affiliations help considerably.

d. In general terms the supported arms commander must state —

1) What the fire plan is to achieve?

2) Where fire is required?

3) When fire is required and for how long, and?

4) What type of fire is required?

e. The artillery adviser will advise on these points and then prepare a detailed plan. He must consider the use of all available fire support, including battalion support weapons.

46. **Sequence in Fire Planning.** Situations will vary but a normal sequence might be as follows:

a. The CO is given his tasks at brigade orders (the CO normally takes the direct support BC with him to orders, or meets him there).

b. The CO is given his resources in terms of guns. There will also be an ammunition allocation but he will get that information through the BC.

c. The CO makes his estimate and plan, accompanied by the BC;

d. The CO decides on the fire plan. In detail he and the BC must decide on —

1) targets and their relative importance,

2) timings,

3) units to engage each,

4) ammunition types,

5) deployment of observation,

6) responsibility and authority for modification to the fire plan,

7) control measures, and

8) adjustment policy.

e. The CO must also consider the need for defensive fire (DF) tasks for consolidation after an attack and ammunition must be retained for these and impromptu targets.

f. The BC passes the necessary orders to implement the fire plan to the artillery CPs involved.

47. Control of Fire:

a. **Modification.** Operations seldom go exactly as planned and all fire plans must be capable of quick modification. The authority to modify generally remains with the CO. Anyone may request a modification but only one person may authorize the change.

b. **Timed/On Call Programmes.** Scheduled timed targets will be engaged at the times set but this method can be too rigid, requiring modification if the situation changes. On call targets are worked out in the same detail but without timings. This permits greater flexibility but is dependent on good communications.

c. **Targets of Opportunity.** The probability of unexpected targets appearing is always high. This is best handled by using the direct support battery in a superimposed role. In this way the fire units directly controlled by the CO and his BC can be switched to deal with the new threat.

48. **Smoke Screens.** When smoke screens are planned, there is additional information which the CO or company commander must give to his artillery adviser. These are:

a. the area to be blinded;

b. the area to be screened;

c. the time at which the screen is to be effective (smoke must be fired before the screen is to be effective to allow the smoke to build up);

d. the duration of the screen;

e. whether testers are allowed; and

f. where there is an alternative HE task, who will make the decision to adopt this alternative should the need arise.

CONDUCT OF FIRE SUPPORT

49. Coordination:

a. Formal fire coordination centres are not established at sub-unit level. Coordination is carried out as necessary by the FOO.

b. At battalion headquarters the FSCC consists of —

1) the BC's party of the direct support battery,

2) mortar platoon headquarters,

3) air defence resources, and

4) a tactical air control party, if allocated.

c. It is usually best for the FSCC to be physically based in the mortar platoon CP to allow the BC full use of his CP when away with the CO, and to cater for the possible re-allotment of artillery

within the brigade. The BC can remote his radios into the FSCC as required.

d. The FSCC must be co-located with the battalion CP to provide the intimate liaison necessary between battalion operations and indirect fire support.

e. Duty shifts within the FSCC normally include representatives from all elements in the FSCC so that the required expertise is instantly available.

f. The fire support coordination functions must be carried out even when the headquarters is moving. Either the CO'S tactical headquarters with the BC's vehicle assumes control or the various elements that make up the FSCC maintain radio contact with each other while on the move.

50. Communications:

a. The following radio nets are found in the FSCC —

1) battalion command net,

2) artillery regimental net,

3) artillery battery net,

4) mortar platoon net, and

5) air request net (if a tactical air control element is allotted).

b. The BC has radios on the artillery regimental and his own battery net and is a sub-station on the battalion command net.

c. FOO parties carry two radios, one on the battery net to the guns and FSCC and one as a sub-station on the infantry sub-unit net.

d. Generally speaking, the artillery nets are valuable sources of accurate, dispassionate situation reports. The artillery officer, be he a FOO or the BC, is not preoccupied with fighting his troops

on the ground and is usually in a location where he can see the battlefield. The artillery nets are an immediately available alternate means of passing information and orders between company, battalion and brigade should the main command nets become inoperable. This means, however, should only be used in exceptional circumstances.

51. Calls for Fire:

a. Fire is normally called for and controlled over artillery radio nets. Unless the call for fire is over-ridden by a concurrent fire order from another unit which has ''priority call'', the OP or FOO of a battery have unquestioned call on the guns of their own battery and may request the fire of as many more guns within range as thought necessary. These requests are considered by artillery commanders at various levels and either agreed or refused.

b. This process is rapid and can be accelerated further by pre-authorizing certain observers to fire specific additional guns without further reference. For example, a FOO might be authorized by the commander divisional artillery to order a divisional artillery target to engage targets over a specified size coming into a vulnerable area (eg an enemy tank regiment on Approach A).

c. When no indirect fire control net is available, any infantry radio net may be used to call for and control fire. The CO and company commanders must include target grid procedure in the training of section commanders and up, plus all reconnaissance detachment commanders.

52. Coordination/Control Measures:

a. **Unit Boundaries.** Fire may not be directed across boundaries into another unit's area without the approval of that unit. This approval can be quickly sought by the FSCC either by speaking with the neighbouring FSCC by radio direct or through the brigade FSCC.

b. **Fire Support Coordination Line (FSCL).** This is a line established by the appropriate ground commander (usually Corps in Canadian doctrine) to ensure the coordination of fire not under his control but which may affect current tactical operations. Note that —

1) the FSCL should follow well defined terrain features;

2) its establishment must be co-ordinated with the appropriate tactical air commander;

3) supporting elements may attack targets forward of the FSCL, without prior co-ordination with the ground force commander, providing the attack will not produce adverse surface effects on, or to the rear of, the line; and

4) the FSCL is usually given with a date and time of effectiveness;

c. **No Fire Line (NFL).** As for FSCL fire may be directed across neighbouring unit boundaries **beyond the NFL** without reference to the neighbouring unit.

d. **Restrictive Fire Line (RFL).** This may be established at any level to coordinate fire between any two converging forces, or between airborne, seaborne, or airmobile forces and link-up forces. No fire may be directed across the FCL without reference to the unit on the other side.

e. **Coordination With Air.** Indirect fire support will only be restricted when absolutely necessary and only if the loss of that fire on the ground is justified by the risk to friendly aircraft. If a restriction is necessary it is ordered as the aircraft begins its run in to the target and is cancelled immediately the aircraft is clear of danger. In most cases a total restriction is not necessary and a restriction on certain areas only need apply. If there is a conflict in priorities the FSCC, in conjunction with battalion operations, will decide which will be allowed to proceed. In many cases it will be possible to allow both to proceed.

COMBAT SERVICE SUPPORT

53. The artillery regiment is broken into the same echelon system as the battalion. Battery A echelons will be located at or very close to the gun position. The regimental A echelon conducts replenishment of each battery A echelon or runs directly to the gun positions, particularly with ammunition.

54. Only on special independent operations would the battalion be required to provide combat service support to the guns themselves.

55. The battalion will, however, provide daily maintenance (including vehicle and radio maintenance) to the direct support BC and FOO parties.

SECTION 4

INFANTRY AND AIR DEFENCE

AIR DEFENCE RESOURCES

56. **Role.** To prevent the interference of ground oeprations by enemy air attack.

57. **Tasks.** Air defence artillery elements provide:

a. early warning,

b. protection,

c. attrition, and

d. airspace control.

58. Principles of Employment:

a. To accomplish the air defence role a mix of mutually supporting weapon systems is employed. One type of system alone cannot cope and the mix of systems permits the capabilities of one system to offset the limitations of the others.

b. All air defence systems require warning to be fully effective.

c. Air defence weapon systems must be mobile and, like normal artillery, controlled at the highest practicable level. It is usual that all weapon systems will be tied into an integrated command and control network regardless of their tactical assignment. This is the only way to guarantee identification, early warning and airspace control.

59. **Tactical Employment.** Air defence is an all arms responsibility. Most weapons of the battalion can be effective against enemy aircraft and will normally be used for self-defence **when attacked** by hostile aircraft. The battalion may also be allocated low level and very low level

air defence (LLAD and VLLAD) systems for specific tasks. Important considerations in the tactical employment of these systems at battalion level are:

a. **VLLAD.** These elements are best employed on the point defence of defiles, headquarters or concentrated sub-unit positions, attack positions, assembly areas and hides. A VLLAD section should be deployed to cover a single point. The section has only limited communications and is very vulnerable to enemy ground action. The battalion must keep it informed on the enemy threat and provide it with protection when necessary.

b. **LLAD.** With protection and mobility comparable to infantry, if not better, LLAD elements are ideally suited for the forward air defence of a battalion. These elements may be rapidly regrouped.

COMMAND AND CONTROL

60. Air defence elements will rarely be placed under command of the battalion. The usual allotment term will be **in support** or **in location**.

61. It will be very difficult for the parent air defence artillery unit to conduct administrative resupply for all sections deployed over a large area. Often, therefore, the sections will be under battalion command **for daily maintenance** (less ammunition and technical weapon maintenance).

SECTION 5

INFANTRY AND ENGINEERS

GENERAL

62. **Roles.** The roles of engineers are to assist the land force to live, move and fight on the battlefield and to assist in denying the same to the enemy.

63. Characteristics:

a. **Flexibility.** The flexibility of engineer units results from the training of their personnel, their organization, and their communications —

1) **Training of Personnel.** Engineers are trained to function effectively in combat. Engineers are capable of fighting as infantry in an emergency.

2) **Organization.** Engineer units are organized and established to complete several minor tasks simultaneously. Units or sub-units may be grouped together to complete a major task.

3) **Communications.** Good communications down to section level provide the means for effective control of engineer work and rapid deployment of engineer resources.

b. **Mobility.** To provide the intimate engineer support required by other arms, engineer units are normally equipped with vehicles with the cross-country mobility comparable to the troops they support. Engineer units carry a considerable quantity of equipment and stores which must be retained in vehicles and/or trailers.

c. **Equipment.** Engineers rely on a variety of special equipment. These include equipment bridging (which in the forward area is usually held in vehicles and trailers); earth moving plant; and armoured engineer vehicles which permit assault engineer tasks to be performed under enemy fire.

d. **Limitations.** Most engineer tasks must be carried out by dismounted troops at critical locations not necessarily within defended areas. These tasks usually require the use of engineer equipment, which by its nature draws enemy attention and fire. The battalion may be required to provide protection for engineer work parties.

64. **Tasks.** The main functions of engineers in support of the infantry battalion are:

a. Maintenance of mobility —

1) passage of obstacles (including mine clearnance),

2) construction and maintenance of routes, and

3) advice on engineering matters.

b. Denial of enemy mobility —

1) route denial,

2) creation and improvement of obstacles and barriers, and

3) development of field defences.

c. Provision of general engineer support —

1) water supply,

2) control of engineers stores, and

3) provision of engineer reconnaissance information.

65. **Organization.** Each brigade normally has either an engineer squadron or a complete Combat Engineer Regiment in support. Depending on the need the battalion might receive the following in support:

a. a field squadron, consisting of —

1) a headquarters,

2) engineer reconnaissance, and

3) three field troops.

b. a field troop, consisting of —

1) a small headquarters,

2) an engineer reconnaissance party, and

3) four field sections.

c. any combination of the above, with special heavy equipment detachments from the regimental Support Squadron may be organized.

INFANTRY ENGINEER COOPERATION

66. Responsibilities of Infantry:

a. protective detachments for engineer working parties;

b. protective detachments for engineer reconnaissance parties;

c. work parties under engineer direction;

d. protection of engineer demolition firing parties; and

e. information on enemy activity in the area.

67. **Responsibilities of Engineers.** Engineer sub-units placed in support of an infantry battalion have the folowing general responsibilities:

a. establishment of contact with the infantry unit headquarters and the provision of a radio on the battalion command net (coordinated by the Signals Officer);

b. advice on engineer capabilities;

c. engineer reconnaissance; and

d. passage of information.

68. When engineers are allotted to the battalion the engineer commander acts as the adviser the the CO on engineer matters. He will normally also coordinate the engineer effort including the work of the Assault Pioneer Platoon.

69. The engineer commander is responsible to the CO for ensuring that engineer tasks are conducted speedily and efficiently. The allotment of priorities to engineer tasks remains the responsibility of the CO, keeping in mind that some of those priorities may have been set by brigade.

70. The battalion must be capable of carrying out its own domestic engineer reguirements such as digging in CPs, laying protective minefields and erecting wire. As with assault pioneers, the CO should not allocate minor engineer jobs to a supporting engineer sub-unit when they could be accomplished by any of his rifle companies.

71. When engineers are employed on brigade tasks but are operating in the battalion area, they must establish liaison with the battalion. The engineer commander must ensure that the activities of his unit conform to the battalion CO's policies on light, track discipline concealment.

COMMAND AND CONTROL

72. Engineers are rarely put under command of the battalion. Rather they are allotted **in support** for a particular task, period of time or phase of an operation. Where possible **affiliated** engineer sub-units will always return to work with the same battalion.

73. Engineers will remain under command of their parent regiment and will maintain communications on their regimental or squadron nets. There will rarely be enough engineer resources for the jobs at hand and it is important to be able to switch these resources to other areas once the local task has been completed.

74. The engineer sub-unit operating in support of the battalion will become a sub-station on the battalion command net. An engineer liaison officer, with communications, will join Battalion Headquarters and remain in or near the CP. The engineer commander will accompany the CO as

part of the R Group, but he must not be expected to accompany the CO thereafter. He must be left free to reconnoitre and to command his sub-unit.

75. At times the battalion will receive only an engineer reconnaissance party in support, especially in offensive operations where engineer reconnaissance information is needed at brigade level. This party may need protection assistance by the forward companies while they conduct their reconnaissance.

TACTICAL FACTORS

76. The need for silence and no illumination will often conflict with the technical working requirements of combat engineers. The CO must make a judgement to strike a balance and he may have to form a deception plan, eg. the firing of guns to cover noise.

77. Engineers are particularly vulnerable when working and tasks will take far longer to complete if they are required to provide their own protection. When necesary the battalion may have to help. This may be only a rifle section to provide OPs and early warning as engineers, when warned, are perfectly capable of defending themselves.

78. None of the above absolves engineers from responsibility for normal concealment and security drills.

79. In mobile operations the battalion CP must closely control the movement of the engineer sub-unit to ensure that it is readily available without being needlessly exposed. Engineer reconnaissance parties must move well forward. Engineer plant and stores must be readily available to avoid long delays.

80. Information is the key. To provide engineer support quickly, the engineer commander must be kept in the picture.

81. Engineer sub-units are trained and equipped to fight as infantry once their engineering tasks have been completed. Their training, weapons, equipment and sheer bloody-mindedness make them particularly well-suited for holding ground. Lack of time to develop and practise drills tends to make them less suited for offensive operations.

OBSTACLES, BREACHING OPERATIONS, CROSSINGS AND FIELD DEFENCES

82. See Chapter 10 and the details on engineer employment in Chapters 8, 9, 11 and 12.

COMBAT SERVICE SUPPORT

83. Attached engineer sub-units will come with an A echelon element. Depending on the task and its location, this echelon may locate near the job or co-locate with the battalion A1 or A2 echelon.

84. The parent engineer regiment will normally resupply the engineer sub-unit echelon direct. If the engineer attachment is to be lengthy (ie more than two or three days) the sub-unit may be placed under command for daily maintenance. Technical equipment maintenance and engineer stores will continue to be handled through the engineer chain.

SECTION 6

INFANTRY AND AVIATION

ROLES

85. The role of tactical aviation is to support land forces by providing aerial firepower, mobility, and reconnaissance.

86. **Characteristics.** The characteristics of tactical aviation are:

a. mobility;

b. flexibility;

c. firepower; and

d. communications.

87. The application of the following fundamental guidelines for the employment of tactical aviation forces will ensure that the best advantage is taken of their abilities:

a. **Anticipation.** Tactical aviation commanders who are kept in the picture can respond faster.

b. **Planning.** Having the tactical aviation commanders involved ensures that the potential capabilities and relevant limitations of aviation are taken into account.

c. **Allocation of Priorities.** Priorities are decided by the commander. Clear priorities are needed.

d. **Co-ordination.** Co-ordination is best developed through joint training, SOPs and the presence of the aviation commander or his representative at all stages of the operation.

88. The tasks completed by tactical aviation in support of the are:

a. reconnaissance and surveillance,

b. direct and control of fire,

c. provision of fire support,

d. combat airlift,

e. support of counter-mobility operations,

f. logistic airlift,

g. command and liaison support,

h. aeromedical support, and

j. communications assistance.

TACTICAL EMPLOYMENT

89. Helicopters should not normally be tasked forward of the FEBA, unless they are supporting covering forces or screens. In the reconnaissance and air OP roles tasks should be selected that capitalize on the helicopter's ability to move quickly over long distances and difficult terrain, rather than needlessly losing them on tasks which could be carried out by ground observation.

90. The CO will generally find the helicopter an inappropriate vehicle from which to exercise command in battle. The helicopter is, however, invaluable for reconnaissance during battle procedure and can be a great aid in the saving of time, particularly in moving from one viewpoint to another and then to the O Group rendezvous.

COMMAND AND CONTROL

91. Helicopters are rarely attached to the battalion. They may, however, be tasked for specific operations. In these instances, the helicopters will be placed in support for a specific task or a specific period of time. The helicopter squadron providing the support will establish liaison with the battalion during the planning phase only. The battalion is responsible for selecting pick-up zones (in consultaton with the aviation representative) and for securing these zones on the ground.

92. The supporting helicopter element will join the battalion command net (or a sub-unit net) as it approaches the battalion area. The control of friendly indirect fire and air defence resources will be exercised by the battalion FSCC. Routes through the battalion area are dictated by the battalion and normally dicided upon during the planning process.

93. The battalion may find armed helicopters operating in the unit area in the antiarmour role as part of the brigade or division plan. Normally this would be forewarned at brigade orders. The CO should be aware, as should his company commanders, that the designation of an area as a possible attack helicopter killing zone will involve a certain amount of prior helicopter reconnaissance activity. Care must be exercised to ensure that this activity, controlled by higher formations, does not prejudice the battalion's plans and dispositions.

COMBAT SERVICE SUPPORT

94. The battalion has no responsibility for providing combat service support to aviation elements. Brigade and division may establish forward arming and refueling points (FARPs) in the battalion area of responsibility. These would be given as ''in location'' elements at brigade orders under normal circumstances. In fast moving operations, however, a FARP consisting of several fuel and ammunition vehicles could appear with little or no notice. FARPs would normally only be seen by depth battalions. The CO must remember that these points become prime targets for enemy air and indirect fire.

SECTION 7

INFANTRY AND AIR

ROLES

95. The primary role of fighter aircraft is the destruction of the enemy's air capability — the winning and maintaining air superiority.

96. Interdiction and close air support are secondary tasks that can benefit the infantry.

CONTROL AND COORDINATION

97. Battalion requests for close air support may be:

a. **Immediate.** This is passed on the air request net through the FSCC, or on the command net to Brigade Headquarters.

b. **Pre-planned.** This is passed on the air request net through the FSCC for the next day's operations.

98. Forward Air Controllers (FACs) for close air support missions are normally either reconnaissance helicopter pilots or FOOs. In some cases, certain battalion officers are trained and may be employed as secondary FACs when no helicopter support is available.

99. FACs will establish communications with the battalion FSCC to ensure coordination of the air mission with air defence artillery and mortars.

100. In isolated instances a lone FAC or a Tactical Air Control Party may join the battalion for a specific operation. These would join **in support** and the battalion would be responsible for their daily maintenance.

CHAPTER 8

OFFENSIVE OPERATIONS — THE ADVANCE

SECTION 1

OFFENSIVE OPERATIONS (GENERAL)

AIMS

1. The primary aim of offensive operations is to destroy the enemy's fighting capability. The real measure of a good commander, at any level, is his ability to achieve this aim with the minimum loss to his own troops.

2. The purpose of offensive operations may be one or more of the following:

a. destroy, erode or repulse enemy forces;

b. re-capture or gain ground;

c. acquire information;

d. deprive the enemy of resources;

e. fix an enemy in place, thus preventing his reinforcing another force; and

f. divert the enemy's attention from other areas.

3. The essential ingredient in offensive operations is to maintain momentum. This requires the rapid concentration of superior combat power at the critical time and place. Operations will be successful if the momentum can be maintained until the enemy's will to resist is broken.

TYPES OF OFFENSIVE OPERATIONS

4. The types of offensive operations are:

a. **The Advance** is carried out to establish contact, maintain contact or in pursuit of a withdrawing enemy.

b. **The Attack** is conducted to destroy the enemy or to seize ground.

c. **The Pursuit** follows the penetration of the enemy's defence and the enemy is forced into a running, non-coherent fight. The advance may develop into a pursuit.

5. At battalion level the types of offensive operation most commonly undertaken are the advance (to or in contact) and the attack.

SECTION 2

THE ADVANCE

GENERAL

6. The advance includes movement forward before and after contact has been made. It ceases when determined enemy opposition is encountered, normally at the enemy main defensive zone.

7. The advance is characterized by swift mobile actions to destroy enemy mobile detachments and forward positions. The idea is to reduce to a minimum the amount of time left to the enemy to prepare his main defences and to rest and maintain his forces.

FUNDAMENTALS

8. The fundamentals of the advance are:

a. **Maintain the Momentum.** Momentum is created by the employment of quick aggressive action designed to bypass or destroy the enemy. The advance offers the CO opportunities, through the use of initiative and imagination, to defeat the enemy with superior tactics rather than brute force. The aim is to out manoeuvre him, rendering his position ineffective and forcing him to fight under our conditions, or to withdraw.

b. **Seize and Control Key Terrain.** Ground important to the enemy's defences must be seized and held. The seizure of dominating ground or defiles may negate the effectiveness of, or gravely endanger, his forward elements forcing their early withdrawal.

c. **Shock Action.** Tanks, mechanized infantry and fire support must be boldly employed to break enemy defences and drive deep into the enemy's rear area.

d. **Depth.** The battalion commander must organize his forces and select his objectives in depth if he is to maintain constant

pressure and exploit penetration of enemy defences. Organizing in depth contributes to shock action.

e. **Balanced Force.** The batalion must be deployed to be able to overcome both enemy resistance and terrain.

f. **Simplicity.** A complex plan will slow the advance. A simple and sound plan, allowing as much freedom of action as possible to sub-unit commanders and leaving lots of room for local initiative, is key.

g. **Information Gathering.** The CO must gain as much prior information and warning as possible through wide reconnaissance to permit timely actions and manoeuvre.

h. **Reserves.** A reserve must be retained to deal with the unexpected and to exploit success. Once committed, a new reserve must be constituted. Committing his reserve is the most important decision a battalion commander must make. Once the battalion is fighting through the objective, it remains the only way in which he can influence the battle.

OTHER CONSIDERATIONS

9. **Acquisition of Information.** At the outset of any advance little information will be available to the CO, other than that gained from maps, air photos, local inhabitants and air reconnaissance. The CO must use his resources aggressively to gain as much information on the enemy as possible during the advance. He must also ensure that this information is disseminated rapidly to all elements of the battalion so that adjustments may be made and fleeting opportunities grasped. Information is essential to retaining the initiative.

10. **Surprise.** An advance which closes with and engages the enemy on ground of the enemy's choosing will be the most costly in terms of casualties and time. The CO must aim to outwit the defender and deceive him about the strength, direction, timing and speed of the advance; or the CO may manoeuvre the battalion to leave the enemy holding ground of no tactical value.

11. **Momentum.** The battalion must be prepared to continue the advance by day or night, within the physical limitations of the troops. The critical elements in the maintenance of momentum are:

a. **Clear Directions.** The CO must give his subordinates a clear mission. His initial orders must include information on boundaries, control measures, critical timings and the bypass policy. He must also provide his sub-unit commanders with as much room as possible for local initiative.

b. **Quick Reaction.** Speed in the advance is maintained more by quick reaction to enemy contacts than by haste between contacts. Quick reaction depends on flexibility, careful grouping, sound battle procedure and anticipation.

c. **Balanced Groupings.** A balanced force is one grouped so that maximum flexibility is available to the CO. The initial grouping must ensure that —

1) reconnaissance elements can cover the required frontage and provide adequate warning on enemy locations and on terrain;

2) leading elements can deal with expected opposition;

3) fire support is readily available with observers well forward; and

4) reserves can be committed without delay.

d. **Bypass Policy.** This policy is based on the extent to which the CO wishes to maintain the momentum and the size of enemy force he is prepared to leave in position to be dealt with by the following sub-units. The bypass policy is usually made by the brigade commander. If an enemy position is to be bypassed —

1) precise information about it must be passed to all concerned;

2) it must be kept under observation;

3) the position must not be able to interfere with either bypassing elements or with subsequent operations; and

4) responsibility for dealing with the bypassed position must be detailed.

e. **Administration.** The administrative plan must be simple and capable of adjusting quickly to changes in the F echelon order of march.

SECTION 3

PLANNING THE ADVANCE

ORGANIZATION

12. At brigade level the concept includes the deployment of:

a. **A Covering Force.** This is designed to destroy enemy reconnaissance, locate his main positions and find gaps in his defensive deployment.

b. **Advance Guard.** Its primary mission is to ensure the uninterrupted advance of the main body. Its functions are to —

1) find and exploit gaps in the enemy's defences;

2) prevent the main body running blindly into enemy opposition; and

3) clear away minor opposition or, if major opposition is met, to cover the deployment of the main body.

c. **Main Body.** This is the remainder of the brigade. Ideally this should not be committed until it has reached the brigade objective.

d. **Flank and Rear Guards.** These are designed to provide security for the main body and, if necessary, fight to protect the flank or rear until it can be reinforced.

13. The battalion may form part of the covering force or main body and, with support elements, all of the advance guard.

THE ESTIMATE

14. Detailed enemy locations are unlikely to be known and the enemy factors will be those involving known enemy doctrine and delaying tactics. Deductions from the consideration of these factors will lead to decisions on grouping within the battalion.

15. Ground factors are next in importance, also leading to decisions on grouping.

16. It will be quite normal for the battalion to adopt a fairly standard grouping for a series of advance operations, permitting the establishment and honing of quick reaction drills. Reaction speed will improve but care must be taken to avoid the battalion's tactics becoming stereotyped.

17. **Deductions.** Analysis of enemy and ground factors and his own battalion's strength and attachments will enable the CO to decide upon:

a. the balance to be struck between speed and security;

b. the size of the force necessary to sustain the advance and secure the flanks;

c. whether to advance on one or two axes and the best one(s) to use;

d. where the advance should be pressed hard and where caution will be necessary;

e. the level of precaution necessary against enemy air attack;

f. specific reconnaissance and engineer/pioneer tasks;

g. specific action to capture or mask known or suspected enemy defences;

h. which features dominate the axis and may be used by the enemy to impede the advance or by the battalion to cover the advance;

j. defiles and obstacles which must be forced, crossed or avoided;

k. covered approaches which may be used by the vanguard; and

m. routes, harbour and waiting areas to be used by the depth sub-units.

CONTROL MEASURES

18. The CO initiates the advance by issuing orders to implement his plan. Within this plan specified authorities will be delegated to company commanders. Thereafter, the advance is controlled by the designation of the following control measures:

a. **Axis of Advance.** This is a line in the direction of advance; often a road or group of roads or a designated series of locations or terrain features.

b. **Centre Line.** This is the route along which the battalion headquarters (and following units) will move.

c. **Bounds.** These are tactical features on the axis. They are well defined features which can be defended if necessary. The battalion does not normally halt on a bound, but it may do so to conform with the situation elsewhere.

d. **Cleared Route.** This is an important route that must be cleared of enemy and kept clear. The task of keeping a route clear would normally be passed to a main body unit. For a route to be cleared the enemy must not be able to bring direct fire to bear on it.

e. **Report Lines.** These are easily recognizable features used as a convenient means of reporting progress. By themselves they have no tactical significance, unless they happen to coincide with a bound.

f. **Boundaries.** These are used to define the area of responsibility between adjacent units or sub-units.

g. **Harbours.** These are selected areas along the route or axis used for dispersal and concealment. These are normally used only by the main body elements which move from harbour to harbour as the advance route is cleared.

19. **Objectives.** Objectives designated by brigade headquarters or selected by the CO will usually consist of good tactical ground, the cap-

ture of which will either disrupt the enemy plan or provide a good firm base from which to continue the advance.

GROUPING AND ORDER OF MARCH

20. The leading sub-units must be strong enough to deal with minor enemy outposts, and equipped to deal with natural and artificial obstacles. It is essential that reconnaissance elements, including engineer reconnaissance, and commanders be located well forward.

21. The battalion is organized into a vanguard (based on a rifle company group) and the main guard. The remainder of the brigade makes up the main body and provides flank and rear guards. It may also provide the covering force although this is more likely to be provided by division.

22. A sample grouping of the battalion as advance guard, assuming fairly standard combat support attachments to the battalion, is shown at Annex A to this Chapter.

ROUTES

23. Two routes are more flexible than one but the final decision depends on:

a. whether more than one route is actually available;

b. whether lateral movement between routes is possible so that forces can be switched as necessary;

c. enemy strength; and

d. the forces available. (balance between the use of two routes and the need for a reserve must be achieved.)

24. By day it is usually quicker and less risky to move cross-country when the going is suitable. By night the use of roads and tracks is quicker but runs the certain risk of meeting the enemy head on and being especially vulnerable to enemy ambush. Wherever possible, even at night, the vanguard at least should move cross-country.

TRANSPORT

25. The likely enemy resistance, state of available routes and the going will determine whether or not the advancing infantry can move mounted in vehicles. The advantages of speed and lessening of fatigue must be balanced against the vulnerability of troops in or on vehicles.

26. When conditions dictate that the vanguard move on foot, every effort should be made to move following sub-units in vehicles to keep the men fresh. Even short lifts help.

SECTION 4

CONDUCT OF THE ADVANCE

COMMAND AND CONTROL

27. Commanders at all levels must be well forward so they are able to influence the battle. The CO normally travels with his battery commander one tactical bound behind the vanguard. He must always be ready to move forward to assess the situation.

28. Battalion Headquarters moves from harbour to harbour, keeping well enough forward to ensure reliable radio communications throughout the unit. Complicated step-up arrangements should be avoided, with the CO's tactical command post assuming control if necessary while battalion headquarters moves. Usually, the battalion CP will be able to maintain adequate control while on the move.

29. Radio silence may be ordered until first contact, and is usually maintained within the main guard and main body so long as the vanguard is in control of the situation.

30. The battalion continues the advance even in the face of enemy jamming. Orders must be both comprehensive and flexible enough to enable sub-unit commanders to exercise their initiative.

31. Once strong enemy contact is made radio orders become mandatory. The gathering of orders groups and issuing of verbal orders will lead to a loss of momentum. The CO can visit individual company commanders to discuss developments and supplenent his initial orders.

32. Needless radio chatter by the main guard and main body elements must be ruthlessly suppressed. The commanders of following sub-units in the main guard can usually maintain a clear enough picture of the situation ahead by simply listening on the advance guard and vanguard radio nets.

ORGANIZATION

33. Usually, the CO divides the battalion and its attached support elements into four groups:

a. **Reconnaissance.** Even with a covering force ahead, the battalion will deploy a reconnaissance element ahead. This will be based on the Reconnaissance Platoon. The platoon may be allocated a FOO and/or MFC, engineer reconnaissance and possibly MRAAWs. The platoon will operate under battalion control, with the vanguard listening to its reports on the battalion command net. The platoon's main jobs are to screen the battalion advance and to conduct route reconnaissance forward of the vanguard. The platoon will normally picquet any enemy position found, hand it over to the vanguard and then press on. The platoon may also have to accept the handover of picquetted enemy positions from the Brigade reconnaissance elements.

b. **Vanguard.** The vanguard will be based on a company/squadron group. It will usually have MRAAW in support and should also be supported by a FOO, MFC and engineer reconnaissance. The vanguard will manoeuvre astride the axis, close enough behind the reconnaissance element to help where necessary, but not so close as to hinder the vanguard's freedom of movement when contact is made.

c. **Main Guard.** This consists of Battalion Headquarters, uncommitted sub-units, support weapons, supporting arms and A1 echelon. The sub-units may move from harbour to harbour, under battalion control, or simply move cross country astride the axis from bound to bound. One pre-designated company group must be ready to assume the vanguard task.

d. **Protective Elements.** Protection in the form of flank and rear guards must be designated by the CO. The rear guard task is usually given to the last company group in the order of march. Its secondary task is to maintain contact with the lead elements of the brigade main body. Flank guard tasks may be allocated to the anti-armour company. The jobs of the flank guard elements

are to provide early warning and to gain time for the main guard elements to prepare a hasty defence or to manoeuvre to meet the threat. Flank guards move roughly parallel to the axis under battalion control. With the brigade on two axes, the flank guard task on the battalion's unexposed flank is one of liaison and maintaining contact with the friendly forces.

COMBAT SUPPORT

34. **Armour.** It will be extremely rare for a battalion in the advance guard role to operate without tanks. The relative positions of infantry and armour are especially dependent on the nature of the terrain:

a. Where there are a number of copses, hedgerows and scattered buildings (broken country), tanks lead with mounted infantry close behind.

b. Tanks lead with mounted infantry one bound behind in open country.

c. Dismounted infantry lead with tanks providing support in close country and at defiles.

35. **Artillery.** Artillery and mortars will be deployed well forward with FOOs and MFCs located with the leading sub-units. Guns and mortars moving forward to new firing positions are given route priority:

a. **Fireplans.** On-call target lists are maintained as part of a continuous fire support programme. Available guns and mortars are laid on targets as they are approached so that fire can be brought down quickly.

b. **Movement.** It is the FSCC responsibility to ensure that indirect fire support is available at all times. Guns and mortars may leapfrog each other or within their own sub-unit organizations. In the worst case they will adopt **crash action** procedures from the line of march.

36. **Engineers/Pioneers.** The main role of combat engineers in the advance is the maintenance of the mobility of the advancing force.

Engineer resources must be well forward, with engineer reconnaissance parties moving with the leading sub-units. The Pioneer Platoon may either augment the engineer resources or provide assault section to the leading sub-units. Early warning and reconnaissance are vital to the effective employment of engineer support.

37. **Air Defence.** The overall air defence framework and the policy for engagement are established at the highest level possible, usually at Corps or Division Headquarters. Battalion air defence resources are normally best concentrated to cover defiles, with any spare capacity devoted to harbour/waiting areas. The battalion's principal defence from enemy air lies in concealment and dispersion.

38. **Tactical Aviation.** The inherent flexibility and mobility of tactical aviation can assist in maintaining the momentum of the advance. The attack helicopter can provide intimate fire support well forward and provides an effective means of attacking a withdrawing force. Utility helicopters can rapidly deploy weapons and troops to seize and hold key terrain. Light helicopters provide reconnaissance and surveillance, forward air control and air observation posts.

39. **Reconnaissance Platoon.** The battalion reconnaissance element is based on the Reconnaissance Platoon, with a FOO/MFC, engineer reconnaissance and perhaps some Antiarmour Company detachments in support. The reconnaissance force normally operates under battalion control but may be placed in support of the leading sub-units when advancing on two axes. The reconnaissance force's jobs are to locate and identify enemy positions covering the advance, to find routes through and around obstacles and routes around enemy positions.

40. **Anti-armour Company.** The battalion anti-armour resources are deployed in mobile detachments to provide flank security. Some elements are normally attached to the reconnaissance force and the vanguard company group. The flank security elements remain under battalion control.

FACTORS AFFECTING THE CONDUCT OF THE ADVANCE

41. **Degree of Search.** The degree of lateral search will be influenced by the CO's estimate of likely enemy opposition and the terrain. Clearing the axis usually involves lateral search out to positions from

which the enemy could bring effective direct fire and observed indirect fire to bear. This distance will vary throughout the advance depending on terrain and visibility. In close country, with the lead troops dismounted, it will be as little as 100 metres; when mounted and supported by tanks the battalion may have to search to 3000 metres.

42. **Rate of Advance.** Every effort must be made to adhere to the planned rate of advance. No matter how well planned, the rate will vary with unexpected obstacles, enemy opposition and weather. Speedy and effective reaction to a changing situation and initiative at all levels are essential. The degree of search required must be considered when planning the rate of advance.

43. **Action on Enemy Contact.** On making contact, the vanguard must, if it is within its capability, destroy the opposition and enable the advance to continue. The vanguard commander must be well forward so that he can quickly assess the situation. Success will depend on speed and accuracy in the collection of information on enemy strength and location, and on speed and determination in the use of firepower and manoeuvre.

44. **Command Decisiveness.** The CO must be well forward so that he can, if necessary, quickly influence the battle. He must decide whether to:

a. let the vanguard commander deal with the enemy;

b. order the vanguard to bypass and continue the advance, detailing a sub-unit from the main guard to engage the enemy position;

c. let the vanguard deal with the enemy and pass another sub-unit around to assume the lead role; or

d. deploy the battalion main guard for a major attack.

45. **Initiative.** Commanders at all levels keep their superior commander informed on the situation and their intentions. They should not interfere with their subordinates but, at the same time, they monitor closely to ensure that piecemeal, inadequately supported attacks are not

made. During the advance a commander does not call a subordinate commander back for discussion. The senior must go forward. The CO is quick to follow up success, thus maintaining the momentum. This is achieved best by deploying a fresh vanguard to resume the advance while the other one is rested and reorganized.

46. **Bypass Policy.** A clear bypass policy is given in both brigade and battalion orders. The fewest possible restrictions should be placed on bypassing to maintain the momentum of the advance, for example often be difficult to determine the exact strength of the enemy position. When ordering a position to be bypassed, the CO also orders that the enemy position is fixed or masked to prevent interference. Subsequently the bypassed position is engaged and eliminated.

47. **Coordination.** In all actions coordination by the battalion CP is essential, without unduly restricting the freedom of action of company commanders. In particular the CP:

a. keeps track of all encountered enemy positions to ensure that they remain picquetted until destroyed or until handed over to the brigade main body;

b. ensures that guns and mortars are given route priority and that the vanguard and reconnaissance force are not out of range of indirect fire support;

c. ensures that company assaults have proper indirect fire support available, especially critical when one sub-unit is continuing the advance while another is dealing with bypassed enemy positions; and

d. when advancing on two axes, ensure that the lead elements on each are aware of the situation on their flank.

SECTION 5

ADVANCE IN CONDITIONS OF REDUCED VISIBILITY

GENERAL

48. It is essential to maintain momentum and give the enemy no chance to break contact, rest or further develop his defences. Planning calls for the advance to continue at night or under other conditions of reduced visibility.

BASIC CONSIDERATIONS

49. Before deciding to continue the advance under these conditions the CO must consider the following:

a. the information available on enemy dispositions;

b. the degree of visibility and enemy surveillance capabilities;

c. the availability and state of routes;

d. the condition of the battalion and the need for rest and maintenance; and

e. the need for additional control measures and navigational aids.

50. By night or in reduced visibility, more reconnaissance is required, both forward and to the flanks. The defender will tend to concentrate on the obvious roads or tracks and, therefore, minor tracks and trails should be exploited. Bounds may be closer to enhance control.

51. The enemy will employ night observation equipment and weapon sights. Once contact has been made, the use of light and smoke may assist in defeating these. The battalion should use only passive observation devices until contact has been made.

SECTION 6

THE PURSUIT

GENERAL

52. As soon as the enemy is forced off balance and loses the initiative he should not be allowed to regain it. The aim of the pursuit is to inflict maximum destruction on the enemy's fighting elements, headquarters and logistics installations.

53. The pursuit and the advance are very similar insofar as tactical handling and grouping are concerned. They differ fundamentally in the enemy situation. The pursuit follows the defeat of an enemy whose degree of cohesive resistance, coordination and morale has been considerably reduced.

54. A pursuit is normally conducted as part of a brigade operation and should not be confused with the exploitation of an attack.

FUNDAMENTALS

55. The pursuit is an extreme form of advance, in which boldness and the maintenance of momentum must be emphasized above all else. The unit takes risks that it would not normally take. Enemy positions are bypassed where possible. Gaps must be exploited and the battalion must thrust deeply into the enemy rear area without excessive caution for its own flanks and rear.

56. Sub-units must be given clear aims and the greatest possible latitude in attaining them — without losing total control at battalion level. Planning and battle procedure must be telescoped to achieve the greatest possible speed of reaction and advance. Control measures such as boundaries and report lines remain necessary but should be kept as few and as simple as possible.

CONDUCT

57. The enemy must never be given time to settle or to develop coherent defences. Constant contact must be maintained and minor opposition bypassed or brushed aside.

58. Calculated risks must be accepted, particularly on open flanks. To compensate, the CO must take care not to allow his force to become unbalanced. He must always maintain a reserve capable of dealing with any enemy counter action. He must avoid out-running his logistics.

59. Battalion communications will become over-extended, especially back to brigade and A echelon. The use of helicopters for rebroadcast/ relay and HF radio can compensate.

60. Avoid out-running the artillery support if at all possible. Even so, fire support may be limited and the battalion may have to rely solely on the Mortar Platoon and its direct support artillery.

61. Regrouping should be kept to the minimum during the pursuit to help maintain the momentum — but loss of balance at any stage must be corrected.

62. All commanders must be well forward to give personal direction. Greater use of radios may be permitted to control the operations of widely separated sub-units. Speed of action and movement will help compensate for any loss of security through communications.

SECTION 7

COMBAT SERVICE SUPPORT IN THE ADVANCE

GENERAL

63. The advance tests the efficiency and flexibility of the logistics system at all levels. Planning must begin as early as possible and the tactical and logistics plans must be developed together.

64. The battalion's main logistic concern in the advance will be the resupply of fuel and ammunition.

COMBAT SUPPLIES

65. The battalion and its companies should carry the maximum quantity of supplies possible, without reducing tactical mobility. Resupply must be brought forward to the company locations.

66. **Ammunition.** Expenditure is routine in the advance, becoming heavy only when an attack is necessary. Resupply of a sub-unit is possible from A1 echelon when a fresh company assumes the vanguard.

67. **Fuel.** Consumption is heavier in the advance than in any other type of operation, but daily topping up is usually sufficient with current vehicle ranges. A1 echelon must be prepared to do this company by company when the tactical situation dictates, rather than at a set time each day.

68. **Timing of Resupply.** The tactical situation facing each sub-unit will dictate the time of resupply. Anticipation by the battalion CP and A echelon is essential. In open country, resupply by night is still preferred. In close country, resupply in daylight will speed things up.

A ECHELON

69. A2 echelon normally remains under brigade control, unless the brigade is advancing on more than one axis. A1 echelon forms part of the battalion main guard and should be positioned well forward.

70. If water is likely to be a problem it should be held in A1 echelon.

71. If helicopter resupply is to be used, slinging equipment should be held in A2 echelon.

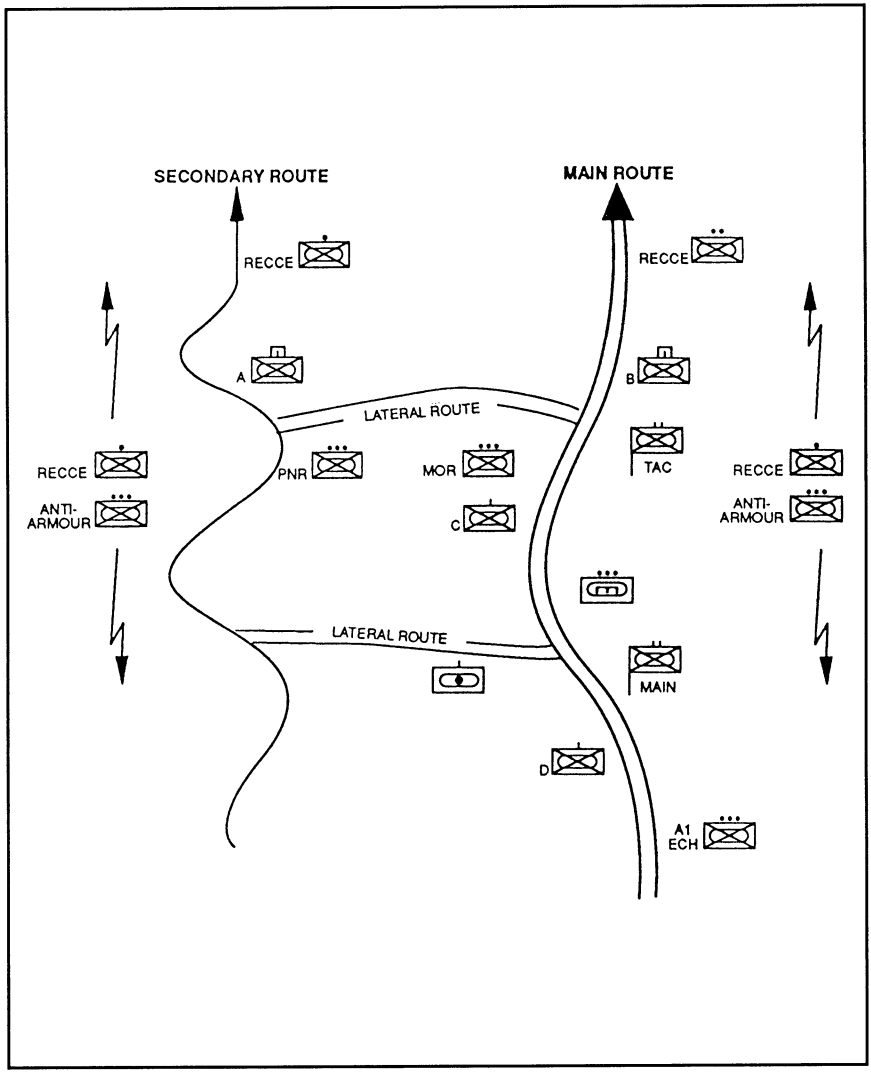
72. **Protection.** Administrative elements are responsible for their own local protection. Special protection parties from depth companies may be necessary during labour intensive tasks such as the movement or operation of DPs and dumps and the establishment and operation of resupply helicopter landing zones.

MEDICAL

73. Plans must be made for the provision of continuous medical support, by the coordination of the moves of the UMS with those of Field Ambulance sub-units.

74. Where possible, casualties should be moved to collecting points on the axis. Evacuation to the UMS will be by ambulance, A1 echelon vehicles or helicopter.

BATTALION AS THE ADVANCE GUARD ORDER OF MARCH AND GROUPING



CHAPTER 9

THE ATTACK

SECTION 1

GENERAL

INTRODUCTION

1. The attack is an offensive operation designed to defeat the enemy by fire and movement. Attacks are launched to destroy the enemy capability to resist and to seize important ground.

2. Attacks range from the instinctive hasty attack of a sub-unit, immediately on contact with the enemy, to a deliberate battalion attack against a well-prepared enemy position in his main defensive zone.

TYPES OF ATTACK

3. Attacks are classified as hasty or deliberate depending primarily on the amount of time for preparation.

4. **Hasty Attack.** The hasty attack is one in which preparation time is traded for speed in order to exploit an opportunity. The aim is to gain a measure of surprise and to take advantage of the relatively unprepared state of enemy defences.

5. **Deliberate Attack.** The deliberate attack consists of pre-planned coordinated employment of firepower and manoeuvre, including the full coordination of all available resources. This is set-piece attack against a well prepared defence and requires detailed reconnaissance, planning and preparation. Time is made available to concentrate greater resources and, if possible, to conduct rehearsals.

FUNDAMENTALS

6. The fundamentals for the attack are described in B-GL-301-002/FP-001 The Battle Group in Operations and are listed below:

a. shock action,

b. depth,

c. balance,

d. simplicity,

e. information gathering, and

f. reserve.

OTHER CONSIDERATIONS

7. **Surprise.** Every attempt is made to surprise the enemy. An attack from an unexpected direction at an unexpected time, during extreme weather, over difficult ground, using concealment and deception and infiltration, and in unexpected strength has a much greater chance of succeeding.

8. **Seize and Control Key Terrain.** The CO must seek to dominate that ground which gives the battalion a tactical advantage in observation, concealment, cover or fields of fire. The CO decides what constitutes key terrain in the battalion's area of responsibility and then concentrates his effort on seizing or neutralizing this terrain.

9. **Firm Base.** In the attack, the unit establishes a fire on base and manoeuvres around it. Firm bases may be established by forces which are to be used in later phases, which were used in previous phases, or which are dedicated for that purpose.

10. **Flexibility.** Few attacks proceed exactly as planned. Same subunits will be more successful than others and it may become necessary to switch the weight of the main thrust or to commit the reserve earlier

than anticipated. The CO must group his companies and supporting arms so that he can quickly exploit any success. The aim is to maintain the initial momentum and to retain the initiative.

11. **Security.** In addition to the security gained by manoeuvring around firm bases:

a. A secure attack position and line of departure (LD) are needed. Initial set-backs can easily upset the overall coordination of fire and movement.

b. Secure flanks are necessary.

c. Consolidate quickly on all objectives.

STAGES OF THE ATTACK

12. The stages of an attack are:

a. **Mounting Stage.** This includes all of the preparations which occur prior to H-hour. It involves —

1) reconnaissance;

2) movement of troops to the battle area and into the attack position;

3) issue of orders;

4) preparation of the fireplan; and

5) initial deployment of the attacking force.

b. **Assault.** This begins when the battalion lead assault elements cross the LD and ends when all objectives have been seized.

c. **Consolidation.** After securing the objective, the attacking force normally pauses, reorganizes and secures the objective against counter-attack. This provides a firm base for exploitation. The plan for this stage must be included in the initial attack orders.

SECTION 2

PLANNING THE HASTY ATTACK

ESSENTIALS

13. As a minimum of time is spent on reconnaissance, planning and coordination, the plan for a hasty attack must be sound but simple, capitalizing on speed and surprise. Success comes from intelligent anticipation by the CO.

14. Equally important, good battle procedure and well rehearsed drills are essential if the short time available is to be well used. Such an attack requires well trained troops who are led by confident, robust and decisive commanders.

15. Because of the limited time available for reconnaissance, information may be restricted to knowledge of the enemy position and the intervening ground. A greater emphasis must be placed on the use of direct fire weapons to support the assault, with indirect fire resources being left for on-call targets.

16. A hasty attack should be launched within 30 minutes of contact at company level and between 30 to 90 minutes from contact at battalion level.

COMBAT ESTIMATE

17. The CO and his tactical headquarters must be close behind the leading elements so that they can move rapidly to a position from which they can both observe and direct the battle. From that position he makes an estimate and plan as quickly as possible.

18. In the hasty attack the CO deals with the immediate task only. Ground is considered as approaches left, centre and right, examining:

a. cover/concealment,

b. obstacles,

c. positions for fire,

d. position for observation,

e. enemy, and

f. distance.

19. The fire plan must be kept simple, making use of all available guns and mortars. The plan must include covering fire during the assault and defensive fire during consolidation. The fire plan should be composed mainly of on-call targets.

ORDERS

20. Once the CO has completed his combat estimate and plan he must issue orders immediately, often by radio to save time. An option is for depth company commanders to have moved forward to the CO's location to receive quick face-to-face instructions. The company commanders can then meet their sub-units en route to the attack positions. Although this takes good training and well developed drills, it ensures clarity, good coordination and security.

21. The CO balances the need for speed with the need for control and coordination and the desire to achieve surprise. First he issues a warning order to initiate essential reconnaissance and preliminary moves. Then he prepares his orders including the following:

a. information, however incomplete, about the enemy;

b. the mission;

c. tasks of the sub-units;

d. essential coordinating instructions:

1) H-hour (often best given once sub-units report in position),

2) the attack position and routes to it,

3) order of march into the attack position,

4) line of departure,

5) axis,

6) target lists,

7) consolidation, including exploitation limits; and

e. HQ and his own location(s).

SECTION 3

CONDUCT OF THE HASTY ATTACK

TROOPS IN CONTACT

22. When the lead company is stopped the unit hasty attack is necessary. The company in contact continues to engage the enemy while the rest of the unit manoeuvres into position. The initial task of the sub-unit in contact is to win the fire fight and fix the enemy with direct fire. Reconnaissance elements must continue to observe and report on the enemy.

DEPLOYMENT

23. The enemy position will continue to be engaged. Indirect fire support weapons, if moving, are ordered to deploy and engage. Fire on the enemy position is intensified to cover the assault. The assault force moves through the attack position without stopping. Final adjustments to fire support and coordination are completed as this movement occurs.

THE ASSAULT

24. The assault element may be a mix of tanks and infantry. It will also include FOOs/MFCs and engineer/pioneer elements. The aim is to concentrate the greatest possible weight of fire power to support the assaulting force. During the crucial stage the infantry close with and destroy the enemy.

FIGHTING THROUGH THE OBJECTIVE

25. If the information about the enemy is correct, there should be few obstacles to hold up a determined assault force with effective fire support. The break-in to the enemy position should be achieved without loss of impetus. Fighting through the objective by sections using fire and movement, with supporting fire continues without pause.

26. Maintaining the momentum and winning the fight on the objective depends on the initiative and leadership and knowledge of junior com-

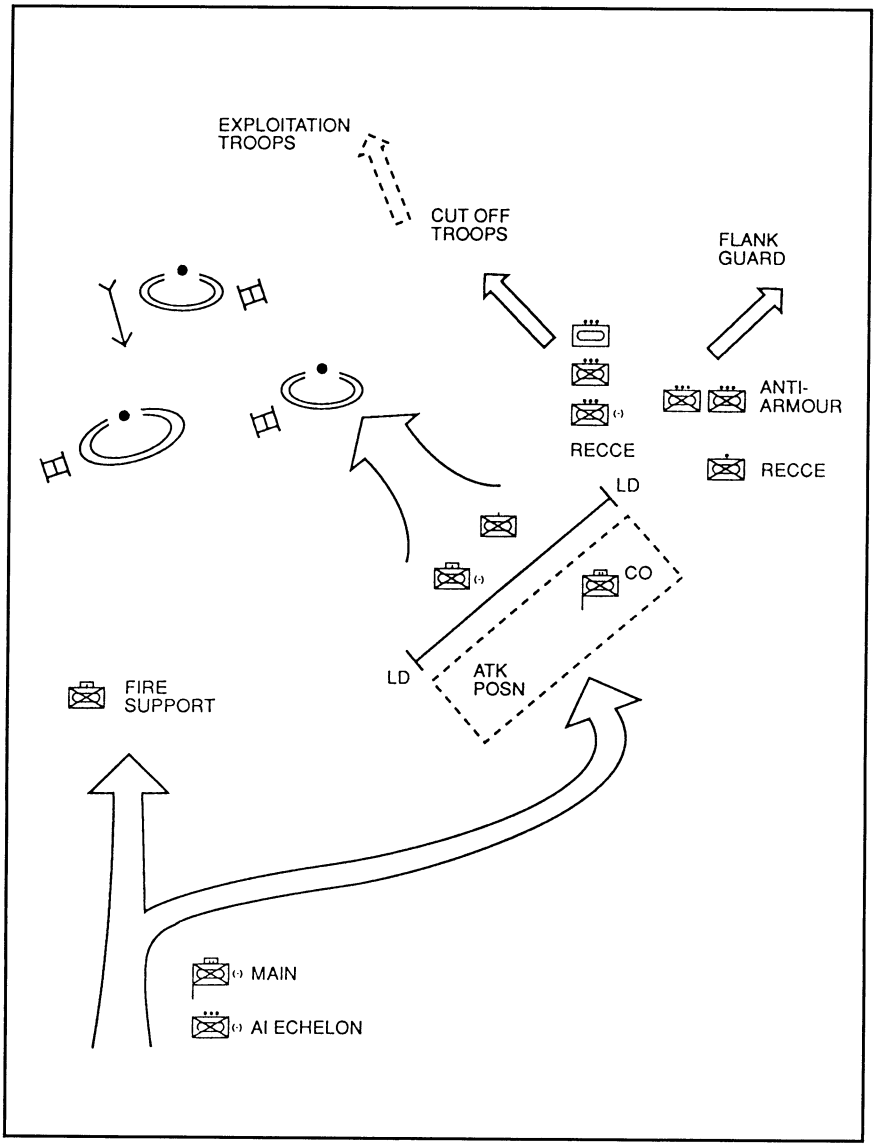


Figure 9-1 Battalion Group Hasty Attack

manders. The CO holds his small reserve ready but does not commit it unless it is necessary for success. Once the reserve is committed the unit is a spent force and another unit will have to take over the lead.

CONSOLIDATION

27. The CO and sub-unit commanders must lose no time in coordinating the reorganization and adjusting plans to take account of the actual situation, including casualties suffered during the assault.

28. Consolidation should include:

a. the deployment of tanks and anti-armour weapons forward and to the flanks to provide a framework of anti-armour defence and to give depth to the position;

b. if the objective is to be held, the coordination and occupation of hasty defensive positions by the assaulting infantry, either by digging fresh defences or by improving those left by the enemy;

c. placing the infantry who must remain on the objective under cover and dispersing the remainder as quickly as possible, to minimize the effect of the almost inevitable enemy artillery reaction;

d. the confirmation and adjustment of previously planned artillery and mortar defensive fire targets; and

e. the move forward of battalion support weapons not involved in the assault.

29. The time required by the infantry to secure and clear the position must not be underestimated. Each trench and bunker must be cleared and searched, prisoners assembled, disarmed and casualties collected and treated. Dismounted troops rejoin their vehicles. Depending on casualties, there is a redistribution of personnel, commanders, weapons and ammunition.

30. If speed is important, it is thus best to pass through the uncommitted company to continue the advance.

EXPLOITATION

31. A pure infantry force is not ideal for exploitation. Armour if the terrain is suitable, is best.

32. Exploitation must be quick, bold and should be executed by a mobile, predominantly armoured force.

33. It should normally be carried out by the leading tanks in the assault element or by those which have been providing covering fire.

34. The exploiting force need not delay until the objective has been totally secured. Overall momentum is best maintained by pushing the exploiting force through or around the objective once the assaulting infantry has established its foothold.

SECTION 4

PLANNING THE DELIBERATE ATTACK

GENERAL

35. The deliberate attack is mounted against well prepared and organized defences. Detailed planning and preparation are required with the full coordination of all available resources.

36. Time must be allowed for thorough reconnaissance, preferably to section level, and possibly to rehearse elements of the attack. Failure to allow this time results in a hasty attack being made against a deliberate attack objective.

37. Assaulting troops are likely to have little room for lateral manoeuvre and this must be compensated for by heavy fire support.

38. The deliberate attack may be conducted at night and may involve minefield breaching or river crossing.

39. In the following examination of the deliberate attack it is assumed that the battalion has some freedom of action and is not constrained by a brigade plan.

ESSENTIALS

40. The following essential points apply to all types of deliberate attack, regardless of visibility, weather and terrain:

a. **Surprise.** The aim is to achieve surprise in the time and direction of attack. As more time is available, deception measures should be more elaborate and effective.

b **Maintenance of Momentum.** This is essential to retaining the initiative and preventing counter-attack and counter-penetration actions from being launched. Attack momentum is achieved by —

1) **Attacking in Depth.** To achieve enough concentration of force, the attack may have to be conducted in phases.

Reserves must be available for each phase to deal with the unexpected.

2) **Maximum Fire Support.** All available battalion weapons, plus supporting arms and fire from neighbouring units, are employed.

3) **Impetus.** The assault force must keep as close as possible to the direct and indirect fire support. Offer the enemy no respite.

4) **Balance.** Correctly grouping the force for each phase of the attack, maintaining reserves of fire-power and manpower, will permit modification of plans, the rapid exploitation of success and the retention of the initiative at all times.

5) **Rapid Consolidation.** When captured each objective must be organized immediately for defence. Consolidation must be completed with a minimum of delay to enable subsequent phases to be launched.

c. **Security.** The LD must be secured. Nothing can disrupt an attack more effectively than to have it bog down on the LD through unexpected enemy action before the initial momentum has been gained. The flanks of the assault force must also be protected against enemy positions that are sited in support of the objective area. This protection can be terrain or suppressive fire from the firm base.

BATTLE PROCEDURE

41. The CO warns his orders group of the impending operation and the company commanders use this information to warn the soldiers of the task and to commence preparations.

42. Once the CO has determined his aim he must obtain the fullest possible information regarding the enemy's defensive layout and reserves and the ground. To gain the information for his estimate the CO may initiate a detailed collection plan. He will definitely spend time on reconnaissance with his advisors and subordinate commanders before making a final plan (time spent on recce is seldom wasted).

43. For a deliberate attack the overall reconnaissance plan is made by the CO. Some parts of the reconnaissance may have to be delegated to subordinate commanders. Some aspects, particularly when the terrain is close, may have to be tasked to special patrols. When patrols are being used to gain information it may be necessary to probe the enemy defences and so force him to react by fire.

44. If possible the ground should be studied from different vantage points. Careful reconnaissance will sometimes reveal concealed approaches through difficult terrain, thereby gaining surprise.

45. Great care must be taken during all reconnaissance efforts to ensure that the timing and direction of assault are not inadvertently compromised. Forward reconnaissance before any attack is a most dangerous operation unless great care is taken. Reconnaissance parties must carry a minimum of information and codes with them in case of capture.

THE ESTIMATE

46. The aim of the attack is derived from the task given to the unit in the brigade order. Usually, this will include an objective to be captured. The CO must be aware of the significance of the battalion's mission toward the achievement of the brigade commander's aim. He must also be aware of any limitations imposed upon him, such as a time limit, or any restriction on manoeuvre.

47. The sub-unit commanders should be given the widest possible scope for initiative. In a deliberate attack there may well not be much latitude permissible beyond that of committing his small reserve.

THE FACTORS

48. **Enemy.** Known locations, relative strengths and intentions must be considered and deductions made regarding:

a. the sub-unit objectives;

b. grouping;

c. types of weapons needed to neutralize enemy weapons;

d. measures needed to counter enemy air;

e. flank protection required;

f. measures to counter enemy surveillance devices;

g. pioneer/engineering tasks;

h. size of reserve;

j. a phased attack; and

k. intelligence.

49. **Ground:**

a. The CO should be able to deduce what areas are particularly good going for vehicles and dismounted infantry, what areas are suitable for assembly areas, where the limit of exploitation should be and what is vital ground to the enemy.

b. Having deduced vital ground, the CO must further determine what constitutes key terrain to the enemy (necessary for the defence of that vital ground). The capture of the enemy's vital ground may well negate the remainder of his defence and will definitely draw an enemy counter-attack. The capture of key terrain will seriously weaken the defence of his vital ground.

c. Next the key terrain and the approaches to it must be examined in detail. From this the CO will determine what important ground must also be captured, and in what sequence. This may indicate a need for phasing the operation. He will also deduce the plan for consolidation.

d. Having decided from a study of the enemy and ground what ground (objectives) he must seize, the CO must decide how to get there. He should examine a number of alternate approaches. At battalion level, the approach options will usually be limited to either frontal or left or right flanking. Each approach is examined throughout its length from within a secure assembly

area through the entire depth of the enemy objective area, considering going, cover and concealment, obstacles, distance, width or frontage possible and enemy ground dominating. The CO must then draw deductions for each approach regarding:

1) assault frontage possible,

2) grouping,

3) suitable areas for attack positions, LD and dismount areas,

4) measures and resources needed to breech or avoid obstacles,

5) measures needed to neutralize enemy observation and fire,

6) need for flank protection,

7) time needed,

8) need for phasing, and

9) suitable areas for consolidation.

50. **Own Troops.** By examining his own resources and any attachments available, and the likelihood of obtaining more resources if necessary, the CO will deduce:

a. the groupings necessary, including regrouping necessary during the attack;

b. number of fire units available;

c. the need for liaison and fire coordination with flanking and forward units;

d. the initial locations of battalion headquarters and A1 and A2 echelons; and

e. the locations of the assembly area, attack positions and LDs.

51. **Meteorology.** The CO must consider daylight, darkness, moonlight, weather and its effects on smoke, air support and enemy alertness and deduce:

a. day vs night attack; and

b. special measures needed to overcome reduced visibility.

52. **Time and Space.** The CO's purpose in considering this factor is to determine the timing of the attack and when to start assembly and deployment. The CO must deduce:

a. the latest possible H-hour;

b. starting times for deployment in relation to H-hour; and

c. confirmation on whether the attack should be by day or night.

53. **Assessment of Tasks.** The CO must assess the number of manoeuvre elements needed on each approach (including reserves and flank protection elements) and the number of fire units needed. The CO can then decide:

a. the feasible approaches;

b. whether more than one approach can be used simultaneously; and

c. the need for phasing the attack.

COMMAND AND CONTROL

54. In order to achieve his aim, the CO must be able to exert direct influence on the battle. A good plan is not enough he must be prepared to fight his plan through to success. Good communications and, where possible, direct observation of progress are most important.

55. When observation is good the CO and his tactical headquarters may establish an OP. When the attack includes more than one phase

it is important for the CO to increase his personal control by moving to an intermediate objective as soon as it is secure.

56. The risk of loss of command and fire control communications through enemy action may influence the CO's location. The loss of the CO part way through the attack does little to enhance the chances of success, but such a loss is usually a very real possibility if the CO is to be in a location which enables him to exert personal command. The chain of command must be absolutely clear in everyone's mind to ensure no loss in momentum.

ORDERS AND BRIEFINGS

57. Security and the level of detailed preparation necessary make radio orders inappropriate for the deliberate attack. Oral orders should be issued at battalion level. These may be supported by a few confirmatory notes or, more frequently, a map overlay. Full, formal verbal orders should be issued down to section level.

58. The battalion orders group members must be practised in taking their own necessary notes at the CO's verbal orders.

59. When time permits, in addition to giving formal verbal orders, the CO may personally brief the battalion, company by company, to ensure that all members of each sub-unit understand the part they must play in the overall battalion plan. If the CO is unable to do this, due to lack of time, each company commander should brief his entire sub-unit group. These briefings will be conducted in the assembly area.

CONCENTRATION AND REHEARSAL

60. For a deliberate attack troops may concentrate in areas well to the rear where they are not likely to be subject to enemy interference. Reconnaissance, planning and the issue of orders normally occur during this concentration process.

61. Troops are briefed and, if time permits, rehearsed in the part they will play. Rehearsals should be conducted over ground and in conditions as close as possible to those likely to be met in the attack.

SECTION 5

CONDUCT OF THE DELIBERATE ATTACK

MOVE TO THE ATTACK POSITION

62. The routes and timings for movement from the assembly areas to the attack positions are detailed in the CO's orders. Separate routes should be used for fighting vehicles and mounted troops and for dismounted troops.

63. It may be necessary to mark the routes and the attack positions and provide guides to assist movement to and within the attack positions. These routes should be hidden from enemy observation and direct fire. If this is not possible action must be taken to deny enemy observation of movement to the attack positions.

64. In a deliberate attack it will be quite normal for the battalion to find itself moving through a forward unit in contact. In this case route marking/guiding responsibility may be assumed by the unit in place.

65. The order of march of the battalion must be such that there is no confusion in the attack positions, or en route to them, and that subunits do not have to move through each other.

ACTION IN THE ATTACK POSITION

66. As the battalion moves into the attack position the troops and supporting arms deploy quickly into assault formations. Due to proximity to the enemy there is no digging and no lights.

67. Little time is spent in the attack positions. Commanders position their forces and space them correctly. This is an extremely vulnerable time for any assaulting force.

68. Platoon and section commanders indicate to their men the LD, the direction of the attack and a clear detailed description of the objective.

MOVEMENT TO THE OBJECTIVE

69. The LD is normally the forward edge of the attack position. Movement forward across the LD is done in attack formation. Attacking troops do not halt on the LD.

70. At H-hour the leading troops cross the LD. The assault elements must expect to come under enemy fire from this point on. Infantry commanders at each level must:

a. maintain the rate of advance to keep the assault troops as close to the supporting fire as possible;

b. check to ensure direction is maintained;

c. keep in contact with troops on his flanks;

d. ensure that correct distances and formations are maintained; and

e. pass back all information regarding enemy and progress.

FINAL ASSAULT

71. The CO and/or company commanders may establish additional control measures in the form of designated assault positions, with an assault line at the forward edge of each. This is normally the position where mounted infantry dismount for a final assault on foot.

72. The covering fire of direct and indirect weapons will allow the infantry to close with the enemy. Providing this fire is effective, the need for fire and movement within companies and platoons should be unnecessary until the latter stages of the assault.

73. Indirect fire will lift first and engage targets in the rear. At this point direct fire from tanks and battalion support weapons must engage the enemy just ahead of the assaulting troops.

74. When the assaulting infantry are accompanied by tanks, the tanks will normally adopt fire positions in or near the assault position to help cover the dismounting operation. These tanks will then advance

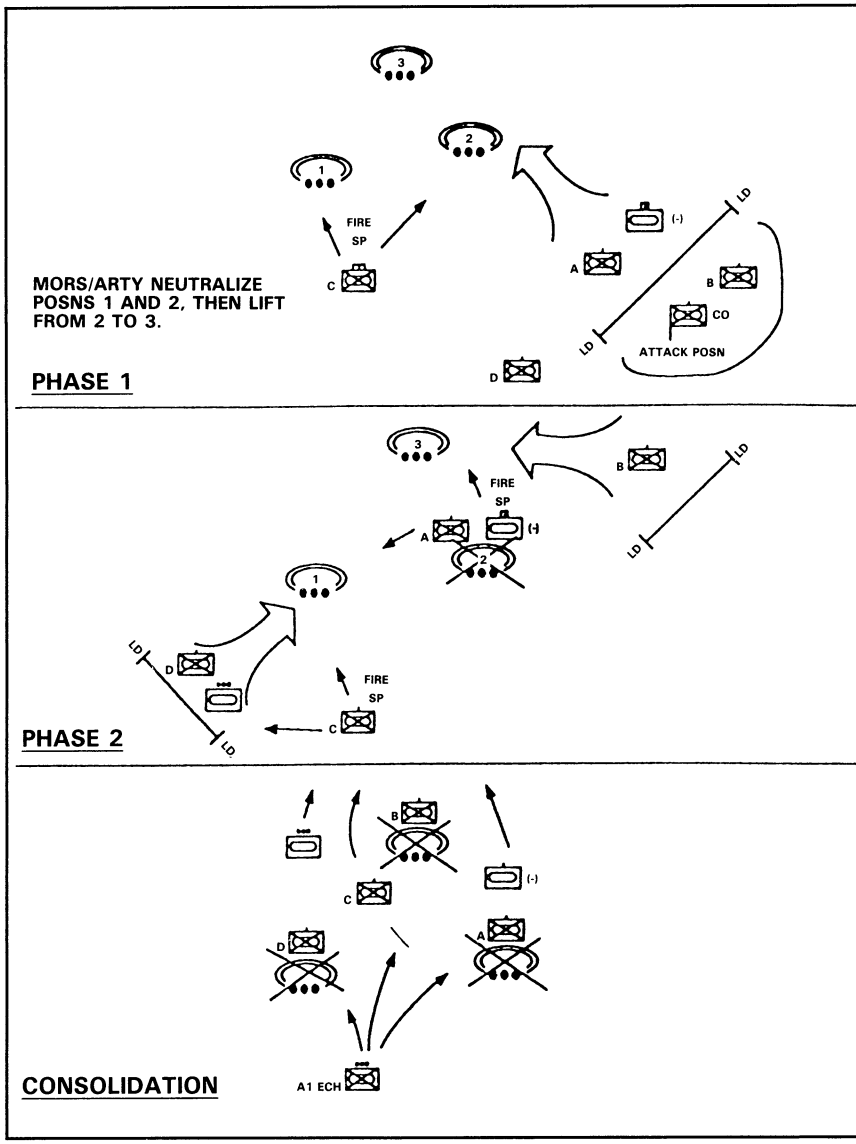


Figure 9-2 Battle Group Deliberate Attack

from fire position to fire position continuing to provide close fire support and shock presence during the final assault.

75. Whether on the same axis as the infantry or on a converging axis, the tanks must arrive on the objective immediately after the leading infantry.

FIGHTING THROUGH THE OBJECTIVE

76. Once on the objective assault battle drills take over and the final fight onto and through the objective becomes a platoon and section commanders' battle.

77. The attack continues until the objective is captured. As the troops fight their way through the objective firing can be expected from enemy who have been previously unlocated, or who have not been effectively neutralized by supporting fire. Company commanders and the CO now influence the battle by anticipating such events and reacting with reserves and support fire.

78. Any hasty plan made to overcome the unexpected should cause the minimum possible modification to the original attack plan formations and grouping. Passing fresh troops through an assault element that has lost momentum is usually undesirable as the use of that approach is obviously difficult. A different approach allows the original assault element to support the fresh assault with fire and keeps pressure on the enemy.

EXPLOITATION

79. The CO must be ready to seize any opportunity for exploitation whenever the enemy has been pushed off balance. The idea of exploitation and retaining the initiative must be firmly implanted in the minds of all ranks in the assault force.

80. In the deliberate attack the opportunities for large scale exploitation by the battalion will usually be quite rare. It is unlikely that a battalion would be able to provide more than one company for exploitation. The CO's limit of exploitation should therefore include no more than one company objective.

81. Exploitation in strength is only likely where enemy defences crumble unexpectedly. In this case exploitation will probably take the form of a hasty company attack against an objective not previously included in the battalion tasks. This is where speed and initiative, within the general framework of the overall deliberate attack plan, will pay very large dividends.

CONSOLIDATION

82. While the hasty attack is normally part of an advance, the deliberate attack is more likely to involve holding the ground taken for a time. Preparation for a deliberate defence, including the construction of field defences and the tasking of OPs and patrols, may start at this stage.

83. The CO, with his tactical headquarters, arrives on or near an objective as soon as it is secure. He conducts an immediate reconnaissance and decides on any adjustments or confirmation of orders for the launching of subsequent phases or for the final consolidation.

84. Once all battalion objectives have been secured the CO must quickly:

a. establish on-the-spot control;

b. confirm the new position of his headquarters;

c. make any adjustments necessary to the consolidation plan and ensure full coordination between companies;

d. modify the indirect fire support plans;

e. ensure the organization of a proper armoured defence framework;

f. establish surveillance forward; and

g. reassess and, if necessary, modify exploitation plans.

SECTION 6

THE ATTACK IN CONDITIONS OF REDUCED VISIBILITY

GENERAL

85. An attack in reduced visibility can:

a. achieve greater surprise;

b. minimize the effect of enemy fire or enemy air support; or

c. reduce the chance of an enemy armoured counter-attack before consolidation is complete.

86. Despite increasingly sophisticated and numerous surveillance aids, both defending and attacking forces are still hampered by reduced target acquisition and engagement ranges and by difficulties in movement and command and control.

87. For the attacker these difficulties tend to be offset by the opportunity to close with the enemy undetected. Conditions of poor visibility often provide favourable conditions for a **carefully planned** attack.

88. The need for thorough preparation normally precludes a hasty attack, except in the extreme case of the immediate counter-attack in defensive operations. In general an attack mounted by night is likely to be deliberate.

89. The principles and procedures for an attack in reduced visibility remain the same as those previously discussed, but certain factors require particular attention:

a. **Simplicity of Plan.** To assist in control. Regrouping must be minimized.

b. **Reconnaissance.** Detailed day and night reconnaissance, if possible down to section level, is necessary.

c. **Preparation.** To ensure that troops get onto their objectives and consolidation is correct, preparation must be thorough. Detailed rehearsals are needed. This does not preclude the hasty attack at company level, but such an attack must be limited in scope.

SILENT/NOISY ATTACKS

90. **Silent:**

a. The silent attack contributes more to the achievement of surprise than any other tactic or ruse, but it is very difficult to achieve in the face of modern surveillance devices. Measures must be taken to limit their effectiveness by —

1) destruction by direct and indirect fire that appears routine rather than preparatory to anything,

2) creating a diversion, and

3) taking advantage of adverse weather conditions; and

b. The silent attack is conducted with fire support on call until detected by the enemy. The main problem for the attacker is that he may not know when he has been detected and call for fire support too late.

91. **Noisy.** The noisy attack uses all available fire support from the outset. Deception measures should be taken to conceal the place, scope, direction and timings of the assault. This type of attack is used when there is little chance of surprise by stealth.

PREPARATION

92. The preparatory stage for an attack in reduced visibility is similar to the first stage of a daylight attack. However, the following special factors must be considered in planning:

a. A phased attack is usually extremely difficult to conduct.

b. Objectives have to be more limited in frontage and depth because visual control is difficult, scope for support by artillery, mortars

and tanks against unforeseen targets is restricted, and because direction and distances are most difficult to estimate.

c. The rate of advance is much slower depending on the terrain and visibility, and limits of exploitation are shorter due to the confusion likely to occur during the final stages of the attack.

d. Easily identified boundaries must be laid down. The axis, which must be carefully selected, can be indicated by —

1) compass bearings;

2) using natural or artificial features such as spurs, creeks, timber edges, fences and tracks;

3) tracer from armoured vehicles or machine guns on fixed lines;

4) lights and flares; and/or

5) tapes laid by navigation parties.

e. The distance travelled must be measured. Distance can be verified by pace checkers, radar or drums of tape or cable.

93. Conditions of reduced visibility facilitate the use of infiltration. Movement may be restricted to roads and tracks to maintain direction and cohesion. Deployment into assault formations oocurs as late as possible. Objectives should be easily identifiable and reduced in width and depth. Intermediate objectives may be required. Even if the plan calls for an assault without preparatory fire support, indirect fire must be on call.

94. **Manoeuvre.** Special attention must be given to the manoeuvre plan. Disorientation can be fatal to the night attack risking delay, confusion, loss of surprise and troops blundering unprepared into the enemy or each other. The plan should be designed from the outset to minimize the difficulties of navigation by selecting easily identifiable routes, axes, LDs and objectives. Furthermore, every possible aid to navigation should be provided both during preliminary deployment and the assault itself.

95. **Illumination.** The surveillance and target acquisition plan will contain both passive and active phases. All elements of the battalion may not adopt the active phase simultaneously, for example the assault may remain passive while fire support weapons are actively illuminating and engaging the objective. Passive surveillance devices and weapon sights should be re-allocated if necessary so that the assault, fire support and flank protection elements all have an adequate passive target acquisition and engagement capability. Illumination targets should include objectives, other identified enemy positions, possible blocking positions, and likely axis for the deployment of enemy reserves and counter-attacks. Additional tasks may include deception, blinding enemy surveillance devices or help in navigation.

96. **Fire Plan.** The fire plan must be based primarily on the use of all available indirect fire to support the attack, as long range direct fire, except from thermal imagery equipped tanks and anti-armour weapons will be much affected by poor visibility and obscuration. Illuminating tasks should be carried out by mortars to release the maximum weight of artillery for HE tasks. The most effective direct support is likely to be that provided at close range by intimate support tanks in the assault.

97. **Weather.** Visibility may change very quickly as fog lifts or as bright moonlight is obscured by clouds. The plan must allow for such changes and in particular for the situation where the attacking element is suddenly exposed to view.

THE ASSAULT

98. Arrangements must be made for any necessary taping or lighting of routes forward to the attack positions, the attack position itself and the LD. Guides must be provided to lead the assault troops into the attack position and to their position in it.

99. The move to the objective requires detailed planning and close control to ensure that assaulting troops maintain direction, rate of advance and formations. Depth companies will often adopt a file formation for control until close to the objective.

100. Careful coordination is necessary to avoid clashes between friendly forces. Each element must be aware of the movement of all other elements and clear boundaries must be established.

101. Fighting through and mopping up are much more difficult under these conditions. Small parties of enemy are easily missed and mopping up may have to wait until, or be redone, after visibility improves.

102. Plans for the use of the reserve must be kept very simple. The risk of confusion and clashes is greatest when passing one sub-unit through another.

CONSOLIDATION

103. A quick, well-coordinated consolidation is vital and yet far more difficult here. The forward movement of support elements must be carefully coordinated to avoid clashes.

104. Defences should be kept compact to assist in control but troops will normally find themselves bunched or exposed when visibility returns. All commanders must be alert to this risk and adjust their positions as soon as necessary.

105. The lack of visibility and difficulty in mopping up emphasize the need for:

a. planning the consolidation in greater detail;

b. companies and platoons recognizing where they are, and holding any found stragglers in their area;

c. a high degree of all-round defence within platoons and companies;

d. guides and escorts to bring F echelon support elements forward; and

e. tight control over all movement, both forward and to the rear.

SECTION 7

INFILTRATION

GENERAL

106. Infiltration is a technique employed to pass troops undetected through the enemy's forward defences in order to:

a. seize undefended key terrain;

b. attack enemy depth positions, gun areas or counter-attack forces, and then withdraw;

c. seize and hold enemy depth battle positions; and

d. support other attacks.

107. Infiltration is most frequently carried out by infantry on foot. It is conducted during reduced visibility or when the enemy's defences are widely dispersed.

108. The insertion of troops behind the FEBA by helicopter is another form of infiltration.

109. Infiltration by its nature may require the infiltrating force to act independently, from the main body; therefore, planning and intelligence are more detailled in the preparatory phase.

MOUNTING

110. The assault element must be strong enough for its task but small enough to avoid detection.

111. An assault force on foot will not carry heavy weapons. To compensate for this:

a. all objectives must be in range of our artillery; and

b. plans must be made to reinforce the assault element with tanks and anti-armour weapons as soon as possible after the attack, if the force is to stay in location.

112. All routes must be secure from enemy observation and fire. Small parties using multiple routes are preferable to larger groups moving on only one or two routes.

113. Patrols should be tasked to screen the advance and cover the flanks of the infiltrating force. Behind this screen, guides may be deployed at critical points, RVs and attack positions. Simple control measures are vital to prevent confusion and clashes between infiltrating groups.

114. All possible passive and active measures should be taken to ensure surprise. In addition to any other deception plan, noise, light and artillery fire should be on call to distract or confuse the enemy if any infiltrating group is detected.

115. The force should be self-sufficient in ammunition, supplies and medical support until link-up can be achieved.

DEPLOYMENT

116. Every effort must be made to reach the attack position by stealth. This demands high standards of training, navigation and light and noise discipline throughout the battalion. Security patrols will move immediately ahead of the infiltrating force to prove its routes, clear or report any opposition to be avoided, and secure its attack position.

117. If the opposition is located or contact made en route to the attack position, the commander must decide between:

a. attempting to bypass the enemy or diverting to another route;

b. withdrawing the party using that route and continuing with a reduced force; or

c. fighting through the opposition, with the probability of losing surprise.

118. Once the infiltrating force reaches the attack position efficient control measures are necessary to avoid confusion and prepare for the assault. From the attack position the attack will continue on conventional lines dictated by the organization and equipment of the attacking force, the ground and the visibility.

SECTION 8

COMBAT SUPPORT IN THE ATTACK

ANTI-ARMOUR COMPANY

119. The battalion anti-armour company provides:

a. anti-armour fire support from a firm fire base;

b. flank protection during the assault; and

c. immediate anti-armour defence during consolidation.

120. Some elements of the company may be attached to the assault companies for flank protection over a long approach and to be immediately available on consolidation. General battalion flank protection will be controlled by battalion headquarters.

121. The company is also able to assist in LD security. Thereafter its elements would be sent forward during consolidation or kept as the battalion anti-armour reserve.

MORTAR PLATOON

122. The primary task of the mortar platoon in the attack is the neutralization of known or suspected enemy positions — both those being assaulted and those that can affect movement on the approaches selected.

123. The mortar platoon will not usually provide fire for a timed programme. The CO will normally keep the mortar fire on call and for consolidation, unless the availability of artillery and gun ammunition is inadequate.

124. As it is undesirable to redeploy mortars during the attack, unless absolutely necessary, base plate positions must be sited well forward. If they must be moved the platoon will leap-frog forward, one group at a time.

125. If the mortars have fired during the preparatory stage, they must redeploy prior to the assault stage. Immediately after success, the mortars are brought forward for consolidation to support subsequent phases.

126. Control of the mortars remains centralized at the battalion FSCC throughout.

RECONNAISSANCE PLATOON

127. During the preparation of the attack the platoon has an obvious information gathering role. The platoon is ideally suited for marking routes forward and guiding sub-units into their attack position. The platoon may also secure company LDs.

128. During the move forward to objectives the platoon may be able to mark routes and guide the assault elements through or around obstacles, although this depends on whether or not the terrain or visibility conditions will permit this, providing sufficient masking of enemy fire.

129. Snipers attached to assault companies or the fire base can be used against enemy key personnel.

130. During consolidation the platoon moves forward quickly to reassume its role of forward and flank reconnaissance. Snipers with the assault companies remain to help fight off an enemy counter-attack. The primary targets are enemy commanders which will add to the enemy confusion and hinder his reorganization.

ASSAULT PIONEERS

131. In the attack, the assault pioneer platoon may have the following tasks:

a. the reconnaissance and marking of enemy minefields;

b. the destruction/breaching of artificial obstacles (eg employing bangalore torpedo);

c. the clearance of a route for vehicles; and

d. the destruction of enemy defensive works and bunkers.

132. The platoon may remain under unit control or be attached, by sections, to assault companies. If it was engaged in obstacle breaching it would remain under central control. Obstacle breaching is discussed in Chapter 10.

133. If their primary task is to assist the assault troops to get on the objective, sections will be attached to the rifle companies. Any uncommited pioneer section moves with the CO's tactical headquarters.

SIGNAL PLATOON

134. The normal distribution of radio sets is usually sufficient to meet radio requirements in the attack. The signal officer must examine distances and terrain to determine the need for radio relay.

135. If line is to be laid during consolidation it is important that line parties be well forward and ready to go to work as soon as objectives are taken.

MACHINE GUNS

136. The vehicle machine guns located throughout the battalion have three main roles:

a. fire support from a firm fire base in support of the assaulting companies;

b. close fire support in the assault, particularly during and after troop dismounting; and

c. suppression of enemy positions threatening the flanks of the assaulting force.

137. Machine gun tracer fire may also be used as a directional aid, marking either the axis or either flank. This would be provided by a reserve company or by specifically designated combat support platoon detachments. Additional ammunition is needed for this task.

138. Immediately after success on any objective, assault company machine guns are brought forward to assist in defeating the enemy

counter-attack. This may mean simply bringing the company vehicles forward onto the objective. In difficult terrain it may mean dismounting some guns and man-packing them onto the objective. Either way, the machine guns should form part of the assault company's consolidation.

RIFLE COMPANY CARRIERS

139. The APC provides limited protection, good communications down to section level, and mobility close to that of the tank. Ideally the infantry should remain in the vehicle for as long as possible. Against light resistance the infantry may actually dismount on the objective. If, however, the infantry must truly fight they must dismount to do so. The difficulty is deciding where to dismount.

140. The obvious advantages of remaining mounted must be tempered by:

a. the danger that APCs and rifle sections can be lost to effective enemy anti-armour and heavy machine gun fire; and

b. infantry orientation problems immediately on dismounting. This short but vulnerable period must not occur under heavy, effective enemy fire.

141. A decision is made where to dismount the assaulting infantry having considered enemy capabilities and the terrain. An ideal dismount area should:

a. be easily recognizable;

b. be in dead ground or screened from enemy direct fire;

c. be large enough;

d. not be an obvious enemy indirect fire target; and

e. be within foot assault range of the objective.

142. **Dismounting Well Short of the Objective.** Dismounting beyond the range of enemy small arms and SRAAW is usually mandatory when

tanks are not available or cannot participate in the assault. It is in effect a dismounted attack and is conducted when:

a. the enemy have very strong anti-armour defences;

b. visibility is very poor;

c. obstacles prevent vehicle movement.

143. **Dismounting Short of the Objective.** Dismounting within range of enemy aimed small arms fire and SRAAW (between 125 m and 600 m from the objective) is the most usual drill. Suitable dismount areas closer than 125 m are unlikely to exist as the dismount can no longer be covered by supporting artillery and mortar fire. The infantry vehicles, each with driver and a crew commander, provide suppressive machine gun fire during the dismount, and continue to provide this fire until masked by the assaulting infantrymen. Depending on the shape, size and location of the dismount area, some empty section vehicles may be able to manoeuvre left or right to be in a better position to provide sustained suppressive fire. Indirect fire remains on the objective until the infantry assault is within the danger area, and then lifts to enemy positions in depth. On success the empty vehicles are called forward to the objective as part of the consolidation.

144. **Dismounting on the Objective.** In this case the leading vehicles stop on top of the line of the forward enemy defences. The vehicles may stop in the centre of the enemy position but this is very dangerous as the vehicles and dismounting infantry are surrounded at the most vulnerable moment. Dismounting on the objective should be considered when:

a. enemy anti-armour defences are very weak;

b. the enemy position has strong wire obstacles or anti-personnel mines just forward of the position;

c. the attack is into the weight of enemy small arms fire; and

d. the vehicles are able to reach the objective very quickly, due to enemy weakness, excellent terrain and our suppression of enemy fire.

145. **Dismounting Beyond the Objective.** This may be dangerous because the location may be exposed to fire from enemy positions in depth.

SECTION 9

SUPPORTING ARMS IN THE ATTACK

ARMOUR

146. The principal tasks of armour in the attack are:

a. to provide direct fire support to the assault troops;

b. to provide intimate support to the infantry fighting on and through the objective; and

c. to exploit beyond the objective.

147. The number of tanks used in the fire support task should be kept low, because the greatest possible weight of tank fire should be concentrated in the assault, terrain and obstacles permitting.

148. In the assault, tanks lead with the mounted infantry close behind. The tanks halt to cover the infantry dismount and then follow the infantry forward, moving from fire position to fire position rather than crawling forward. The tanks must come onto the objective as soon as the lead infantry are into the first line of enemy trenches. The dismounted infantry can sometimes use the tanks for cover from small arms fire until they break into the enemy's trench system. The tanks should be forward of the infantry at this stage. When on the objective, the tanks should be near enough so that tank target indication can be conducted using the tank telephone. See Figure 9-3.

149. Whether accompanying the infantry in the assault or assaulting on a converging armour only approach, the assault must be coordinated to attempt to have the tanks and infantry arrive on the objective simultaneously.

150. During the fight through the objective rifle sections and individual tanks will leap-frog forward, with the infantry clearing trenches and bunkers and destroying enemy antiarmour weapons and the tanks destroying bunkers and machine gun posts and rolling over wire obstacles.

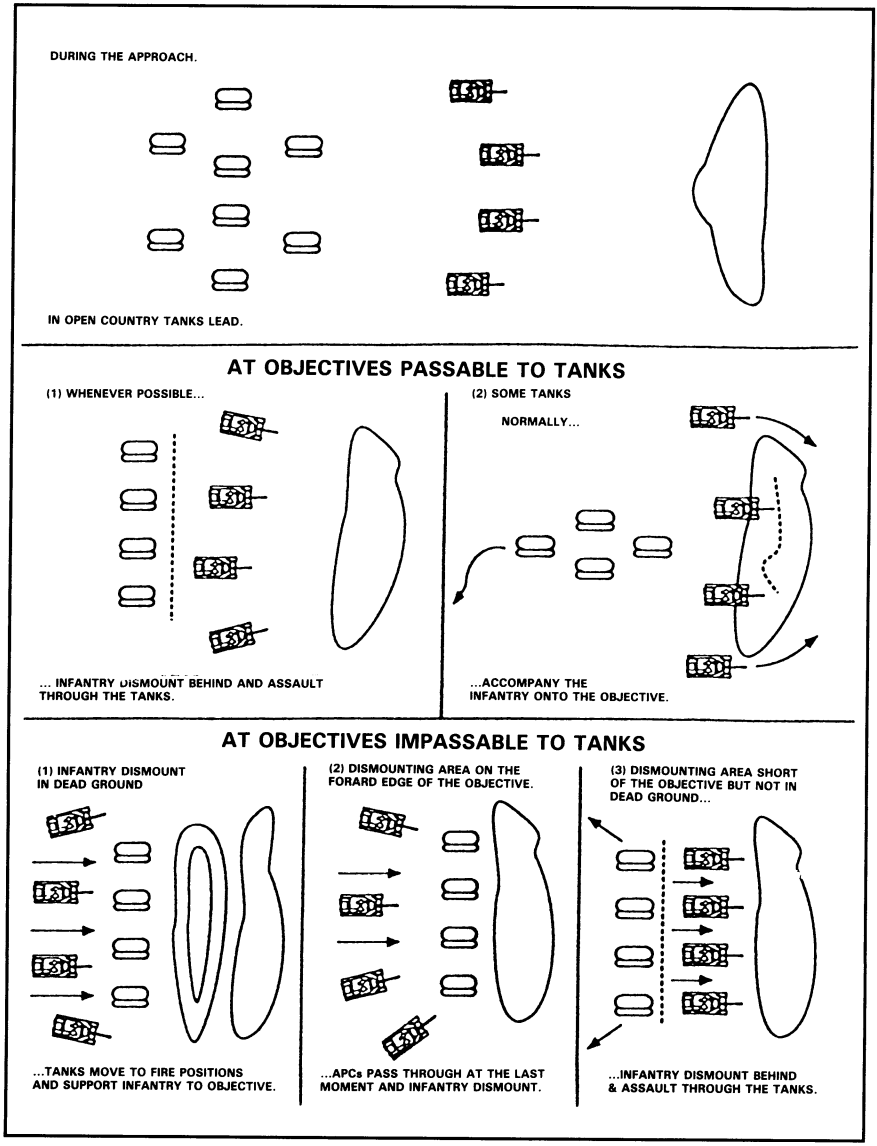


Figure 9-3 Infantry and Tanks in the Assault

151. After success, the tanks range forward to the far edge of the objective, and perhaps a tactical bound beyond to defend against enemy counterattacks.

152. See B-GL-301-002/FP-001 The Battle Group in Operations for a more detailed discussion.

ARTILLERY

153. The principal task of artillery in the attack is to neutralize the enemy to enable the assault force to attack and hold the objective with the minimum casualties. The number of targets which can be engaged at one time will limit the choice of approach and the choice of objectives for each phase.

154. The use of smoke to cover the movement of the assault force and any dismount area and to provide a measure of flank protection should be considered.

155. There will seldom be sufficient fire units to engage all important targets as the CO must decide on priorities and designate those targets which can be on call. A proportion of the available fire support should be superimposed and thus available for diversion to cater for calls for fire on opportunity targets.

156. A proportion of the ammunition available for the attack must be retained for consolidation to provide adequate defensive fire.

157. The mortar fire plan forms part of the overall indirect fire plan. The battery commander decides the best weapon for each target selected taking into account range, type of target, ammunition lethality and supply.

158. The fire plan is controlled by the FSCC using FOOs and MFCs located in OPs or moving with the leading companies. It is most important that assault companies have a FOO or MFC with them to correct the fire coming onto their objective, to lift it at the correct time and be ready to engage defensive fire targets during consolidation.

ENGINEERS

159. See Chapter 10.

AIR DEFENCE

160. Air defence resources attached to the battalion are best employed in:

a. the defence of the battalion assembly area;

b. protection of battalion headquarters;

c. point defence of defiles on any approach or route forward; and

d. the defence of captured objectives, especially enemy key terrain.

161. If mobile, lightly armoured air defence resources are attached they should accompany the assault force with the greatest number of tanks, as this will become the main enemy air target.

AVIATION

162. The inherent flexibility and mobility of tactical aviation can help develop and maintain the momentum of the attack. The attack helicopter provides an effective means of stopping enemy counter-attack forces or attacking a withdrawing force. It may also be able to provide close fire support to assaulting forces.

163. Attack helicopters may be allocated to help defend important objectives once they have been captured. Armour killing zones should be selected during consolidation and the information passed up the chain of command.

164. Utility helicopters may be used to infiltrate assault forces into the enemy's rear areas, to bring forward emergency supplies and to rapidly move additional weapons and troops onto captured objectives. Any available transport helicopter may be used for medical evacuation.

AIR

165. Close air support missions may be provided to soften up important objectives. In all cases, the CO must superimpose fire from his own artillery or mortars in case the air sorties are unable to effectively hit the target. The CO's fire plan must be designed to build on the shock effect of the air strike and continue to neutralize the target. Air strikes are part of the preparatory bombardment, ending at or very near H-hour.

SECTION 10

COMBAT SERVICE SUPPORT IN THE ATTACK

GENERAL

166. The amount of administrative support required for an attack depends directly on the degree of difficulty of the attack. In the case of the quick attack, no special service support arrangements are needed. All necessary support is anticipated and incorporated in the plan for the advance. A1 echelon's organization is designed to provide the support necessary.

167. Very thorough combat service support preparations are required to support a deliberate attack. The administrative preparations at battalion level include:

a. preparations for the assault, and

b. support during consolidation.

PREPARATIONS FOR AN ASSAULT

168. Combat supplies include:

a. additional ammunition for guns, mortars and machine guns, as well as illumination for poor visibility; and

b. special ammunition such as smoke generators and bangalore torpedoes.

169. Medical preparations include:

a. careful siting of the UMS and the stocking of additional medical supplies;

b. the possible attachment of Field Ambulance evacuation and treatment elements;

c. arrangements for the handling of high numbers of casualties, including the provision of helicopters; and

d. the complete re-filling of company-held medical supplies.

170. Equipment includes the provision of special items such as ladders, extra wire cutters, signalling and identification devices.

171. Echelons deploy as follows:

a. A2 echelon normally joins the battalion in the assembly area, unless the echelon is remaining under brigade control in the BAA.

b. A1 echelon follows the lead assault companies to the attack position and, unless the approach is very long, remains near the attack position until called forward.

c. Upon success, A1 echelon resupplies forward and may move its location nearer to the captured objective.

CONSOLIDATION

172. There are four essentials during consolidation:

a. the immediate resupply of ammunition;

b. the move forward of the remainder of F echelon, including the clearance and marking of routes forward;

c. rapid casualty evacuation; and

d. battlefield clearance.

173. **Casualty Handling.** The UMS should move forward to its new position as soon as possible and special arrangements may be made for dealing with casualties during its move. These may involve:

a. the use of another battalion's UMS for the initial stages of the attack; or

b. reinforcement by the brigade field ambulance to form a second battalion UMS while the other moves.

174. **Battlefield Clearance.** Arrangements are made to ensure effective battlefield clearance, searching especially for friendly and enemy casualties, special enemy equipments, unexploded demolitions and battalion vehicle casualties. Maintenance Platoon begins repairs or recovery of vehicles and equipment during consolidation. Repair priorities are set by the CP. The overall battlefield clearance task may be given to an uncommitted reserve company, or be spread to a platoon from each rifle company.

CHAPTER 10

OBSTACLE CROSSING

SECTION 1

GENERAL

TYPES

1. An obstacle is any obstruction that stops, delays or restricts movement. It represents another factor limiting the speed of offensive operations. The principles of the advance and attack remain unaltered, but a technique is required to enable the attacking troops to overcome the obstacle with a minimum of delay.

2. The two types of obstacles, both of which may be included in an enemy's obstacle plan, are:

a. natural, and

b. artificial.

NATURAL OBSTACLES

3. The location and characteristics of natural obstacles have a direct influence on the deployment of the battalion. Natural obstacles include:

a. steep slopes,

b. escarpments,

c. ravines, gullies and ditches,

d. rivers, streams and canals,

e. swamps and marshes,

f. thick forest, and

g. built-up areas.

4. Fighting in forests and built-up areas is described in Chapter 13. Minor natural obstacles such as small streams do not represent a difficulty to infantry mobility and are not considered here. The emphasis in this chapter is placed on the procedures for crossing major water obstacles.

ARTIFICIAL OBSTACLES

5. Artificial obstacles are usually used to reinforce or augment natural obstacles or constructed where there are no natural obstacles. They include:

a. minefields,

b. wire entanglements,

c. craters, ditches, abatis and dragon's teeth,

d. booby traps,

e. rubble,

f. contaminated areas, and

g. any combination of the above.

6. The combination of minefields and wire will be the most common encountered. The basic considerations and requirements in negotiating all obstacles remain the same, whatever the type, the strength of the defence and the method of penetration. Different techniques based on the same considerations will need to be adopted to deal with each individual obstacle.

7. With respect to artificial obstacles this chapter will concentrate on minefield breaching as this type of obstacle is the deepest and most difficult.

COURSES OPEN

8. The CO may be fortunate enough to secure a gap in an obstacle or to capture a prepared crossing site intact. When advancing, the CO

may achieve this by moving forces rapidly in an unexpected direction using helicopters or vehicles. This is known as a bounce crossing. If this does not occur he has three options:

a. to conduct a hasty crossing,

b. to outflank or bypass, or

c. to carry out a deliberate breaching or crossing operation.

9. The CO must understand the merits of each option. Before attempting to conduct a hasty crossing he must estimate the effect of the obstacle, estimate the casualties and weigh this against the advantages that could accrue from a quick and decisive battle. To bypass or outflank may mean that the battalion will be channelled into prepared killing areas of the enemy's own choosing.

10. Both the bypass and hasty crossing operations will be executed with a minimum of preparation, using the crossing or breaching equipment at hand. Success depends on quick reconnaissance, good engineer intelligence and having the necessary equipment close to the leading troops. Often both the bypass and hasty crossing will have been unsuccessfully attempted by the leading elements of the advance before sufficient information is gained on the obstacle and its defences to force the deliberate operation.

11. The deliberate breaching or crossing of an obstacle requires special consideration. These can be slow and expensive operations as the obstacle will normally be under enemy observation and fire.

REQUIREMENTS FOR SUCCESS

12. The basic requirements for a crossing or breach to be successful are:

a. the determination to get across or through the obstacle;

b. a deception plan;

c. good intelligence, especially engineer intelligence;

d. speedy and accurate reconnaissance;

e. the necessary equipment being in the right place at the right time;

f. a simple plan which provides the flexibility to exploit success and react effectively to unforeseen circumstances;

g. good training; and

h. preparation.

13. This chapter describes the tactics and procedures for deliberate breaching or crossing operations at battalion level. Remember that major obstacles will be covered by coordinated enemy defences and such operations will usually be planned and controlled at brigade level or higher.

14. The principles and procedures described apply equally to a hasty operation.

SECTION 2

PLANNING THE BREACH OR CROSSING

GENERAL

15. The enemy will rarely be able to hold major obstacles in strength everywhere and he will therefore depend on surveillance and mobile reserves. To counter this the attacker can take advantage of surprise and rapid exploitation to seize and break out from a crossing before the defender can reach in strength.

16. It is always difficult but rarely impossible to cross the obstacle. The real difficulty arises in defending the position gained on the far side.

THE CO'S ESTIMATE

17. In addition to those factors normally included in an attack estimate, the CO must consider technical factors that affect the location and number of crossing sites. Tactical and technical factors often conflict.

18. **Tactical Factors.** To achieve surprise, flexibility and a rapid break out, multiple sites are best. They give:

a. concealment from enemy observation and fire;

b. good approaches and exits for both tracked and wheeled vehicles; and

c. suitable ground for deployment of direct fire support on the friendly side and of bridgehead defences on the enemy side.

19. **Technical Factors.** Equipment characteristics and availability dominate engineer planning. The fewest possible sites are preferable to permit the concentration of engineer resources and the retention of reserves against equipment casualties and failure. The suitability of individual sites is based on such factors as:

a. access for oversize vehicles and plant;

b. obstacle width, particularly for bridging or explosive breaching;

c. river bank and bed profile and current; and

d. going and soil structure for mineploughs or hand breaching.

20. **Surprise.** If surprise is to be attempted then the following factors are considered:

a. **Timing.** A hasty crossing can be attempted in daylight, in close country when we have air superiority. A deliberate crossing is usually mounted at night or in poor visibility.

b. **Noisy or Silent.** A noisy crossing can be attempted when we have heavy fire support or when the crossing can be achieved too quickly for the enemy to react effectively. However, the usual compromise is to keep the operation silent either until surprise is lost or until a predetermined moment, for example the firing of explosive breaching equipment.

c. **Deception.** A deception plan is used to deceive enemy reserves as to the location of the crossing site, or at least to delay and confuse enemy reaction to the actual crossing.

THE PLAN

21. The CO's plan includes grouping, objectives, timings, crossing sites, assembly areas and routes, traffic control and liaison, vehicle priorities and order of march and consolidation.

22. **Grouping.** This details the assaulting and breakout forces and the deployment of engineers and equipment.

23. **Objectives.** The initial objectives are chosen to stop the enemy bringing direct or observed indirect fire on to the crossing sites. It is essential that the bridgehead defence be strengthened as quickly as possible to defeat the inevitable counter attack. Anti-aircraft and anti-armour weapons are given high priority. The size of the bridgehead is dictated by the space required for the breakout force to deploy.

24. **Timings.** The selection of H hour will depend on a number of factors such as the assembly of troops and engineer equipment, the improvement of routes, the crossing and breaching operation itself and the time it will take to build up the breakout force. A poor time appreciation might have disastrous consequences if much of the operation takes place, for example, by day when it was intended to be completed in darkness.

25. **Crossing Sites/Lanes.** The distance apart will depend on the ground, the enemy and the equipment available. They should be selected so that they do not interfere tactically with each other along lateral routes.

26. **Assembly Areas and Routes.** At battalion level assembly areas and routes are allocated by battalion headquarters. They are carefully reconnoitred and alternatives are selected.

27. **Traffic Control and Liaison Arrangements.** A comprehensive traffic control organization is set up by battalion headquarters. This may be done by the reconnaissance platoon. Liaison officers are required at each crossing site.

28. **Vehicle Priority Table.** A vehicle priority table is requied to ensure that assaulting sub-units get their vehicles over or through the obstacle in a pre-arranged order, by whatever means of crossing are open.

29. **Consolidation.** The crossing plan must aim to produce a balanced force across the obstacle, as rapidly as possible, to repel an enemy counter-attack. Air defence of the crossing sites is a vital consideration if the enemy has an effective offensive air capability, or is likely to launch an air mobile operation. Defence fireplans are equally vital.

SECTION 3

BREACHING AN ARTIFICIAL OBSTACLE

BASIC CONSIDERATIONS

30. **Basic Considerations.** Before deciding to breach an obstacle, the CO must consider the following:

a. reconnaissance,

b. planning,

c. command and control,

d. timings,

e. fire planning, and

f. traffic control and communications.

31. **Reconnaissance.** Before a breaching plan is made, extensive ground reconnaissance is necessary. Engineers can assist in obtaining information. Patrols will be moving in or near the enemy area. For reasons of speed and safety, they must be kept as small as possible. There are three possible ways of organizing an obstacle reconnaissance patrol:

a. **The Infantry Patrol.** If the enemy has been in contact for any length of time, infantry patrols must dominate no man's land. These patrols may be able to locate the obstacles but detailed information on minefields and method of laying will be difficult to discover.

b. **The Mixed Patrol.** The engineer recce patrol is the best means of getting technical information. Rather than operate independently the engineer recce party should be part of an infantry patrol. This reduces the number of friendly patrols operating in no man's land and it also provides protection for the engineer specialists so that they can concentrate on their task. The task is performed by the engineers while the infantry is responsible

for the navigation and protection. No other tasks are conducted by the specialist patrol.

32. **Planning.** The enemy will use obstacles to enhance his defence. When assaulting through an obstacle, the actual breaching should be considered as just another phase in the attack. The aim of the breaching operation is to produce as many lanes as possible. Ideally a lane should be cleared for each assaulting rifle section in a battalion breaching operation, but this will often be impossible.

33. When an accurate picture of the enemy defence is obtained the breaching operation is planned. The fire plan for the operation is organized to neutralize enemy fire directed onto planned lanes or gaps. This is also important during the subsequent movement through the obstacle as advancing troops and vehicles are channelled through lanes.

34. Other planning considerations of the breaching operation are as follows:

a. In a major breaching operation the battalion may be wholly committed to the task of supporting the engineers involved in breaching the obstacle. This may include the seizing of a bridgehead on the enemy side of the obstacle. Once the breach is successful the battalion will not normally be part of the assault force, but may be held in reserve or used to assist in traffic control.

b. In a minor operation, breaching of the obstacle should be considered only as an addition to the initial stage of an attack. It does not dictate the overall attack plan.

c. When the battalion is part of a larger breaching operation, resources will usually only allow two lanes per platoon to be attempted. This should ensure that at least one lane is cleared successfully. If resources allow, approximately 50 per cent more lanes than required should be breached to provide alternatives if early assaults fail.

35. **Command and Control.** There is no rule for establishing the command structure. In a battalion breaching operation, assaulting com-

panies may be made responsible for the initial breaching. When the battalion is part of a larger breaching operation, a more complicated command structure will exist. A breaching force commander will be responsible to the commander of the operation. To aid control, assaulting elements will be required to provide liaison officers to the breaching elements. The control of a minefield breach is shown diagramatically in Figure 10-1.

36. **Timings.** The timing of an assault in a breaching operation is critical. The enemy's ability to bring effective fire to bear on the assaulting force must be prevented. A night operation or the use of smoke with covering fire will reduce the enemy's observation or keep him below ground. Conducting a breaching operation at night is more difficult to control and more time-consuming than by day. The following factors should be considered when determining the timings of the breach:

a. The initial assault should be conducted at night or under the cover of smoke in an attempt to neutralize or at least reduce the accuracy of the enemy's covering fire.

b. If the initial assault is by night it should be timed so that subsequent breaching operations allow the battalion's F echelon vehicles and supporting armour to join the bridgehead by first light. This is the most likely time for a counter-attack.

c. Breaching is much easier by day but if this is attempted it must be conducted under the cover of smoke or fire.

37. **Fire Planning.** Because the enemy may continue to cover his obstacles with fire, the initial breaching will be slow. The accuracy of our supporting fire is most important at this stage. The principles and considerations for fire planning will be the same as for the attack.

38. **Traffic Control.** Traffic control communications will consist of line or a specially established radio net, possibly one of the combat support platoon nets.

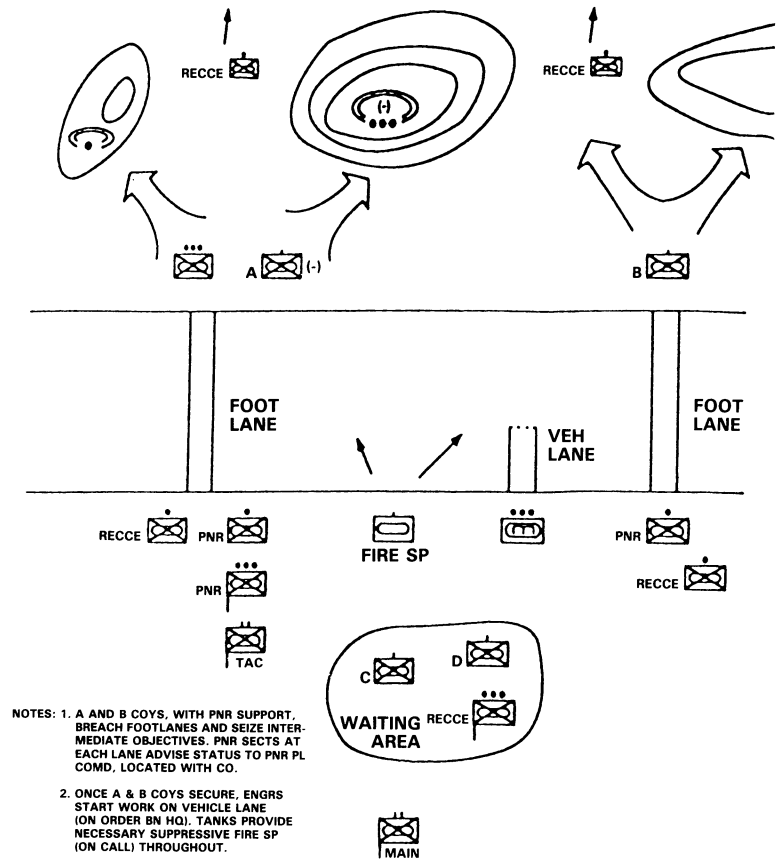


Figure 10-1 Minefield Breach

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TASKS

39. The tasks of the infantry in a breaching operation include:

a. securing bridgeheads including any initial breaching of the obstacles;

b. protection of the breaching force;

c. assault;

d. expansion of the breach and maintenance of lanes; and

e. control of movement through the obstacles.

SEQUENCE

40. The following sequence is applicable to all breaching operations:

a. **Deployment.** Protection parties are deployed at the proposed start points for lanes. Lanes are marked and guides are positioned for the engineers or assault pioneers doing the breach. Breaching parties and equipment are particularly vulnerable to aimed fire during their breaching activities.

b. **Breaching.** A breach by assault pioneers or engineers is followed by an infantry assault through the lanes provided. Forming into assault formation for the attack will occur after the obstacle has been crossed.

c. **Intermediate Bridgehead.** The assault force then establishes an intermediate bridgehead on the far side of the obstacle, preferably on objectives which prevent the enemy from bringing direct fire to bear on the obstacle.

d. **Buildup.** Breaching of wider lanes by assault pioneers and engineers starts as soon as possible. Combat support elements must pass through the obstacle as soon as possible to support the infantry in the intermediate bridgehead.

METHODS OF BREACHING

41. Methods of breaching are as follows:

a. **Silent Breach.** Lanes are cleared through obstacles using hand-held equipment. This is a very slow operation and, no matter how much care is taken, it remains difficult to avoid detection by the enemy.

b. **Explosive Breach.** Lanes are cleared using explosive equipment.

c. **Mechanical Breach.** Lanes are cleared using mechanical means.

42. The breaching method employed for a specific task depends on the nature of the ground, the type of obstacle, and the degree of enemy opposition expected.

COMBAT SUPPORT

43. Assault pioneers usually have the task of clearing lanes through obstacles of limited depth, to enable assaulting infantry to cross. They are trained to use most items of breaching equipment available. The choice of equipment depends on whether or not a silent operation is attempted.

44. Breaching operations involve slow and deliberate work in areas usually dominated by enemy positions. Maximum combined arms support is required throughout the operation. The types of support required may be:

a. covering fire and counter-battery fire and mortars to suppress the eneny fire on the obstacle;

b. direct fire support by armour and anti-armour; and

c. deliberate breaching operations by engineers.

SECTION 4

BREACHING A MINEFIELD

GENERAL

45. Minefields are employed as obstacles to:

a. delay and hamper advancing forces;

b. canalize movement toward selected ground or in front of prepared positions;

c. deny penetration into vital areas or between units;

d. provide close-in protection for a defending force; and

e. delay retreating force by mining routes.

46. A minefield breaching operation attempts to achieve the safe passage of our troops through or around the minefield as quickly as possible, remembering that the usual purpose of an obstacle is to slow down our advance.

47. When breaching a minefield, the following planning sequence should be followed:

a. conduct an early reconnaissance;

b. define the minefield;

c. prepare the plan; and then

d. prepare the tactical plan.

RECONNAISSANCE AND DEFINITION OF THE MINEFIELD

48. Success in a minefield breaching is largely due to obtaining accurate information. The CO needs information concerning:

a. the forward edge of the minefield, its length and depth;

b. types of mines, presence of trip-wires, anti-personnel devices and anti-lifting devices;

c. mine density;

d. suitability of ground for tracked and wheeled vehicles;

e. location of, and the approaches and exits to and from, gaps and mine-free areas;

f. location of enemy positions covering the minefield; and

g. details of wire, anti-armour and other obstacles sited in conjunction with the minefield.

49. A careful reconnaissance of the minefield is necessary for success. The minimum information required is the depth, the front age and rear edges, and details of enemy positions covering the minefield. There are occasions when this information is relatively easy to obtain; for example, the extent of a mechanically-laid minefield and details of hastily prepared defensive positions overlooking it, are sometimes revealed in air photographs.

50. To maintain the momentum, a commander may decide to breach without a complete knowledge of the minefield. Nor is there much point conducting a deliberate reconnaissance of the minefield if one is suddenly caught in the middle of a minefield. The chances of being hit by enemy direct fire or running onto a mine are about the same.

51. Once a minefield is detected, the width, depth, composition, and pattern must be determined quickly. This is accomplished by reconnaissance:

a. **Quick Definition.** During the advance or pursuit the following action is taken:

1) A minefield reconnaissance party, consisting of pioneers or engineers, moves forward into the mined area to determine its composition and depth.

2) Patrols are dispatched to the right and left of the axis to determine the width of the minefield, and to find a way around the obstacle if at all possible.

3) The headquarters is advised of the minefield location and what action has been taken.

4) Once the width, depth, and composition of the field are known, the action required by the main body to bypass or breach the minefield may be determined.

b. **Deliberate Definition.** This involves:

1) Study map and the air photo to locate boundaries, gaps, and defensive positions supporting the minefields.

2) Infantry and engineers conduct a reconnaissance to determine the composition, pattern, and extent of the minefield. While this is taking place, the location, strength, and possible intentions of our main body must remain concealed from the enemy.

3) A careful study of enemy activity and routine which may reveal safe lanes in the minefield.

52. The ground reconnaissance of enemy minefields is planned in great detail and is carefully coordinated. The task of determining the location of the forward edge of the minefield, its extent and the location of gaps or lanes is primarly an infantry responsiblility. This may involve the reconnaissance platoon or the lead rifle company.

53. Reconnaissance **within** the minefield is essentially an engineer responsibility. In the absence of engineers the task falls to the assault pioneer platoon. Sometimes both are involved.

54. An engineer/pioneer reconnaissance party consists of a section (sometimes half section) conducting a **fishline** survey. This entails carefully working their way through the minefield in single file, locating mines with mine detectors and prodders and either marking or disarming each mine found. It is a dangerous and painstaking task, taking about one minute per metre of depth. The reconnaissance party requires infantry protection throughout. More than one **fishline** survey would be required before a breaching plan is formulated — as a guide, one survey for every two lanes being attempted.

BREACHING PLAN

55. Before the CO decides on his plan to breach the minefield, he must consider very carefully the relationship between the area selected and the area suitable for defence and subsequent break-out on the other side of the obstacle. They may be different.

56. The CO must also decide whether breaching can start at once or whether it must wait until specific features beyond the obstacle have been secured. Decisions on these points will materially affect the size of force needed to protect the breaching party and the order in which assaulting forces cross the obstacle.

57. The choice of the method of breaching depends upon a number of factors:

a. ground and physical obstacles;

b. types of mines to be dealt with and the depth of the minefield;

c. meteorological conditions, including the state of the moon, whether it is clear or foggy, and whether conditions are suitable for using smoke;

d. the degree of opposition expected;

e. the availability and type of breaching equipment;

f. the chances of achieving surprise with a silent breaching operation;

g. the availability of armour; and

h. time available.

BREACHING

58. **Manual.** The locating and lifting of mines by hand is a time-consuming business that cannot be conducted under observed fire without incurring unacceptably high casualties. In this case it is necessary to establish an infantry bridgehead on the far side or select a location that cannot be observed. This method can be used by day or night; it is silent and offers the possibility of achieving surprise. It may be the only way to get the initial bridgehead force across.

59. **Mechanical.** Vehicles equipped with ploughs, flails or rollers, although not found in the battalion, may be available to support a breaching operation. For deliberate breaches these vehicles need protection against enemy anti-armour weapons. As a general rule, the battalion needs some infantry already across the minefield to provide this protection. Armoured squadrons are also capable of hasty breaches with integral resources, depending on the minefield and enemy dispositions.

60. **Explosive breaching**:

a. Infantry line clearance charges (Baby Vipers) carried by the pioneer platoon clear safe foot lanes.

b. Engineer line clearance charges (Giant Vipers) clear a vehicle lane. If the minefield is more than 160 metres deep, because of the time needed to move up successive Giant Vipers, fire them and prove the lane, it will seldom be possible to use them in the face of enemy observed direct fire.

c. Note that napalm and indirect fire have little or no neutralizing effect on mines.

61. **Combination.** A deliberate breaching operation is usually conducted using a combination of methods.

BREACHING SEQUENCE

62. A typical sequence for breaching a mixed minefield over 160 metres deep and covered by enemy observation might be:

a. close up the minefield and reconnoitre by night;

b. mark a foot lane by hand or breach one with baby vipers;

c. the lead rifle companies cross on foot and establish a small bridgehead covering the proposed major breaching sites;

d. breach vehicle lanes using explosive and mechanical means;

e. immediately cross the essential combat support elements to join the bridgehead force;

f. cross the remaining rifle companies and combat support elements, enlarging the bridgehead; and

g. prepare to break-out from the bridgehead or to support the breakout of a fresh unit.

63. Normally, in a major breaching operation, the battalion is tasked to establish the initial bridgehead and to protect the breaching operation and the lanes established. The battalion continues to protect the lanes until all brigade elements are across. In the meantime fresh units commence the breakout.

OPERATIONAL PLAN

64. The operational plan should be as simple as possible, ensuring that every means is used to achieve surprise. The breaching operation should remain silent until: discovery by the enemy, the first planned Viper is fired, or most of the attacking force is through the minefield.

65. Once breached, minefields are crossed as quickly as possible. The maximum realistic number of lanes should be made allowing breaching on as wide a front as possible. For every lane required, two should be attempted. Waiting areas should be well dispersed to ensure operational security. Specialist breaching equipments must be hidden until the last possible moment.

66. Movement up to and through the obstacle is carefully controlled. The traffic control plan must be able to switch sub-units to different lanes. Sub-unit locations on the far side are planned ahead to ensure there is no delay imposed on following elements.

67. Fire support is planned to neutralize or destroy enemy depth elements as well as those covering the obstacle itself. Getting across is relatively easy compared to holding the bridgehead against enemy action.

SECTION 5

PLANNING RIVER CROSSINGS

GENERAL

68. The vulnerability of the battalion while crossing the obstacle is the main concern in this operation. In addition to being canalized at the crossing sites, the battalion is temporarily divided with troops on both sides of the obstacle. This exposes the unit to possible defeat in detail because its commitment to the battle on the far side is not concentrated.

69. The water obstacle also affects the mobility of various vehicles and support elements of the battalion to different degrees. This tends to disrupt the tactical grouping within the battalion. Therefore the aim is to get fighting elements (F echelon) across the water obstacle as quickly as possible.

70. The CO must not surrender the initiative to the enemy by allowing water obstacles to affect the manoeuvre plan needlessly. The battalion should:

a. reconnoitre well forward and on a broad front;

b. hold its engineer and pioneer support as far forward as tactically feasible;

c. attempt a crossing as soon as possible; and

d. cross on a broad front.

71. Crossing on a broad front:

a. reduces congestion;

b. increases flexibility;

c. usually speeds up the crossing operation; and

d. may cause the enemy to delay counter-attacking until he determines the most serious crossing point.

72. Where possible the CO should attempt to avoid an opposed river crossing by detouring and crossing at an undefended location, or by seizing a crossing site from the enemy by advancing quickly or using an air mobile force (coup de main).

TYPES OF CROSSINGS

73. **Hasty.** This is conducted on a broad front, capitalizing on the amphibious capability of some battalion vehicles and available crossing sites. It is generally a continuation of the operation underway, using resources at hand. Surprise and momentum are key ingredients for success. This is the type of crossing most usually conducted by the battalion on its own initiative.

74. **Deliberate.** This requires extensive preparation and it is only undertaken when the tactical situation does not permit a hasty crossing. In the deliberate crossing the battalion is always part of a brigade or divisional plan.

AIM

75. The initial aim of a river crossing is to establish a bridgehead on the far bank.

76. The bridgehead must:

a. provide protection to the forces crossing for subsequent operations; and

b. be large enough to provide space for the breakout force.

TACTICAL CONSIDERATIONS

77. **Problems of the Defender.** The two major problems facing the defender are:

a. the difficulty in concealing defence works on a river line from observation and reconnaissance; and

b. an obstacle, must be covered by direct fire and/or observed indirect fire to be effective.

78. These problems may cause defender to disperse his force, since he will not know exactly where the bridging operation will take place. He must decide whether to defend with a small widely dispersed force with a relatively large reserve for counter-attack, or to defend with the majority of his force concentrated at a particular point along the river with a small reserve. If the defender adopts the first method, it may be easy for the attacker to defeat an enemy counter-attack against the bridgehead. If the second method is adopted, securing a bridgehead will be difficult; however, once secured it will be difficult for the enemy to restore the obstacle. Both these defence methods are tested best by the attacker using multiple crossings along a relatively broad front.

79. **Problems Facing the Attacker.** The attacker must clear and secure the near bank before detailed reconnaissance for the operation can begin. The attacker can choose the exact crossing site but is faced with the problem of neutralizing the enemy so that the bridgehead can be established. Maximum use of indirect fire is needed to neutralize the enemy's direct fire capability. Speed is essential to keep the enemy off balance. Deception operations will aid the attacker in maintaining secrecy.

THE HASTY CROSSING

80. **Reconnaissance.** The tasks of reconnaissance elements (both infantry and engineer) are:

a. to confirm map and air photo appreciations;

b. to select routes, entrances, and exits for APCs and tanks;

c. to mark and provide necessary direction at the crossing sites;

d. to select sites for bridge layers; and

e. to provide crossing control and communications.

81. **Crossing Methods.** The assault crossing may be made by:

a. improvised means (swimmers and ropes);

b. improvised light rafting;

c. captured local craft;

d. assault boats, rafts or bridges;

e. swimming APCs;

f. bridgelayers; or

g. helicopters.

82. Determined troops can seize the initiative and gain time and surprise by fording or swimming and by using any available aid. Troops crossing using these aids or by swimming must receive as much fire support as possible.

83. The crossing may start as a silent operation in an attempt to hide the exact sites from the enemy. Once they have been discovered, indirect and direct fire from the near bank, with lots of smoke, are used.

84. Supporting elements cross close behind the assaulting infantry. Even when crossing without oppositon, the infantry should still secure the far bank before armoured vehicles cross.

STAGES OF A WATER CROSSING

85. A crossing is conducted in three overlapping stages:

a. the assault, to gain a lodgement on the far side;

b. the build-up, to extend the lodgement into a bridgehead; and

c. consolidation, to establish a firm base within the bridgehead from which to break out.

FORCES AND TASKS

86. A clear command structure is needed for the crossing operation to succeed. The forces involved are:

a. **The In-Place-Force.** The force-in-place on the near bank provides fire support during the assault crossing. The in-place-force clears the near bank of enemy and secures attack positions and LDs for the bridgehead force.

b. **Bank Group** —

1) The bank group organization is usually formed from the in-place-force. It provides the following specific support until completion of the assault stage:

a) clearance of the near bank if this has not been done already, and securing the attack position and LD;

b) organization of boat off-loading points which should be as far forward as the situation permits (possibly in the attack position);

c) control of the movement forward of the assaulting forces;

d) manning the assault boats and returning empty boats to the near bank for succeeding waves if necessary;

e) assisting with APC swimming through the provision of entry and exit bank masters, recovery, medical and engineer resources; and

f) any other assistance as agreed by the assault force and the force-in-place.

2) While the bank group provides the entry and exit bank masters at each APC crossing site, assaulting units provide a crossing controller at each site. He is usually an officer who collocates with the bank group headquarters controlling a site or group of sites. This arrangement enables the assaulting unit to be called forward on its own radio net by the unit crossing controller who reacts to direction from the bank group commander. The bank group commander is in communication with his entry and exit bank masters using the unit radio net. If radio silence is in effect line is used.

3) Note that the battalion might have to form its own bank group, using one rifle company with attached engineer/pioneer resources to support the assault crossing of the remaining companies.

c. **Bridgehead Force.** This consists of the assault echelon and the main body. Its mission is to seize or control ground on the far side to permit the subsequent crossing of follow-up elements and to provide manoeuvre space needed for subsequent operations. The assault echelon is tasked to gain the lodgement, normally by seizing intermediate objectives. This force must prevent the enemy from having ground observation and direct fire on the obstacle crossing sites. During the assault stage the bank group engineers are normally in support of the bridgehead force commander. The main body of the bridgehead force conducts the build-up and consolidation.

d. **Break-out Force.** This force continues the overall operation. The break-out may be an additional task of the bridgehead force, but not normally.

e. **Movement Control Organization.** The movement of elements up to and across the obstacle, and their deployment on the far side, is strictly controlled in order to maintain momentum, avoid congestion and provide flexibility. The movement control organization is in place from the start of the operation.

f. **Crossing Area Organization.** This is formed to establish, operate and maintain crossing sites. It is ordered into effect once the assault stage has been completed. At this point the bank group engineers are placed under its command. The crossing area commander is usually an engineer.

PLANNING SEQUENCE

87. In a major crossing operation planning follows this sequence:

a. reconnaissance and estimate;

b. select the bridgehead and designate the bridgehead line;

c. determine the force necessary to seize and hold the bridgehead;

d. determine the time required to secure the bridgehead, including the crossing;

e. select the intermediate objectives;

f. determine the strength and composition of assault troops;

g. estimate the fire support required including direct fire, indirect fire, air, aviation and air defence;

h. select assault crossing sites, ferry sites, bridge sites, ford sites, etc; and

j. determine other resources, such as engineers, signals, traffic control, and combat service support, required to execute the plan.

88. This planning sequence applies as much at battalion level as at higher levels. When the battalion is part of a brigade crossing operation, however, it will be given specific engineer and other resources for its task, and specific objectives if it is part of the assault force.

RECONNAISSANCE AND PLANNING

89. **Information.** It will be necessary to locate suitable crossing sites, assembly areas, gun positions and equipment construction sites:

a. enemy locations and defences;

b. details about the river including width, depth, current, type of bottom, banks, fords, weirs and sandbanks;

c. subsidiary obstacles, ditches and fences;

d. approaches to the entry points to the water and the routes from the exit points from the water, both for wheeled and tracked vehicles;

e. crossing places for boats, rafts and amphibians; and

f. landing sites.

90. **Sources of Information.** Information is obtained from patrols, OP, maps, air reconnaissance, air photographs, PW and refugees. The engineers can normally supply detailed information about rivers, which can be checked or enlarged on by patrols. Composite patrols involving infantry/armour or infantry/engineers, are frequently necessary. Care is taken not to disclose the location of intended crossing places. For this reason, reconnaissance of the river line may be controlled by brigade and patrol activity established along the whole front as part of a deception plan.

91. **Choice of Crossing Places.** The battalion crossing places may be restricted by the brigade plan. The tactical and technical requirements of crossing places will often conflict. The CO's choice of crossing places also depends on the size of the bridgehead necessary to protect it from enemy small arms fire, and if possible, observation.

92. **Frontages.** Unit frontages differ little from those in any other attack. The battalion should use as many crossing places as possible, consistent with crossing facilities, control and the need for concentration.

93. **Choice of H-hour.** The CO may be limited by the brigade plan in his selection of H-hour. The vulnerability of infantry while crossing the obstacle, and while pausing on the far bank for support weapons and perhaps armour to arrive, makes daylight crossing a hazardous operation. Therefore H-hour is best timed at or just after last light, to allow the maximum daylight for preparations and maximum time for building up the bridgehead during darkness. The difficulty of clearing the far bank during darkness must be appreciated.

94. **Rehearsals.** Troops should rehearse their part in a deliberate crossing by day and night.

SECTION 6

CONDUCT OF THE RIVER CROSSING

BASIC SEQUENCE

95. The organization of the move forward to assault boat crossing sites the APC swim sites are shown at Figure 10-2.

96. The basic sequence for an opposed river crossing is as follows:

a. an infantry assault in boats, APC or helicopters, with troops carrying as much ammunition and anti-armour weapons as possible;

b. far bank security of intermediate objectives to allow for the start of bridging and/or rafting operations;

c. swimming of additional amphibious vehicles, if this is likely to save time and if water conditions allow;

d. opening of bridges or rafts to pass over vehicles and any supporting armour into the bridgehead;

e. establishment of an organized bridgehead defence against counterattack; and

f. buildup for break-out, followed by the break-out.

THE BATTALION AS BANK GROUP

97. **Battalion Assaulting on Own.** A rifle company reinforced with engineers, etc, provides the bank group for the battalion. For the APC swimming operation, the bank group would have an entry bank master at each APC entry point, an exit bank master at each exit from the river, a bank group commander to control the APC swimming operation in waves of four APCs per wave, recovery and medical resources and a far bank commander. This group operates on one radio net controlling the APC swim for the assaulting companies. As an assaulting company

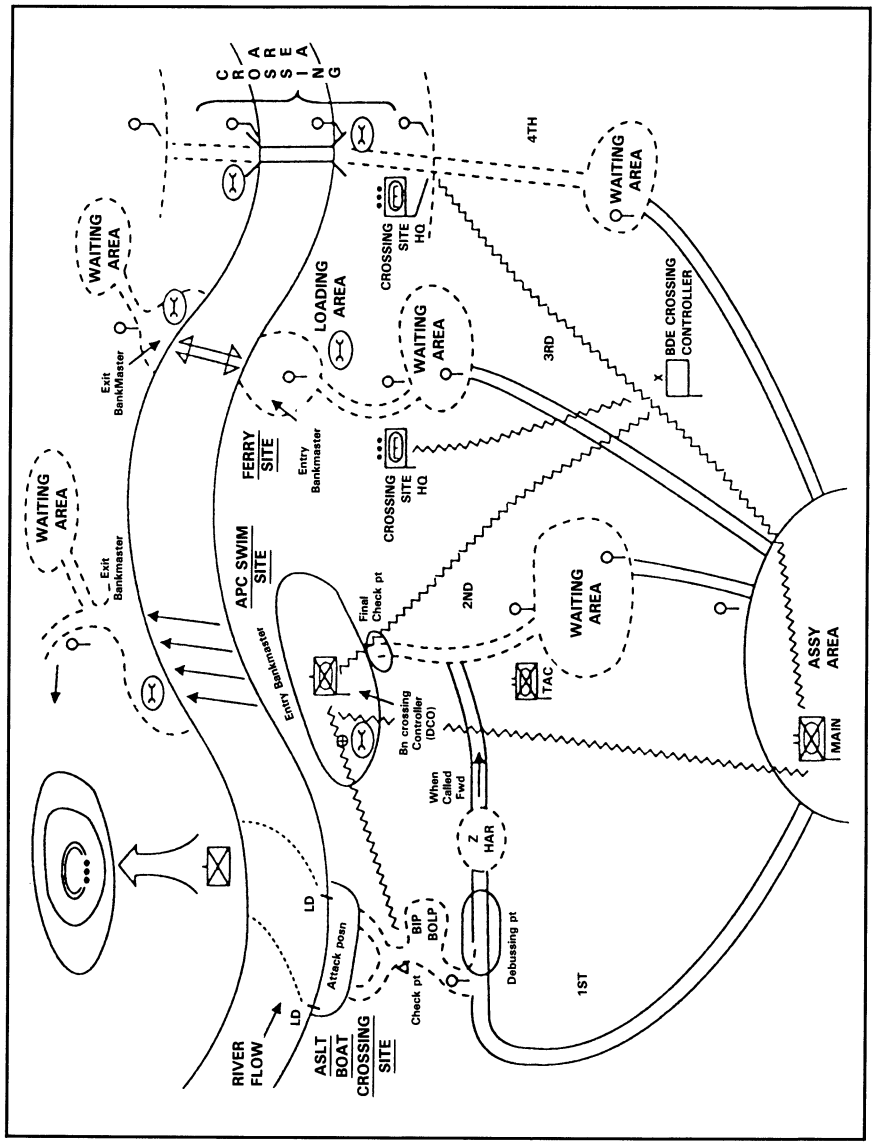

Figure 10-2 Crossing Site Layouts

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moves to its final waiting area the sub-unit crossing controller — usually the company 2IC — reports to the bank group commander. When told he can proceed he calls forward the APCs in waves of four using the assaulting company radio net.

98. **Battalion as Bank Group for Brigade.** If the battalion is providing the bank group for a brigade assault, two battalions up, the Battalion Headquarters forms a Bank Group Headquarters controlling two bank group commanders as follows:

a. Assaulting battalion DCOs report to Bank Group Headquarters and call forward assaulting companies in order of priority. Company seconds-in-command report to their respective bank group commanders.

b. Battalion support weapons and attached support elements are sited to provide near bank fire support over crossing sites. This fire is strictly **in support** of the assault force and, from H-hour on, it must be under the control of that assault force.

99. **Bank Group Responsibilities.** A smooth and orderly crossing depends upon efficient direction and control of vehicles and troops between the assembly area and the dispersed areas on the far bank. The Bank Group is responsible for:

a. marking, controlling and protecting the routes of the crossing places;

b. providing ferrymen as required;

c. dumping special equipment as far forward as possible for collection by the assault companies;

d. providing fire support; and

e. manning traffic control posts.

100. **Bank Group Organization.** There is no laid down organization for a bank group. The headquarters should be kept small but with adequate communications, and the bank group must have the following resources/capabilities:

a. representatives/LOs with communications at —

1) assembly areas,

2) crossing sites,

3) traffic posts, and

4) the headquarters of the assaulting battalion/brigade;

b. fire support able to lay suppressive fire on the far bank at each crossing site;

c. engineer and/or assault pioneer support;

d. recovery equipment at each crossing site;

e. a traffic control capability, with military police support.

101. The Bank Group is set up and closed down as follows:

a. It is established as far as the near bank before the assault crossing commences. As the assault troops secure the far bank, the bank group extends across the obstacle to control exits and dispersal points for the follow-on elements.

b. The bank group opens up new and alternate crossing sites as soon as far bank security and crossing equipments permit. It also closes down functions sequentially, eg, assault boat support first, followed by APC swimming, and so on.

THE BATTALION AS ASSAULT FORCE

102. **Vehicle Priority Tables.** The battalion prepares vehicle priority tables for all elements designated to cross the obstacle. These tables list, in sequence, the order in which unit vehicles are to cross. They are not concerned with timings, only with the order of crossing. They provide the CO with flexibility should ferries or bridges be destroyed and they help ensure that the most essential vehicles get across first.

103. **Traffic Control.** If the battalion is involved in a brigade crossing, a traffic control organization will be set up by brigade headquarters. Traffic control within the battalion will be left to the MP section who liaises directly with the brigade MP platoon.

104. The Assault is conducted as follows:

a. Assaulting troops form into their assault waves in the battalion assembly area. A complete sub-unit uses one crossing site, crossing one platoon at a time.

b. Initially the assault companies use only those weapons which they can carry across. They are supported by the maximum direct and indirect fire available from the near bank. The initial critical assault must have the fire support available to neutralize every enemy position which can bring aimed fire to bear on the crossing site.

c. The CO commands the operation from the near bank, until the second assault company is across. He then moves his tactical headquarters across.

d. Company commanders cross with their second platoon. Company seconds-in-command supervise arrangements on the near bank for their companies assisted by guides. If visibility is limited, guides may be necessary on the far bank to direct the platoons forward. This far bank control is under the company sergeant-major who has crossed with company headquarters.

105. **Fire Support.** Fire support is essentially the same as for a normal attack, but the following points are emphasized:

a. in a silent crossing attempt, fire support is on call; and

b. full use is made of the fire power from troops holding the near bank, for flank protection, neutralizing enemy defences and **shooting in** the first assault wave.

ESTABLISHMENT OF THE BRIDGEHEAD

106. **Establishment of the Bridgehead.** To allow for the construction of raft and bridging sites, assaulting infantry must secure the ground from which the enemy can direct aimed, small arms fire onto the sites. The bridgehead is not secure until a sufficient force, including support weapons, is across to enable the battalion to withstand an enemy counter-attack.

107. When considering the foothold on the far bank, the CO has the following alternatives open to him:

a. He uses the assault companies to secure the crossing sites, with a limit on their penetration of the far bank. At the same time supporting fire should suppress interference beyond them. Depth companies then cross, form up behind them and pass through to secure the objectives in depth needed to be secured for the protection of rafting and heavy bridging sites.

b. The assault companies secure the crossing sites then secure the objectives in depth, leaving the depth companies to mop up and secure the crossing site.

108. An intermediate bridgehead is secured quickly and the choice between the alternatives are influenced by:

a. the enemy strength and dispositions, the speed with which he may be able to counter-attack, the degree of surprise which can be achieved by the crossing and the likely effect of our supporting fire;

b. ground which dominates the crossing area; and

c. the planned speed for crossing the obstacles and the frontage of the attack.

MOPPING UP

109. Mopping up should normally be carried out by forward troops and not left to the depth companies. Bypassed enemy continue to fight and may seriously impede both reserve companies and the rear element of those troops who may have gone through them. The delay caused by mopping up cannot be avoided because the area must be free of enemy interference.

110. As with other forms of attack, a high priority is placed on the early arrival of supporting arms and support weapons into the bridgehead. Armour crosses at the first opportunity to assist the infantry.

111. The movement of support weapons across the river depends on the availability of helicopters or the speed with which assault pioneers and engineers complete raft and/or bridge sites. Priorities in movement of weapons and stores across the river once established are strictly controlled throughout the operation.

112. At battalion level the movement of vehicles across the obstacle are controlled primarily to avoid traffic jams. The number of vehicles concentrated in the waiting areas should be limited to avoid unnecessary casualties from enemy indirect fire.

SECTION 7

COMBAT SERVICE SUPPORT

OBSTACLE CROSSING PREPARATIONS

113. In any obstacle crossing operation it is essential that administrative planning commence as early as possible. The positioning of the needed elements, stores and equipment at the right place and time will save an enormous amount of time later on, and help maintain momentum, generate surprise and reduce casualties.

114. **Combat Supplies.** The move of fighting vehicles and combat support weapons across takes priority over replenishment; therefore, the assaulting troops carry their maximum load of ammunition.

115. **Recovery.** Recovery equipment, even if only a designated APC equipped with a long cable, is positioned at the entry of each crossing site to quickly remove any vehicle casualty blocking access. As soon as the situation and crossing capability permit, recovery equipments are stationed at the exit points as well.

116. **Medical.** The movement control plan must include arrangements for the evacuation of casualties from both sides of the obstacle. The in-place force UMS should be prepared to take the main load initially, leaving the assault force UMS to move forward and, ultimately, across into the bridgehead. Helicopter medical evacuation from the far bank back to an established UMS is best. Returning ferries and assault boats may also be used.

117. **PW.** The battalion establishes a PW collecting point on the far bank away from activity.

A ECHELON

118. As soon as the assault companies are across the obstacle and the intermediate objectives are secure, the combat support vehicles and empty rifle company vehicles cross. Then A1 echelon crosses.

119. A2 echelon crosses after the break-out has commenced. Space in the bridgehead is scarce and it must be reserved for the break-out force.

120. If initial casualties are heavy and beyond the capacity of the in-place force UMS, the battalion UMS sets up on the near bank, in the assembly area or closer, if possible.

121. If initial casualties are light and steady evacuation back across the obstacle seems possible, the assaulting battalion UMS should cross and set up in the bridgehead.

CHAPTER 11

THE DEFENCE

SECTION 1

GENERAL

CONCEPTS OF DEFENCE

1. Defensive operations are conducted to inflict casualties on the enemy to reduce his offensive capability. They aim to break up the enemy attack, destroy his forces and force him to go on the defensive.

2. The adoption of a defensive posture implies a ceding of the initiative to the enemy; but this does not mean that the defence is conducted passively, it must be fought aggressively.

3. The infantry battalion may have a wide variety of roles and tasks within the brigade commander's defensive battle plan. Defensive operations include:

a. **Delay.** This is an operation in which a force, under pressure, trades space for time by slowing the enemy's momentum and inflicting maximum damage on him — without becoming decisively engaged.

b. **Defence.** This is an operation conducted to stop the enemy or to break up his attack and force him to take up a defensive posture.

c. **Withdrawal.** This is an operation in which a force, in contact, disengages from the enemy, usually to establish itself in a more favourable defensive position. The withdrawal is discussed in detail in Chapter 12.

PRINCIPLES AND FUNDAMENTALS

4. Whether the defence is prepared hastily or deliberately, the principles and fundamentals remain the same but may require differing emphasis according to the situation.

5. **Principles of war.** The following are emphasized in the defence:

a. **Concentration of Force.** It is necessary to concentrate sufficient force and firepower to defeat the enemy at the point of assault. Good judgement and timing and the skillful application and control of fire and movement are critical.

b. **Offensive Action.** The battle must not be allowed to drift into a passive acceptance that the enemy holds the initiative and the defenders are merely reacting to enemy moves. Every opportunity must be taken to grasp the initiative and ultimately force the attacker to comply with the defensive plan. A belligerent guard, active patrolling, deception measures, nuisance obstacles, sniping and tank hunting are all key elements. Immediate and aggressive counter-attacks at all levels, before the enemy consolidates gains, help to wrest the initiative from the enemy.

c. **Security.** The battalion achieves security through reconnaissance, surveillance, deception and protective measures (including concealment, NBC defence and passive air defence. An attack from any direction, at any time of day, must be anticipated. The attacker must be continuously delayed and confused by the defensive layout.

6. **Fundamentals.** In addition to the above, fundamental considerations in defensive operations are:

a. **Information Gathering.** It is important to gain as much information and intelligence as possible through the use of covering troops, formation intelligence resources, patrols, and troops in contact.

b. **Use of ground.** The strength of the defence depends to a large extent on the selection and use of ground. The brigade commander determines approaches, selects vital ground and deploys forces to support his defensive plan. He assigns a battalion area of responsibility and specific tasks. The battalion area may contain key terrain selected by the brigade commander and specific pieces of ground that must be held by the battalion. The CO selects vital ground in his area. This process, repeated at each level of command, ensures unity of tactics in the overall plan.

c. **Coordination.** The CO and battalion headquarters conduct continuous coordination during both the planning and the conduct of the defence. This coordination takes place not only within the battalion but also with adjacent units, the brigade headquarters and the headquarters of attached elements and in-location forces.

d. **Mutual support.** Mutual support is the key factor in preventing the piecemeal destruction of companies, and of platoons within companies. The front, flanks and rear of each company area should be covered by fire from neighbouring companies — with any gaps covered by observation and indirect fire. The enemy must not be allowed to mount an attack against one position without being subjected to fire from another.

e. **Depth.** Depth is essential to defeat a sustained attack and to absorb the enemy's momentum. It may create surprise. Without depth shallow penetrations may lead to a break through. There is often a conflict between the need for both depth and mutual support. One may have to sacrifice some mutual support for depth, and compensate with observation, a mobile reserve and indirect fire. If gaps in mutual support become unavoidable, the gaps should be between companies. Platoons **must** be mutually supporting.

f. **Manoeuvre.** Using hit and run tactics commanders can avoid unpromising decisive actions. This enables them to concentrate sufficient strength at the right time and place to defeat the enemy.

g. **Firepower.** The effectiveness of the defence at all levels depends on the planning, coordination and use of all available firepowers.

h. **Reserves.** At battalion level the reserve may be small but, without it, the CO's ability to influence the battle is limited. Normally the battalion reserve will have a ground holding role in depth. Surprise is essential for the successful commitment of a reserve. This is gained through rapid and decisive action, deception and committing the reserve from an unexpected direction. Once committed a reserve must be re-constituted. It may then be necessary to reform the reserve from those areas less threatened or from depth elements which are not in contact with the enemy.

7. **Other Considerations.** One must consider the requirement for all ground defence. An attack from any direction must be expected. Reconnaissance and the preparation of alternate positions may be necessary.

STAGES

8. The stages of the defence occur in sequence, however the transition from one stage to the next is seldom distinct. This change can often occur at different times and in different locations in a brigade area. At battalion level the change is more clear-cut. The stages of the defence are:

a. **Covering Force Stage.** Covering forces are deployed forward to protect the preparation of the main defensive area, to delay the enemy and to identify the main axis of his advance. Covering forces are normally divided into —

1) a guard which is a security element whose primary task is to protect the main force by fighting to gain time; and

2) a screen which, while also a security element, has the main tasks of observation, identification and reporting information.

b. **Main Defence Stage.** This starts when the covering force breaks contact with the enemy near the forward edge of battlefield (FEBA).

c. **Countermoves Stage.** The countermoves plan includes plans for reinforcing, blocking and counter-attacks. The battalion will not give up ground until forced to do so. When penetrated by the enemy, the battalion will reinforce, block or counterattack to contain and destroy the penetration.

9. The infantry battalion may be employed with the covering force, fighting a delaying defence, holding ground in the main defensive area or as all or part of a higher formation countermoves force. The battalion may be required to form its own screen in front of the FEBA or, less likely, its own guard.

SECTION 2

DELAYING OPERATIONS

CHARACTERISTICS

10. The aim of the delay is to avoid or postpone a pitched battle in order to gain more favourable conditions. The idea is to offer virtually continuous opposition to force the enemy to deploy, go through his battle procedure and concentrate for an attack. This slows his advance.

11. Decisive combat should be avoided because the delaying force is needed back in the main defensive area, usually as the reserve. The effective use of obstacles can do much to enhance the delaying action.

12. The characteristics of the delay are:

a. decisive combat is avoided;

b. mobility is preserved;

c. a hasty defence is conducted at each delaying position;

d. maximum firepower forward;

e. extended frontage;

f. long range engagements are the norm; and

g. counter-attacks are employed primarily to help disengage elements caught in close combat.

PLANNING

13. Brigade provides the following direction:

a. the general locations of the initial and subsequent delaying positions and the area where the delay is to be conducted, and the duration of the delay action;

b. control measures such as report lines, boundaries and reserved routes;

c. obstacle plan to include preliminary and reserve demolitions;

d. location of troops providing the screen, flank guard, rear security and demolition guards; and

e. support allotted to the battalion to assist it in accomplishing its mission.

14. The successful delaying defence depends on:

a. the maintenance of morale,

b. good control,

c. secrecy,

d. security,

e. concentrated firepower,

f. superior mobility and the best use of obstacles, and

g. a simple and flexible plan.

15. Part of the brigade or division covering force or in an independent role, the battalion, may conduct their own limited delaying action. A specific period of delay may be needed over a certain distance and within certain boundaries. The options available are the same as those available to the formation, that is:

a. to impose delay by deploying on successive positions;

b. to impose delay by deploying part of the battalion on one position while the remainder prepares another position (delay on alternate positions); or

c. to impose continuous delay by conducting a tactical withdrawal.

FACTORS

16. In the delay the important factors are:

a. **Enemy.** The enemy will attempt to bypass strong opposition, then isolate and destroy it with follow-up forces. The battalion must retain its mobility, maintain a reserve and guard its exposed flanks and minor approaches.

b. **Own troops.** The CO will normally group the battalion into combat teams. It should not be necessary to change the initial grouping once the operation begins.

c. **Ground.** The battalion has the advantage of knowning the ground over which it will fight. Maximum use of this advantage is necessary as follows —

1) Select likely enemy major and minor avenues of approach.

2) Select the best positions from which to dominate these approaches with observation and fire.

3) Select covered and concealed withdrawal routes.

4) Select natural obstacles that may be improved.

5) Select likely ambush positions.

6) Note lateral routes which could be used to move a reserve, and which could also be used by the enemy.

7) Start drawing conclusions on grouping.

d. **Time and space.** The depth and width of the area will affect the CO's manoeuvre plan and determine if he must delay on successive or alternate positions. The amount of delay he must impose helps determine the number of positions and the length of time the combat teams must hold each one (and the degree of risk they must take).

DELAY ON SUCCESSIVE POSITIONS

17. Delay on successive positions involves the deployment of most of the battalion on one or more delaying positions (Figure 11-1). Whether more than one delaying position can be occupied simultaneously will depend on the:

a. enemy strength;

b. amount of delay and destruction of the enemy required;

c. amount of ground that can be given up before redeploying to the main position;

d. availability of suitable delaying positions; and

e. time available to prepare delaying positions.

18. Each delaying position should provide natural cover and concealment, good fields of fire and good routes for withdrawal. To reduce the danger of the enemy bypassing a delaying position, and to make effective use of all available weapons, the unit will often fight on a wide front, with little depth.

19. Disengagement of a battalion and movement between positions, including the movement of administrative echelons, is carried out like a withdrawal operation with detachments deployed for security and reconnaissance. Speed and a high standard of training are essential to success.

DELAY ON ALTERNATE POSITIONS

20. Here the unit forms two groups which initially occupy the first and second of the chosen delaying positions. Obviously with a reduced strength on each position the frontage will be restricted. Consequently, this technique may only be possible if the enemy advance is confined to a narrow front or when your flanks are relatively secure. Having completed its task the group deployed on the first position then withdraws to the main position or a third alternate position. This manoeuvre is repeated as often as is necessary, trading space for time. (Figure 11-2).

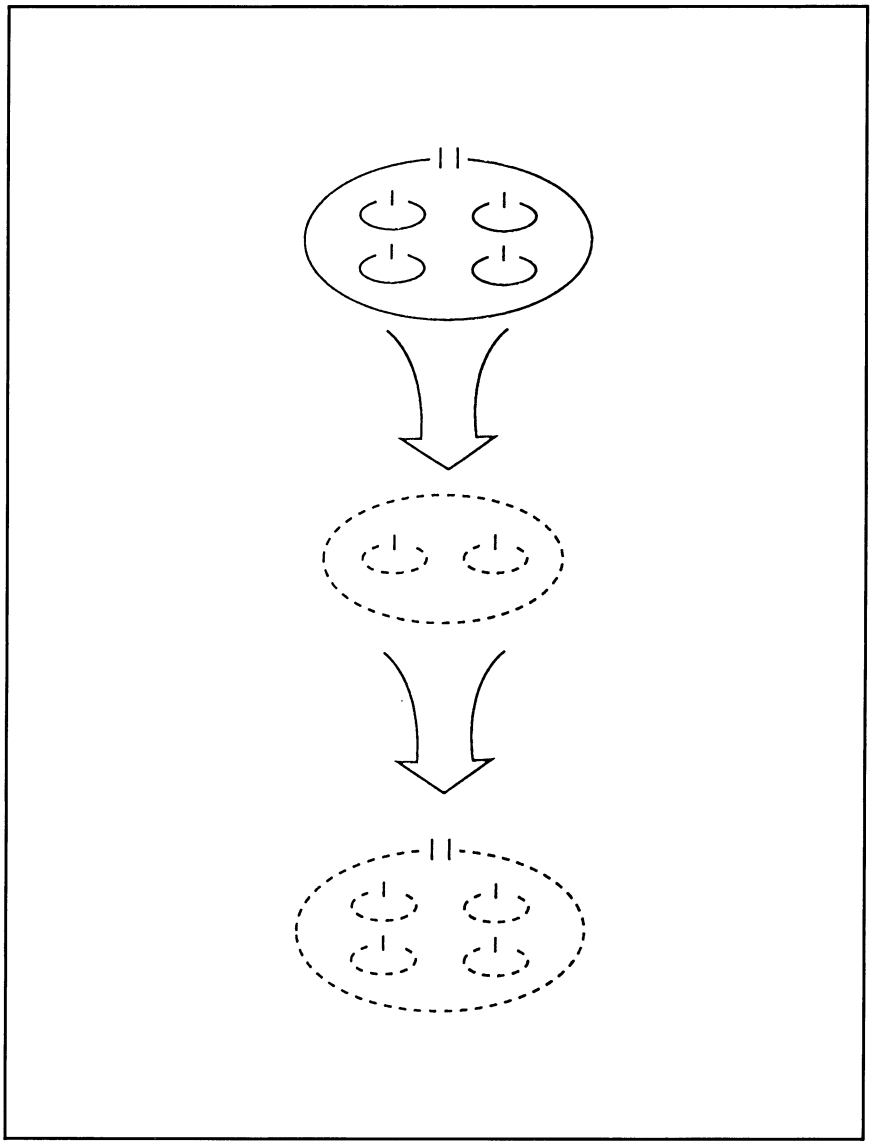

Figure 11-1 Successive Delay Positions

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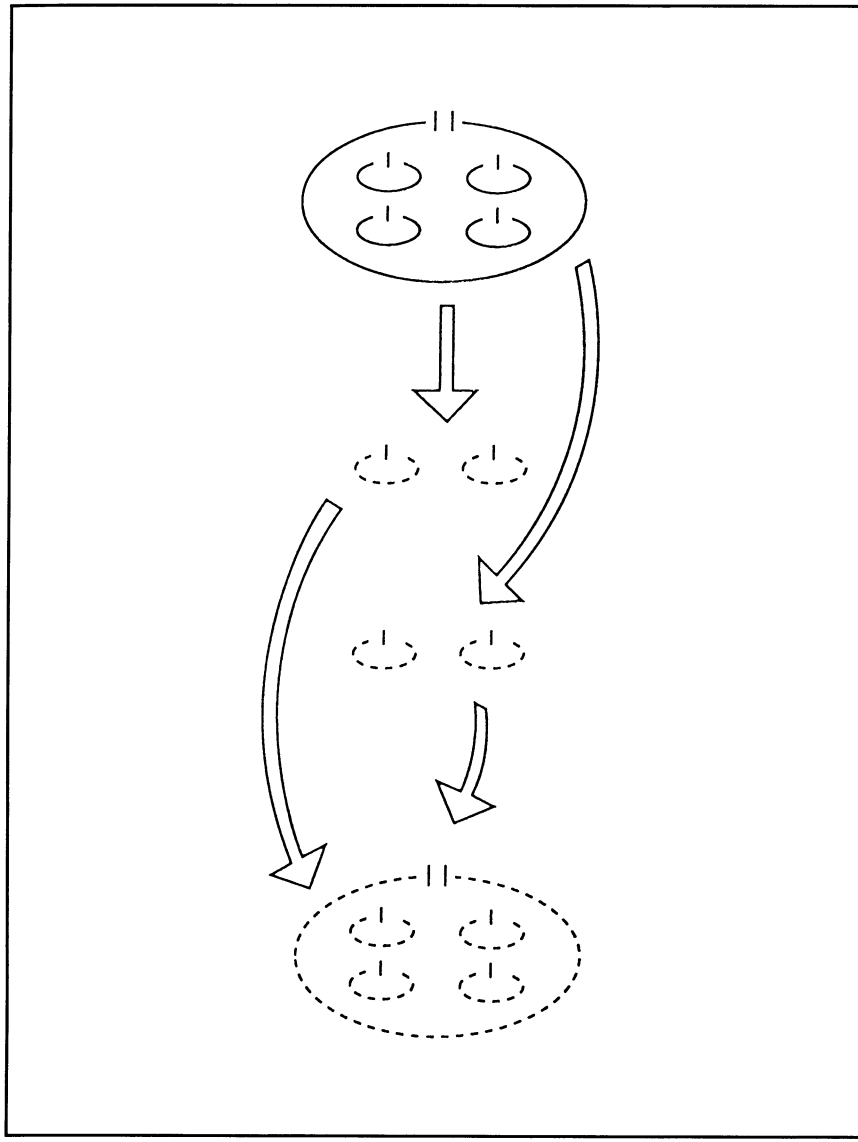

Figure 11-2 Delay on Alternate Positions

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21. Sharing command will occur. The CO may command the first position himself, using a subordinate to reconnoitre and prepare the second position. He may assume command of the second position once the first has been abandoned or he may delegate that responsibility to a subordinate while he takes command of the next rear position.

22. Delaying on alternate positions has the following advantages:

a. a separate reserve is not required;

b. more time is available for the improvement of the depth positions;

c. troops get some relief from being in constant contact with the enemy; and

d. there is less chance of becoming involved in close combat.

CONTINUOUS DELAY

23. Continuous delay is achieved with the coordinated tactical withdrawal of individual sub-units from one tactical feature to the next immediately to the rear, covered by other sub-units and maximum supporting fire. Limited offensive action, by companies or platoons, is undertaken either to take advantage of the opportunity to inflict casualties or to disengage a sub-unit which is too heavily committed.

24. To successfully conduct continuous delay the following advantages are needed:

a. tactical mobility;

b. ground which provides good fields of fire and also covered routes of withdrawal;

c. effective supporting fire from artillery and, when possible, from tanks; and

d. efficient communications.

FIRE PLANNING

25. The fire plan must provide:

a. continuous fire support to cover manoeuvre from one delaying position to the next;

b. defensive fire for each delaying position available at maximum range to force early enemy deployment;

c. defensive fire on all obstacles; and

d. covering fire on any gaps and exposed flanks.

26. The antiarmour fire plan is developed for each delaying position and coordinated into an integrated battalion plan. The key point is the selection of tank killing zones. The CO will normally retain control over some battalion antiarmour resources to influence the battle.

CONDUCT

27. The following control and coordination measures are used:

a. the time until which an area of responsibility must be held;

b. delaying positions to the rear reconnoitred and partially occupied before the forward position is abandoned;

c. contact maintained with units operating on the flanks;

d. report lines, bounds, routes, axes and boundaries established throughout the entire area of responsibility;

e. withdrawal from a position before the stated time approved by the senior commander;

f. communications based on the most reliable means not the most convenient, and plans must cater for this; and

g. commanders well forward to personally observe actions as they develop.

28. The delay action can be conducted using long range engagements or relatively short range ambush action or, best, a combination of these. All measures must be taken to gain surprise and to throw the enemy off balance.

29. Concealment and good camouflage are vital. If the enemy is able to detect delay positions well in advance, he gains the initiative by being able to plan bypass operations or well coordinated hasty attacks.

DEMOLITION GUARDS

30. Demolitions play an important part in delaying the enemy, particularly at defiles and river lines, where crossing places are limited. Demolitions are classified as:

a. preliminary, and

b. reserved.

31. Preliminary demolitions have limited tactical value as they may be fired as soon as the engineers have prepared them or on the orders of the local tactical commander. These demolitions do not have a demolition guard and their firing is an engineer responsibility.

32. Reserved demolitions are specifically controlled, either because they play a vital part in the tactical plan, or because of the importance of the structure itself. Three commanders are concerned with the firing of a reserved demolition:

a. The authorized commander is the senior commander who has overall responsibility. He usually is the formation commander in whose sector the demolition is located. He may delegate his authority to the battalion CO or the demolition guard commander.

b. The commander of the demolition guard is normally a company or platoon commander.

c. The commander of the demolition firing party is normally an engineer officer or non commissioned officer.

33. Reserved demolitions are guarded by a force varying in size from a platoon with support weapons up to an entire battalion, depending on the importance of the reserved demolition and the enemy threat. The guard's task is to protect the demolition and the engineer firing party. A demolition guard is normally sited in a defended locality protecting the demolition task. In the case of a bridge, some troops may actually be located on the bridge.

34. The demolition guard commander has under his command a small engineer firing party which prepares the demolition for firing. The engineer tasks are to maintain the charges and the firing circuits, fire them when ordered, and to confirm that the demolition was successful. The commander of the firing party is located near the headquarters of the demolition guard.

COMBAT SERVICE SUPPORT

35. The CO must ensure that the following administrative points are actioned by brigade and, if not, he must ensure that the unit takes action:

a. **Combat supplies.** These are held forward, preferably on vehicles rather than dumped. If absolutely necessary some supplies may have to be dumped at future delay positions. This is especially so for mortar and anti-tank ammunition and mines.

b. **Defence stores.** These are held forward and possibly dumped at delay positions.

c. **Repair and recovery.** Recovery takes precedence over repair unless the tactical situation permits in situ repair. All possible battalion recovery means must be ready for use. A policy for equipment destruction must be issued.

d. **Medical.** The battalion may need additional attached ambulance resources or helicopter support.

e. **Traffic control.** Traffic control is maintained on reserved routes and during the rear passage of lines when the battalion elements return through the main defensive position.

36. **Echelons.** A1 echelon will operate forward close behind the fighting sub-units. If the battalion is fighting from a series of company delay positions, company A1 echelons will operate detached. A2 echelon is back in the main defensive area to reduce traffic. Some elements, such as additional recovery, supply and medical elements, normally held at A2 echelon should become part of A1 echelon for the delay operation.

SECTION 3

PLANNING THE DEFENCE

THE DEFENSIVE LAYOUT

37. At brigade and divisional levels a covering force is normally deployed to cover the occupation of the main defensive position. The CO and company commanders must, however, provide some form of security against all forms of attack, whether a screen is deployed or not. Ultimately the security of the battalion is the responsibility of the CO, who may deem it necessary to provide patrols in addition to any security provided by brigade.

38. The CO must balance the requirements of:

a. brigade key terrain (if any),

b. battalion vital ground,

c. mutual support,

d. all-round defence,

e. depth,

f. concealment,

h. security,

j. firepower, and

k. reserves.

39. This is usually accomplished by:

a. avoiding the obvious ground;

b. siting weapons, including small arms, to take advantage of their best range;

c. denying the enemy the opportunity to engage our fire positions with long range direct fire weapons; and

d. turning the company defensive positions into a confusing maze of interlocking fire positions and obstacles.

40. Every effort must be made to conceal defensive positions as a means of achieving surprise and making target acquisition difficult. This implies the use of defilade positions and strict control of fire. Active measures like aggressive patrolling will assist in denying the enemy information about defences.

41. The battalion's companies are deployed to take advantage of the channelling and disruptive effect of any natural obstacles. These impede the attacker, reduce his tactical cohesion and expose him longer to defensive fire. In the absence of natural obstacles, artificial obstacles again sited in the less obvious, hidden locations must be developed. Any obstacle must be covered by observed fire and the enemy must be prevented from reconnoitring or interfering with it in any way, by day or night.

42. Depth is the cumulative effect of all defensive measures within the battalion area. The defence starts as far forward as possible to progressively weaken the enemy so that he is unable to defeat the battalion on its main position. Despite this a determined attacker can usually close with the forward companies and probably achieve some penetration, if not on the first attempt certainly on one of the subsequent tries. The defensive layout must be designed to prevent any such break-in from being exploited.

43. In short, the unit makes the attacker's problem as difficult as possible. The defence is organized so that it is:

a. difficult to locate weapons;

b. difficult to neutralize command and control;

c. able to separate the attacking infantry from their support; and

d. able to defeat any penetration achieved.

44. The temptation to site fire trenches that give the occupants a 3000 metre view when their weapons will only engage effectively to 300 metres must be resisted. Some individual fire positions are sited to provide long-range observation and direct fire (for long range weapons). But there is little point in exposing the rifleman to accurate stand-off enemy tank fire when he has nothing with which to fight back.

45. Company positions are designed to confuse the enemy if he is successful in penetrating the position. In this way, the element of surprise exists, not just for the first enemy assault, but for subsequent assaults as well.

46. In the delay positions are designed to surprise the enemy and stop his initial assault, forcing him to regroup and conduct battle procedure for a second, more deliberate attempt. It is usually not designed to stop that second attempt, unless it is very poorly executed by the attacker.

47. In the main defensive area, the positions are designed bearing in mind that, ultimately, surprise will be lost. It may take several attempts but eventually the enemy will have located most of the defensive positions. The CO must recognize this and organize the defence to present a difficult task for the attacker. Figure 11-3 explains further.

BATTLE PROCEDURE

48. The warning order should include:

a. the battalion task and area of responsibility;

b. time and place for rendez-vous for orders;

c. earliest time of movement; and

d. if known, some indication of likely company tasks and areas of responsibility.

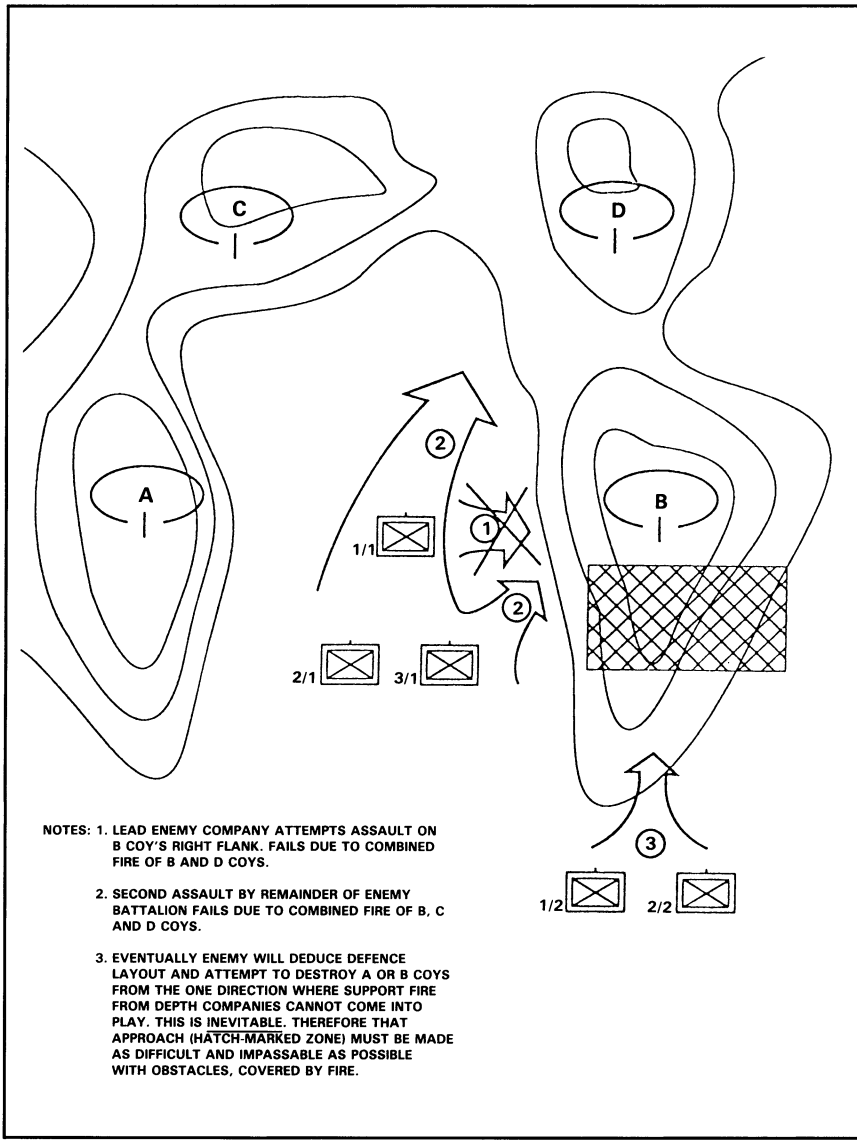

Figure 11-3 Battalion Defensive Layout

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49. It is important to get the troops on the ground and digging as soon as possible. The overall sequence of events is as follows:

a. brigade warning order issued;

b. map study and reconnaissance plan by the CO;

c. battalion warning order issued;

d. CO attends brigade preliminary orders;

e. further map study and adjusted reconnaissance plan by the CO;

f. battalion preliminary orders if the time and space dictate that the company commanders start their reconnaissance as soon as possible;

g. CO's reconnaissance, estimate and plan;

h. brief orders by the CO in sufficient detail to get troops on the ground, and to confirm or adjust preliminary orders;

j. coordination by the CO with the companies on the ground; and

k. CO's confirmatory orders.

50. The CO must be prepared to be called away to brigade confirmatory orders and must ensure that work in the battalion does not cease simply because of his absence. The DCO and operations officer fill in if the CO is called away.

51. As for the reconnaissance, the ground is studied from different vantage points, especially from that of the enemy. A helicopter can be a valuable aid in providing an overview of the battalion's area of responsibility. A helicopter reconnaissance does not obviate the need of a careful ground reconnaissance.

52. Great care must be taken during the reconnaissance to ensure that the layout of the battalion defence is not inadvertently compromised. Protection is necessary and reconnaissance parties must carry a minimum of information and codes. Particular note must be made of routes forward that will be used during the occupation of the position.

THE ESTIMATE

53. The aim of the defence comes from the tasks line of the brigade order. Usually, this will include specific ground to be held or approaches to be blocked. The CO and sub-unit commanders must be aware of the significance of their tasks in the overall plan. They must be particularly clear on how they are expected to provide mutual support or depth to flanking units and sub-units.

54. The battalion mission must be a clear statement by the CO of what the battalion is expected to do: hold ground, deny ground, destroy the enemy, inflict maximum casualties.

55. The main factors to be considered by the CO are:

a. enemy,

b. ground,

c. assessment of tasks,

d. time and space.

56. **Enemy.** The strength, tactics and intentions of the enemy will influence every aspect of the operation. Under adverse air conditions concealment from the air is essential. In all cases, the importance of track discipline and the camouflage of positions, headquarters, vehicles, stores and artificial obstacles is paramount. Enemy capabilities may preclude daylight activity.

57. Ground:

a. **Key terrain/Vital ground.** The part the battalion has to play in the defence of the brigade vital ground (or key terrain if so designated by the brigade or divisional commanders) will influence the CO during his estimate. In addition, he will select his own vital ground — that ground which the battalion must hold to be able to continue to perform its mission.

b. **Approaches.** The CO next considers likely enemy approaches, day and night, to his vital ground. He should consider possible enemy assembly areas, attack positions, the capacity of the approach to hold troops deployed for assault, its suitability for armour and any obstacles that exist. He must also examine likely infiltration approaches.

c. **Ground Dominating Approaches.** After deciding on the main approaches the CO assesses the ground that provides best observation and long range fire positions and best concealment and battle positions. He also considers possible counter-attack routes and blocking positions for a reserve force.

d. **Alternate positions.** Alternate positions may be used —

1) to deceive enemy reconnaissance,

2) for day or night occupation, and

3) for secondary tasks such as counter-penetration and all-round defence against secondary enemy approaches.

NOTE

The digging of alternate positions imposes a heavy additional strain on troops and the number of such positions should be kept to a minimum.

58. **Assessment of tasks (Troops to ground).** Having decided on the ground which best covers the enemy approaches the CO will decide on the positioning of troops, including patrols, antiarmour weapons, the selection of OPs and the use of artillery and mortar defensive fire. The battalion must be deployed to ensure the full power of all weapons can be brought to bear on the enemy — at the appropriate range. Planning is conducted ''two down''. To assist in making an assessment of troops to ground:

a. The CO uses the capability of a platoon and selects platoon positions covering all approaches. This normally leads to the selection of more positions than the platoons available.

b. The assessed platoon positions are next grouped into possible combinations of company localities.

59. **Time and space.** The time available will dictate the amount of defensive work possible and, from that, the priority of work. Defensive preparations are never finished and, if the enemy grants more time, work continues. A shortage of time may lead to a request for engineer assistance and will lead the CO to decide where his pioneers should be best employed.

60. **Courses open.** The combination of platoon positions into company localities which provides the best defence is selected and:

a. Company tasks and areas of responsibility are allotted. Those platoon positions desired originally but that cannot be occupied became patrol/OP tasks, artificial obstacles or indirect fire targets.

b. Gaps between companies are covered with patrols, surveillance, artificial obstacles and reserve tasks.

61. **Battle plan.** The CO's estimate leads him not only to his outline plan but also to a detailed concept for the conduct of the defence which will run through all the subsequent planning. The essence of his plan is where, and how, to kill the enemy. The enemy will seldom conform

to the CO's expectations. His final plan must be flexible allowing him to counter the unexpected, retain the initiative and force the battle to be fought within the framework of his design. He must retain a reserve to be able to influence the battle.

RESERVE SLOPE POSITIONS

62. To help achieve surprise and reduce the effect of enemy long range direct fire weapons, positions may be selected on reverse slopes. A reverse slope defence is organized on that part of the slope which is masked by the crest (Figure 11-4).

63. A successful reverse slope defence is based on denying the crest, which may be vital ground, to the enemy. The mere possession of the crest should not automatically interfere with the cohesiveness of the defence. The defended locality must be sited so that the enemy is forced to continue his attack against it. Similarly, the possession of the crest should not afford the attacker as much of a marked advantage as he might have expected. On gaining the crest the attacker should be unhappily surprised to find himself in an exposed killing ground with the main battle still to come.

64. The forward slope, crest and reverse slope should be covered by enfilade fire from flanking units and indirect fire from artillery and mortars. The defended locality on the reverse slope should be protected by minefields and other obstacles, the breaching of which will be so time-consuming that the attrition rate on the enemy will result in his failure. Dummy positions may be used on the crest or forward slope to aid in the initial deception and to encourage the enemy to waste ammunition.

65. When the enemy's momentum has been stopped and his forces reduced to manageable proportions, strong local counter-attack forces should be available to drive the enemy from the crest and forward slopes. A reverse slope position will usually only be successful if the position is strong enough to halt the advancing enemy and there is sufficient direct fire from flanks and front and indirect fire to make the occupation of the crest and slopes untenable.

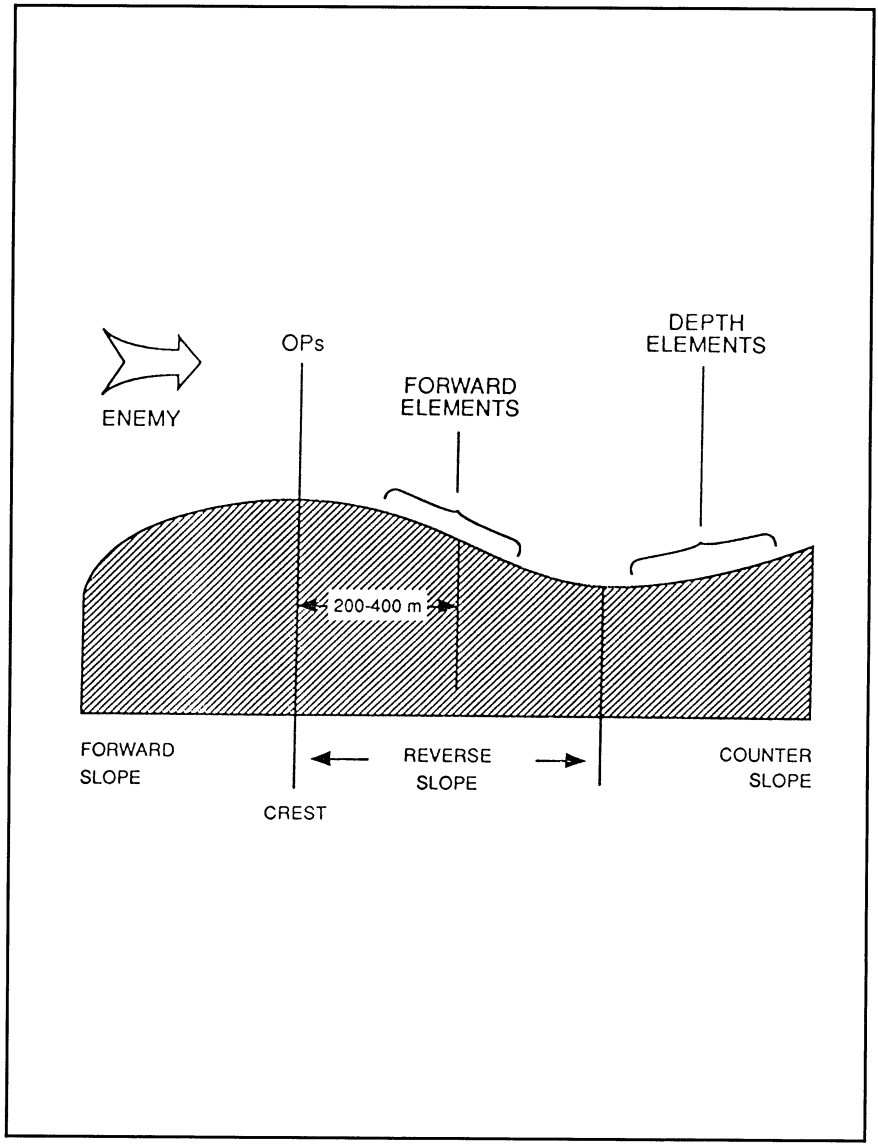


Figure 11-4 Reverse Slope Defence

66. The battalion will rarely conduct a reverse slope defence along its entire front. However, there may be situations when it is tactically advantageous for elements of a battalion to be deployed in reverse slope defence. A CO may adopt a reverse slope defence for elements of the battalion in the following situations:

a. when the forward slope is made untenable by enemy fire;

b. when the forward slope has been lost;

c. when the terrain on the reverse slope affords appreciably better fields of fire than are available on the forward slope;

d. when possession of the forward slope is not essential for observation;

e. when it is desirable to avoid creating a dangerous salient or re-entrant in friendly locations; or

f. to surprise the enemy and to deceive him as to the position of sub-unit localities.

COMMUNICATIONS

67. The following factors should be considered when planning the communications system:

a. Maximum use of line helps ensure that communications can be maintained in the face of jamming.

b. The CO will normally issue priorities for laying line, including additional line for OP and CP. The battalion has only a limited line capacity.

c. Radio sets must be kept in weapon pits or CP and be ready for operation as a man pack set at all times.

d. A reserve of signal equipment must be maintained.

e. The communications plan for counter-attack must be arranged and issued.

SURVEILLANCE

68. A surveillance plan is required for the continuous day and night surveillance of the battalion sector of responsibility. The plan should particularly cover approaches and obstacles, using all available resources. These include security patrols if deployed, reconnaissance patrols, OP, other patrols, air reconnaissance and night-fighting aids. The plan will include the CO's policy on the use of white light and electronic devices.

69. **Patrol Policy.** The aim of any patrol policy is to dominate the area between opposing forces:

a. **Before Contact.** It may not be necessary to establish security patrols in front of the main position while the screen is in position. Local protection can be achieved by normal sentries and listening posts. By night it may be necessary to supplement the screen/sentries with standing patrols and ambushes. The use of soldiers on patrols who have been working hard by day in preparing the main position should be avoided.

b. **After Contact.** Patrols will be required to cover dead ground and obstacles. The number of fighting patrols sent out by a battalion will vary; two or three a night will be the limit which can be sustained over a protracted period.

c. Patrols in gaps between forward companies are usually provided by those companies. Rear companies usually provide patrols for gaps between each other and between themselves and the forward companies.

70. The CO issues his surveillance plan which gives the general outline of the patrol programme to be followed. The location of all patrols and listening posts in the battalion area must be carefully recorded at Battalion Headquarters and promulgated in a patrol plan. Where observation of an area is difficult, patrols should be located so that they can observe the area and call for DF as soon as possible.

71. In situations where there are extensive gaps between companies or between flanking units, or where visibility is poor, patrols must be deployed to prevent enemy infiltration, interference with obstacles or reconnaissance of the defensive positions.

72. The overall battalion surveillance plan is normally drawn up by the Reconnaissance Platoon Commander for the CO. It consists of a map trace showing the point locations and observation arcs of all static patrols, both battalion and company, and the routes of mobile patrols. It includes those patrols ordered in the patrol task table. It also must include the locations of passive surveillance devices.

73. The surveillance plan must include those control measures needed for security and deception. Active devices should not be employed before contact has been made. All active devices should not necessarily be activated at once.

OBSTACLES

74. The brigade obstacle plan is designed to:

a. slow the enemy advance and canalize or restrict his movement;

b. cause casualties to troops, vehicles and equipment; and

c. separate the enemy assault force from its heavy support.

75. The battalion obstacle plan is based on the brigade plan but is primarily designed to protect defended localities and to divert the enemy into areas of our choosing. Natural obstacles should be used whenever available to save time, labour and material.

76. Without substantial engineer assistance the battalion will be limited to laying small protective minefields around company/platoon positions and building wire obstacles. Wire is designed to prevent enemy on foot from easily assaulting a position under conditions of reduced visibility. It slows the enemy advance and forces bunching. Care must be taken to ensure that wire does not reveal the position it is meant to protect.

77. The CO will allocate the available wire to companies according to priority and give the company commander the task of preparing the obstacle. He may provide some assault pioneer elements to help. While a properly prepared wire obstacle can be an effective part of the defence plan, the manpower required to carry and erect the defence stores can be substantial.

78. All minefields and mine-strips laid must be recorded. In addition, they and all wire obstacles must be sited in such a way as to not restrict the movement of support weapons to alternate firing positions or restrict the movement of counterattack forces. Overall control of obstacle siting within the battalion area is most important.

79. **Tactical Siting Conflicts.** Care must be taken to resolve at an early stage, before physical work has started, the inevitable conflicts that will arise between the siting of obstacles and company defensive positions. This is particularly so when formation obstacles are to be located in the battalion area. Following brigade or division orders, engineer work on these major obstacles must start early and it is not uncommon for the companies to arrive and find that their planned defensive position is now located in a major formation minefield (upon which work has already commenced); or that the minefield is being sited in an area into which the company cannot bring fire to bear.

80. Usually relatively minor adjustments can. be made that improve the overall cohesiveness and effectiveness of both the obstacle and the company position. There is nothing inherently wrong with locating a company position inside a major minefield, so long as the clear routes are known. Early liaison by the CO with the engineer commnder at brigade orders is essential. Continued coordination afterward within the battalion area during the development of the defensive positions and obstacles is also necessary.

THE FIRE PLAN

81. A defensive fire plan must ensure that the enemy is subjected to harassment and destruction by direct and indirect fire from his reconnaissance stage to the final assault. In addition, any counter-attack or counter-penetration must be supported by a fire plan. The fire plan must be co-ordinated and should involve artillery, tanks, mortars, anti-armour weapons, machine guns and close air support if available. It must also include the pre-planned provision of illumination.

82. The CO will base his fire plan on suggested DF tasks submitted by the company commnders. He will be advised in this by the artillery battery commander and the mortar platoon commannder. The planning number for DF tasks is six to eight for each artillery battery and the same for the mortar platoon. Each fire unit will also be allocated one final protective fire (FPF) task. The CO may also recommend some DF tasks **in depth**. These are finally decided and coordinated by the formation commander.

THE ANTI-ARMOUR PLAN

83. All anti-armour resources available to the battalion must be properly coordinated. This is usually done by the Antiarmour Company Commander or the commander of an attached armoured element. Approaches, minefields, gaps and flanks must be covered fully and arcs allotted which best suit the weapon characteristics.

84. The anti-armour defence is based on:

a. the brigade plan which aims to channel the attacking armour in order to destroy it;

b. the factors governing the layout of anti-armour defences: concealment, depth, mutual support and all-round defence;

c. the use of alternate firing positions for mobile resources; and

d. the antiarmour resources attached to the battalion, plus the battalion's Anti-armour Company and the rifle company antiarmour weapons.

85. The anti-armour weapons are sited in depth within a defended locality, defiladed and concealed. The overall plan is coordinated so that the battalion anti-armour defence layout ties in with the overall brigade layout and the company anti-armour layout ties in with the battalion's.

86. In circumstances where the armour attack constitutes the major threat, the battalion's defensive layout will be based on the anti-tank framework. In all cases the anti-armour plan must be laid out on a map trace showing point locations and arcs of fire for all brigade, battalion and company anti-armour weapons in the battalion area.

87. Infantry anti-armour operations will be based on a combination of the use of ground and the use of weapons:

a. **Use of Ground.** This includes the use of obstacles to hinder and channel enemy movement; the use of dead ground for concealment, for example, the movement of anti-tank weapons to obtain a defilade position or the use of reverse slopes for protection from long range enemy tank fire.

b. **Use of Weapons.** The resources available to the battalion are wide and range from hand-held short range weapons to the tank gun. Anti-armour weapons remain concealed and protected until required for use. Once used their survival lies in cover from retaliatory fire and the use of alternative positions. The weapons must give each other mutual support for protection and to cover movement. Finally, they must be carefully co-ordinated so that each type is allotted tasks best suited to its characteristics.

88. **Short Range Anti-Armour Weapons (SRAAW).** SRAAW are designed for the immediate close protection of platoons and specialist sections. It is important that SRAAW within the company are properly co-ordinated with each other and with battalion anti-tank weapons, also that arcs and tasks are allotted and that illumination is planned. This co-ordination is the duty of the company commander.

89. **Patrols.** Fighting patrols may be organized and equipped for action against tanks using platoon anti-tank weapons, mines, et cetera. These patrols can pay a great dividend particularly at night and in close country. The employment of even the minimum number of tank hunting or ambush parties could result in halting or causing hesitant, cautious, enemy tank movement, thereby gaining time and creating easier targets. An aggressive, positive state of mind is needed for successful tank hunting. Great confidence will be achieved once the vulnerability of tanks in circumstances favourable to infantry is recognized.

PLANS FOR COUNTERMOVES

90. Blocking actions and counter-attacks comprise the countermoves stage of a defence. The battalion must earmark its reserve or depth company for immediate counter-attack tasks, or for blocking. A blocking task can be undertaken by infantry without tank support whereas the immediate counter-attack force should have some tank support.

91. The companies must be aware of any brigade countermoves plans into their areas, and should expect to see countermoves reconnaissance parties and possible skeleton rehearsals during the preparatory stage of the defence.

92. Each company commander must have an immediate counter-attack plan for his defensive position. It is rare for an immediate counter-attack to be conducted below company level but a platoon commander may well consider conducting local assaults using an uncommitted section, or even part of platoon headquarters, to restore a situation.

SECTION 4

CONDUCT OF THE DEFENCE PREPARATORY STAGE

OCCUPATION

93. Usually time will not permit commanders to return to the assembly area to brief their troops and their time, in any event, is better spent forward conducting reconnaissance and coordination. The troops move forward on order of their commander but controlled by battalion headquarters. Each company moves forward under the command of the company second-in-command. Nothing is guaranteed in battle and sub-units moving forward must be ready to fight during the move and immediately on arrival at the position.

94. If the battle procedure has been good, rifle section commanders will be able to give orders immediately to troops on their arrival. Plant and defence stores should be in position ready for immediate use.

95. From the start, orders on protection, air and NBC defence, movement, camouflage and concealment must be immediately and strictly enforced. Commanders at all levels must ensure that the plan for the defence of the position as a whole, and of their locality in particular, is thoroughly understood by all ranks. Only by knowing what fire is available to break up an attack will the soldier have complete confidence in his ability to defend his position and, if necessary, to remain there while some enemy elements pass by.

96. During the occupation the area should be searched for enemy reconnaissance parties and OPs. This should be done even if the position is some distance from the FEBA.

COORDINATION

97. It is only after his troops are on the ground that the CO can finally coordinate his defensive layout. This coordination requires his personal inspection and the checking of:

a. battle positions, including the siting of support weapons;

b. the anti-armour layout, machine gun tasks and the surveillance plan;

c. artillery and mortar tasks;

d. obstacles and their protection;

e. administrative arrangements; and

f. communications.

98. Final counter-attack plans must be coordinated at this stage, including those involving formation counter-attack forces.

CONSTRUCTION

99. To ensure that the most important tasks are undertaken first in the development of the position, a priority of work is normally given in the operation order. The following priority items are battalion SOP and are automatic:

a. establish sentries and standing patrols;

b. position weapons;

c. clear fields of fire and prepare range cards; and

d. make a track plan.

100. A sample priority of work given in battalion orders might be:

a. prepare and camouflage fire trenches;

b. position protective minefields;

c. construct wire obstacles;

d. construct overhead cover for trenches;

e. prepare (assist engineers/pioneers) with secondary obstacles and warning devices;

f. dig in APCs (if necessary);

g. prepare alternate positions; and

h. prepare deceptive positions.

101. There must be a sense of urgency during the preparatory stage. It is important for the CO to monitor progress and change priorities if necessary. The preparation of a defensive position is physically exhausting and, if time permits, enforced rest should be organized.

102. Some parts of the position may be too exposed for permanent occupation. In such cases there may be alternate positions for periods of good and reduced visibility.

SCREEN AND GUARD ACTION

103. A guard can impose delay out of all proportion to its size. Once it has reached its **break clear** line, it will withdraw as fast as possible supported by maximum fire support from its own resources and artillery firing from alternate positions in the main defensive area. As it withdraws its routes will be mined and cratered and any minefield gaps closed. The guard will withdraw through the FEBA normally to occupy depth positions in the main defence.

104. Once the guard has broken clear, the screen forces continue to monitor the enemy movement. The trick is to gain additional delay by leaving the enemy uncertain whether the guard has broken clear or simply moved back to yet another delay position. The skillful employment of indirect fire by the screen can do much to reinforce this uncertainty. Eventually the enemy will force the screen to withdraw behind the FEBA. This operation and the withdrawal of the covering force/guard through the screen are rearward passage of lines operations (discussed in Chapter 12).

105. The withdrawal of the screen is the prelude to the main defensive battle stage. During this period the responsibility for dominating the ground forward falls on the forward battalions:

a. **By Day.** The area forward of the FEBA is dominated by indirect fire, by long range tank and antiarmour weapons and by patrols. The aim is to destroy the enemy whenever he exposes himself, thus denying him close reconnaissance.

b. **By Night.** A greater number of troops must be deployed and temporary positions closer to the obstacles on the FEBA and perhaps forward may be necessary.

SECTION 5

THE MAIN DEFENSIVE BATTLE

THE ENEMY ASSAULT

106. The assault by the enemy will be accompanied by the maximum direct and indirect fire that he can muster. Actual and likely defensive positions will be engaged with the aims of destruction, neutralization and gaining information through our returned fire. If the defence has been well planned not all our positions may be under fire at the same time.

107. To survive the bombardment and still carry out the tasks of holding ground and destroying the enemy, good leadership and the survival of an effective command and control system are paramount. Commanders cannot move around above ground and aggressive yet calm leadership and command by junior NCOs in trenches are vital. Orders will be passed by line or radio but the sheer weight of fire and the noise will make individual initiative important. This is why all ranks must fully understand the battle plan, including the deceptive measures intended.

108. Fire control and fire discipline, including the strict control of illumination, must be very good to avoid prejudicing surprise and wasting valuable ammunition on unproductive targets.

109. Initially the attacker is engaged with indirect fire and long range antiarmour weapons, including tank guns, firing from forward positions and then from positions in depth as the enemy closes. Only when a company defensive position is directly assaulted, or when an adjacent locality is assaulted, with all its weapons come into play.

110. Troops do not leave their prepared positions during an attack except:

a. to engage the enemy in close combat;

b. when ordered to make a local counter-attack;

c. to fight off an attack from an unexpected quarter; or

d. when ordered to occupy an alternate defensive position.

111. Even if the enemy overruns some localities and penetrates the position, the remaining trenches in that position and the remaining localities must continue to fight.

112. The decisive fight on and around the company and platoon positions will be a confused dog fight. The CO must be forward where he can get a personal feel for how the battle is going. Company commanders must attempt to maintain eye contact with their platoons.

BLOCKING

113. The CO must contain enemy penetration into his battalion area. The means of countering penetration are:

a. the use of DF, particularly the mortars and supporting artillery;

b. fire from positions sited in depth;

c. obstacles sited in depth;

d. as the direction of the main attack becomes clear, the redeployment of depth sub-units into prepared blocking positions; or

e. the use of the force allotted the task of deliberate counterattack or blocking. This force is normally controlled by the brigade commander.

114. Normally in a battalion the CO does not possess the resources to mount a deliberate counter-attack. Blocking can be conducted by sections, platoons or companies to halt penetration into the battalion area and to contain and halt any enemy elements which have broken through into the defended locality. Although in some circumstances penetration can be accepted between companies, it can never be accepted within company localities.

SECTION 6

COUNTER-ATTACKS

GENERAL

115. No battle will go exactly as planned and a reserve must be available and ready, with a pre-arranged fire plan. The CO must see for himself the situation before committing the reserve to a course of action. He must, however, avoid becoming intimately involved with each minor engagement or with each company fight but must consider the battalion battle as a whole.

116. The counter-attack is an integral part of the defence and can be mounted as a spontaneous action to take advantage of the situation or as a planned attack. The normal considerations applicable to an attack apply equally to the counter-attack. The responsibility for counter-attack is normally given to specified reserves. Counter-attack plans are developed as part of the plan for the defence. They may be planned to:

a. exploit the moments of weakness in an enemy attack;

b. destroy an enemy who has infiltrated or penetrated the defensive position; or

c. recapture lost ground.

LOCAL

117. This is organized and launched by a local commander to destroy enemy forces which have penetrated his position. It may or may not be rehearsed. It is usually launched during the enemy assault stage to take advantage of a fleeting opportunity. It should not be an instinctive reaction to all enemy penetrations. It should only be launched if the enemy cannot be neutralized with fire and he has taken ground which makes the rest of the position untenable or is preventing the company from carrying out its mission.

118. Local counter-attacks are part of the aggressive pattern of holding positions so that enemy penetrations can be defeated or contained. There will be occasions in forward areas when the enemy will be halted and contained on ground which the defence does not wish to occupy but which is controlled by fire. In such cases a counter-attack would be unnecessary and undesirable.

119. Local counterattacks require speed, initiative, determination and good fire support to succeed. There must be no delay and there will be no time for complicated preparations, formal planning or formal orders. They work best when the local commander has foreseen the requirement and planned and rehearsed a drill to meet certain circumstances.

DELIBERATE

120. The deliberate counter-attack is normally a formation operation mounted in at least battalion strength. The enemy will have consolidated their defences. A carefully planned and co-ordinated attack is therefore necessary. If time is available, likely tasks will have been carefully reconnoitred, planned and possibly rehearsed. However, if the counter-attack is unforeseen it will be mounted using the same procedures as for the deliberate attack at Chapter 9. While the ground and the layout of the defences should be well known, detailed reconnaissance must be carried out to confirm the exact enemy positions and in particular, any new obstacles or minefields. Contact must be established with any friendly forces in the area to obtain information, draw on their support and avoid clashes. Although the operation is deliberate, time is of the essence as any delay allows the enemy to better consolidate and reinforce his position.

121. The battalioin must know the route and method of assault of the counter-attacking force coming into its area in order to assist it with fire. Once the counter-attack has succeeded, the force will normally be withdrawn. The CO should expect to have to hold the restored position with the remainder of the battalion, including the remainder of the companies that lost the position initially.

SECTION 7

COMBAT SUPPORT IN THE DEFENCE

RECONNAISSANCE PLATOON

122. The Reconnaissance Platoon, relying primarily on strealth and concealment, can perform the following tasks in the defence:

a. form part of the screen;

b. provide surveillance forward of the FEBA following withdrawal of the screen;

c. provide surveillance over gaps between companies and over obstacles;

d. provide flank and rear area surveillance;

e. engage important enemy targets with sniper fire; and

f. provide lay-back patrols.

123. The entire platoon may be deployed on detachment tasks, as each detachment is able to operate a surveillance site or OP on a continuous 24-hour basis.

124. Snipers may operate forward under platoon control to interfere with enemy obstacle crossing operations, and reconnaissance parties, or be located in company localities to help break up assaults by killing enemy commanders.

125. Lay-back patrols can provide much important information on enemy approaches and gain excellent indirect fire target information. This is a most dangerous task, however, and special care must be taken in the employment.

MORTAR PLATOON

126. The primary task of the Mortar Platoon is the engagement of DF tasks to break up the attack while the enemy is canalized by obstacles, shaking out in the attack position or in the final assault. In addition the platoon will engage targets:

a. in support of counter-attacks;

b. in support of patrols;

c. to provide battlefield illumination; and

d. designated as FPFs by the CO.

127. The platoon will provide fire support as far forward as possible and this may require one or both mortar groups being deployed forward to alternate positions. Any mortar targets engaged before the main enemy assault must be fired from alternate base plate positions to avoid the immediate neutralization of the mortars during the main assault.

128. The mortars may be deployed in platoon or group base plate positions depending on the counter-mortar threat. Control remains centralized through the FSCC. All MFCs may be deployed with the companies, usually with one to the Reconnaissance Platoon. MFCs from the companies accompany sub-unit patrols.

128. The mortars may remain with their vehicles to permit rapid deployment to alternate positions. Alternatively they must be dug-in properly. In the latter case movement is most difficult and they must be prepared to weather enemy counter-mortar fire.

ASSAULT PIONEERS

130. The Pioneer Platoon tasks include:

a. construction, or assistance in construction of obstacles;

b. supervise the construction of dug-in CPs and a dug-in UMS;

c. demolitions;

d. maintenance of unit minefield records; and

e. NBC monitoring.

131. The pioneers should not be wasted on tasks which can be completed by riflemen. The CO must coordinate their work with the defensive work of the companies, and with any attached engineers. The platoon remains centralized under battalion command. If working on rifle company defences, the sections are placed in support for specific tasks or a specific time period.

132. The platoon is capable of holding ground and, when all its specialist tasks are complete, may be sited:

a. to defend battalion headquarters;

b. as a fourth rifle company platoon (under command of the company) in the company with the greatest need; or

c. in a gap or depth position.

133. The CO must recognize that the platoon may not have had time to prepare its own defensive position.

ANTI-ARMOUR COMPANY

134. The Anti-armour Company provides the battalion antiarmour defence framework and operates centralized under the CO's command.

135. Initial long range engagements of enemy armour will be made from forward alternate positions, perhaps even forward of the forward rifle companies. As the enemy continues to advance the company weapon detachments will pull back to positions in the main defence area.

136. The CO will take into account any brigade anti-armour resources in his area. The detailed siting of weapons, and coordination with the rifle companies, will be left to the Anti-armour Company Commander.

137. Once work has commenced on the main defences, the CO must ensure as part of his coordination and inspection routine that the Anti-armour Company weapons are sited to be:

a. in defilade wherever possible;

b. mutually supporting; and

c. that a reserve exists.

138. In the delaying defence the CO may choose to place anti-armour detachments under command of rifle companies for that stage to minimize regrouping requirements.

SIGNALS PLATOON

139. Line should be used in the main defence to the maximum extent possible. The CO will lay down priorities for line-laying, including line for certain Reconnaissance Platoon OPs and important artillery OPs.

140. Where possible line should be laid before the rifle companies occupy their localities.

141. Radio stations must be dug-in and ready for operation. Under most circumstances radio silence will be maintained throughout the occupation of the position, and up until the company is under attack. Sub-units not engaged remain silent.

MACHINE GUNS

142. The vehicle machine guns on company vehicles may be employed:

a. mounted if suitable vehicle positions are available; or

b. dismounted on the company position.

143. Some machine guns should always be employed dismounted on company positions. Care must be taken in fire control as these weapons can be excellent indicators to the attacker of where the main defences lie.

APCs

144. **Forward Company Positions.** Some may remain forward, dug-in on the company position making use of the vehicle weapons. There will rarely, however, be room for all company vehicles on the position so a vehicle hide must be found, or the vehicles must be sent back to A2 echelon. If a suitable hide is available the empty vehicles may be sited to block unlikely approaches and provide enfilade fire across the front of adjacent companies.

145. **Reserve Company Position.** In the event that the battalion reserve must redeploy or counter-attack, all its vehicles should be held in a hide near at hand.

146. **Security.** In selecting vehicle hides due consideration must be given to the ease with which vehicles and their heat signatures can be detected from the air. Care must be taken to ensure that vehicle hides do not give away an otherwise well hidden position.

SECTION 8

SUPPORTING ARMS IN THE DEFENCE

ARMOUR

147. Armour will normally form the major part of the formation covering force. Armoured reconnaissance elements will form the basis of a brigade screen. If armour is allocated in support of the battalion for the main defensive battle it may not become available until the covering force has withdrawn.

148. The main role of armour in support of the battalion in the defence is the long range destruction of enemy armour. With its relatively heavy armour the tank is the only vehicle which can move around the battlefield with relative impunity. It is often best employed, therefore, in a reserve, counter-attack role in the battalion area. Tanks should not be allocated out to the rifle companies in ''penny-packets'' as this negates their advantages of mobility and shock action.

149. **Armour Requirements.** Armour requires the following from the battalion when it is present in an infantry defended area:

a. close infantry protection,

b. short range anti-armour protection,

c. details on the infantry defensive layout,

d. adequate firing positions,

e. hides, and

f. routes.

150. For a more detailed discussion see B-GL-301-002/FP-001 The Battle Group in Operations.

ARTILLERY

151. The principal task of artillery in the defence is the break-up of enemy attacks, in all stages of their development, crossing obstacles, shaking-out in the attack position and in the final assault. The aim of DF is to disorganize enemy preparations and to break-up the assault. The aim of FPF is to break up final assaults.

152. Gun positions should be sited to gain some measure of protection from infantry localities. Although close protection of the gun positions is an artillery responsibility some emergency infantry assistance may be necessary.

153. The Battery Commander of the direct support battery will remain with the CO at all times so that he can plan, coordinate and implement the defensive fire plan in accordance with the CO's intentions.

154. FOOs are allocated to the forward rifle companies and to the battalion reserve/counterattack force. FOOs may also be sent out with certain infantry patrols.

ENGINEERS

155. The primary role of the engineers in the defence is the denial of freedom of movement to the enemy. In the defence in particular there will never be enough engineer resources to complete all required tasks simultaneously. Their main task will be in providing depth and strength to the infantry company defences.

156. The battalion will usually find engineers in the battalion area, during the preparatory stage, working on formation obstacles. The CO should note the coordination necessary to ensure that the planned obstacles and the planned company positions complement each other.

157. Once the main obstacles have been prepared the engineers may be available to work on dummy positions for deception purposes. When all specialist work is done, the engineers are well-suited and well-equipped to hold ground. It is usual, however, at this stage for all engineer resources to be withdrawn from the battalion for employment on specialist tasks elsewhere in the brigade or division.

AIR DEFENCE

158. Air defence in the main defensive area will normally be controlled at brigade level or higher. Some air defence elements may be allotted in support of the battalion, most will be only in location.

159. Resources in support of the battalion are best employed defending:

a. battalion headquarters;

b. the battalion reserve (especially if it contains armour); and

c. in the delaying defence, defiles and gaps in obstacles.

TACTICAL AVIATION

160. Usually tactical aviation units will be tasked in support of the covering force and screen operations, providing flexibility and mobile fire support. It would be rare for the battalion to be given tactical aviation support in the main defensive battle, unless the battalion itself were part of a reserve/counter-attack force.

161. The battalion may find attack helicopters operating in the unit area as part of a brigade or division plan. The designation of an area as a possible armour killing zone will involve a certain amount of prior helicopter reconnaissance activity. Care must be taken, through consultation and coordination, that this activity (controlled by higher formations) does not give away the battalion's plans.

SECTION 9

COMBAT SERVICE SUPPORT

GENERAL

162. The main combat service support problems in the defence are:

a. the heavy demands for mines, defence stores and ammunition;

b. the vulnerability of echelons to ground and air attack; and

c. the difficulty in movement, particularly by day.

163. In the defence the need for cover and concealment is most important and administrative preparations, such as the siting of dumps, must not be allowed to prejudice this requirement.

PREPARATIONS

164. The combat service support preparations for the defence must begin as early as possible and not wait for the detailed battalion plan particularly when ordering and moving forward defence stores.

165. Company vehicles not required for the defensive battle should be withdrawn to A2 echelon to assist in concealment.

166. The normal system of replenishment will continue as long as the tactical situation allows. Only when enemy action makes it impossible to draw from DPs should dumped stocks be used. During quieter periods every effort should be made to replenish dumps that have been used or destroyed. As well, the normal daily replenishment system should be re-established.

167. Dumping will almost certainly be necessary, particularly for defence stores and artillery, mortar and anti-armour ammunition. Dumping, however, is inflexible and wasteful if too much is put on the ground in the wrong place. Careful judgement is necessary to strike the right balance.

MAIN DEFENSIVE BATTLE

168. **Medical.** Whenever possible, the normal medical evacuation system is used. After a successful battle, helicopter evacuation of casualties may be implemented.

169. **Repair and Recovery.** The main task during sustained battle will be in situ repairs to equipment and sufficient recovery operations to keep routes clear. Once a suitable pause in the battle occurs, recovery teams can move forward.

170. **Traffic Control.** A echelon elements will normally require BAA approval before vehicles are allowed forward. The forward battalion companies must place posts on any major route through their area to stop friendly traffic from straying beyond the FEBA.

171. **Morale.** Active steps are needed to maintain morale during protracted defensive operations. Of particular importance is the need for the dissemination of news and the suppression of rumours, both in relation to the battalion, brigade and divisional battle and the conduct of the war as a whole. In a prolonged defence, the provision of rest areas will be necessary, or at least the transfer of the unit to a quieter sector.

172. **Leadership.** The CO and company commanders must make time to visit and be seen by their soldiers. This is even more important during the critical points in the battle when reassurance is most needed.

SECTION 10

RELIEF IN PLACE

INTRODUCTION

173. Relief in place is a common operation in which all or part of a battalion is replaced by an incoming force. The responsibilities of the replaced force are transferred to the incoming force which continues the operation.

174. Both incoming and outgoing units are vulnerable during this operation. There are many soldiers on the move in forward areas and command and control is difficult to exercise if an enemy attack develops while the relief is in progress. Relief in place should, therefore, be conducted during a period of low activity.

BASIC CONSIDERATIONS

175. Relief should be conducted in accordance with the following basic considerations:

a. **Secrecy.** If the enemy attacks or engages with artillery while the relief is in progress, casualties may be heavy. Change-over must be concealed for as long as possible. Lax radio discipline is the most likely area to cause a breach of security.

b. **Speed.** The relief must be carried out in the shortest possible time compatible with silence and control. It depends on —

1) whether relief takes place by night or day;

2) how much the position and route to it is under observation by the enemy; and

3) the location of the dismounting point and other movement factors. By night the aim must be to ensure that the incoming battalion is concealed and ready to fight by first light and the outgoing battalion is then no longer under direct enemy observation.

c. **Silence.** The need for silence may often be greater than the need for speed, and arrangements for control must be such that silence is not broken unnecessarily.

d. **Control.** Although secrecy, speed and silence are major considerations in the success of this operation, it is control which is decisive if the unexpected happens. Good arrangements for guides, check-points, route marking, movement on foot and in transport, and action by F echelon transport are the basis of control.

176. A warning order should be received no later than 48 hours in advance if sufficient time is to be available for the operation to be carefully planned and conducted. On receipt of the warning order the CO passes on all available information to his OGp and nominates the advance party. He and his advance party should go to meet their opposite numbers as soon as possible, and then reconnoitre the new position.

EXCHANGE OF PLANS AND LIAISON PERSONNEL

177. The incoming CO and his staff must be briefed on, and become thoroughly familiar with, the defensive layout, including fire plans, obstacles, counterattack plans and the patrol policies of the unit being relieved. This can be assisted by the incoming unit sending forward advance parties and the outgoing unit leaving liaison officers for a specified period. The number will vary according to the situation. LO normally remain with each headquarters down to sub-unit level. The incoming CO and his staff must be fully briefed on the enemy and his habits.

178. The two CO make mutual arrangements to enable detailed planning of the relief to start. Assuming that the organization of the two units is the same, careful consideration must still be given to their relative strengths and consequently the size and layout of posts and localities. They decide on:

a. On the order of relief forward companies are usually relieved before rear companies.

b. Command will change when two or more companies have reported relief complete. Command changes at company level when two or more platoons have reported relief complete.

c. Arrangements for liaison are made with flanking units.

d. Locating and marking of dismount areas and check-points are done.

e. A policy for taking over stores and weapons is made.

f. Signals instructions for the relief are completed.

179. The CO issues outline orders before the advance party commences its reconnaissance and planning. Further orders are given before the relief begins and a final coordinating conference is held on completion of the relief. Orders must include as much detail and information as possible.

ADVANCE PARTY

180. On receipt of the CO's orders all members of the advance party are briefed as to the information required at their level. The main body will carry out normal preparation for battle. Commanders with the main body will brief the troops, in particular covering:

a. the task;

b. expected light and weather conditions;

c. the need for silent movement;

d. details of action if attacked while the operation is in progress;

e. the acceptance of night battle noises as routine (for example, that shelling is not necessarily directed at them); and

f. the password and any light signals which could affect their forward movement.

181. The composition of the advance party depends on:

a. whether the incoming battalion is:

1) in contact with the enemy and therefore only being transferred from one sector to another,

2) in reserve and liable to be called on at short notice for an operational task, or

3) in a rest area; and

b. whether movement is possible in daylight and the number of men the outgoing CO is willing to allow forward.

182. The battalion will be established and ready to fight quickly if commanders at all levels can see the ground in daylight and discuss the position with their counterparts.

183. If time allows company and platoon commanders should return to brief their men. After the briefing they must then go back to the new position and stay there to keep in touch with the situation until the return.

BATTALION HEADQUARTERS

184. The CO and the CP section require information on all matters of significance in the area, particularly the following:

a. topography, including dead ground on approaches to the area;

b. enemy, dispositions, strength and habits including —

1) patrolling,

2) minefields,

3) reaction to fire or movement, and

4) air situation; and

c. own troops —

1) layout of the battalion area,

2) disposition of flanking units,

3) fire plan,

4) counter-attack and counter-penetration plans,

5) air situation, and

6) all information on own obstacles and gaps through them, condition of minefields, patrol activity, OP, communications, civilians, casualty evacuation, the administrative plan and routes.

185. In addition to the information listed above, the Intelligence Officer takes over:

a. traces of enemy and our own dispositions, minefields, wire, fire plan, enemy DF and fixed lines;

b. reports from patrols and OP;

c. shelling and bombing traces and reports;

d. ops/int log data, battle map, patrol map, and other special maps and air photographs; and

e. code setting and passwords.

186. The Signals Platoon obtains all information regarding the communications plan, including any technical restrictions. Stores are taken over or, where desirable, exchanged.

187. The UMS takes over any medical stores and familiarizes itself with the casualty evacuation plan, medical arrangements and hygiene.

COMPANIES

188. The company commander and platoon commanders, with guides, effect liaison with their opposite numbers and obtain the following information:

a. topography, including dead ground;

b. enemy, habits, snipers, patrols, locations of minefields, wire and shelling;

c. tasks, location of company headquarters and platoons, numbers of men in each post, extra weapon pits required and digging parties needed, obstacles, warning devices, any listening posts and communication details;

d. disposition of flanking sub-units;

e. DF tasks and the method of calling for fire, range cards and sketches;

f. local counter-attack and counter-penetration details;

g. alternative positions;

h. patrol routes and minefield lanes;

j. defence stores and ammunition to be taken over;

k. feeding and sanitary arrangements;

m. evacuation of casualties and location of aid posts;

n. track discipline; and

p. passwords, code settings, light signals and their meanings.

189. The combat support platoons require information on:

a. enemy dispositions and habits;

b. disposition of our own troops including OP;

c. exact tasks with any special instructions affecting their weapons;

d. reference points; and

e. administrative arrangements.

CONDUCT OF THE RELIEF

190. The relief procedure may be specified by the headquarters ordering the relief. To ensure a strong defence throughout, the relief is carried out by stages, either rear to front or front to rear. Factors affecting the sequence are the:

a. subsequent task of the relieving unit;

b. strength and efficiency of the unit in position;

c. capability of the enemy to detect and react against the relief;

d. nature of the terrain;

e. need to vary the pattern of relief, especially in protracted operations; and

f. size and nature of the two forces involved in the relief.

191. Joint arrangements must be made for the control of the incoming and outgoing movements. Coordination should include:

a. routes to be used and priorities;

b. responsibility for traffic control;

c. location of dismounting points;

d. provision of guides for the relieving sub-units; and

e. common use of transport.

192. Control points which must be set up are:

a. dismounting point;

b. battalion check-point;

c. company check-point; and

d. platoon RV.

193. **Dismounting Point.** The dismounting point is the location where the incoming unit dismounts from vehicles or aircraft, prior to moving into the new position. The following should be considered when choosing and organizing a dismounting point:

a. **Location.** The location should —

1) be near enough to the new area to avoid unnecessary movement,

2) be far enough back to prevent any noise being heard by the enemy,

3) have good turn round areas,

4) provide concealment for transport,

5) have dispersal areas for companies if there is likely to be any delay, and

6) be clear of usual enemy harassing fire areas.

b. **Officer in Charge.** One officer from each battalion is positioned at the dismount point. His tasks include siting the company dispersal area which must be able to be defended.

c. **Timing of Arrival.** Company groups should arrive at sufficient intervals to allow one to get clear before the other arrives.

d. **Action on Arrival** —

1) The officer in charge of each arriving group reports to the officer in charge of the dismounting point while his group forms up ready to march off.

2) The guide briefs the officer in charge of the group and leads it to the new area. If there is a serious delay, the officer in charge of the dismounting point may order the incoming group to the dispersal area.

194. **Battalion Check-point.** The battalion check-point has the same functions as a battalion check-point in the withdrawal. The following should be considered:

a. The battalion check-point should be a position on the route forward from the dismounting point but short of the place at which the first company leaves the main route, and not so close to the dismounting point that companies have not had room to deploy.

b. It may serve also as a company check-point for one or more of the reserve companies withdrawing.

c. There must be suitable dispersal areas for two companies.

d. One senior officer fram each battalion and company are designated. The company officer moves at the head of his company and reports its arrival. An NCO reports when the last man has arrived.

e. Instructions on what action is to be taken on arrival are issued. For example — This is only a check-point; there is no halting unless ordered by the CO because of unexpected delay.

195. **Company Check-point.** The following should be considered when detailing a company check-point:

a. A company check-point is usually at the point at which companies leave the main route.

b. A company check-point should be located forward of the battalion check-point.

c. Platoon dispersal areas should be reconnoitred.

d. The CSM of the outgoing company is normally in command.

e. Each platoon and company headquarters reports its head and tail through the check-point but does not halt.

196. **Platoon RV.** The following should be considered:

a. Platoon RV should be close to platoon headquarters.

b. Sections meet their guides at the platoon RV.

c. Sections and platoon headquarters are led to their respective positions.

ROUTE MARKING AND GUIDES

197. The incoming battalion is responsible for marking the route forward to the dismounting point. From the dismounting point to platoon areas the outgoing battalion is responsible, using the tactical signs of the incoming battalion. These are brought forward by the advance party. By night, light signs are required and tape may be necessary.

198. The responsibility for providing guides and for guiding lies with the outgoing battalion. However, if the situation allows the incoming unit to send forward a large advance party, they may be able to provide their own guides. This will be a matter of agreement between the two CO. Guides must be briefed carefully and in addition to knowing the routes, they must know the areas allotted to their sub-unit in the dispersal areas at the dismounting point and check-points.

199. Officers and/or NCO in the advance party should meet their sub-units at the company check-point so that:

a. any last minute changes in orders can be passed on; and

b. there is someone else who can take over if the guide provided by the outgoing sub-unit becomes a casualty.

COMMUNICATIONS

200. There are three means of communication during the relief. These should be used in the following order of priority:

a. line,

b. outgoing battalion radio net, or

c. incoming battalion radio net.

201. **Line.** Line is required to the dismounting point, battalion checkpoint, and sub-units, so that information and orders can be passed freely by secure means.

202. **Radio.** The volume of radio traffic should be kept at normal levels. If this is not possible, traffic should be confined to the outgoing battalion net already known to the enemy. The incoming battalion should observe radio silence.

SECURITY OF THE RELIEF

203. Every effort must be made to prevent the enemy learning of the relief. In addition to carrying out the relief during poor visibility:

a. normal activity must be maintained;

b. reconnaissance and advance parties must be kept as small as practicable and move forward separately;

c. aerial reconnaissance should be made in aircraft of the force being relieved;

d. radio nets of both forces should not be used simultaneously;

e. vehicles and equipment of a different type to that of the outgoing unit or formation should be concealed;

f. tactical deception should be a joint plan; and

g. fire support should be co-ordinated by the outgoing CP until command passes. Weapons of different calibres from those of the outgoing unit should not be fired (except in emergency) until relief is complete.

PROTECTION DURING RELIEF

204. Protection during the relief, depending on likely enemy activity, involves:

a. patrols; and

b. protection for the dismounting point, battalion check-point and company check-points.

205. **Patrolling.** Patrol programmes must be maintained at normal levels during the relief operation. It will be usual for the unit being relieved to provide the patrols on the night of the relief and for these patrols to be accompanied by members of the advance party of the relieving unit. These members of the relieving unit must be brought forward on the night before the relief so that they can view the terrain during the day before accompanying the patrols.

206. The incoming battalion will probably be responsible for protecting its dismounting point and battalion and company check-points. Responsibility for any or all of these may be changed by mutual agreement between the CO.

207. **Dismounting Point.** Anything from a few listening posts to a whole company may be required to secure the dismounting point according to the degree of enemy activity. The area protected should include the dispersal areas.

208. **Check-points.** As these are likely to be close to or within the battalion location their protection is unlikely to require large numbers of men.

PASSAGE OF COMMAND

209. The outgoing CO is responsible for the defence of his area until command passes. The moment when command is to pass is determined by mutual agreement between the two commanders, unless directed by higher headquarters and it must be clearly stated in orders. Before command passes, the outgoing CO exercises full operational command over all subordinate elements of the relieving unit which have completed their portion of the relief. When command passes, the relieving commander assumes full operational command of all elements of the outgoing unit which have not yet been relieved. The incoming battalion must fit into and accept the defence plan of the outgoing unit until command has passed.

COMBAT SUPPORT

210. Unit equipment will not normally be exchanged, but ammunition, defence stores and other stocks of use to the relieving unit are normally handed over in position. Any variation from this must be agreed upon and clearly stated.

211. The relief of combat support platoons and any attached supporting arms is normally carried out concurrently with that of rifle companies.

212. To ensure reliable mortar support during the relief, some mortar targets should be registered as a check on accuracy soon after relief. Complete registration of all tasks should be avoided to prevent revealing the fact that the relief has taken place. On occasion it may be possible to relieve combat support weapons gradually during one or two days preceding and/or following the main relief. This procedure allows inconspicuous registration.

213. Dumped ammunition for both mortars and medium antiarmour weapons should be handed over to incoming platoons.

214. The method of relieving artillery units must be clearly stated. Normally the divisional artillery or the direct support regiment of the outgoing formation remains in position until the forward units or sub-units have been relieved. If sufficient gun positions are available, the relieving artillery may elect not to take over existing positions and may select new positions from which the same tasks can be fired. The relieving artillery then moves into position and, when ready to fire, the relieved batteries withdraw. When sufficient gun positions are not available, the same positions will be used and it may then be necessary for relief to take place by section to avoid congestion.

215. If the relieving force is to conduct an attack, the artillery of the outgoing force may remain to support the attack. In this case, careful planning of gun positions is essential.

CHAPTER 12

THE WITHDRAWAL

SECTION 1

GENERAL

AIM

1. The aim of withdrawal is to redeploy the unit to a new defensive position with the minimum casualties and interference from the enemy. It is one of the most difficult operations of war as the enemy may have the initiative and air superiority, and the morale of our own troops may be low.

2. A withdrawal may be conducted deliberately as part of a pre-arranged plan, or more hastily as the result of a change in the tactical situation. The basic considerations remain the same whatever the reason for the operation, but the time available for planning and battle procedure will naturally differ.

3. The withdrawal may be undertaken for any of the following reasons:

a. to avoid decisive battle under unfavourable tactical conditions;

b. as a result of a local defeat;

c. to conform to the movement of flank formations;

d. for logistic reasons; or

e. to allow the use of all or part of the battalion elsewhere.

4. Whatever the reason for withdrawal, every opportunity must be taken to harrass, exhaust and inflict casualties on the enemy. Offensive operations will compel the enemy to move cautiously and will boost the morale of the withdrawing force.

BASIC CONSIDERATIONS

5. A successful withdrawal at battalion level depends upon:

a. simplicity and flexibility,

b. surprise,

c. security,

d. clean break,

e. offensive action, and

f. maintenance of morale.

6. **Simplicity and Flexibility.** Withdrawal at battalion level is difficult as it involves the rearward movement of many troops and much equipment, usually on limited routes, often over ground unfamiliar to the soldiers, and often under significant enemy pressure. The CO may have to contend with unpredictable events (enemy action, bad weather). All these difficulties can be managed by having a simple plan with:

a. good clear orders at all levels,

b. good control measures,

c. realistic timings (avoid too tight timings), and

d. good administrative arrangements.

7. **Surprise.** It will usually be apparent to the enemy, from the tactical situation, that a withdrawal is imminent. The CO, however, can do much to deceive the enemy as to the actual time it is to occur. To maintain secrecy and gain surprise, the battalion should:

a. continue the normal pattern of activity on the front right up to the time of withdrawal, including patrol activity forward and between companies;

b. avoid any increase or decrease in radio traffic;

c. observe strict radio/message security;

d. give sub-unit commanders ample planning time;

e. conduct all abnormal movement during conditions of reduced visibility; and

f. plan harassing fire to cover the noise of rearward movement.

8. **Security.** Enemy interference can occur as a result of penetration, infiltration, envelopment, enemy fire or air attack. Protection must be careflly planned, even if a guard is deployed. The critical time is during the move back until protection is provided by an intermediate position or a covering force ahead of the new main position. To make it difficult for the enemy to detect the withdrawal and to prevent him penetrating the battalion position during its evacuation, an intact front with normal patrols must be maintained as long as possible.

9. **Clean Break.** The withdrawal in contact, particularly at night, is a very hazardous operation. The CO should make every effort to withdraw out of contact from the outset. If this is not possible, to avoid a running fight he must achieve a clean break early in the operation by:

a. conducting a stealthy withdrawal in poor visibility;

b. conducting a speedy and noisy withdrawal relying on maximum fire power to keep the enemy at bay until the clean break is achieved;

c. using obstacles to delay the enemy;

d. employing an effective deception plan using patrols, harrassing fire and deceptive noise; and

e. ensuring the battalion has protected routes back to the next position.

10. **Offensive Action.** Offensive action during the withdrawal will force the enemy to move with caution. The battalion can slow the enemy by:

a. aggressive patrolling;

b. limited counter-attacks if the enemy becomes over-confident;

c. indirect fire;

d. ambushing with rear parties and snipers;

e. obstacles, including booby traps (but only when brigade policy permits); and

f. demolitions and route denial operations.

11. **Maintenance of Morale.** Withdrawal may originate from a tactical defeat or reverse and, as a result, places a greater strain on morale than any other type of operation. This may be counteracted by:

a. commanders at all levels remaining forward until their main body withdraws;

b. reliable information about what is happening being passed to all ranks once the withdrawal has started;

c. good administrative arrangements being made throughout for feeding, replenishnent and casualty evacuation;

d. practising the withdrawal drills in training; and

e. offensive action wherever possible.

12. **Security vs Morale.** To guarantee security and surprise the CO may have to be very careful about the amount of early information that is passed to the troops, in the event of their capture. He must resolve this requirement with that of maintaining morale through the passage of good, reliable information to all ranks. There is no set formula. Only the CO can decide, knowing both the tactical situation and his unit.

CONTROL

13. Control may be difficult in the withdrawal. The CO must be aware of all rearward movement, know at what stage each sub-unit is, know when to move each element, and know when to turn and fight. If this control is lost, the withdrawal becomes a rout and it may be impossible to regain the composure necessary to complete the mission.

14. **Timings.** The four essential timings are:

a. The time until which the position is to be denied means that sufficient troops to repel an enemy attack are kept on the position until that time.

b. The time before which there is to be no rearward movement means that, except for reconnaissance parties, this is the earliest time that thinning out may begin.

c. The time by which the position is to be abandoned is self explanatory.

d. The time by which all troops must be behind a specific line allows the CO freedom to call for artillery and air support forward of that line.

15. A further timing which is also used is the time to commence thinning out. The brigade commander might detail the time before which there is to be no rearward movement. The CO may then specify the thinning out time, company by company, depending on enemy tactics and the situation.

16. **Physical Measures.** These are RVs, check points, embussing points and report lines:

a. **RVs.** This is an area where troops collect and reorganize as an entity before continuing the withdrawal. The commander reestablishes physical control, checks that his unit or sub-unit is complete and ensures that it commences the next phase of the withdrawal on time and tactically organized to deal with

ambushes or attacks from the flank or rear. RVs are required at platoon, company and battalion levels. To avoid any confusion company RV locations are laid down by Battalion Headquarters, as are the routes back to the battalion RV. Normally the first element to arrive in an RV is tasked with its security.

b. **Check Points.** These are located at convenient points on the routes back to RVs. They are manned by an officer or NCO with communications. Troops do not stop at the check point, but are counted through.

c. **Embussing Point.** The area to the rear of an RV where marching troops join their vehicles. It is normally controlled by an officer with communications and must be protected, even if only by the vehicle crews and weapons and the deployment of the vehicles for all-round defence. Note that the troops may join their vehicles immediately behind their defensive position essentially at a platoon RV and then proceed mounted to the company RV. The company check point would then count section vehicles through.

SECTION 2

PLANNING THE WITHDRAWAL

PRELIMINARY PLANNING

17. When planning for a withdrawal, the CO will consider:

a. the orders given to him by his superior;

b. the distance between the present position and the new main position and the time needed to reconnoitre and prepare the latter;

c. the need for intermediate positions;

d. the terrain between the present and the new main position and how it can be used to best effect;

e. weather, going and the degree and duration of poor visibility;

f. enemy strengths, dispositions, reaction times and likely intention;

g. the relative mobility of the two forces;

h. the air situation; and

j. the logistic situation.

18. In the detailed planning of a withdrawal, the following aspects should be closely examined:

a. **Timing of the Withdrawal.** However good the plan, the operation may fail if the decision to withdraw is not timely. While there will be factors, such as action on the flanks or reinforcement of the enemy, over which the CO has no control, he must still decide a time he will withdraw.

b. **Preparation of the New Positions.** Rear reconnaissance parties from all companies must be sent to the rear in time to ensure that the new positions are properly laid out. These parties are led by the seconds-in-command at all levels. The detailed composition should be included in battalion SOPs. The CO, company and platoon commanders remain forward to fight their organizations. The reconnaissance party lays out the next defensive position in the same manner as described in Chapter 11. In the case of an intermediate position this may consist of simply marking the locations for sections, platoons, etc. For a main position the reconnaissance party will require augmentation so that digging may commence. The reconnaissance party organizes the reception of the main body by manning the release point and providing company and platoon guides.

c. **Obstacles.** An obstacle plan must be drawn up and promulgated as soon as possible to ensure that companies know —

1) which withdrawal routes will be available, so that they can be reconnoitred and signed if necessary;

2) the demolition guard commitment;

3) the level of control for firing reserved demolitions; and

4) any special communication requirements for the control and reporting of progress of movement through demolitions.

d. **Non-essential Troops and Vehicles.** Troops, vehicles and equipment not essential to the defence should be sent to the rear before the withdrawal of the fighting troops begins. This movement must not prejudice security.

e. **Timings.** The sequence and timing of the withdrawal of forward companies must be carefully planned.

f. **Control.** Arrangements must be made to monitor the progress of the withdrawal to permit any difficulties to be resolved. Rendez-vous and routes to the rear must be detailed and officers should be stationed at likely problem areas on the withdrawal route.

g. **Reserves.** A reserve must be held ready to counter enemy penetrations, or to counter-attack any positions lost prematurely.

BATTALION RV

19. Separate RV are selected for the battalion and each sub-unit to enable the respective commanders to re-establish control over the whole of their commands. A battalion RV should, if possible, be:

a. an area on which the enemy has not fired artillery and which has probably not been registered;

b. out of range of enemy flat trajectory weapons and mortar fire;

c. large enough to permit the allotment of a separate area to each sub-unit using the RV;

d. easily accessible from the front and rear;

e. an area which requires a minimum of troops for its defence;

f. near a suitable turn around area if the battalion is to embus;

g. concealed from air and ground observation; and

h. on the route of withdrawal.

20. Arrangements must be made for the following:

a. **Defence.** Usually the first company to arrive at the RV will be responsible for its protection. Preliminary reconnaissance by representatives from that company will assist rapid deployment on arrival.

b. **Control.** An officer controls the movement in and out of the RV. He sets up a control headquarters at the entrance to the RV. He requires guides to lead each sub-unit to its location and then to the mounting area if necessary. The commander and some of the troops of the sub-unit protecting the RV may be given this task. A daylight reconnaissance of the area is necessary.

BATTALION CHECKPOINT

21. A battalion checkpoint is a point along the withdrawal route where companies converge on the way to a battalion RV. It should be easily recognizable but not an obvious enemy fire task. It is usually manned by an officer who keeps the CO and the officer controlling the battalion RV informed of the progress of the withdrawal. Troops do not halt at this point. More than one battalion checkpoint may be required if suitable withdrawal routes do not converge or if more than one battalion route is being used.

REAR PARTIES

22. It may be necessary to form parties to undertake special tasks, for example:

a. closing minefield gaps,

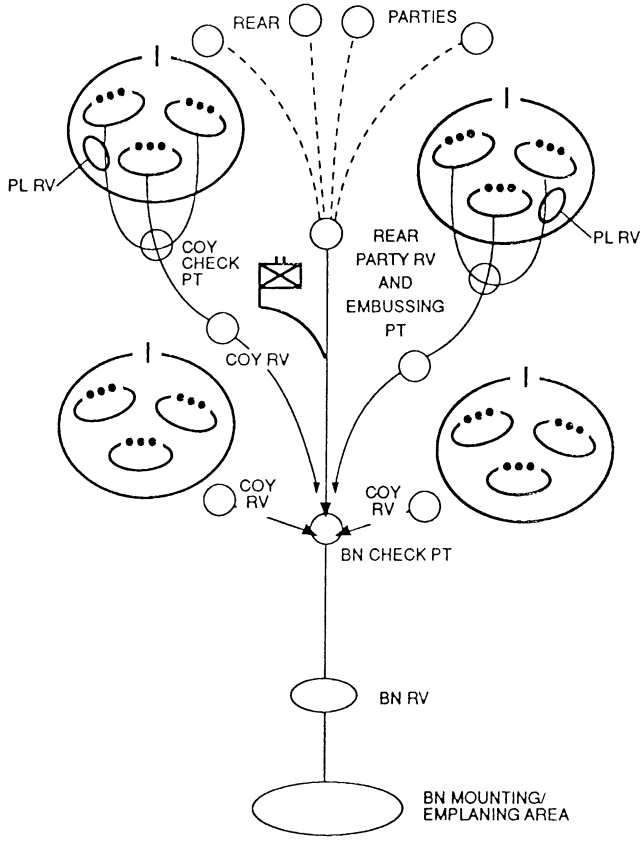
b. firing demolitions, or

c. providing standing patrols on vulnerable approaches.

23. Rear parties rely on covering fire and speed for their protection. Their withdrawal is normally controlled by the battalion and may be on routes and timings different from the rest of the unit.

SECURITY AND DECEPTION

24. See Section 1.



NOTE:

1. THIS LAYOUT IS BASED ON THE USE OF ONE MAIN ROUTE. IF TWO BATTALION ROUTES ARE USED, BATTALION CHECKPOINTS, RV AND MOUNTING AREAS WILL BE DUPLICATED. IT MAY ALSO BE DESIRABLE TO USE A FINAL BATTALION CHECKPOINT, FOR EXAMPLE, WHERE THE TWO BATTALION WITHDRAWAL ROUTES MERGE.

Figure 12-1 Schematic Organization for Withdrawal

SEQUENCE AND WARNING ORDER DETAILS

25. Prior to issuing his orders the CO must:

a. issue a warning order;

b. detail any changes in the standard composition of rear reconnaissance parties, select an RV and time for their concentration and arrange transport;

c. select battalion and company RVs, routes and the battalion check-point;

d. decide on the task and composition of rear parties;

e. assess what firm base and/or intermediate positions are necessary; and

f. decide on the sequence of withdrawal of companies and all timings.

26. The warning order should include the battalion task, earliest time at which movement may begin, time and place for orders and, if possible, key timings and an outline of movement of rear reconnaissance parties.

27. The sequence of withdrawal depends on the tactical situation. A typical sequence is:

a. All non-essential vehicles, personnel and equipment are cleared from the forward areas as soon as possible after rear movement is authorized.

b. Thinning out begins in accordance with the battalion plan.

c. All remaining troops, except rear parties, withdraw at their stated time of denial.

d. Rear parties withdraw in accordance with specific orders.

SUPPORTING PLANS

28. **Anti-armour.** When there is a significant threat from enemy armour one of the main tactical considerations will be the maintenance of the integrity of the anti-armour defence until denial time. Tanks and MRAAW should be kept forward as long as possible. If the withdrawal is carried out in contact, tanks should remain forward to assist in the clean break.

29. **Indirect Fire Plan.** There must be a fire plan to cover the withdrawal and to cater for fire missions after the position has been abandoned. In addition to the normal DF plan there will be a need for:

a. additional DF tasks 'on call' to cover the depth of the position from the FEBA to the embussing point;

b. smoke to cover the withdrawal of forward troops and to degrade enemy surveillance devices;

c. 'on call' targets on likely routes for an enemy advance and to support patrols;

d. harassing fire to deceive the enemy, to cover the noise of vehicle movement and to slow an enemy advance; and

e. covering fire should it be necessary to counter attack at any stage.

30. **Surveillance Plan.** In a daylight withdrawal, any surveillance devices should be withdrawn early with the non-essential vehicles and equipment. They should be moved back to the positions they will occupy the next night and, if possible, sited in daylight. At night or in conditions of poor visibility, surveillance devices should remain in position as long as possible but sufficient time must be allowed for the withdrawal of bulky equipment. Besides making a plan for the current and new positions, there may be a requirement to allocate resources to cover the move back and for flank protection forces.

31. **Patrol Plan.** Normal patrol activity should continue throughout the operation. Additional patrols may be necessary to cover gaps, and for ambush locations on withdrawal routes. It is preferable that fighting patrols return before the denial time, if not, they must be given rendezvous locations. The withdrawal cannot be delayed to wait for patrols to return.

32. **Engineer Plan.** While the major effort will be on the new position, engineers and pioneers in the battalion may be used to:

a. reconnoitre and improve withdrawal routes;

b. close minefield gaps;

c. booby trap; and

d. execute preliminary and reserve demolitions and other route denial tasks.

SECTION 3

WITHDRAWAL IN OPEN AND CLOSE COUNTRY BY DAY AND NIGHT

OPEN COUNTRY

33. **By Day.** In open country the extrication of forward troops by day is difficult. The enemy may discover the exact time of withdrawal and may bring aimed or observed fire onto the withdrawing troops. Enemy air attack may also occur. The enemy will endeavour to follow up the withdrawal and to maintain pressure on the forward troops or he may do this in conjunction with a wide out-flanking movement. To overcome this the CO must be prepared to:

a. Use covered routes and make use of smoke to mask or conceal movement and thus reduce the effectiveness of the enemy's fire.

b. Use heavy fire-power from all available artillery, armour and infantry weapons to suppress enemy fire and to prevent a close follow-up by the enemy troops.

c. Withdraw forward troops first through firm bases provided by rear platoons and companies.

d. Provide flank protection.

34. **By Night.** At night in open country it is normal to withdraw rear companies first. The aim is to prevent the enemy learning the actual time of withdrawal until it is too late for him to follow up closely. An intact front and normal activity, particularly with patrols and harassing fire, are maintained as essential precautions. The strength remaining must be such that the position can still be denied to the time given. It should indicate that the position is held strongly. Withdrawing rear companies first always offers the advantage of simplicity and ease of control and is normal procedure at night. However, should the appreciation of the probable enemy action lead to the conclusion that they may attack at

or before the time of denial, it may prove imprudent to plan on withdrawing all rear companies first. There is the risk that penetration may be achieved and then, almost certainly, the last troops out would need to fight a running battle unaided until they pass behind a firm base position.

CLOSE COUNTRY

35. **By Day.** In close country rapid pursuit is difficult, observation by the enemy more limited and any attempt to envelop the flanks slow and exhausting. Delay is more easily imposed by ambushes laid by the withdrawing force. It is easier to deceive the enemy that the position is still held in strength, but it can be difficult still to achieve a clean break. Where there is a risk of enemy attack before or at the time of withdrawal it can be difficult to decide whether rear companies should be withdrawn first. It is the preferred option but it may not be sound tactically in all situations.

36. **By Night.** While night withdrawals in close country can be carried out, they are very difficult to control and should be avoided. If it is a must, then very detailed reconnaissance, preferably to section commander level, is essential.

SECTION 4

CONDUCT OF THE WITHDRAWAL

BREAKING CONTACT

37. Normal activity must be maintained until the last possible moment. If the enemy becomes aware of the withdrawal and attacks, forward companies and perhaps the whole battalion may have to disengage by the fire and movement.

38. The CO will normally remain at the CP until after the time of denial, so that he can receive reports of progress from the battalion check-point and be in a position to control the battalion in the event of enemy interference. After this time he should move as quickly as possible to the RV.

39. Company commanders check their localities before leaving and then withdraw with the last platoons of their companies. They must remain in radio contact with their platoons and the company RV. On arrival at the company RV, they are given a report on the state of each platoon.

DISENGAGEMENT UNDER PRESSURE

40. If the forward companies are in contact a fighting withdrawal may have to be used to establish the clean break. Within rifle companies fire, movement and smoke are employed and it will be most difficult to prevent the company battle from developing into a running fight.

41. At battalion level, the forward companies must be covered by the depth sub-units. If the enemy pressure continues the forward companies must then occupy hasty intermediate positions and the process is repeated until the enemy is worn down by attrition and the necessary separation to permit a clean break is achieved.

THE MOVE BACK

42. After concentration at its RV, each company moves rearward as a complete sub-unit using similar formations as in the advance. Troops may be detailed for flank and rear protection. Casualties are carried on stretchers as far as the UMS, which is normally at the battalion RV. They should be evacuated out as early as possible so that they are not reinvolved in the battle.

43. Time spent in the RV should be as short as possible. Companies mount or start marching to the rear as soon as possible after arrival. The rearmost company is responsible for the rear protection of the column.

SECTION 5

COMBAT SUPPORT IN THE WITHDRAWAL

RECONNAISSANCE PLATOON

44. Reconnaissance tasks include:

a. route and going reconnaissance;

b. the provision of a screen where possible;

c. traffic control;

d. surveillance and target acquisition on the present position and any intermediate position;

e. monitoring the movement of own forces; and

f. flank early warning and liaison.

45. Observation will be valuable up to the very last moment but time must be allowed for the dismantling and move of bulky surveillance equipment. In a daylight withdrawal surveillance may be withdrawn early and moved back to the new position.

46. In a withdrawal under pressure snipers should be employed where they can best assist in the clean break by killing enemy commanders.

MORTAR PLATOON

47. The main tasks of the Mortar Platoon are to:

a. provide support for patrols;

b. delay the enemy by fire and force him to deploy;

c. cover the final withdrawal; and

d. form part of the rear guard.

48. Mortars will remain on the mortar line until the position has been abandoned and MFCs will remain with the sub-units throughout the operation. The mortar groups will leap-frog back to be in a position to assist with fire support at any time.

ASSSAULT PIONEER PLATOON

49. It may be necessary for some assault pioneers to be back at the new main position to assist in its construction or to start preparing obstacles.

50. Likely pioneer tasks in the forward area are:

a. closing gaps in minefields,

b. booby-trapping,

c. construction of road blocks, and

d. hasty demolitions.

51. Unless it is clear that the pioneers involved forward must remain as rear parties, it may be advisable to attach them to a specific company to close gaps in obstacles in that company area and to withdraw with that same company.

ANTI-ARMOUR COMPANY

52. By day or by night (unless night sights are inoperative) the company detachments remain forward until the position is abandoned. They withdraw with or just behind the rifle companies.

53. In a withdrawal under pressure the detachments fight back covering each other and building on the defence of the depth companies, similar to the tactics used in the delaying defence.

SIGNALS PLATOON

54. The Signals Platoon must:

a. continue to provide and maintain normal communications;

b. provide additional control communications at RVs and check-points;

c. lay line back at the new position;

d. where possible, recover non-essential line from the present position; and

e. provide a relay facility, if necessary, for the move back.

55. If the battalion is operating under radio silence, additional line will have to be laid to all RVs and check-points. The platoon will have to arrange for an extra supply of line for the new position as most of the line laid in the present position will have to be abandoned.

ARMOUR

56. If the battalion has tanks in support they should be employed forward to assist in the clean break and to maintain the anti-armour framework to the last moment.

57. Any move of tanks back will prejudice security because of their noise and heat signature. Their movement may initiate enemy activity but this will take time and, by then, the position should be clear.

58. In circumstances, due to visibility or close-country, where it may be preferable for armour to be kept back, the tanks may be best employed on and between intermediate positions in the rear to delay any enemy follow-up.

59. The most efficient method of achieving a clean break is for tanks and mounted infantry to leave together. Variations are:

a. **By Day.** Tanks withdraw last unless the enemy threat is predominantly infantry, and the country very close.

b. **By Night.** If the enemy threat is predominantly infantry, tanks withdraw first, particularly in close country. If there is a significant armour threat tanks withdraw last.

ARTILLERY

60. The BC and FOOs remain with the battalion and sub-units during the withdrawal. OP reconnaissance and fire planning advice on the next position is the responsibility of the battery captain.

61. Initially the guns will move to gun areas further back where they can still support the forward companies and provide continuous fire support during the clean break.

62. Throughout the operation the movement of the infantry and artillery must be carefully coordinated so that:

a. the guns do not move out of range of forward troops;

b. the forward troops do not withdraw at such a rate that the guns are exposed to assaulting enemy; and

c. fire support is always available on short notice.

ENGINEERS

63. The main engineer task in the withdrawal is to assist in delaying the enemy. Their main tasks include:

a. **Keeping Open the Routes of Withdrawal.** This may mean positioning equipment at selected places to restore routes or make diversons.

b. **Impeding the Enemy.** This may include mining and cratering of roads, felling trees and demolishing bridges. These tasks require careful coordination with the tactical plan and usually need protective parties. Tasks may also include attacking the enemy in his newly won territory by delayed action charges, booby traps and nuisance mines.

c. **Denial Operations.** These deny the enemy the use of any equipment, stores and facilities left behind.

d. **Assisting in the Preparation of the New Main and Intermediate Positions.**

64. Apart from special rear guard tasks, the battalion should expect very little engineer support during the withdrawal. The main engineer effort should be directed toward the new main position.

TACTICAL AVIATION

65. Tactical aviation support may be used by the battalion to:

a. assist in breaking contact by the provision of fire support and troop mobility;

b. deceive the enemy;

c. counter an enemy breakthrough or bypass operation; and

d. perform aeromedical evacuation.

SECTION 6

COMBAT SERVICE SUPPORT

PLANNING

66. The combat service support plan must ensure that the battalion has all it needs to deny the main position until the time ordered, and for the withdrawal itself. At the same time it should prevent combat supplies and useful equipment from falling into enemy hands.

67. The following points should be considered in planning:

a. The battalion should start the operation fully replenished.

b. Non-essential vehicles and stocks must be withdrawn early. It is likely that most of A2 echelon will move as early as permitted (possibly under brigade control).

c. The destruction of equipment and supplies will be conducted only in an emergency when backloading is impossible. The running down of foward stocks to lessen the rearward movement bill may be possible.

d. Medical plans should be based on the rapid evacuation of all casualties as far to the rear as possible, preferably making maximum use of helicopters.

e. Repair and recovery resources must be available throughout the withdrawal. Normally, vehicles are automatically recovered back to the new position rather than attempting any forward repairs during the withdrawal.

f. A dumping and/or re-location programme to the new main position and any major intermediate position may be necessary.

PROBLEMS

68. Daily maintenance requirements in a withdrawal are still considerable. The position is somewhat eased because the battalion is usually falling back on its own lines of communication, and, given warning and time, the successive withdrawal positions can be stocked in advance.

69. On the other hand, there may be an urgent need to backload surplus stocks from the unit area, and there will certainly be a requirement for troop carrying and miscellaneous transport tasks associated with the movement generally.

70. The air situation will often be adverse. The result of an unfavourable air situation is an increased likelihood of air and airborne attack, a probable need to restrict movement to areas of heavy cover or to night, and a restriction on friendly offensive and transport air support. Where routes are limited or defiles exist, the effect of enemy air or airborne attack may be a critical factor.

REPLENISHMENT

71. As one of the fundamental principles of the withdrawal is to ensure a clean break, replenishment must be planned so that it is not needed during the actual operation. Some extra combat supplies may be needed forward in case the break is not as clean as desired.

72. Some replenishment will be needed at intermediate positions and this should be handled by A1 echelon elements.

CASUALTY EVACUATION

73. The normal chain should function as long as possible, with a priority to helicopter evacuation as far back as possible.

74. Casualties incurred during the break clean must be carried back by the companies to the battalion RV. Where possible, additional medical resources should be attached to those sub-units that will be involved in the fight during the withdrawal to assist in handling and minimal sustaining care.

75. The UMS should set up near the battalion RV and have plans for evacuation directly back behind the new main position from there.

REPAIR AND RECOVERY

76. The main Maintenance Platoon function is to ensure that routes do not become blocked with vehicle casualties. Repair and recovery detachments are located at defiles and choke points. The essential action required is to tow the vehicle clear of the route, repair it sufficiently to enable it to complete the move back towed or under its own power, or destroy it.

77. The backloading of vehicles should not be attempted during the main body withdrawal, unless it involves a simple tow by a like vehicle, as this leads to congestion when the time comes for each recovery detachment to withdraw. They may be permitted to backload as much as they can, provided this does not overly delay and endanger their own move back. The alternative is destruction on the spot. Clear orders must be given on these matters.

ADMINISTRATION ON THE NEW POSITION

78. As for the Defence (Chapter 11). All administrative requirements on the new position are arranged initially by the rear reconnaissance party.

SECTION 7

REAR PASSAGE OF LINES

GENERAL

79. The passage of a battalion or sub-unit through an area occupied by another is a common occurrence in both offensive and defensive operations. The rear passage of lines is an operation in which a withdrawing unit or sub-unit moves through another holding a defensive position in the rear.

80. While it is similar to a forward passage of lines, the rear passage is more difficult because:

a. the desire for speed and lack of sufficient troops will make detail reconnaissance and liaison difficult;

b. the unit moving back will be hurt and exhausted; and

c. the unit may be in close contact with the attacking or advancing enemy.

81. The main problem areas in a passage of lines operation are:

a. time of transfer of responsibilities;

b. control of fire-power;

c. movement and guidance through any obstacle system in front of defensive position;

d. control of demolitions;

e. traffic control when both forces are using the same routes; and

f. co-ordination of tactical plans.

PLANNING FACTORS

82. The following points must be considered and decided by the withdrawing unit liaison party and the commander of the unit in place;

a. **Fire Support.** Plans must be made for the unit in place to provide all the fire support possible for the withdrawing unit. Arrangements for the control of this fire must be made.

b. **Passage Through Obstacles.** The unit in place must identify all obstacles, routes and gaps through them to the liaison party and be prepared to provide guides and traffic control for the withdrawing unit.

c. **Command and Control.** Coordination of control measures must be arranged so that the unit in place assumes responsibility for the ground forward of the FEBA at the mutually agreed time or when the withdrawing unit is clear of a mutually agreed report line.

d. **Traffic Control.** To reduce troop density and congestion, and speed the actual passage time, multiple routes should be considered. Traffic control will be provided by the unit in place and the withdrawing unit will be given priority use of routes. The commander of the withdrawing unit advises the unit in place when he is clear.

e. **Liaison.** The two units will exchange liaison officers and their tactical plans. The withdrawing unit provides information and intelligence to the unit in place.

f. **Recognition and Communications.** Planning must include mutually agreed recognition measures for day and night, eg, pass words, visual and audible signals.

g. **Rendez-vous/Assembly Area.** The use of these areas to collect sub-units should be avoided, if possible. However, if they are used, they should be far enough in the rear of the unit in place to avoid interfering with its tactical or administration operations.

h. **Administrative Support.** If necessary, the unit in place should be prepared to provide the withdrawing unit and casualty evacuation assistance, vehicle recovery, and refuelling of vehicles. Except for traffic control this should take place in the withdrawing unit rendez-vous area. Recovery support should be part of the traffic control plan.

SECTION 8

THE HASTY WITHDRAWAL

SITUATION

83. In the worst case, the battalion, in close contact with the enemy, may be ordered to withdraw without adequate warning. Battle procedure will be rushed and commanders and troops at all levels may have to improvise in a rapidly changing situation. Unit integrity must be maintained at all costs.

ESSENTIALS

84. The CO must quickly select, normally from the map, a position in the rear as an intermediate battle position. He will order all troops not committed to the immediate battle to move there and prepare hasty defences. This will include not only battalion reserve but also any sub-units or support weapon detachments which are out of contact, supporting arms and echelons.

85. Those elements of the battalion in contact will fight back through this new battle position to assembly areas immediately behind it. In these areas troops will be sorted and reorganized as they arrive and:

a. either fed forward to reinforce and improve the battle position already established; or

b. quickly deployed to prepare fresh defences in depth.

ACTION ON ENCIRCLEMENT

86. A withdrawal conducted in the face of a fully mechanized and numerically superior enemy, supported by air mobile troops, may lead to encirclement of sub-units or the complete battalion. On encirclement, a decision must be made quickly whether to stand and fight, until relief occurs, or to break out.

87. **Stand and Fight.** If the encirclement occurs as withdrawal is taking place from the main position, the current positions with modifications should be used. If the encirclement occurs on the withdrawal route a hasty defensive position should be adopted. In both cases the perimeter should be reduced where possible, and troops must dig in quickly. The enemy should be engaged with indirect fire while reorganization takes place. Patrols should be sent out immediately to identify enemy locations and strengths so that a relief or breakout can be planned.

88. **The Break Out.** The longer the enemy is given to organize, the more difficult the break out will be. Assistance can be provided by forces which are not encircled, in particular indirect fire and tanks. The direction of the break out will be decided by balancing factors such as the areas of enemy weakness, the location of friendly forces not encircled and the terrain. Where possible the break out should be in a single direction as an intact force and may be in the form of a deliberate attack with a prepared fire plan. Attention must be paid to flank protection and normally a rear guard will be required.

89. **Alternatives.** If a deliberate single direction operation is not possible, a break out by smaller forces in several directions at once may be but this is unlikely. The only real alternative is to break out in small groups. Routes and RVs must be carefully coordinated. It is essential that sub-units be reconstituted as soon as possible after the break out is achieved. Reception arrangements and signals at RVs must be fully understood by all ranks as it will be impossible to predict which group will arrive first. This sort of operation requires a high standard of junior leadership and makes the battalion ineffective as a fighting unit until it is reconstituted.

90. **Relief of an Encircled Force.** Much information about the enemy will be provided by the encircled force. The relieving force may be used to clear a route of enemy to allow the trapped force to break out, or to conduct a distraction operation to make the enemy weaken his encircling force. Careful coordination is required between the relief and encircled forces, especially their fire plans. If possible the encircled force should go on the offensive too, to assist the relief operation.

CHAPTER 13

OTHER INFANTRY OPERATIONS

SECTION 1

PATROLLING

INTRODUCTION

1. Patrolling is an essential part of all operations and may be used in all phases of war. It is undertaken by night and day to obtain information, to destroy and disrupt the enemy and undermine his morale. Patrol activity can bring danger to its most personal and individual level in war. However, successful patrolling will have a marked, and at times spectacular, effect on battalion morale and sense of superiority.

2. The conditions of modern war lead to dispersion and thus to the greater width and depth of battalion areas of responsibility. These trends increase the importance and value of patrols. Though modern surveillance devices and air reconnaissance will help gain intelligence, they cannot replace patrols as the winners of the detailed information on which an attack is planned or by which early warning of enemy intentions are revealed.

3. Patrolling is often difficult and always dangerous. While the quality of information gained by individual patrols is greatly influenced by the initiative and skill of the patrol leader and his men, the success of patrolling is largely dependent on the thoroughness with which it is planned and co-ordinated at company and battalion headquarters. Well organized patrols will usually result in the minimum casualties and the maximum information that operational circumstances will allow. Success lies therefore in thorough preparation and briefing.

4. This section deals only with the types of patrol and the responsibility of the company commanders and the CO for their tasking. The detailed planning, and the execution of patrols, is covered in B-GL-309-004/FT-001, Patrolling.

TYPES OF PATROL

5. Patrols fall into 3 general categories:

a. **Reconnaissance Patrols.** Reconnaissance patrols are designed to gain information by observation and they operate by stealth; they avoid fighting except in self-defence. Normally they consist of an officer or NCO with 3 soldiers to allow for additional observation and protection and for assistance in casualty evacuation.

b. **Standing Patrols.** Standing patrols are deployed to give warning of enemy movements by watching likely approaches and covering dead ground and obstacles which cannot be observed or covered by fire from company positions. They are kept as small as possible, usually 3 or 4 strong, have communications and a call on DF tasks.

c. **Fighting Patrols.** Fighting patrols are prepared to fight for information or to disrupt the enemy. They will be organized to meet the requirements of their particular task and will never be less than a section and may, on occasion, even be of platoon or more in strength.

PLANNING AND COORDINATION

6. **Responsibility.** Patrols will normally be ordered by the CO in consultation with company commanders. Companies, in such cases, would then be given a task, timings and details of any special restrictions or fire support. During active operations company commanders may themselves order patrols when circumstances require it, but all patrols must be properly co-ordinated at Battalion Headquarters and the patrol plan must be carefully integrated with the fire and surveillance plans. Briefing and debriefing of patrols from the Reconnaissance Platoon and any special patrols ordered by the CO will normally be done by the Intelligence Officer.

7. **Coordination and Control.** The need for detailed coordination and firm control is essential if potentially disastrous clashes between our own patrols are to be avoided. A battalion patrol master should be appointed and during periods of intense patrolling liaison officers should be sent to neighbouring units to ensure maximum coordination. The patrol master, who will normally be the Intelligence Officer, is responsible for:

a. coordinating and controlling the overall patrol effort within the battalion and liaising with the brigade patrol master;

b. briefing patrols on the activities of other patrols within their operating area and any specific geographical boundaries which must not be crossed;

c. ensuring that patrols have a standard recognition signal within the area of responsibility;

d. informing brigade headquarters and sub-units if a specific patrol is delayed in returning;

e. briefing company commanders, FOOs and MFCs of planned patrol activity within their area of responsibility;

f. keeping all patrol reports for reference purposes;

g. maintaining the patrol situation. This can be kept on maps or air-photograph enlargements or an air-photograph mosaic; it must record the exact positions of our own forward troops and minefields;

h. adjusting timings so that patrols are sent out at varying times each day;

j. arranging special communications, if necessary, and for specialist advisers to accompany patrols if appropriate; and

k. issuing a Patrol Task Table.

8. **Time for Planning.** The maximum practicable warning of a patrol should always be given to allow time for planning, briefing, reconnaissance, orders, rehearsals and rest; much will depend on the task and familiarity with the ground. Four daylight hours should be considered the minimum warning for a fighting patrol though reconnaissance patrols may do with less. It may be advantageous to appoint a battalion standby patrol to prepare itself for unexpected, short-notice requirements.

9. **Fire Support.** Fire plans and programmes, particularly harassing tasks, must be carefully coordinated with patrol plans. The CO or company commander must decide whether special fire support is required for each particular patrol; if it is a FOO or MFC may be included in the patrol in which case he should be present at the briefing. If no FOO or MFC is provided, fire support may be called for by the patrol commander in the normal way.

10. **Reserves.** It will often be necessary to have a reserve of standby patrols briefed to follow one or more patrols already out. The circumstances in which a standby patrol may be required are when:

a. There is a particularly important and difficult task facing a patrol. Should the patrol fail, or encounter serious difficulties, the reserve standing by can be sent out to complete the task or assist in the extrication of the original patrol.

b. A patrol has had casualties and needs help to bring them back.

c. A patrol has taken prisoners and to escort them would, due to the limited strength of the patrol, prevent the patrol from completing the task.

11. **Patrol Reports.** At the end of every patrol the leader, and sometimes the members, will be debriefed and a patrol report prepared.

12. **Fatigue and Leadership.** While patrolling is a basic infantry skill and common to all infantrymen, there will often be a tendency for soldiers required for the more difficult patrols to be selected from a comparatively small number who have proved themselves and are experienced patrollers. In these circumstances there is a danger that a small number of soldiers, who may be volunteers for patrols, will become overworked and their efficiency in patrolling and other duties will be reduced. The CO must be alert to this possibility and demand careful rosters and a good general standard of patrol training throughout the battalion.

SECTION 2

FIGHTING IN WOODS AND FORESTS

TACTICAL CONSIDERATIONS

13. Forested areas, like built-up areas, have three main effects on tactics: reduced visibility and fields of fire; restricted vehicle movement; and enhanced concealment from ground and visual air observation.

14. Reduced visibility and fields of fire will affect both the attacker and defender:

a. Large numbers of infantry will be required to defend or clear a wooded area.

b. Movement will tend to follow tracks and trails; therefore, in defence these must be dominated by longer range weapons with defended localities sited astride major tracks.

c. In defence, the perimeter of the wooded area must be occupied by observation posts equipped with night viewing devices.

d. Tanks are usually, but not always, limited to operating on the edges of the wood or along tracks.

e. Artillery and mortar fire positions will be restricted to the edges of woods, major tracks and open areas within the woods.

f. The size of defended localities in defence will be reduced because of the short ranges. These will probably be based on platoons rather than companies.

15. Vehicle movement will be restricted to the edge of the wooded area, tracks and trails. With little effort, engineers may turn a wooded area into a major obstacle to vehicle movement by cratering, mining tracks and trails and felling trees. Infantry moving on foot will face navigation problems especially at night. Woods hold chemical contamination much longer than open areas.

16. Concealment from ground and air observation will enable the attacker to move and concentrate on foot permitting excellent infiltration possibilities. It will allow the defender to move reserves, to mass prior to launching a counter-attack or to withdraw under more favourable conditions. Equal opportunities for surprise are possible for both the defender and attacker.

OFFENCE

17. The advance is centred on the clearance of main routes forward and of tracks and trails, in conjunction with the movement of flank screens, or guards, moving parallel to the main body. Such an advance may be restricted to a narrow frontage or a single route and, where possible, should be supported by another main or subsidiary advance on a parallel axis, eg, two combat teams forward. This type of advance will be a necessary part of the plan where a main route is required for the movement of F and A echelon vehicles.

18. The attacker should attempt to outflank, or infiltrate, the defender's likely blocking positions with the aim of establishing himself in the rear, in order that:

a. He may attack from an unexpected direction.

b. He may establish a position to block the withdrawal of the defender.

19. The attacker may, through bypassing or infiltration, attempt to avoid the immediate defence to establish himself in another area as part of a major infiltration attack. Such movement would invariably be on foot.

20. The attacker must take every advantage of the cover to infiltrate, surround, block, ambush and attack the defender from an unexpected direction. Great emphasis will be placed on the movement and action of dismounted troops to deal with blocking positions and to clear a way forward for vehicles.

21. **Action of the Main Axis.** The aim is to clear the axis as quickly as possible. Infantry will lead the advance on the main axis with reconnaissance patrols forward and, wherever possible, flank screens or guards will move on parallel axes. A troop of tanks may be employed well forward to fire down tracks and trails and in open spaces:

a. In areas where there is considered to be only a limited risk of contact with the enemy, tanks may lead. The tanks would be closely supported by infantry in APCs or riding on the rearmost tanks. Unless some calculated risk is taken to speed up movement, progress through woods will be time-consuming.

b. On making contact, local tactics should be based on creating a block position on the main axis while infantry envelop, encircle or attack the enemy from an unexpected direction; the operation is supported by the maximum artillery and mortar fire. These tactics may be slow but are more likely to succeed than a frontal attack up the main axis onto the main enemy defensive positions and obstacle belts.

22. **Ambush and Counter-ambush.** The defence will be sensitive to outflanking movement and infiltration and will deploy observation patrols, ambushes and small counter-attack forces to deal with this. The battalion must overcome this by:

a. employing patrols and flank screens on parallel routes;

b. employing reconnaissance patrols forward of the main body;

c. picquetting key track junctions, and high ground dominating the local area; and

d. establishing a reserve to deal with unexpected enemy action.

23. There should be a planned and rehearsed anti-ambush drill which recognizes that in wooded areas only a small part of a force on the move can, normally, be ambushed at any one time. Protective tactics should therefore be based on:

a. immediate retaliatory fire and movement by the ambushed force;

b. maintaining the remainder of the force in place; and

c. immediately counterattacking with uncommitted troops.

24. **Maintaining the Momentum.** This may be achieved by:

a. seizing every opportunity to exploit tactical advantages by day or night, discovering weaknesses in the enemy's defensive layout or his action, finding and using lightly or unguarded routes, infiltrating or by inserting troops by air into the rear of his defended position;

b. placing reserves well forward to take over the lead, exploit tactical opportunities or replace casualties; and

c. carefully controlling progress through limited objectives, route clearance in clearly defined sections, and the use of bounds, report lines, boundaries and recognition signals.

DEFENCE

25. **General Concept.** Planning the battalion defence of a forest or wood is conducted in the same manner as described in Chapter 11. Emphasis is placed on the following:

a. **Selection and Defence of Important Ground.** The area of responsibility will seldom be small enough to produce an ideal mutually supporting defence in depth —

1) The defence must concentrate on the most likely enemy main routes and cover the remainder of the area by patrols, while maintaining a reserve.

2) The defence will be based on the tactically important ground. Strong blocking positions will be created by companies, sited for all-round protection, and they will form a base for patrols and the reserve. Such areas may be track junctions, natural obstacles on the enemy's likely approaches, high ground or open spaces from which the approaches can be dominated.

3) Alternate positions must be planned, reconnoitred and, if possible, prepared.

4) There will be little or no mutual support between company blocking positions except, possibly, by using lateral fields of fire into tracks and trails. The intervening areas must, therefore, be covered by patrols, listening posts and available warning devices. Boundaries between companies must be clearly defined to avoid clashes between our own forces.

b. **Observation**. To ensure early warning of any enemy attempt to infiltrate or bypass these areas, patrols must be deployed by day and night. Ideally, these patrols should remain in position for extended periods to reduce the chance of their detection by enemy probing reconnaissance elements.

c. **Reserve**. Seldom will the enemy advance initially down the most obvious routes. He will probe for the lines of least resistance and then attempt to infiltrate the position. This will be followed by surprise attacks on blocking positions from the rear designed to cut withdrawal routes, ambush the movement of reserves, or simply bypass the defence altogether. A strong reserve must be held far enough back not to be caught in the enemy envelopment but not so far removed that it cannot arrive at the critical point on time. A reserve position centred on a network of tracks and trails offers the best possibility for rapid movement to the critical point in the area of responsibility.

26. **Defence of the Forward and Rear Edge of a Wood.** Where these are included in the battalion area of responsibility they should be held by small mobile forces strong in long range fire power. Tanks and battalion antiarmour weapons are useful in preventing the enemy from closing to the edge of the wood with impunity. These weapons also serve to cover mine fields that would normally be used along the forward edge of the wood. The rear edge of the wood should be secured by patrols with observation devices. The main threat is from enemy infiltration through or around the forest or wood. These patrols will give early warning for the possible commitment of the reserve and also be able to call down artillery and mortar fire on the enemy.

SECTION 3

FIGHTING IN BUILT-UP AREAS (FIBUA)

PRINCIPLES

27. The general principles of defence and attack also apply but their relative importance will vary because of the conditions peculiar to FIBUA. These special conditions are:

a. **Ground** —

1) Generally observation and fields of fire are limited. In cases (for example, streets and parks) good fields of fire are offered and these areas assume a particular significance when making an estimate of the ground. The nature of the ground dictates the employment of large numbers of infantrymen.

2) Local knowledge will offer a considerable advantage and generally this favours the defence. The need to obtain the maximum topographical information will be of importance to the attacker.

3) The selection of dominating ground as objectives will be just as important as when fighting in open country.

4) There are many chances for bypassing the enemy as built-up areas are ideal for infiltration.

5) Invariably, progress will be very slow.

b. **Concealment** —

1) It is difficult to locate the enemy, to estimate his strength and to identify his plan.

2) Little information can be gained through ground observation and, as a result, the enemy must be forced to reveal his plan. This leads to close-quarter fighting which is very expensive in manpower and creates heavy casualties on both sides.

3) Control of the operation becomes a major problem.

4) In addition to short visual ranges, smoke and dust reduce visibility drastically.

5) Local knowledge becomes vital.

6) Helicopters may assist in locating enemy carefully concealed from ground observation.

c. **Movement** —

1) Streets and open spaces invite movement but are readily covered by fire.

2) The movement of vehicles is restricted severely and they are vulnerable to short-range attacks.

3) The more buildings are damaged the more cover there is for the defender and the harder it is for the attacker to advance.

4) There are many chances for bypassing the enemy by going over or under him via roof tops, cellars and sewers.

5) Progress will be slow. and

6) Provided they are not exposed to direct fire, helicopters will be invaluable for observation, movement of reserves, resupply and casualty evacuation.

d. **Fire Support** —

1) Short-range weapons and grenades will predominate. Mutual support will be difficult to achieve because of short-range and limited observation; nevertheless all movement must be covered by fire.

2) Support weapons and tanks will be restricted in their employment in close fighting, although they will be invaluable for dominating parks and open areas.

3) The use of artillery and air support will depend on the policy for destruction of the built-up area. If the aim is to clear a route through an area, rather than to destroy all of the enemy, there might be limitations imposed on the employment of indirect fire. The danger to civilians may also affect the tactical plan.

4) With many forms of construction the defenders can be burned out of buildings, but the use of fire may prove equally disadvantageous to the attacker.

e. **Leadership.** Street fighting is dangerous. It is physically and mentally exhausting and success is measured in yards, building by building. In these circumstances much will depend on the initiative and standard of leadership at section, platoon and company level.

THE DEFENCE

28. **Components.** Ideally, defence of a built-up area should be based on the following components:

a. **Perimeter Screen.** A force comprising tanks, recce, anti-armour, artillery FOOs, and mortar FCs which engage the enemy with direct and indirect fire as he approaches the area. The purpose is to force the enemy to deploy at this stage. The force is mutually supporting, if possible.

b. **Guard Force.** Invariably provided from the reserve and whose aim is to further delay, confuse and disrupt the enemy as he advances through the built-up area.

c. **Strong Points.** The main defensive area is based on mutually supporting strong points in depth forming defended localities sited at key places on the main routes.

d. **Reserve.** A centrally placed mobile reserve to reinforce a defended locality, to provide elements of the guard force, and a counter-attack force.

29. **Strong Points.** If possible these should not be restricted to one building which can be isolated and destroyed easily. Defensive strength can best be achieved by grouping a strong point around an intersection, with fire positions in two or three different buildings providing interlocking and mutually supporting fire. Strong points may be of platoon strength or, in large buildings, of company strength and may include AFVs.

30. **Defended Localities.** Normally, these will be of at least company strength. Ideally, they should be sited so that penetration between strong points is impossible. Boundaries between localities should be arranged so that the likely enemy lines of approach fall solely into the area of responsibility of one defended locality or another.

31. **Small Built-up Areas.** The components listed above can be applied in full to the small built-up area. However, the precise tasks and troops given to each component will depend on the size of the built-up area and the composition of the defensive force. In a village or hamlet each component can be well manned and mutually supporting because the perimeter is short and the reserve sufficiently strong and close to provide depth and mutual support. In a town or a large village an ideal balance will seldom be possible. The length of the perimeter and the building density will stretch the perimeter posts, deny mutual support between defended localities and spread the reserve. In this case, it may be necessary to concentrate on selected key parts of the town.

32. **Large Built-up Areas.** Clearly the number of troops required for the security of a large town or city is often prohibitive. In such circumstances it would likely be a formation task and each battalion allocated a selected area to defend. These selected areas should be held as strong, independent, and self-supporting localities, each capable of all-around defence, composed of mutually supporting strong points from which an area can be dominated by patrols and the local reserve can operate offensively. It may be better to accept some infiltration between localities than to attempt to hold a continuous perimeter.

33. **Demolitions, Obstacles and Booby Traps.** In any town there will be a wealth and variety of material and resources with which to prepare defensive obstacles and traps. Careful planning will be necessary and a detailed priority of work must be issued early so that preparation time is used to best advantage.

34. When time allows, buildings may be demolished to block routes and channel the attacker into selected areas. If possible, buildings which are not demolished should be booby-trapped. The demolition plan must be coordinated by Battalion Headquarters and known to all ranks, otherwise the defender's main asset, his ability to move quickly based on his knowledge of the ground, will suffer.

35. **Civilians**. The policy on civilians will depend on whether they are friendly or hostile and evacuation will usually be determined by a higher commander. If retained they can provide a work force to assist in preparing defences but they will add to the logistic burden. Sometimes a policy of evacuating the old, ill and very young and retaining, but not arming, those who man the fire brigade, civil engineering, public works, and essential services organizations may be adopted.

CONDUCT OF THE DEFENCE

36. **Defence of the Perimeter**. Perimeter positions, less OPs, are liable to be pin-pointed and destroyed and the defenders should occupy their reconnoitred and prepared positions at the last possible moment in order to catch the asssaulting enemy in the open. In the early stages a number of temporary positions should be held which can be vacated when detected by the enemy. Once the posts on the perimeter can no longer inflict casualties on the enemy, or are in danger of being cut off, they should withdraw to a defended locality in depth. Some OPs may be left behind to provide information and to direct indirect fire at depth elements.

37. **Disruption Battle**. A guard force can be employed in large built-up areas where there is scope to manoeuvre. The guard force should be light and highly mobile so as to be able to concentrate quickly along the major axis of advance. It will inflict casualties by ambush and local counterattack, making maximum use of covered approaches such as rooftops and underground passages, as well as cached combat supplies.

38. Action at Defended Localities:

a. Although the defender can remain concealed until the last moment, so can the attacker. It will be difficult to determine the weight and direction of attack or to secure and watch the flanks. Furthermore, due to the difficulties of mutual support, the attacker may succeed in bypassing a locality or in penetrating between strong points in a defended locality.

b. If the enemy does succeed in penetrating, local reserves must be used to deal with him before he can get established. Penetration between localities must be sealed off by reserves, but whether a counter-attack should be launched will depend on the strength of the enemy. In built-up areas counter-attacks against an enemy who has established himself strongly in buildings may be costly and it may be wiser to adjust the defended localities. The defender should always try to filter back into areas cleared but not held by the enemy.

c. Tanks can be used in the anti-armour role and can provide fire support for the infantry. Tank fire may be more effective than conventional artillery fire in the latter role.

d. Determined resistance by troops in strong points and localities, when they have been completely cut off, can have a considerable effect in disrupting the progress of an attack.

e. Alternate positions may be used to —

1) meet the necessary variations in day and night dispositions, and

2) deceive the enemy as to the location and strength of the defence by occupying various positions at random.

39. **Employment of the Central Mobile Reserve.** While it is desirable that the reserve should be kept concentrated and uncommitted, the inevitable shortage of troops will mean that the reserve might have to hold ground temporarily, occupying defended localities in depth. The restriction on the movement of armour will not permit tanks to play their normal reserve role and the reserve should be composed mainly of infantry.

40. The tasks of a reserve will include:

a. reinforcing a defended locality;

b. sealing off and destroying any enemy penetration between localities; and

c. mounting a counterattack to regain a locality or important strong point that has been overrun.

41. **Aggressive Action.** At all times the defence must be aggressive and exploit fully the advantage of a detailed knowledge of side streets, alley-ways, sewers and buildings. Enemy movement must be observed constantly and concealed approaches watched to prevent surprise. There is tremendous value in energetic and effective patrolling and sniping by day and by night.

42. **Control.** Good communications are essential for the control of the battle. Screening by buildings will affect the use of radio and rebroadcast may have to be used. Additional means of communication such as line, local telephones (providing the exchange is secure), and runners must be employed. Pre-laid land line grids, into which mobile forces can connect, can be very useful.

43. **Surveillance.** The ambient light level created by fires in a built-up area may hamper the use of night vision devices by giving off false readings. The relatively short fields of view along streets and across open spaces should enable the defender to detect attacker movement almost as easily by night as by day. On the other hand, care must be taken to guard against outflanking movements over rooftops, underground and through buildings.

THE ATTACK

44. **Plans.** There are three main courses open to the attacker:

a. to fight through building by building;

b. to destroy the enemy and the built-up area by bombardment; or

c. to cordon the built-up area and bypass it.

45. **Factors.** The choice will depend on the mission and various factors including time, the need for a cleared route through the built-up area, the size of the town, the strength of the enemy, the fire support available and the presence of civilians.

46. **Objectives.** These must be limited, clearly defined and easily recognizable. They must be cleared thoroughly and methodically.

47. **Consolidation.** Objectives must be occupied and held, or denied to prevent recapture. Leap-frogging of forward elements will be necessary to maintain momentum. As a result, reserves must be held at all levels.

48. **Time.** Operations cannot be hurried. Heavy casualties, the loss of control and the need to recapture objectives which have been reoccupied by the enemy will cause substantial delays in planned programmes.

49. The attack in a built-up area is conducted in the same three stages as any other attack:

a. **Mounting.** This may include isolating the area by the use of cut-off troops to block the defender attempting to withdraw, and to hamper his reinforcement and resupply.

b. **The Assault.** This involves breaking into the town to gain a foothold. The aim is to secure as many entry points as possible to provide firm bases for the next phase of the attack. Objectives should be limited. The assault is conducted as a normal attack operation with the maximum use of direct and indirect fire sup-

port. During this phase the defender is likely to have good surveillance and fields of fire and, if the attack should be conducted at night or under cover of smoke, it should be combined with a plan for neutralizing and degrading the performance of his surveillance devices. Once entry has been gained, lines of approach must be secured to control movement to and from the lodgement areas. Next comes the systematic fighting through the built-up area, clearing sectors and destroying defensive localities and strong points. This should culminate in the clearing of the final objectives which may be important buildings or major routes. If strengths and circumstances permit there may be an advantage in attacking simultaneously from more than one direction as this may confuse the defender and slow up the commitment of his reserves, though in general it is sounder to attack on parallel axes so that a measure of mutual support can be achieved.

c. **Consolidatlon.** This will take place after the main objectives have been seized and may include mopping up and exploitation to the far limits of the area.

50. It is the actual fighting in streets and buildings which is of particular concern and the following paragraphs concentrate on the assault phase.

PLANNING THE ATTACK

51. **Simplicity.** This type of operation is difficult to control and plans must be simple and flexible. It is unwise to plan in detail too far ahead and orders will normally cover the whole operation in outline with only the first phase in detail. Plans for subsequent phases will be made and detailed orders issued as the preceding phase is completed.

52. **Information.** Maximum information on the layout of the town and the defender's dispositions are essential. Sources will be:

a. maps, town plans, guide books, and air photographs;

b. patrols;

c. air reconnaissance; and

d. local inhabitants, refugees and prisoners.

53. **The Essentials**. The plan must take note of the following:

a. **Limited Objectives**. The attack must be planned so that progress to the final objective is made by a series of subsidiary objectives. At all levels commanders should retain a reserve which can be deployed when necessary in order to maintain momentum. A subsidiary objective will provide the firm base for a subsequent phase and it must be held in strength to prevent reoccupation by the defender.

b. **Control**. Strict control by commanders at all levels is vital. Limited objectives, report lines, bounds and boundaries assume particular importance.

c. **Momentum**. Momentum must be maintained night and day as the slightest pause will give the defender time to regroup, react and regain local initiative. It is therefore essential that the plan cater for —

1) successive units and sub-units taking over the advance by leap-frogging,

2) reserves placed well forward so that they can take over quickly to deal with the unexpected or to exploit a tactical advantage,

3) the replenishment of ammunition and combat supplies, and

4) casualty evacuation.

54. **Selection of Main Objectives**. These will be key points such as public buildings, churches and open spaces, placed centrally in the area. Often they will be strongly constructed and give good observation. The capture of the main objectives should ensure the collapse of the defence and enable the attacker to clear outwards in any direction at will.

55. **Movement Through the Built-up Area**. To control movement through the built-up area the following will be planned:

a. **Sectors**. The area must be divided into clearly defined and recognizable sectors which should be numbered or lettered and have a named commander. Normally sectors will be allotted as company clearance tasks and then divided into sub-sectors for platoon tasks, bearing in mind the need for local reserves. The area must be cleared methodically sector by sector.

b. **Bounds and Report Lines**. These should be selected along streets at right angles to the line of advance.

c. **Boundaries**. These could be parallel to streets, and the buildings on both sides of the street should be inclusive to one company or platoon in suburban areas or in small towns. Small side streets form the best boundaries. In city cores an approach must be inclusive to a unit or sub-unit, eg, a main street is the axis of advance of a battalion and boundaries are drawn to give both sides of the axis to the one unit.

d. **Report Centres**. Report centres should be established in each sector, to which ammunition and supplies can be brought and from which casualties can be collected.

e. **Nicknames**. All key points, important buildings, main streets and open areas should receive nicknames.

56. **Special Equipment, Explosives and Ammunition**. The particular nature of the operation will necessitate the provision of special stores, although much can be achieved by improvisation with local resources. Special stores include:

a. **Equipment**. Picks, shovels, crowbars, portable drills, scaling ladders, toggle ropes, grapnels, searchlights and periscopes; and

b. **Explosives and Ammunition**. Pole charges, beehives, plastic explosive and primers, smoke, HE and CS gas grenades (if authorized for use).

57. **Casualties.** Because of the nature of the operations, casualties may be so heavy that whole sub-units may suddenly become non-effective. This means that:

a. reserves must be passed through quickly to maintain momentum; and

b. special arrangements must be made for the collection and evacuation of casualties which may include urgent civilian casualties.

CONDUCT OF THE ATTACK

58. **General.** Normal attack procedures will be used for the seizure of limited objectives on narrow frontages. Momentum will be maintained by the frequent relief of units and sub-units. All movement must be covered by fire and areas thoroughly cleared to ensure that no snipers or ambush parties are left behind.

59. **Progress within the Built-up Area.** Progress will be slow and must allow for each sector to be seized, cleared and then turned into a firm base before passing through a company to assault the next sector. It should always be part of the attacker's design to close with the defender in order to minimize his defensive fire, create opportunities for quick surprise attacks, and to cause strain and fatigue on the defenders since they will have to man forward positions in strength.

60. To counter infiltration, a sector once cleared should be organized by holding a perimeter round the edge with the reserve placed centrally. Tanks and anti-tank weapons must be sited and protected, mines laid and obstacles constructed. Ammunition and supplies must be replenished, cellars and buildings strengthened and access cleared through them.

61. The attacker will have the choice of some or all of the following routes:

a. streets, but keeping away from the open areas exposed to enemy fire;

b. gardens and backyards parallel to the streets;

c. roofs of houses;

d. inside houses through dividing walls (mouse-holing); and

e. underground approaches (sewers and drains).

62. In clearing a street two platoons may work in parallel along opposite sides, their advance being controlled by the company commander. Within platoons the leading section will enter the block the platoon is to clear, covered by fire and smoke. The section must clear the first house which is made into a firm base, then it covers the second section which passes through to secure the next house. Ideally, each house is entered at the top and cleared downwards to drive the defenders outside.

Smoke, HE and CS grenades can be used to clear cellars and other rooms with difficult or vulnerable means of access.

63. **Indication of Progress.** An important requirement will be for all elements of the attacking force to be aware of each other's progress. This will apply particularly when infantry are supported by tanks or aircraft. Methods of indicating progress must be agreed upon, eg, coloured smoke, aircraft recognition panels or blankets hung from windows.

64. **Civil Population.** Civilians may be caught in the fighting and be found sheltering in cellars or similar refuges. Care should be taken to ensure enemy are not concealed amongst them.

COMMAND AND CONTROL

65. **Communications.** Radios and headquarters must be sited carefully with rebroadcast and remote facilities used where necessary. Whenever possible, radio must be supplemented by line.

66. **Positions of Commanders.** Junior commanders should be well forward leading their platoons. Casualties among them will be high and constant leap-frogging of sections and platoons must be employed to ease the strain and to maintain the momentum of the attack. Company

commanders should be well forward but located with the reserve. They are extremely vulnerable in this type of close-quarter fighting and are attractive sniper targets. The CO must carefully balance his need to maintain control and commit his reserve at the right time and place with the need to see the battle and be seen by his troop. He must be extremely careful when moving forward.

SUPPORTING ARMS

67. **Tanks.** In addition to their anti-armour role, tanks may used to:

a. smash holes in walls and knock down houses and barricades;

b. remove crests from rubble so that tanks may move forward;

c. fire into windows prior to infantry entering a building;

d. give cover to infantry with machine-gun fire; and

e. block the withdrawal routes of defenders.

68. Tanks work in pairs with the infantry (two tanks on one axis). There are handicaps in committing tanks to the close support of infantry fighting in the streets:

a. Mobility is restricted as they will be confined to roads or streets often blocked with debris.

b. Fire-power is restricted as houses will often reduce the traverse of the turret and the elevation of the tank gun may be insufficient to reach the top floors or roof tops.

c. The tanks will be particularly vulnerable to short-range anti-tank weapons and their crews, if exposed, are good targets for snipers; therefore tanks must move through the streets closed down and will require infantry protection.

69. **Artillery and Mortars**. Artillery and mortars are used to:

a. Provide preparatory fire prior to the assault, to destroy enemy morale and hinder his movement. However, the use of artillery can cause damage that may impede the subsequent movement of our own troops.

b. Provide normal covering fire for the assault. Artillery can be used effectively to neutralize enemy positions on rooftops and in the top floors of buildings.

c. Harass enemy rear areas to hinder redeployment of reserves and movement of supplies and to disrupt lines of communication during the destructive phase.

d. Artillery can also give direct fire support as assault guns.

70. **Engineers and Assault Pioneers**. Tasks may include:

a. **In Defence** —

1) denial of areas and routes by demolitions, mining and booby trapping,

2) clearance of obstacles to movement,

3) strengthening buildings,

4) water supply, both domestic and fire fighting, and

5) making passages through the internal walls of buildings; and

b. **In Offence** —

1) clearance of mines, booby traps, debris and obstacles, and

2) the use of explosives and assault weapons for attacking strong points.

71. **Tactical Aviation.** The vulnerability of helicopters in built-up areas is high but tactical aviation possesses unique capabilities which may have to be exploited despite the inherent risks. Tasks may include:

a. **Observation Support.** Mobility and significant technological advances in day/night viewing devices make a properly equipped helicopter very effective.

b. **Mobility.** Helicopters may be used to —

1) insert antiarmour teams and infantry into cut-off positions,

2) move troops onto rooftops, and

3) evacuate casualties.

SECTION 4

AIRMOBILE OPERATIONS

INTRODUCTION

72. Airmobile operations offer the advantages of being able to approach from any direction, striking objectives in otherwise inaccessible areas, overflying barriers and bypassing enemy positions to achieve surprise. A well placed airmobile raid can achieve success out of all proportion to its size by creating confusion and uncertainty and impeding the movement of enemy reserves. See B-GL-302-011/FT-001, Airmobile Operations.

73. Airmobile operations may be limited by weather conditions, enemy air and air defences and any inserted force is vulnerable to eventual destruction in detail unless it can be reinforced.

74. The infantry battalion dismounted is ideally suited for airmobile operations, provided the troops and commanders have been trained in them. The battalion may be employed in an airmobile role to:

a. counter or block enemy penetration;

b. reinforce an encircled force;

c. counter enemy airmobile or airborne insertions in rear areas;

d. secure a bridgehead over an obstacle; and

e. capture key terrain in depth in support of a major offensive operation, or block routes that must be used by enemy reserves.

COMMAND

75. In a formation operation, the CO is the ground force commander and the aviation resources would be placed in support for the duration of the airmobile phase. The CO produces the ground tactical plan. The aviation mission commander commands the helicopter force and produces the air plan to conform with and support the ground plan.

76. Normally the airmobile operation is part of a larger operation and the brigade commander would be the overall mission commander.

PLANNING

77. An airmobile operation is planned in the reverse order of execution. The reverse planning sequence consists of:

a. **Ground Tactical Plan.** The ground tactical plan covers the employment of the battalion and supporting elements once they have landed. An estimate is required on what force levels, supporting fire, weapon systems and logistic support are necessary for the success of the mission. The quantity, type and allocation time of helicopters will have implications on the task organization, the need for phases and if the rate of build up is acceptable.

b. **Landing Plan.** The landing plan covers the introduction of the battalion into the objective area at the right time and place and in the correct sequence to execute the ground tactical plan. This will include the selection of LZs and alternatives, together with the need for protection from ground and air attack. Securing parties may need to be sent in early or the area suppressed just before landing by artillery, air or armed helicopters. The mission and enemy dispositions will dictate whether landing should be on the objective, near it or in a secure area some distance away. Whatever decision is made, the lack of vehicles makes movement of the battalion slow once landed and this may become a major consideration.

c. **Movement Plan.** The air movement plan involves the selection of flight routes and checkpoints necessary for the control of helicopters both to and from the drop-off LZ. It also includes air defence and airspace control measures both en route and in the objective area.

d. **Loadinq Plan.** The loading plan will include pick-up points, their layout and the priority of loading aircraft to conform to the ground plan.

e. **Staging Plan.** The staging plan covers the movement of the battalion, supporting elements and logistics stocks to concentration areas and pick-up points prior to the execution of the airmobile operation.

78. **Artillery.** For any airmobile operation FOOs and air defence weapons need to be flown in early. This sort of operation requires concentrated indirect fire support, on call, to help make up for the fact that the battalion will be on light scales. Plans must be made to defeat the inevitable enemy counterattack.

79. **Engineers.** In an operation against an enemy reserved demolition engineers will be needed to neutralize the demolition. If the operation is a prelude to a major offensive operation, engineers may be required for route and obstacle reconnaissance.

CONDUCT OF AN AIRMOBILE OPERATION

80. The operation should be kept as simple as possible to allow flexibility. Helicopters may be shot down or become unserviceable and a clear list of priorities for moving must be laid down by the CO. Essential command and combat support elements must be cross-loaded over a number of aircraft.

81. Surprise is always required and, where aviation resources permit, a single lift is best. Single lift is nearly always essential for cross-FEBA operations.

82. **Security.** The aim is to deceive the enemy for as long as possible as to the area of insertion, thereby delaying his reaction. Radio silence early in the operation, restrictions on prior helicopter reconnaissance, dummy landings, covered assembly areas and pick-up points are all important considerations.

83. Once on the ground all the principles and procedures for the attack and defence detailed in previous chapters apply. The same goes for all planning of the ground tactical phase.

COMBAT SERVICE SUPPORT

84. **Planning.** For defensive operations the battalion should carry sufficient combat supplies for 72 hours and, for offensive tasks, 48 hours. Planning should be based on the worst case, that is that the unit vehicles will not be able to reach the battalion. Air resupply of a battalion forward of the FEBA is extremely hazardous and should be avoided. Where it becomes essential, a full-scale operation with air defence suppression, fire and air support, etc must be mounted.

85. **Combat Supplies.** Movement of any supplies in and around the objective area will be slow and difficult. Planning should attempt to ensure that bulky or heavy items are dropped precisely where they will be required. Even the inclusion of a couple of jeeps in the initial lift can make all the difference in the movement of anmunition and casualties.

86. **Medical.** Initial casualties may be sent back on empty returning helicopters. Thereafter plans must cater for long evacuation delays and the UMS must be prepared to provide sustaining care.

SECTION 5

AIRBORNE OPERATICNS

INTRODUCTION

87. It is important to stress that the basic considerations, principles and fundamentals contained in all previous chapters apply to the airborne unit as much as any other infantry unit. The general tasks, areas of vulnerability, planning requirements, etc detailed in Section 4, Airmobile Operations also apply.

88. Infantry in the parachute role can be moved quickly over great distances and crossing difficult terrain and obstacles. As the mounting area is usually secure and well away from the battle area, the area of intended operations cannot be predicted by the enemy with any degree of certainty. Even when launched the mission of the force may not be immediately apparent to the enemy.

89. The most likely tasks to be undertaken by airborne infantry units are:

a. the seizure and retention of vital ground until link up with ground forces;

b. the capture of airfields and beaches to form airheads or bridgeheads;

c. flank protection;

d. reinforcement of encircled forces;

e. the conduct of raids on headquarters, fire support positions, lines of communications, administrative and logistic installations; and

f. as a reserve to counter a deep penetration by an enemy force.

90. The following is a general discussion of airborne operations. Details are in B-GL-310-001/FT-001, Airborne Operations.

CHARACTERISTICS

91. Airborne operations have the following characteristics:

a. Ground mobility is limited as air transport resources will permit few vehicles to be dropped.

b. Lack of armour and mobility means that key terrain must be seized quickly.

c. It is difficult to sustain operations beyond two or three days. Relief or reinforcement by other forces or the extrication of the force is required.

d. Organic fire support is limited and therefore the force will rely heavily on close air support.

92. An airborne operation may be limited by:

a. **Vulnerability of Transport Aircraft**. Transport aircraft are very vulnerable to enemy air defence measures. Enemy air defences must be suppressed.

b. **Vulnerability on Landing**. Parachute troops are vulnerable immediately on landing until they have organized themselves into fighting units. With an accurate drop, reorganization of a battalion will take at least 30 minutes by day and 45 to 60 minutes by night. However, smaller tactical teams of platoon or company strength can RV and start to carry out tasks much faster than this. Until platforms have been derigged and detachments married up with heavy weapons, the battalion is vulnerable to attack by enemy armour. During this period the battalion is also vulnerable to artillery fire and chemical attack.

c. **Wind Conditions**. The incidence of landing casualties rises sharply in winds of more than 13 knots.

d. **Logistic Resupply**. Resupply by air is likely to be hazardous and subject to disruption. An early link up with ground forces is therefore desirable.

93. Airborne operations take time to mount. The rigging of platforms and vehicles and the marshalling of the force and aircraft require excellent planning and well developed drills. The wide variety of factors which can limit or cause an airborne operation to be abandoned means that continuous close cooperation is essential.

PLANNING

94. **Sequence**. Plans for an airborne assault must be simple and flexible. The ground plan may be made with inconclusive intelligence and there will be a requirement for continuous updates of the latest battle information. Planning will be joint and is best carried out, as in airmobile operations, in the reverse order of execution. The sequence of planning is:

a. ground tactical plan;

b. airborne assault plan (including the selection of DZs and P Hour);

c. air movement plan;

d. air loading plan; and

e. mounting plan.

95. **The Ground Tactical Plan**. Once the force has been given its mission, objectives must be selected. It is important during this stage that there is an ample supply of accurate maps, air photographs and other topographical intelligence readily available. Accurate intelligence on the enemy and the DZs is crucial. The flow of information and intelligence must continue until the last possible moment and late adjustment of plans may be necessary. The main points requiring planning action will be:

a. an assessment of the strength and composition of the forces required to seize and hold objectives;

b. the outline requirements of an interdiction programme against enemy reserves and air defence systems;

c. deception;

d. fire support which may include air, naval gun fire and artillery which may be in range or airdropped with the force;

e. engineer support for mobility or counter-mobility tasks. If the mission is to secure an airfield, engineers may be required to open runways for follow up troops to air-land;

f. decision on the timing of the drop (P Hour) related to the ground force plan;

g. coordination of the link-up with the ground or follow-up air-landed forces;

h. logistic support for the initial operation and maintenance thereafter; and

j. a joint communications plan.

96. **The Airborne Assault Plan.** This plan, in conjunction with the ground tactical plan, gives the sequence of landing, location of DZs and the assembly of the various components of the unit and its logistic support in the objective area. The force should arrive on the DZs as concentrated as possible both in time and area. It is essential that aircraft availability and payloads offered are given as early as possible.

97. **Selection of DZs.** The initial selection of DZs is the responsibility of the senior army commander, as they are fundamental to the ground plan. The responsibility for locating the zones and dropping troops and equipment onto them accurately belongs to the transport force commander. The main factors to be considered are:

a. **Closeness to Objectives.** The closer the initial DZs are to the objective the greater the chance of achieving surprise. Recovery of follow-up resupply and heavier equipment will be easier if their DZ is within the final defended perimeter or at least covered by fire from positions on the perimeter. Surprise will not only be an asset to capturing an objective but will give the enemy less time to react in strength. This may mean daylight landings on top or very close to the objective. By night, DZs may be further away to enable the force to form up and approach stealthily on foot.

b. **Enemy Dispositions**. The position and strength of enemy ground forces which could interfere with the rally after the drop and the move to the objective. Static enemy positions are important but account must be taken of the enemy ability to mount a reaction force, in particular at what strength and the time it will take to move into position.

c. **Enemy Air Defences**. Transport aircraft approaching a DZ must fly level at a constant altitude and are therefore most vulnerable to enemy air defences. Enemy air defences must be suppressed in detail.

d. **Recognition of DZs from the Air**. The commander must decide whether or not to insert pathfinders ahead of the main body to mark and secure the drop zone. The employment of pathfinders can greatly increase the accuracy of a drop, but their use risks compromising the airborne assault and ground tactical plans.

e. **Suitable Ground**. Accepting some casualties, parachute troops can land successfully almost anywhere except in precipitous country or built-up areas. Consideration must be given to the landing and recovery of the heavy drop equipment.

f. **Alternative DZs**. When planning the initial assault, alternative DZs must be included.

98. **The Choice of P Hour**. P Hour is the time of drop of the first sticks of the main body in an airborne operation. Considerations for a drop by day or night are:

a. **Night** —

1) Night drops may be preferable because they give some cover from enemy air and ground air defences. However, developments in radar and radar-controlled and heat seeking weapons narrow this advantage and account should be taken of the enemy air defence capability. Enemy air is likely to be less effective against the battalion once it is on the ground.

2) Deception, including electronic counter measures designed to conceal the strength and location of landing should be easier at night. The aim will be to confuse the enemy so that he receives inaccurate reports from his ground troops which may slow reaction.

3) Reorganization is likely to take longer.

b. **Day**. Daylight assaults require a favourable air situation or rely entirely on surprise. It is most unlikely, except in Out-of-Area operations against an unsophisticated enemy, that daylight parachute assaults will take place. However, by being unlikely, it is the very element which may gain the necessary surprise if the mission is vital.

99. **The Air Loading Plan**. The air loading plan is based on the requirements of the airborne assault plan and establishes the priority of loading. Troops are tactically cross-loaded into aircraft so that they arrive as near as possible to where they will RV on the DZ. Thus, a sub-unit will be allocated a portion of the seats in the same section of several aircraft, so that the entire sub-unit lands together on the same area of the DZ. This aids the move to the RV and ensures that the loss of one or two aircraft does not destroy an entire sub-unit. High priority personnel and equipment must be clearly identified so that they can be quickly transferred in the event of an aircraft becoming unserviceable before take-off.

CONDUCT OF AN AIRBORNE OPERATION

100. **Phases**. An airborne operation is normally carried out in 4 phases:

a. **Mounting**. The mounting phase starts on receipt of the warning order and ends when the aircraft are loaded with men and equipment. It covers the joint planning, the assembly of troops, equipment and aircraft at the departure airfield(s), briefings, orders and loading. It may also include the insertion of pathfinders to reconnoitre DZs and objectives.

b. **Air Movement**. This phase begins with take-off of loaded aircraft from departure airfields and ends with the delivery of the battalion on the DZs. A pathfinder team may be dropped ahead of the main body to establish and operate navigation aids to guide aircraft to DZs. Troops drop onto a personnel DZ; stores and heavy equipment are dropped on to a heavy drop DZ adjacent to it. If only one DZ is available, troops drop first followed by vehicles and heavy items of equipment which are rigged onto platforms.

c. **Assault**. This covers the assault landing of the force on the DZs, assembly, securing the objective and consolidation.

d. **Subsequent Operations**. Subsequent operations may be holding an objective or bridgehead until relieved or reinforced by follow-up or link-up troops. If the mission is completed this may be the withdrawal or extraction of the force.

FIRE SUPPORT

101. Airlift capacity will normally limit the amount of artillery weapons and ammunition which can be airdropped. Much reliance will be placed on air support and it is essential that these aircraft can be directed onto target. Adequate air defence elements should be flown in with the leading elements of the parachute force.

COMBAT SERVICE SUPPORT

102. **Planning**. Plans must cater for the loss of some supplies during an airdrop. Holdings of weapons and ammunition will vary according to the type of operation, the type of enemy to be engaged and the theatre of operations. Plans for resupply are an important part of the ground tactical plan.

103. **Accompanying Supplies**. Troops will drop with sufficient combat supplies to carry out their immediate tasks. Some stores will be dropped on platforms and immediate use ammunition for support weapons will be dropped immediately before the despatch of troops.

104. **Immediate Resupply**. Some aircraft loaded with stores and combat supplies drop their loads immediately after the first drop of troops and equipment. This is known as the immediate resupply and is usually designed to bring the force up to a 72 hour holding of combat supplies.

105. **Follow-up Supply**. The follow-up supply is in two parts:

a. Resupply is delivered automatically in the objective area according to a pre-planned timing. It may be based on a daily maintenance pack.

b. On call resupply is necessary to cover emergency requirements for vital items.

106. **Medical**. The likely casualties from the airdrop, enemy action and the problems of evacuation create the need for extra medical resources and a sustaining capability.

SECTION 6

REAR AREA SECURITY

INTRODUCTION

107. The rear area for any particular command is the area extending forward from its rear boundary to the rear of the area of responsibility of the next lower level of command. The area is provided primarily for the performance of combat service support functions.

108. Infantry battalions may be employed on rear area security duties in the Combat Zone that is in division or corps rear areas or Communications Zone (Comm Z). Operations vary from small static guards to conventional tasks described in earlier chapters under the different types of operations. The aim of rear area security operations is to guarantee the uninterrupted logistic resupply of the forward formations and units and to permit freedom of manoeuvre by reserves. Rear area security duties are a vital element in the main contact battle.

109. **Command and Control.** The size of areas, the number and variety of headquarters and units deployed, make a clear system of command and control essential. Radio communications will be made difficult, not only by problems of range but with the number of radios available and their compatibility. Battalions in rear areas may find themselves under the command or operational control of the following headquarters:

a. **Division Rear Area.** The battalion will normally be under the direct command of a division's main or rear headquarters.

b. **Corps Rear Area.** Battalions and companies will normally be under command of their parent headquarters but may be under command or operational control of the following —

1) under command of corps or division main if tasked with protecting the headquarters,

2) under operational control of sector headquarters, and

3) under command of brigade/area headquarters.

TYPES OF OPERATIONS

110. **Protection of Key or Vital Points.** A vital point is a site or installation, the destruction or capture of which would seriously affect the success of operations. They may be logistic or air defence installations, bridges and defiles on main supply routes, railway lines or sensitive headquarters and communications sites. It should be remembered that some vital point installations and areas extend over an area of several square kilometres. Protection usually involves:

a. surveillance,

b. sentries,

c. area patrols, and

d. mobile reserves.

111. **Protection of Main Supply Routes.** These are often long and are almost impossible to protect. Bottlenecks such as defiles and bridges are obvious areas of threat. However, the cratering of roads or destruction of culverts and bridges anywhere along the route could cause long delays for convoys. It is important that any blockage is identified early so that diversions can be put into operation immediately. A convoy encountering a well sited blockage without warning, will have difficulty in turning round and therefore be prone to ground and air attack. To gain the necessary early warning requires a combination of static OPs and mobile patrols both in vehicles and helicopters. While prevention of a blockage should be the aim, reaction is more likely to be the norm. Diversions must be actioned immediately by military and civil police and engineers with the appropriate plant and stores made readily available. It may be necessary for the engineers to be escorted to the site and protected while working.

112. **Anti Heliborne/Airborne Operations.** Airborne or heliborne forces may be inserted into rear areas to create disruption to the logistic resupply system, or to capture important defiles and bridges which are intended for use by breakthrough or outflanking ground forces. These

air inserted forces may include armoured vehicles, artillery, heavy mortars and mobile air defence systems. There are 4 phases in dealing with these forces:

a. **Forecast.** An analysis of the importance of certain areas, headquarters and installations, together with the availability of DZs and LZs and suitable areas for air landing, will make some prediction possible. Furthermore, the course of the forward battle and enemy doctrine may give firm indicators of timing.

b. **Find.** Good reporting on the fly-in route of numbers and direction of helicopters or aircraft is essential. However, the exact point of insertion may be difficult to find, particularly at night or if no friendly forces are in the area. It is important that measures are taken to find the enemy as quickly as possible.

c. **Fix and Destroy.** Once the inserted force has been found, it must be contained and destroyed.

113. **Miscellaneous Tasks.** These include convoy escort, assistance with PW, refugees, casualties and possibly the outloading of vital stores — Planning for such a wide variety of employment is difficult and demands great flexibility. It is essential that changes from one task to the next be quick, and taken as a matter of course.

PLANNING

114. Rear areas are normally large and there are rarely sufficient troops available to cover all the tasks required. The CO may be ordered to provide forces at a specific strength in some areas by higher formation. However, for many tasks he will have to decide the manpower available having carefully analysed the threat. It will then be a case of balancing the requirements for static guards, OPs, mobile patrols and reserves to carry out his mission. No particular task is likely to be long term and so battalions must be ready for any task at short notice.

115. **Time and Space.** A battalion may be given a tactical area of responsibility. The tactical area of responsibility is likely to be large and the time taken for reserves to reach a problem area will be critical. Both wheeled and helicopter transport must be considered early in the planning stage together with likely routes and LZs.

116. **Reserves.** Reserves are essential for almost all tasks. Likely tasks and time and distance will dictate the location of reserves. Ideally, a reserve should be concentrated in such a position that movement times to any point are the same and briefing will be easy. However, the likely threat and the need for immediate reinforcement in a given area may dictate the need for dispersed reserves in sub-unit concentration areas, thereby creating a need for quick concentration of the whole reserve, to deal with a major problem. COs should guard against double earmarking reserves, such as allowing them to be used as mobile patrols and also earmarking them as a reserve, as it is likely that neither function will be carried out effectively.

117. **Communications.** Insufficient radio sets and long distances make communications difficult. It is important that timely warning is given of an attack or incident so that support and reserves can be deployed quickly. It is essential that the communications plan is thorough, including which civil telephones are to be manned.

118. **Artillery.** Providing guns are in range, the quickest response to an incident is likely to be by artillery. It is essential that all elements of a battalion are aware of what artillery support is available. Calls for artillery support will normally be over company and battalion command nets as there will rarely be sufficient FOOs to cover the whole area. Battalions may be allocated some air defence assets for point defence but in the main will not be under area low level air defence cover. When selecting concentration areas, moving them to an area already with air defence cover should be considered.

119. **Engineers.** Engineers are most likely to be employed on route maintenance tasks rather than defence tasks. At reserved demolitions firing parties will almost always be provided by engineers. Battalions will have to rely on assault pioneers for mining, wiring and other defence tasks. It is essential that there is close liaison with any engineers working in the area.

120. **Aviation.** Helicopters are invaluable for reconnaissance and liaison tasks. Allocation is likely to be limited and therefore tasks must be carefully planned to achieve the best results.

CONDUCT OF REAR AREA OPERATIONS

121. **Employment.** A battalion may be employed in a number of ways:

a. As a complete battalion in reserve ready to carry out area security operations. The battalion may be concentrated in a single concentration area or in dispersed sub-unit locations.

b. Have an area with responsibility for defence of some points and also area defence tasks within the area.

c. Be split into static tasks guarding vital points. In this case the major task of Battalion Headquarters is to ensure the administrative needs of the detached sub-units are met while at the same time planning for future operations.

122. **Morale.** Much of a battalion may be in small dispersed groups with little or no enemy activity. Updates on what is happening elsewhere and likely future operations are important for morale. Furthermore, information on the redeployment of such groups may not reach battalion Headquarters. While dispersion and distance make liaison visits difficult, every effort must be made if contact is to be retained and the groups are not to feel abandoned.

123. **Intelligence.** Every source of information should be used to provide the necessary intelligence on enemy movements. Information should be available from other arms and logistic units, all of which have sentries, and the civil police. Liaison with such elements is most important.

124. **Flexibility.** It is essential that the battalion be flexible and able to be changed quickly from one task to another. If a battalion is concentrated then redeployment is easy. However, if it is dispersed it may take some time for orders to reach the sub-units on the ground because of the communications and distance problems described earlier. This is the main difference between rear area security battalions and those employed in conventional operations in the forward divisions and brigades.

SECTION 7

OTHER OPERATIONS

MOUNTAIN OPERATIONS

125. Infantry, because of its versatility and ability to move virtually anywhere, will play the dominant role in mountain operations. To do so, the highest standard of junior command and leadership, physical toughness, fieldcraft, and individual skill at arms will be necessary. Rugged country gives more opportunity for infiltration by small parties; there will be greater scope for the use of independent pickets, outposts, ambushes, and sniping and sabotage tasks; hence the need for good command and leadership at platoon, section, and patrol level.

126. Owing to the difficulty of deploying armour, infantry battalions will operate mainly without armoured support.

127. Particularly good observation is often possible and every infantryman must be capable of siting and manning an observation post effectively. This capability will include the use of night viewing devices.

128. The ability to operate with helicopters is particularly important as is the selection and preparation of landing zones and winching areas. Marshalling and normal loading and unloading drills must be thoroughly understood.

129. The increased number of small parties, pickets, patrols, OPs, and outposts needing mortar, artillery, and close air support requires a high standard of target and FAC training. In addition, the problem of ammunition resupply makes fire control and accuracy of fire more than usually important.

130. Engagements with small arms tend to be at long range, and infantrymen must be able to shoot accurately at long range.

131. **Light Loads**. Infantry moving on foot in difficult country should be loaded lightly. Heavy weapons, ammunition, and supplies should therefore be brought to forward positions by helicopter whenever possible. As sufficient air lift will seldom be available, economies must be

made and only essential weapons and equipment carried, the choice of which will depend on the climate, the ground, and the type of opposition expected. Commanders at all levels must decide the priorities and issue precise orders. Where there is conflict between weight of ammunition and weight of weapons, experience has shown that it is better to take more ammunition and fewer weapons.

132. **Support Weapons:**

a. Mortars are the most valuable infantry support weapon in mountains, and other material may have to be sacrificed to ensure an adequate supply of ammunition for them.

b. The GPMG is useful to engage the long-range targets likely to be encountered.

c. Even if the country is impassable to enemy armour some anti-armour weapons should be carried to deal with enemy bunkers and sangars.

133. **Grenades.** A plentiful supply of grenades is essential, particularly for reorganization and defence. They can be lobbed downhill for considerable distances and with great effect in rocky places. Coloured smoke grenades are useful for marking positions.

134. **Radios.** Additional lightweight radios will be required for the extra OPs, pickets, and relay stations that will be deployed, and also for ground to air communications.

135. **Night Fighting Aids.** New aids (including ground surveillance radars) currently available or planned for the future can be effectively employed in the mountains. Skilfully sited, their line of sight characteristics can be fully exploited in covering areas which would otherwise absorb large numbers of men in OPs and patrols. Siting is critical and screening will often be difficult to avoid.

136. A soldier's guide to mountain operations is contained in B-GL-302-005/FP-002.

JUNGLE OPERATIONS

137. The infantryman plays the dominant role in jungle operations because of his versatility and relative mobility. All others support him. But the soldier introduced into the jungle for the first time must acquire an early familiarity with his new surroundings before he is able to operate effectively. He must overcome a natural fear of the unknown and once he is aware that the jungle is not a hostile environment he must be trained to use it to his own advantage.

138. Infantry are unlikely to be used in mass in jungle warfare but will generally be dispersed widely in small units with the prime object of dominating an area, locating the enemy, and destroying him. Continual, silent, and aggressive patrolling is the key to success, and will normally be the major infantry task. In the offence, direct assaults on strongly held positions are generally costly, so the emphasis lies instead on encircling and ambushing the enemy, using the concealment which the jungle provides. The ambush is the most effective means of taking advantage of the concealment offered, and so becomes a major feature of jungle operations.

139. Any form of permanent or temporary base or resting place is vulnerable to enemy surprise attack from close range, and the protection of bases, whether they be platoon, company, battalion, or fire support bases, is important.

140. Visibility and poor fields of fire place severe limitations on all long range weapons. The following battalion weapons are most useful:

a. all small arms,

b. SRAAW(H),

c. grenades and the grenade launcher, and

d. mortars.

141. **APCs**. The firepower, mobility, and protection afforded by APCs will be useful in areas where the going is suitable. The vehicles are valuable load carriers for rations, water, ammunition, and stores and provide protection against small arms in an ambush, when their radio and fire support will also be an asset. APCs proved themselves useful in the jungles of Vietnam, and provided their limitations and the logistic support needs are taken into account, may be able to play an important part in operations.

142. **Explosive Devices**. Infantry in a defensive position in jungle will need to make sure of all available devices to avoid being surprised and to illuminate and destroy approaching enemy. The claymore mine, which is easily set up and a very lethal directional weapon, can be used on approach routes and may either be command detonated by the defender or left to be set off by the enemy (anti-lifting devices may be used to prevent tampering). Illumination and trip flares are also of use in these circumstances.

143. **Flame throwers**. Flame throwers, if they can be obtained, can assist considerably in the reduction of bunkers and strongpoints and can be used to clear foliage and undergrowth and thereby widen fields of fire in some circumstances.

144. **Surveillance and Night Fighting Equipment**. The profuse vegetation and steep high hills which limit visibility in the jungle also reduce the effectiveness of observation devices. It is important to select the appropriate device for the task and not overburden the soldier; therefore, relatively light night weapon sights and night observation devices and alarm devices should take precedence over radars.

145. A soldier's guide to operating in the jungle is contained in B-GL-302-004/PT-002.

NORTHERN OPERATIONS

146. Operations in the north stress small unit tactics, command is therefore decentralized to ensure maximum flexibility. Because of the demanding requirements on the individual soldier, forceful and personal leadership must be of the highest order. A routine must be established

and all must adhere to it. Commanders at all levels must plan and prepare their operations in great detail, actively supervise, keep themselves and their subordinates informed, and maintain close coordination with adjacent and supporting units.

147. A high proportion of troops committed to northern operations, especially in winter, have a basic fear of the environment. The major task of leaders will be first to overcome this basic fear in their men, and then to use this confidence and esprit to best advantage against the enemy. A positive frame of mind may well spell the difference during operations in the north. Survival is of course a very basic consideration and man's natural tendencies cannot be discounted. Through the exercise of personal discipline and example, leaders can put survival in its proper perspective and not the focal point of every action.

148. **Mobility**. The combined effect of climate, terrain, and lack of infrastructure has a very limiting effect on mobility. Mobility problems vary greatly according to time of year.

149. **Firepower**. All other things being equal, the ability to deliver superior firepower on the enemy will carry the battle.

150. Every casualty imposed on the enemy, every shelter destroyed, every supply column intercepted will impose on him a **snowballing** effect throughout his entire system. The time, effort, and manpower involved in recovering, treating, and evacuating a gunshot-wound casualty is far greater than in a temperate zone.

151. Indirect fire is the most effective method of delivering fire with minimum risk to own troops. Unfortunately, difficulties in plotting positions, inaccurate maps, weather effects on munitions, and the shortage of firing data for extreme low temperatures reduce some of the advantages. Techniques of adjusting fire from initial rounds must be practised.

152. Few battles are ever won without employing direct fire weapons. Their characteristics make them less vulnerable to the environment but they also have their problems. Those employing electrical circuits are affected by extreme temperatures, moving parts become brittle and break. Skill and cunning in the use of cover, both artificial and

natural, will be necessary in order to reduce casualties. A good plan will strive to get maximum benefit from indirect fire and weather before direct fire employed. An enemy worn down by casualties, fatigue, cold, hunger, and thirst will be much less effective in the handling of his own weapons.

153. **Combat Service Support**. The battalion will not achieve the necessary mobility and the capacity to deliver firepower unless it is supported by a sound logistic system. Logistics is important in all theatres but even more so in the north where the infrastructure is minimal, and the battalion may have to assume total responsibility for its own maintenance. All combat service support will invariably take more time in a northern environment. Distance is measured in time rather than space. Simple tasks take longer to execute due to extremes of temperature, bulky environmental clothing, etc. The unpredictability of the weather means that holdings at all levels must be carefully considered. Calculated risks are more dangerous because of the climate but this is not a license to over issue. Too many stocks can be almost as much a problem as too few.

154. Details on cold weather training may be found in B-GG-302-002/FP-001, Basic Cold Weather Training.

REEFRENCES AND STANDARDIZATION AGREEMENTS

1. The following publications were consulted in the preparation of this manual:

a. B-GL-300-000/FP-0000 — The Army;

b. B-GL-301-001/FP-001 — Land Formations in Battle;

c. B-GL-301-002/FP-001 — The Battle Group in Operations;

d. B-GL-301-002/FP-Z01 — Combat Team Commanders Handbook;

e. B-GG-302-002/FP-001 — Basic Cold Weather Training;

f. B-GL-302-011/FT-001 — Airmobile Operations;

g. B-GL-303-002/FP-Z01 — Staff Duties in the Field, Supplement 1, Military Symbols;

h. B-GL-303-002/FP-Z03 — Staff Duties in the Field, Supplement 3, Army Vocabulary;

j. B-GL-304-002/FP-001 — Unit Administration;

k. B-GL-305-001/FT-001 — The Armoured Regiment in Battle;

m. B-GL-306-002/FP-001 — Artillery Staff Duties;

n. B-GL-308-001/FT-001 — Air Defence Artillery Command, Control and Employment;

p. B-GL-309-004/FT-001 — Patrolling;

q. B-GL-310-001/FT-001 — Airborne Operations;

r. B-GL-315-002/FP-001 — Combat Intelligence;

s. B-GS-316-013/FP-001 — NBCW Individual Procedures;

t. B-GS-316-014/FP-001 — NBCW Formation and Unit Procedures;

u. B-OL-318-010/FT-001 — Ambush and Counter-Ambush;

v. B-GL-318-017/PT-000 — All Arms Air Defence;

w. B-GL-319-001/FT-001 — Engineers in Battle;

x. B-GA-440-000/FP-000 — Tactical Aviation in Operations;

y. AS 7610-66-118-5958 — The Infantry Battalion;

z. UK 71358 (Part 1) — Battlegroup Tactics;

aa. UK 71358 (Part 2) — The Infantry Battalion in Battle;

ab. US FM 71-2J — The Tank and Mechanized Infantry Battalion Task Force; and

ac. US FM FC 71-6 — Battalion and Brigade Command and Control.

2. The following NATO Standardization Agreements have been wholly or partially incorporated into this manual:

a. STANAG 2014 (Edition 6), Operations Orders, Warning Orders and Administrative/Logistics Orders;

b. STANAG 2017 (Edition 5), Orders to the Demolition Guard Commander and Demolition Firing Party Commander (Non-Nuclear);

c. STANAG 2019 (Edition 1), Military Symbols for Land Based Systems;

d. STANAG 2020 (Edition 7), Operation SITREPs;

e. STANAG 2029 (Edition 7), Method of Describing Ground Locations, Areas and Boundaries;

f. STANAG 2044 (Edition 5), Procedures for Dealing with Prisoners of War;

g. STANAG 2047 (Edition 3), Emergency Alarms of Hazard or Attack (NBC and Air only);

h. STANAG 2067 (Edition 1), Control and Return of Stragglers;

j. STANAG 2070 (Edition 3), Emergency War Burial Procedures;

k. STANAG 2082 (Edition 3), Relief of Combat Troops;

m. STANAG 2084 (Edition 3), Handling and Reporting of Captured Enemy Documents and Equipment;

n. STANAG 2088 (Edition 6), Battlefield Illumination;

p. STANAG 2113 (Edition 2), Denial of a Unit's Military Equipment and Supplies to an Enemy;

q. STANAG 2868, Land Force Tactical Doctrine — ATP-35(A);

r. STANAG 2904, Airmobile Operations; and

s. STANAG 3680, Glossary of Terms and Definitions.

3. The following ABCA Quadripartite Standardization Agreements have been wholly or partially incorporated into this manual:

a. QSTAG 243, Surveillance (including night observation) Plan — Annex to Operations Order;

b. QSTAG 506, Operation Orders, Warning Orders and Administrative/Logistics Orders;

c. QSTAG 508, Orders to the Demolition Guard Commander and Demolition Firing Party Commander (Non-Nuclear);

d. QSTAG 509, Military Symbols;

e. QSTAG 510, Operational SITREPs;

f. QSTAG 514, Method of Describing Ground Locations, Areas and Boundaries;

g. QSTAG 523, Procedures for Dealing with Prisoners of War;

h. QSTAG 525, Control and Return of Stragglers;

j. QSTAG 528, Handling and Reporting of Captured Enemy Documents and Equipment;

k. QSTAG 534, Denial of a Unit's Military Equipment and Supplies to an Enemy;

m. QSTAG 567, Command and Control of Infantry Antiarmour Weapons;

n. QSTAG 665, Airmobile Operations; and

p. QSTAG 891, Glossary of Terms and Definitions.