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(6) LESSONS FROM THE INDO-CHINA WAR, Vol. III.

by

The Supreme Command, Far East

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COMMANDMENT IN CHIEF
IN THE FAR EAST

LESSONS

from the

WAR IN INDOCHINA

Volume II

The enemy we have fought over the last nine years has practiced, under the aegis of self-criticism, an old discipline of our own Army which we simply called the "critique".

Such a collective self-examination following our operations has been our best material for study and development. But is it not shocking to apply one same method of introspection to peaceful exercises as well as to the brutal realities of war?

All things considered we are nevertheless compelled to dwell on the causes which brought our failures about, or our successes, and the testimony borne by each one of our dead must not be buried among the memories of the surviving.

Besides, an Army endowed with a long military past is rich enough to let her men tell the truth.

In order to prepare these Teachings from the Indochina Campaign, we have drawn from veterans' relationships and the 1400 reports written by officers of all ranks constitute the main basis of this study.

The accounts, the news bulletins and the many short works prepared in Indochina during hostilities for training purposes have been drawn upon also, as well as the policies laid down by successive Commanding Officers.

The reports drawn up upon completion of the most important operations, G-2 syntheses and lastly the various statistical data collected by the Staff of the Commander-in-Chief, constitute one last source of documentation.

It was still difficult to gather within the limits of one book all the experiences of one war whose type and intensity varied according to the times, to the environment and even to the seasons. In addition, it was necessary to classify these teachings according to the level of command to which they applied.

A classifying method based on a division into three documents was therefore adopted.

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- The first section, a very limited edition, covers the lessons which, due to their importance and their politico-military character, concern the High Command level. It purports to be an outline of the problems involved in conducting operations to meet requirements which were all too often irrelevant to tactics.
- The second section, intended for wide distribution, groups together everything the Armed Forces have learned during the Campaign which would still apply today, should we be called upon to counter, outside of Europe, a rebellion fed by the same sources.
- Finaly, the third section, with as wide a distribution as the afore-mentioned, attempts to group all the lessons of a more general character which, consequently, deserve to influence our tactical principles.

Indeed, the fine line drawn between the contents of the second section and that which is the object of the third may seem at times questionable. One deals mainly with the thousand and one forms of Viet Minh guerilla, and the other deals mainly with European-style combat methods. But this division, based on convenience, must not lead one to forget that the fortunes of war admit only one didactical classification.

Saigon, May 31st, 1955

General of the Army P. Ely
Commissioner General of France and
Commander-in-Chief, Indochina

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COST OF THE INDOCHINA WAR TO THE FRENCH ARMY:

3 Generals,
8 Colonels,
18 Lieutenant-Colonels,
69 Majors,
341 Captains,
1,140 Lieutenants and 2nd Lieutenants,
2,683 Non-commissicnned Officers, and
6,008 Soldiers
12,019 North-African and African NCO's and Soldiers, and Legionnaires,
14,093 Indegenous NCO's and Soldiers of the Expeditionary Force

"FALLEN FOR FRANCE"

AND:
1 Lieutenant-Colonel,
5 Majors,
60 Captains,
134 Lieutenants and 2nd Lieutenants,
2,755 Non-Commissioned Officers and Soldiers
5,791 North-African and African NCO's and Soldiers, and Legionnaires,
12,830 Indigenous NCO's and Soldiers of the Expeditionary Force

"STILL CAPTIVE OR MISSING"

IN ADDITION WERE WOUNDED:
20,899 French men,
24,347 Legionnaires, North-Africans and Africans,
26,924 Indegenous personnel
31,291 Men were repatriated for medical reasons,
16,118 Prisoners were liberated by the enemy.

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AIR FORCE LOSSES DURING COMBAT MISSIONS:

1 General,
60 Officers,
160 Non-Commissionned Officers,
49 Men.

IN ADDITION: 85 Officers,
243 Non-Commissioned Officers,
52 Men,

"HAVE BEEN MISSING OR DIED AS THE RESULT"
"OF THEIR WOUNDS OR DISEASES"

NAVY LOSSES IN COMBAT:

27 Officers,
39 Petty Officers,
235 Seamen,

IN ADDITION: 53 Officers,
157 Petty Officers,
615 Seamen,

"HAVE BEEN MISSING OR DIED AS THE RESULT"
"OF THEIR WOUNDS OR DISEASES"

THE MOST DISASTROUS YEAR WAS 1947, WITH:

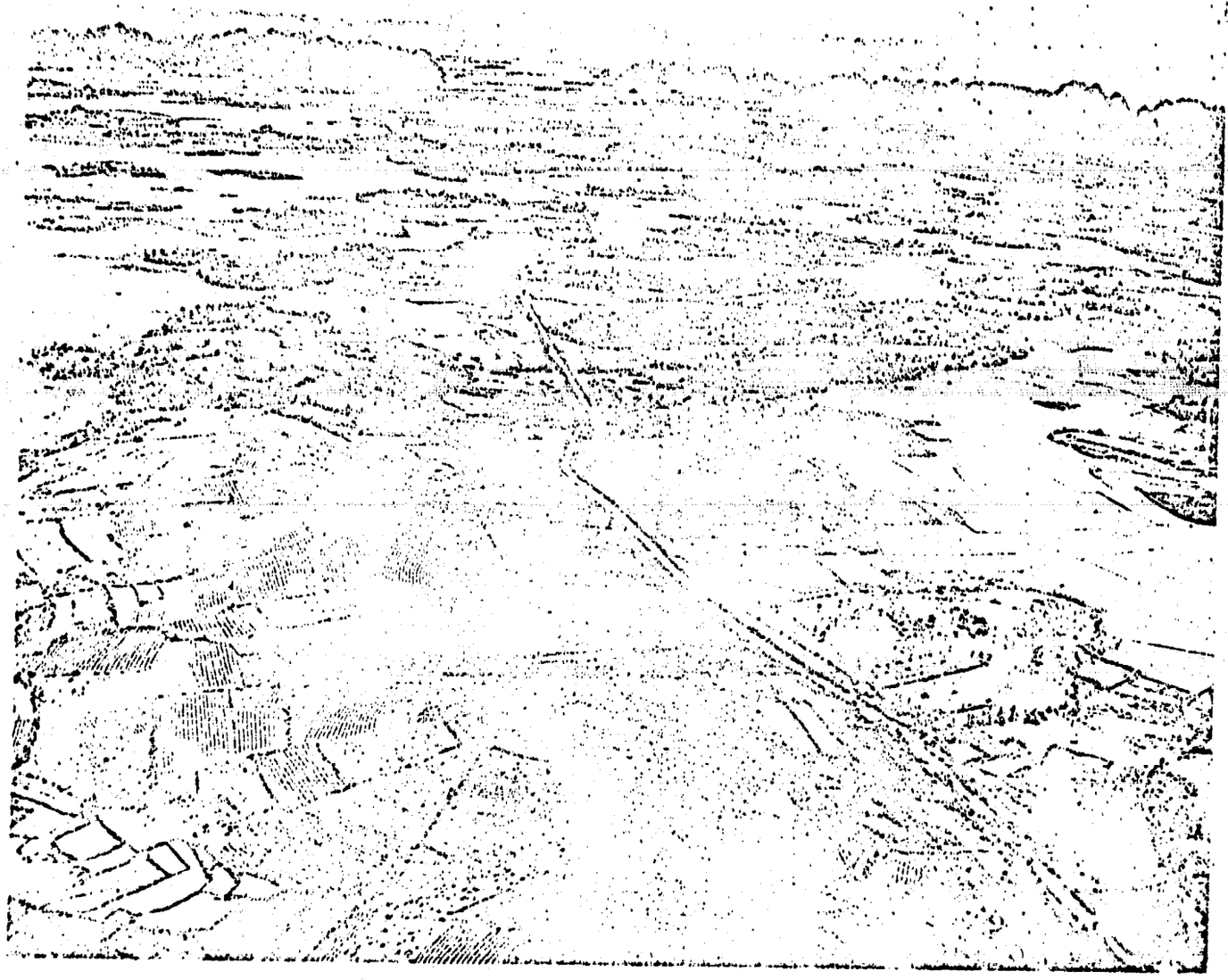
5,345 killed,
9,790 wounded, for the three branches of the Armed Forces combined,

- While the years 1950 and 1953 cost respectively only:

2,297 and 2,849 killed,
6,473 and 9,203 wounded.

- On the other hand, the Vietnamese Army lost in 1954:

2,590 killed and
6,822 wounded.



ASPECT DU TERRAIN DELTA TONKINOIS

Aspect of the TONKIN Delta terrain

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MOYENNE REGION CULTIVEE.

Cultivated middle region

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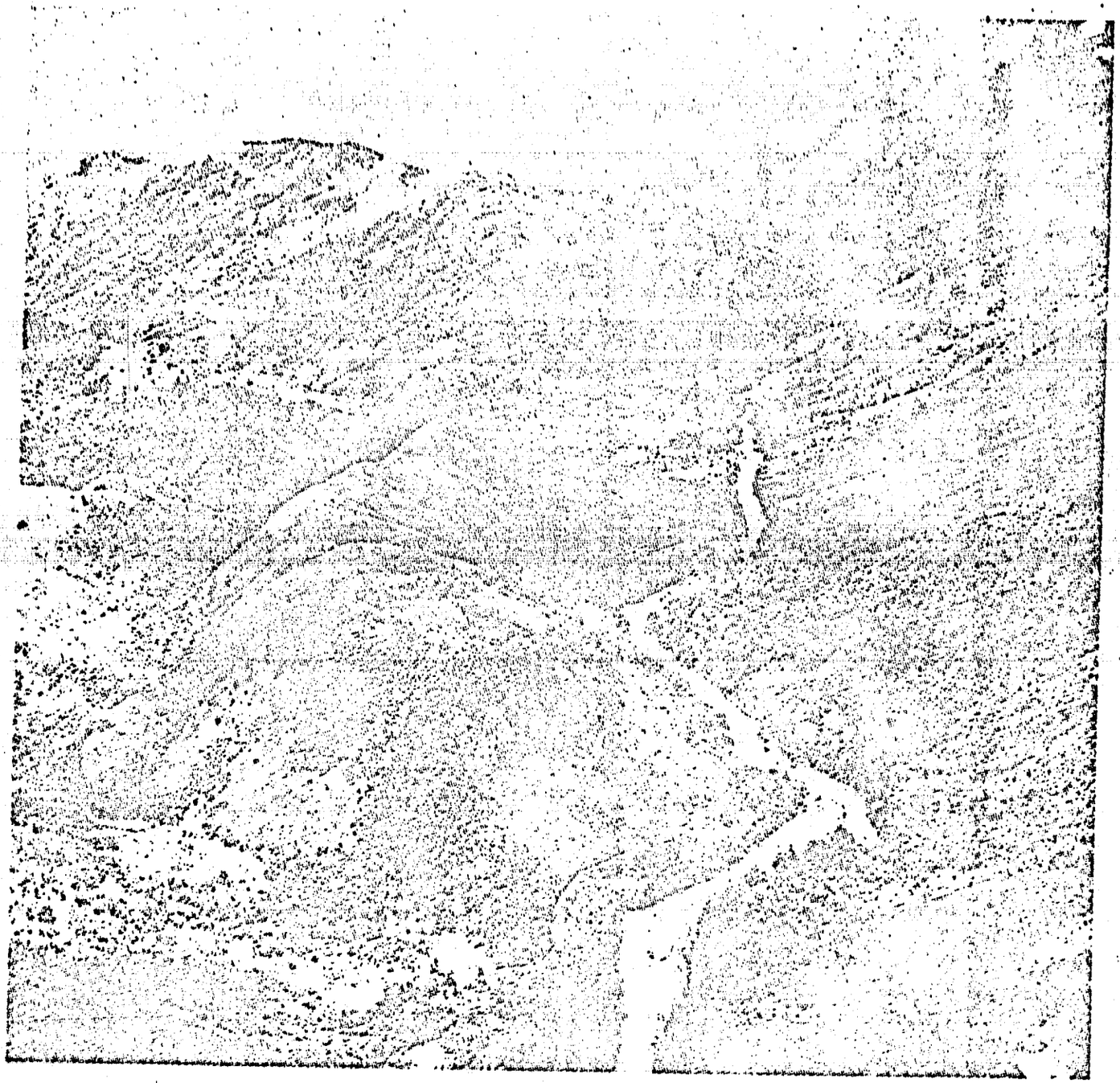
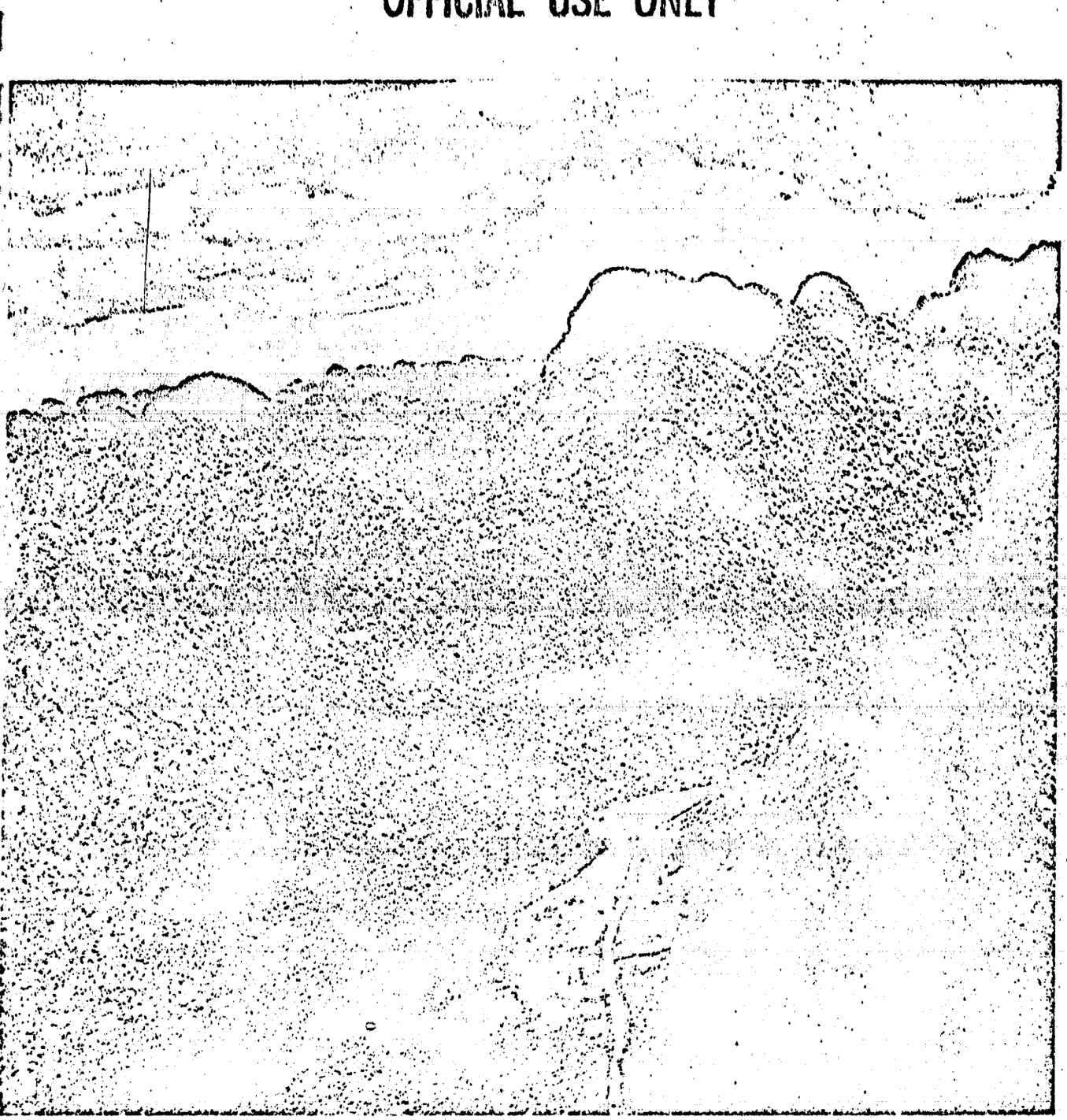


MOYENNE REGION

Middle region



HAUTE REGION

High region

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FIRST PART

*****

THE WAR OF IDEAS

**
****
**

"Where the guerilla is deprived of any
"political objective, it will fail. Where it
"has a political objective which is incompati-
"ble with popular political objectives, it will
"fail just the same for it will not receive,
"from the people, the support, the participation,
"the assistance and the active collaboration
"that are necessary.

. . . . . .

"It is as if the people were the sea and
"the Army a fish. How can it be difficult for
"the fish to survive if it dives in the mass of
"water? But should the water recede or dry up,
"then the fish cannot escape sure death."

MAO TSE TUNG

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CHAPTER I

PRE-INSURGENT PERIOD

*****

It is extremely difficult to detect a pre-insurgent period. Nevertheless, one can surmise that it begins at the moment when opposition to established law and order has acquired sufficient hold on the population to breed trouble.

In Indochina, such a period has probably had its sources around 1925,and the grave incidents of 1930 in North-Annam and in the Tonkin Delta area are especially responsible for it. Thus, it lasted some twenty years and could have lasted longer if the war circumstances, namely the elimination of French authority by the Japanese in 1945, had not given the Viet-Minh Party the opportunity to fill a vacant place.

It is difficult to draw other lessons from this period other than the confirmation of some well-known rules.

If those rules were transgressed, it was no doubt because the existence of a pre-insurgent state was not suspected, and also because the insurgency had lost its traditionnal pattern and this evolution took us by surprise.

SECRECY OF PRE-INSURGENT SYMPTOMS.- The various reports relating to the pre-war situation gave an optimistic view of the internal security and placed responsibility for the incidents and troubles with some distraught individuals, against whom force was normal and sufficient.

"One might wonder if the errors committed in the estimation of the situation did not stem from the training of the ranking file, for one part, which was oriented towards an administrative ultra-conservatism rather than towards evolution; for the other part, from their standard of living which kept them apart from the Vietnamese people"(1).

---

(1) - Colonel X... commanding an area (territorial Division) in Tonkin.

Here is actually what a man, though well experienced in matters related to Indochina, wrote in 1932 after the repression of the YEN-BAI revolt, which he blamed on too wide a display of our ideas and too liberal politics.(2)

"Far from undermining tradition, it would be wise to rely on it and not do anything which might be contrary or strange to it .... With these conditions, our descendants will not have too many surprises when the years that will ensue will open the way to the future for them".

Our ranking file overseas must prepare this future while paying closer attention to the aspirations of indegenous movements, and not only meeting their material needs, but their affective needs.

For, in 1954, Colonel N.... who followed the events, commented in these terms on the use made of force with regard to the same repression.

"Pre-war revolts were brought to heel: short-lived triumph which cost a lot! Because force did much more harm than good; the Tonkin village of X.... which was shelled was to remain a hotbed of revolt and North Annam, which was occupied by minority troops, was to see no more French men after 1945". (3)

EVOLUTION OF THE INSURGENCY - To the Black Flag, to the Cochin-Chinese pirate moved by personal ambition, by greed or by some local patriotism, was gradually substituted an adversary animated by a racial patriotism and by a new set of ideals based on Marxism.

Leaders educated in PARIS or trained in CHINA, or even MOSCOW, were recruited from among the mass of the population.

Recognized as natural leaders of their collectivity because they sprang from it, they had at their disposal to influence opinions the traditional motives which rouse the indegenous masses: xenophobia, anti-colonialism .....

But the communist disciplines provided them with a propaganda and indoctrination technique which allowed them to win over large numbers of adherents within the most unfavoured classes.

---

(2)Mr. de Pouvourville, from the Collection "How they think".

(3) Colonel X..... Zone commander, North Vietnam

From this double-sided, double source ideology sprang a duality of origin in the supports from which the rebellion benefited. On the one hand, the Viet Minh made maximum use of the local ressources it had secured for itself by intimidation and terrorism if necessary; on the other hand, it had the outside support of foreign nations.... and some French quarters.

It found, actually, certain favors, both official and clandestine, within a fraction of our public opinion and of our Assemblies. This combination of complicities and material aid quickly allowed the rebels to get over the phase of the armed bands which characterized the year 1945. With the help of circumstances and time, they passed from regularly formed groups to units of all branches of the services and finally to major units.

PERMANENCE OF HOTBEDS OF AGITATION.- What we have observed in Indochina confirms an already known fact in our African possessions: there exists a permanence in the hotbeds and areas of agitation. History and geography point out certain regions as being the traditional birthplace of insurgent movements, then as the favored guerilla theatre of operations.

It is in the provinces where the population has always been the proudest, the most conceited and the most independent, that the revolt has taken on the most acute and intense forms (the PLAINE DES JONCS, the Region of VINH, the mountains surrounding LANGSON, etc..). Being able to compare some recent engagements to the history of certain battles of the conquest is a gripping thing. The same events occur often, sometimes at the same spots. Some of the pamphlets or notes from Tonkinese Mandarins to the North VIETNAM pacifiers were written in the same vein as the Viet Minh pamphlets.

To these traditional circumstances were added of course the contributions of the modern era. The existence of a proletariat in the cities has favored the birth of urban disturbances (in particular on December 19, 1946), while the patience of the rural masses finally wore out.

Due to the very nature of this pre-insurgent state, it appeared that the solution to the problem could not be brought about by the use of force alone.

The authorities responsible for law and order must step in at the political, economic and social level rather than at the police level. "Under penalty of inefficiency it must not be assigned the mission of maintaining law and order as well as the causes of disorder".

As long as the leaders of the revolt must exert prudence and caution, we must not resort to savage repression.

"They will always attempt to "sever all relations", to become outlaws; it is up to the authorities attempting to maintain order to manoeuver so that, on the contrary, relations will be continued without interruption and that, at all times, it is possible for them to rally without losing face or prestige".(1)

PREPARATION OF THE ARMED FORCES. - The very structure of our Armed Forces makes them ill-fitted to maintain law and order. The pre-insurgent period thus takes on an all-important character in their setting up, as well as in adjustment of backing-up forces eventually coming from other territories.

If the Indochina War provides us with few positive lessons in this area, it can however point out the gaps of our preparation. A great number of Officers at first deplored the fact that the Expeditionary Corps was deprived of a Specialized Officers Group, similar to that of the Indegenous Affairs Group.

Besides the Commander's general information which must include all details of local politics, all the problems brought on by the gathering of information, special actions (clandestine forces, counter-clandestine forces...), the recruiting, the formation of local forces..., will only be resolved with the assistance of qualified Officers who might in turn be assisted by civil servants in due time. In Indochina, these missions were of necessity almost always assigned to troops who did not know the theatre of operations very well, did not speak Annamese nor any of the local dialects and consequently could not carry on adequate relations with the inhabitants.

It is imperative to have specialists from the start of the pre-insurgent period, for it goes without saying that their recruiting and their training cannot be accomplished within a few weeks nor even a few months.

Preparation of the theatre of operations is not as imperative. It must include in particular:

- General Staff studies of the Command organization, of territorial division and of proposed manoeuvers as a function of two or three simple case-studies.
- Complete documentation of each zone, adopting the traditional format of sector note-books or itinerary memos.
- A beginning in installations in accordance with the budget (means of communications, naval installations, air and logistics installations,..).

(1) Comments of Major X... on the pacification of South-VIETNAM.

Finally Intelligence Research must be initiated by the recruiting of potential agents, establishing contacts and by preparing communication channels within hostile zones... In Indochina, the difficulty of infiltrating agents into territory already subjected to Marxist control asserted itself. Therefore one must proceed with the organization of the future networks ahead of time.

INVOLVEMENT OF TROOPS. - When criminal assaults, sabotage actions and riots get so important that they cannot be handled by the police, the only course is to resort to troop units. However, it is desirable to avoid certain errors which Colonel X... (1) has pointed out:

"Essentially, the Armed Forces must be present, but not involved."

"Their rapid involvement serves as the signal to trigger hostilities. In their task to maintain critical points and communications means, which constitute the essential instrument of Command, of the Government and of economic life, they can adopt one of two behaviors the choice of which depends on local conditions and cannot follow any set of rules:

-"either they make themselves evident, by a large deployment if necessary,

-"or they make use of discretion, accomplishing their missions efficiently, but unobtrusively."

" Should the probability of involving troops become evident, then it is absolutely imperative that their involvement be prepared:

-" In the selection of objectives. Much too often there is a tendency to assign troops to secondary tasks. Since troops constitute the final argument, their use must made in a decisive action.

-"Mopping-ups, searching, and all operations of this type run the risk of producing deceiving results if they have no connection with the magnitude of the instrument set in motion. In this case they annoy the population and demonstrate the futility of force. So, during pre-insurgent periods, they will be used only if sufficient assurance of achieving the objectives of importance exists.

-"In its duration. It must be strictly limited to the brutal act and care must be exercised so as not to let it go on. This means that the assigned mission must be determined with great precision, where its nature and the anticipated results are concerned.

---

(1) Zone Commander in Tonkin, with a lengthy stay in Indochina.

-" In its conduct. Due to the gravity of psychological consequences, it is imperative to take the necessary steps and use enough troops that are adapted to the type of mission indicated. It is more advisable to act by means of massive and short demonstrations rather than by a succession of small-scale operations. In all, the principle of economy of forces must be rigorously applied.

"If involvement of troops creates a technical problem for the Military Authority, one must remember that, during such a period, besides acting with precision but within certain limits, the Military Authority is expected to effect a psychological shock on public opinion. The rest falls within the jurisdiction of the police and it is not advisable to assign to the Army missions dealing with the replacement of specialized services except in cases of absolute lack of them."

TO CONCLUDE, as soon as a pre-insurgent state can be detected, it is absolutely imperative to use the delay still available to prepare potential operations and to organize a specialist force if necessary.

When the use of the military becomes inevitable, do so with caution, for its psychological impact on the masses will be as important as its clash with rebel factions.

C H A P T E R II

PSYCHOLOGICAL ASPECTS OF THE STRUGGLE

If war always opposes two will-powers, civil war adds to it the clash of two doctrines and even two explanations of the world when Marxism inspires one of the two adversaries.

We are not attempting here to state the multiple causes which have resulted in the triumph of the Viet-Minh ideology over social conservatism and over the governmental weakness of traditional Vietnam.

After all these causes are too well known: "We couldn't possibly re-establish a new order for the profit of a constitutional and social disorder" (1)-(2).

There is not one French Veteran who hasn't expressed his bitterness and his anger towards the conflicting policies he was forced to serve as a soldier.

The following appraisal can be construed as one of the mildest... " In 1946, in order to do our duty here, we were shipped off between two rows of constables, like criminals. Upon returning in 1953, we were searched by Vietnamese Customs officers, like tourists" (3).

Most of the appraisals however are much more bitter and reflect these opinions of two officers:

Captain P...: "If we have been unable to oppose Communist propaganda effectively, it is because we have not proposed a positive ideology to counter Communism, from which a new doctrine and faith would have emerged".

Colonel N...: "The Franco-Vietnamese placed their bets on everything that was dying in this country: the traditions, the old - The Viet Minh used everything that came into being or grew: desires, passions, the young".

---

(1) - Major X...
(2) - The Viet Minh capitalized on statistics such as these (translated from Document No.953/FTNV/2 of 6 April, 1955) :
58% of Vietnamese families do not own one inch of land.
39% own less than 5 hectares (14 acres).
2% own from 5 to 20 hectares (14 to 56 acres)
0.34% own more than 50 hectares (125 acres).
(3) - Lieutenant Z... of the F.T.S.V.

But, if the Military Authorities overlooked the diplomatic and political aspects in the conduct of the war, they could not ignore the fact that "the ideological weapon was one of the major weapons, if not the major one, for the population was at stake in the struggle and our opponent was communist".(1)

The Expeditionary Force was, unfortunately, allowed to use this ideological weapon only in certain areas and with strict limitations. This chapter will therefore merely be a statement of facts as far as our successes are concerned, and especially our failures in the areas where the commanding officers were able to wage a restrained psychological war.

ACTION ON VIETNAMESE POPULATIONS .- In the zones where our units attempted to rid or preserve of the V.M. contamination, it was normal that we resort fo propaganda, while making use of weapons at the same time.

But the troops and their leadership were, with few exceptions, assisted by mediocre persuasion and indoctrination agents.

First of all, due to poor preparation:

"Political action is not a part of our formation ... our leaders were ill at ease when faced with problems of contact with the population, of propaganda... (2)"

"The majority of our leaders displayed, in too many cases, a thorough lack of knowledge in the field of political action... Some destroyed what others had taken such pains to build."

"A living example is the village of D..., on the Bassac, In an abandoned area, one of our Platoon leaders had succeeded, with great pains and patience, to convince 2,000 of the inhabitants to return. This village was the pride of my Company. Unfortunately, after we were relieved, some incompetent station leader lost the confidence of the population and it didn't take more than two weeks for D... to be entirely burned and abandoned by the very ones who populated it and preferred rejoining the V.M. zone rather than endure the vexations of an incompetent section leader and troops that were unprepared politically for their mission".(3)

Numerous are the officers who, in trying to conduct political actions within their zones, observed: "All their efforts destroyed in the space of a few days by the transit of a mobile unit in the area which knew nothing of the local conditions, and left without having killed one Viet, but having alienated forever those who gave us information and fought with us against the V.M.(4)"

---

(1) Lieutenant N... Company Leader in North Vietnam
(2) Major D... Sub/Sector Commanding Officer F.T.C.V.
(3) Captain N... Quarters Chief F.T.S.V.
(4) Captain R... LAOS

Added to this political ignorance was the lack of Officers having knowledge of the country and its language: "Many a Section Leader was asked to conduct propaganda actions. But what were his means? He did not speak Vietnamese, did not know the customs nor the country. For this type of mission, we need preparatory instruction, but most of all a strong nucleus of real specialists" (5).

We shall not insist more on this point since the necessity of having a A.I* Force has already been pointed out.

Moreover, the action which the Command could reasonably expect from the troops on the population was handicapped by the very type of operations. "I have noticed, wrote Major P... (FTNV), that psychological action and military operations are closely interrelated".

"When the Viets overtook a post, blew up a train or a vehicule, or laid an ambush, the population did not feel any impact, save through the fines and reprisals we imposed upon them."

"When we conducted an operation on a Viet based in a village, the population didn't feel the impact because we destroyed it along with the Viet."

"In either case, the V.M. Propaganda apparatus found a valuable subject, substantiated with facts, while we have naturally provided the masses with grounds for hatred."

"Thus we were losing, to the enemy's profit, sources of strength and intelligence."

These observations applied mainly to the zones where we waged a battle against decay.

In the regions under V.M. obedience, where we conducted raids from time to time, in most cases, we had to pay for some military advantages with the permanent alienation of the populations. The latter, actually, believed in the return of the Franco-Vietnamese Forces, maintained a benevolent neutrality and even gave us some tokens of faith, only to find themselves abandoned to reprisals of the V.M. Consequently, an incursion or a raid in a non-controlled zone should never be conducted together with an attempt to win over populations.

Under such unfavorable conditions, the poor results can be easily explained.

---

(5) Major L... F.T.N.V.

* Affaires Indigenes (Indegenous Affairs).

The use of modern propaganda methods had not, however, been neglected.

From 1946 to 1952 a "Propaganda Section" operated within the general staffs of the Commander-in-Chief and the Territorial Commanders. It distributed all necessary instructions to Zone and Sector Intelligence Officers and provided them with the material means necessary.

In 1953, a "Bureau of Psychological Warfare" was created within the General Staff of the Commander-in-Chief and this organisation received an ever-increasing amount of funds.

Instruction courses were organized to train propagandists. All equipment for printing leaflets and posters was distributed, display rooms were arranged; Mobile teams were equipped with megaphones, tens of millions of leaflets were parachute-dropped (1) and a plane equipped with loudspeakers was frequently used.

This tardy effort was slowed down anyway by a lack of competent personnel. For "the ideological wars of our contemporary era demand highly specialized cadres in the fields of political action and propaganda. Questions of doctrine set aside, there is a technique in which the greatest possible number of officers must be initiated, and in which some of them must be specialized"(2).

ACTION ON ENEMY TROOPS.- While direct propaganda on V.M. troops has yielded very few desertions and rallying soldiers due to the ascendancy of the political cadres on troops, we have achieved considerable success with the prisoners.

Action on the P.I.M.'s was based on a difference of regime (3).

Those who didn't belong to the regular army were assigned, after a probation period, to workers units from which it was never difficult to recruit coolies to serve voluntarily in our units. The latter have been practically always the devoted and extraordinarily faithful assistants to our formations: Without the necessary and concerted psychological action, common life with our troops has succeeded, in almost all cases, in transforming a former adversary into an unarmed auxiliary who shared his unit's "esprit de corps".

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(1)- 31 million during the month of January, 1954, alone.
(2)- Major S... Sub/Sector Commander F.T.S.V.
(3)- These personnel, referred to generally as PIM (Interned Military Prisoners) belonged to various categories according to their origin (Regular Army, guerilla soldier, political cadre) and their degree of intoxication, or indoctrination.

"In my Battalion, wrote Captain X... (FTSV), we quickly acclimatized our "PIMs", and a great many of them gave us undeniable tokens of allegiance - search of underground passages, for example - and requested to become partisans".

With regard to the P.I.M. who had to endure the regime of captivity, the Psychological Action Service conducted, from 1952 on, successful actions. In the camps where this was tried, the majority of prisoners, once the indomitable elements strained and segregated, proved to be receptive to objective information (on Vietnam, the Vietnamese Government, the National Army, the opportunities offered to the Vietnamese youth, etc..), and capable of receiving professional and intellectual training(1).

These two achievements of very different character prove that political rehabilitation is possible. They are, moreover, the judgement passed against a penitentiary regime which assembled the prisoners, without any distinction, into the same camp. An attempt to provide the captives with a certain comfort and of course the abolition of all brutality are indispensable to create a climate which is favorable to the rehabilitation phase.

V.M. ACTION ON OUR TROOPS.- With the exception of indegenous units, recruited among the ethnical minorities who always revealed themselves hostile to the V.M. due to racial repulsion, the enemy found fertile grounds for its propaganda among the indegenous elements of our formations and naturally within the Vietnamese Army.

The "DICH-VAN" movement (meaning: appeal to the enemy) was doted upon by the V.M. National Defence Ministry. Considerable documentation which came to our attention bears this out.

For the intention of nationalist Vietnamese the following arguments were used: "the Vietnamese soldier is not an enemy; he is a lost sheep, at most a rebel". If he "rallies" he will be treated with respect.

Simultaneously, pressure, even blackmail, were exercized against his family.

Everything, the narrow overlapping of our installations or of that of the adversary in the two delta areas and along the coastal zone, the receptivity of populations to the V.M. arguments from fear, or simply for attentism, favored the actions of the DICH-VAN.

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(1)- For example: 2,000 PIMs were thus treated in camp X... in TONKIN in 1952-1954, 900 enlisted in the Vietnamese Army where they served honorably; 1,100 were liberated.

It can be deducted that it was at the base of the fall of almost all posts whose garrison included indogenous elements, and that any unit with Annamite personnel had a DICH-VAN cell, either active or latent.

The V.M. Command acted on the French Union troops through the French Communist Party; in addition, they made use of leaflets and sometimes... women.

The defeatist propaganda originating from the Metropole was unquestionably the most demoralising factor for the French personnel, without however, having provoked any appreciable number of defections. (1)

With regard to the other elements of the Expeditionary Force, the V.M. widely used pamphlets which were written in every language and well suited to the time and place. In some cases, they also made use of interpreters, who harangued the garrisons of attacked posts with the aid of loudspeakers.

As a whole, their propaganda failed, for the living conditions in the Viet-Minh prisoner camps were too well known for our men to lend any credit to appeals signed by former buddies who had fal n in enemy hands. (2)

The Communist education, which the enemy attempted to instill in our prisoners with perseverance, obtained only superficial results: there were too many differences between the political agents' explanation of the world and what the captives knew so well. There was too wide a gap between the arguments and the hard fate which was reserved daily to our men.

The hope of liberation might have brought on a few repudiations and some allegiances to Marxist line, but the great majority of the repatriated ones adapted themselves again more or less rapidly to our ways of thinking.

The failure of the Viet-Minh preachers has just pointed out once again the necessity to base any attempt to win over people on good treatment and a possibility of gradual accession to liberty.

DECEPTIVE OPERATIONS.

Ever since the Anglo-Saxons made such great noise about their "deceptive"/ operations during the period 1940-1945, it has been the habit to cover a certain character with the cloak of psychological war, which was called the Stratagem of War from the times of the siege of Troy and the battle of the Horatii and the Curiatii.

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(1)- The number of French deserters has not been more than a few tens during 8 years of war and in most cases, the defection was caused by..'a female cong. Furthermore, many of these deserters tried later to escape.

(2)- The number of African, North-African and Legionnaire deserters totaled a few hundred during the eight years of war, and the great majority of them tried to escape later.

In fact, the deceptive action "whose objective is to achieve a psychological victory over the enemy, by leading him to a false interpretation of our intentions and thus reducing his ability to counter"(1), is always a fictitious manoeuver, the achievement of which is more or less strained.

But the means of modern propagande have allowed the considerable increase of the impact of false steps, wrong orders, and wrong activities in communications.

In this respect, but this one only, one can lend to psychological warfare the noisy orchestration of a stratagem.

ORGANISATION OF A DECEPTIVE OPERATION.- The decision to launch a deceptive operation can only rest with the Commander-in-Chief. But he should be provided with a "permanent Deception Staff" who, appraised in due time of the Chief's remote intentions, could suggest some lures. This branch could then "launch the action of the specialist Services with the maximum of efficiency and timeliness". (2)

Once the decision to simulate a plan of the Commander is taken, it becomes imperative that "the deceptive operation be headed by an operational Staff separate from the Staff of the main tactical operation".(2)

Preparation of the operation will deal mainly with "an abstract terrain: the morale and intellect of the adversary"(2), thus requiring the search for solutions well adapted to the adversary's characteristics, those of the population, and our relationship with the latter.

It will be necessary to make a close evaluation of the delays required for the false information to reach the opposing Commander in time to bring about the anticipated reactions.

"As in a game of bridge, one must influence the opposing team in the conduct of the game by certain calls or discards, or even by a particular way of unblocking some "long ones" in order to "squeeze him", or hide from him for the longest possible time the decisive card, so that when he realizes the game, it will be too late for him, to react efficiently"(2).

Given all this, we can use concurrently:

"- Spoken propaganda

"- Written propaganda

"- Whispered propaganda

"- The spectacular visit of very important persons (2). etc...

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(1)- Study by the Staff of the Commander-in-Chief on deceptive operations.

(2)- " " " " "

It goes without saying that a deceptive operation "must remain secret until the end of its development and deceive the friendly camp as well as that of the enemy".

"Its objective has been accomplished only when everybody has been taken in by the game".

"The minute the action has begun, everyone at all levels must play the game, even if the script shocks them or if they don't understand it"(1).

The rules we have stated here were not always applied in their entirety during the campaign, but their empirical application brought us a number of successes.

For example the evacuation of NA SAM on August 12, 1953, was preceded by a campaign of false rumors, which duped all the performers.

The "PELICAN" and "GERMAINE" operations nearing the end of hostilities were examples of the opportunities brought to us by modern means of propaganda.

"PELICAN" in October 1953 was designed to create a threat on the coast of THANH-HOA while the "MOUETTE" operation was launched some fifty kilometers inland. A simulated naval action and a timely endoctrination brought complete success,"since it was possible to emplace the "MOUETTE" apparatus facing the V.M. 320th Division, while immobilizing the 304th, and to take care of the first without being disturbed by the second"(1).

While the Geneva negociations were being carried on, the "GERMAINE" operation was designed to "persuade French, Vietnamese and international opinions, as well as the V.M., the strong reinforcement from the TONKIN Delta was on the way and would be accomplished before the 15th of June"(1).

Thus we were led to magnify the importance of actual facts such as the arrival in TONKIN of a paratroopers battalion, which was interpreted as the notice of the imminent reconstruction of two mobile groups, or the arrival in SAIGON of the cruisers GLOIRE and MONTCALM considered as the forerunners "of a large squadron comprising other ships and ground forces on ships which would land in the HAIPHONG area".

A Battalion Leader who was taken prisoner at DIEN-BIEN-PHU reported that "from the statements made by the V.M. Commander's spokesman in Officer prisoner camps, he had really believed a substantial strengthening of our Expeditionary Force. In early July, 1954, this possibility seemed to disturb him greatly".

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(1)- Study by the Staff of the Commander-in-Chief on deceptive operations.

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SECOND PART

*****

THE WAR WITHOUT A FRONT

****

"Material inferiority in the face of the enemy is not serious. What is important is popular mobilization. The population must be a huge ocean in which the enemy will drown.."

"What makes up the real rampart?

- It is the people...".

MAO TSE TUNG

 OFFICIAL USE ONLY

On December 19, 1946, large strips of TONKIN and ANNAM fell in the hands of the Viet-Minh and became so many provinces of a new State. For, although HO-CHI-MINH's government was condemned to a life of difficulties, little by little it succeeded in establishing an administration, a judicial branch and a few public offices, while subsisting from a rudimentary economy.

The outline of part of these territories kept shifting during the eight years of war, especially in South VIETNAM. In TONKIN, however, the year 1951 was noted for the actual delimitation of the Viet-Minh zone: by the erection of a fortified enclosure around the Delta, we more or less acknowledged our inability to regain the central region.

Indeed, we attempted on several occasions to recapture some of the enemy's fiefs. We went thus to BAC-KAN and CAO-BANG in 1947 and launched the "ATLANTE" operation in 1954 to attempt to recapture a portion of the ANNAM coast.

Other operations led us to take the offensive in Viet-Minh territories, whether larger scale raids (1) were involved, or we had infiltrated into enemy territory with the hope of drawing out his troops and destroying them (2).

But these undertakings constituted only a series of events while the struggle took on a permanent form in the very regions we wished to control, namely the two Deltas and some areas of the ANNAM coastline, which were densely populated and the most productive land areas.

The "War without a front" thus waged for eight years was a struggle in which the adhesion of a population massed together in the villages was at stake.

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(1)- For example the "LORRAINE" operation in 1952 and the "MOUETTE" operation in 1953.

(2)- For example the HOA-BINH affair in 1951, the NA-SAN affair, and finally DIEN-BIEN-PHU.

The V.M. contamination varied from one community to another, changed over the months, but a sort of osmosis was constantly taking place between the communist-controlled fiefs and the disputed zones: weapons supplies - ammunition and arms - trickled inside from the outside every night, while thousands of emissaries, political agents or more or less important government agents infiltrated to effect contact between the Viets within and without. In addition, a noria movement brought in by turns the regular units and some provincial units in the heart of the Deltas and sent them back towards the camps of the peripheral regions.

The consequence of these human and material exchanges naturally conditionned the intensity of the struggle.

In South VIETNAM, the support given to the rebels was mediocre and came from affar. On the other hand, in North VIETNAM, the operations inside the Delta were always influenced by the presence, on the borderline, of the V.M. battle formations and by the relative proximity of supply sources which the rebels found in CHINA from 1950 on.

Our Forces in North Vietnam had to ward off the interventions of this Battle Corps constantly, which deviated our conduct of the surface war in TONKIN.

It is therefore logical to search for lessons relating to the restoration of order and applicable to other areas, much more in South VIETNAM than in North VIETNAM, where the particulars of the problem always had peculiar characteristics.

Surface war actions take on various aspects, but they all center around three exercises:

- Ready availibility of the main roads and waterways which are necessary to the existence of units as well as to maneuvability.
  Thus emerges a policy of control of the roads and waterways.
- Progressive reoganization of various regions by a policy of surface control.
- Apeasement of the minds and disarmament of rebels by a policy of pacification.

These three types of activities have been essentially the work of territorial armies and especially that of so-called "implanted" units. They will be discussed in three separate chapters.

Mobile Forces were responsible for only a fraction of the undertakings relating to surface control; it was, moreover, the roughest part, for their job was to destroy the most active and best armed bands.

However, the type of their activities remained similar to that of the territorial units, when they proceeded to light mop-ups. The only difference resided in the size of the installation and in the capacity to face a stronger enemy. Thus it seemed possible to review, in a last chapter, the different maneuvers given the units, whether these were territorial or mobile.

Finally, the importance taken on by the strengthening during the campaign justifies that a chapter devoted to it be annexed hereto.

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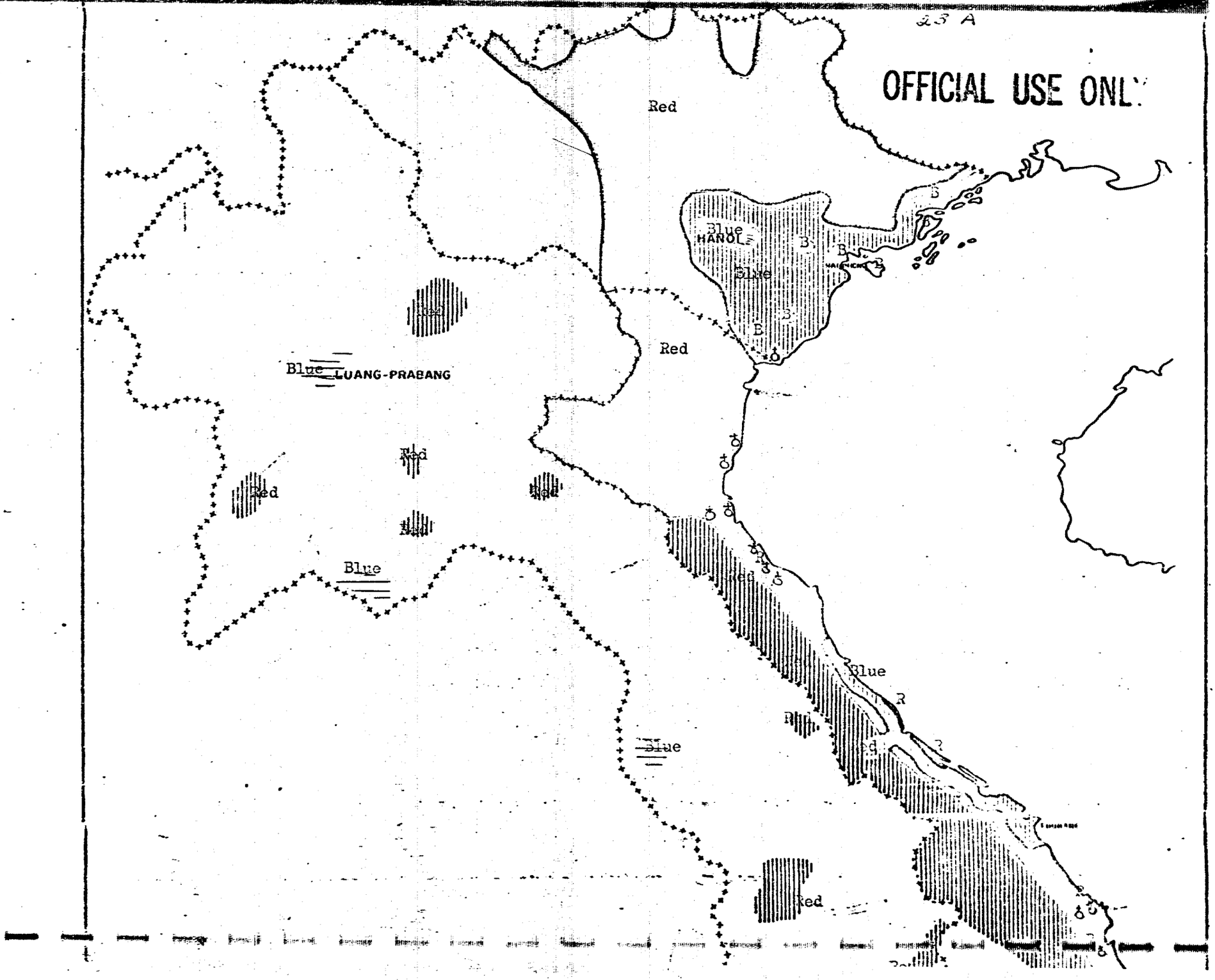

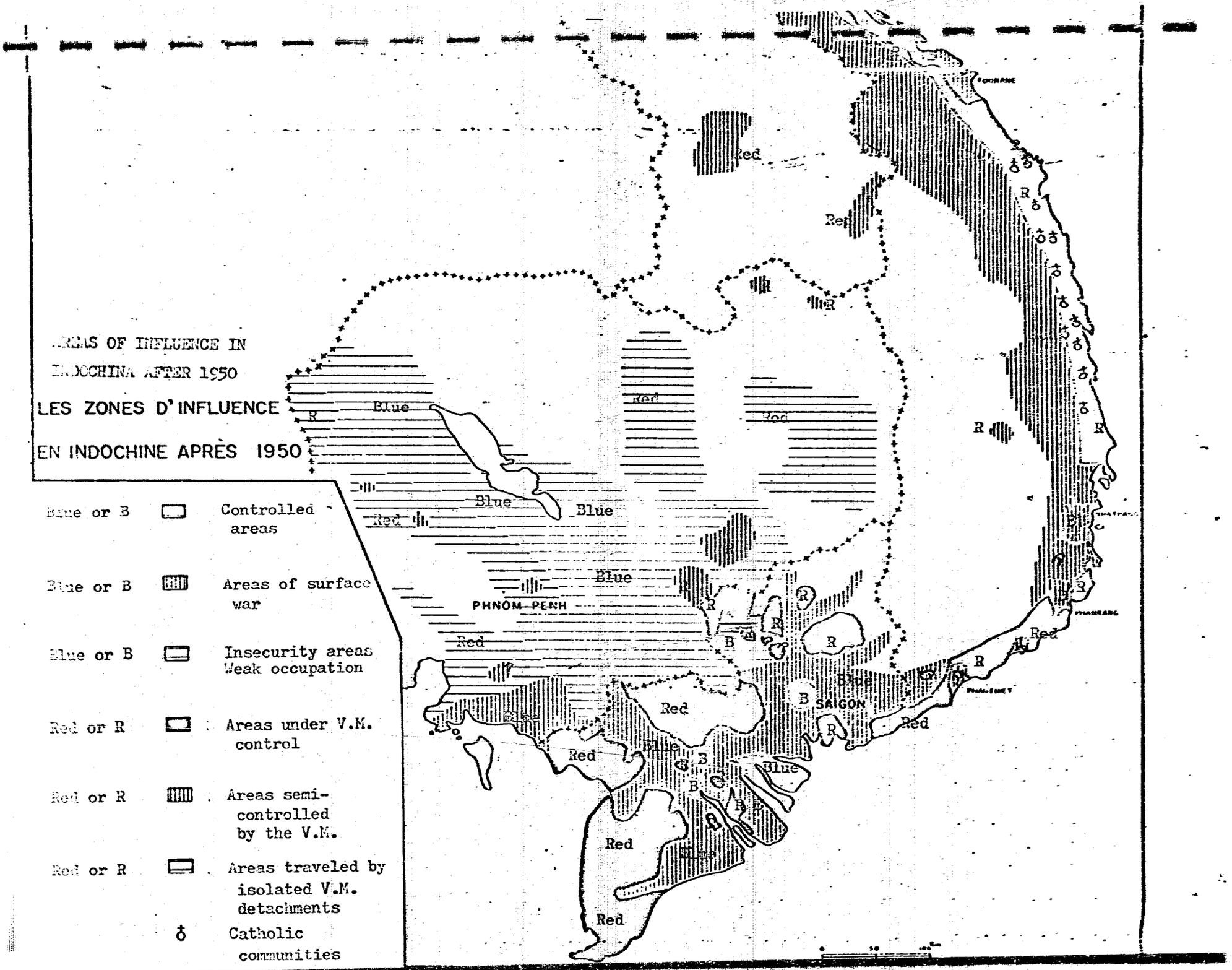
AREAS OF INFLUENCE IN INDOCHINA AFTER 1950
LES ZONES D'INFLUENCE EN INDOCHINE APRÈS 1950
Blue or B — Controlled areas
Blue or B — Areas of surface war
Blue or B — Insecurity areas Weak occupation
Red or R — Areas under V.M. control
Red or R — Areas semi-controlled by the V.M.
Red or R — Areas traveled by isolated V.M. detachments
Catholic communities
PHNOM-PENH
SAIGON
Red
Blue
R
B

C H A P T E R I

MAIN PARTICULARS

ORGANIZATION OF COMMAND.- During the whole campaign, the territorial chain of command remained as based on a geographic partition of INDOCHINA:

- THE DISTRICT was equivalent to one of the wide natural regions of the country.

  Its Leader had at his disposal a more or less large number of territorial units and could, in addition, dispose of Air and River Forces which were adapted to the terrain.

- THE ZONES were subdivisions of the District and included themselves SECTORS, broken down into sub-sectors, the latter corresponding in principle to the capabilities of action of a more or less reinforced battalion.

The major preoccupation of each level of Command was to arrive at organizing reserves to conduct more or less important operations, and the only controversial subject was the proportion to be maintained between the mobile and the implanted forces. This problem will be reviewed later.

It is to be noted that, on the one hand, as the means were reinforced in both camps, and due to the strategic nature the Viet Minh finally gave its actions, we were forced to create more and more important Operational Commands. Their juxtaposition or superimposition to the existing Territorial Commands did not always prove to be a favorable element to the sought after rational pacification itself.

INTELLIGENCE.- It has been often stated that one of the main causes of our failures was the lack of good intelligence.

Yet, not one day went by that the Commander-in-Chief and his high level subordinates could not determine, from maps presented to them by their G-2 chiefs, the complete Viet-Minh units disposition, often with a better than 80% accuracy, and rarely below.

In contrast, the Battalion Commander, the post Leader and even the Mobile Group Commander were to have one day or another the most painful of surprises. In addition to their motor vehicles being blown up daily in mined areas, their patrols found nothing or disappeared after being ambushed, and when their unit made its way into a village, it lacked the intelligence which would have permitted them to classify the population and subset the rebels without mistake.

It is therefore fitting to clearly draw the line between the long-term intelligence, with which the High Command was always provided with great precision, and the immediate and close-at-hand intelligence, which the subordinate cadres almost never obtained.

Thus, one could well write: "The Commander-in-Chief informs the Battalion Leader, who in turn never informed the Commander-in-Chief."

The G-2s sources of intelligence were the standard ones, and the Indo-chinese War has not produced any particular lesson: the methods and the means were good.

However, at the company level, and especially at the Sub-sector Commanders level, the failure of intelligence was attributed to various causes, the first one of which was the lack of interest some of the authorities showed in searching for it.

"At the lower levels, the importance of the functions of the Intelligence Officer was much too often ignored. Frequently replaced, sometimes burdened with several tasks of various natures, he tended to become a pawn in an administrative group."

If one said: "One good intelligence officer equals a battalion, not one leader in fact did without a battalion in order to have an intelligence officer."(1)

On the other hand, the elements responsible for research often lacked the proper means and particularly lacked aerial photographs.

The former Intelligence Officer of a Sub-sector wrote, for example, that in 12 months he was unable to obtain a cover picture of his territory.

Such an instance was not an exception; even in TONKIN the negatives were never available in adequate quantities and never renewed frequently enough.

One could also deplore the quantitative and qualitative inadequacy of the interpreter force, the absence of instruments for close monitoring and finally the total lack of tracking sections which, in various circumstances, could have located mortars and artillery pieces of the Viet-Minh.(2)

But these deficiencies were of little importance compared to the default of the main source of intelligence in a surface war: the people.

For it is actually among the population that one must look for abundant and permanent intelligence, allowing the isolation of the fraction which took arms and became outlaw.

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(1)- Captain Z....Intelligence Officer of a Sector (F.T.N.V.)

(2)- Modern means were just being tested at the end of hostilities.

Unfortunately, there is a vicious circle here for it is true that the intelligence from the people cannot give its maximum return except in a country where pacification is in progress.

In the rare cases where we were able to benefit from both conditions, results have been excellent.

"For once well informed", reported an Officer, "I was able, in one hour's time on a certain night, to arrest all political cadres of a rebel village with a handful of men while we couldn't enter that same village, under ordinary circumstances with less than a Company" (1).

It is therefore absolutely necessary that stable, highly specialized and in sufficient number, personnel be assigned to the search.

In this same vein, we must insist once again on the importance of having a Group of Indegenous Affairs Officers. It will always constitute the nucleus of an Intelligence Division.

Knowledge of the language, numerous files at his disposal and the tradition of a proven doctrine will constitute the major assets of the I.A. Officer; he will only need to gather assistants in order to expand his field of investigation..

But if the circumstances did not permit that we benefit from the people's intelligence, we were able to ascertain the fact that the adversary profited by this.

This state of affairs could be anticipated: "Like any Communist Regime duly recognized, the V.M. asserted and maintained itself through an extremely well-developed Secret Services and Police organization"(2).

Besides the implanted political cells within the great majority of the villages, which constituted an extremely closely related cross-section of research agencies, The V.M. had organized within the Army a special service to make use of some NCO's and soldiers' intelligence capabilities as they received very advanced instruction in this field.

The "TRINH-SAT" was represented starting at the Company level, (one Non-commissioned Officer and three men) all the way to the Division where a special company was instituted.

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(1) - Lieutenant X... Intelligence Officer in TONKIN.

(2)- Excerpt from a F.A.V.N. General Staff notice.

Acting in small teams or alone, working now as patrolmen, now as agents, sometimes being assisted by an organized unit, sometimes through village sympathizers or even trusting only themselves, the TRINH-SAT men patiently observed our posts, our installations and our movements, listened in on our conversations, probed our defences, interrogated the villagers, tried to capture a prisoner or documents,etc. There hasn't been one V.M. action, whether it be an ambush at a road clearing or the attacks on DIEN-BIEN-PHU, that was not thus prepared for weeks and even months by research elements more or less important.

Besides, all documents that fell into our hands have proven the wealth of information the enemy had procured himself through this organization.

It is necessary to make a comparison of the activities of the TRINH-SAT and those of the DICH-VAN which we have already mentioned.

The enemy's objective was to create within each of our indegenous units and above all within each vietnamese formation a DICH-VAN cell (1) the members of which were to obtain confidence posts. The adversary did not hesitate to prescribe to its partisans that they should class themselves among the best NCOs and soldiers until the day they received their orders to reveal themselves.

In order to achieve this infiltration, the V.M. contaminated individuals, either through their relatives, or on the contrary through threats of reprisals against their families.

We had found an excellent parry to this intoxication manoeuver with the families, by grouping the latter in places where they would not be exposed to the rebel influence. (2)

In addition, some systematic measures of protection proved to be efficient when a unit Commander entertained any doubts about his personnel: "turnover of garrisons and units, irregularity in the schedules and guard duties, false departure,etc. (3)

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(1)- Quite often two, which ignored the other's existence until the day of action.

(2)- In this fashion, some "married peoples camps" were created within the fenced enclosure of posts or of bases to the rear.

(3)- Lieutenant X... Commander of an Auxiliary Company N.V.N.

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CASUALTIES OF INSECURITY.- The gradual increase of the V.M. potential capabilities and the progress of decay in certain regions meant that we had to pay a higher and higher tax for the security of our installations and movements.

This immobilization of a large part of the troops for missions of security is one of the main characteristics of the war without a front. We shall get back to this subject often and we will only mention a few typical facts herebelow:

Mobile units had to spend approximately 1/4 of their strength for the protection of their artillery, their C.P. and their heavy apparatus, etc..

More than a third, if not half of the activities of the Infantry, whether implanted or mobile, were absorbed by guard duties and surveillance of a 20 kilometer stretch of road which cost us the value of a Battalion and a battery, whereas the enemy maintained insecurity with a strength of about a Company. In the more peaceful regions, we needed, to stand up to the activities of one or two Sections and protect a 40 kilometer piece of road, one Battalion and whatever Auxiliaries were necessary to ensure guard duties.

As soon as a region was to be searched, the movement of a security element, complete, was in order and, "if movements went slowly, it was less on account of the difficulties of the terrain than because everything had to be searched, everything had to be seen, we had to beware of everything" (1).

These burdens could have been much lighter if we could have secured more reliable information about the local enemy. But when one does not pay the price of Intelligence, one must pay the bill of security with a great expense of means, without better guarantees for it.

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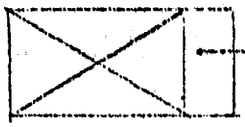
(1)- Battalion Leader Y...

TRINH SAT ORGANIZATION (Sketch)

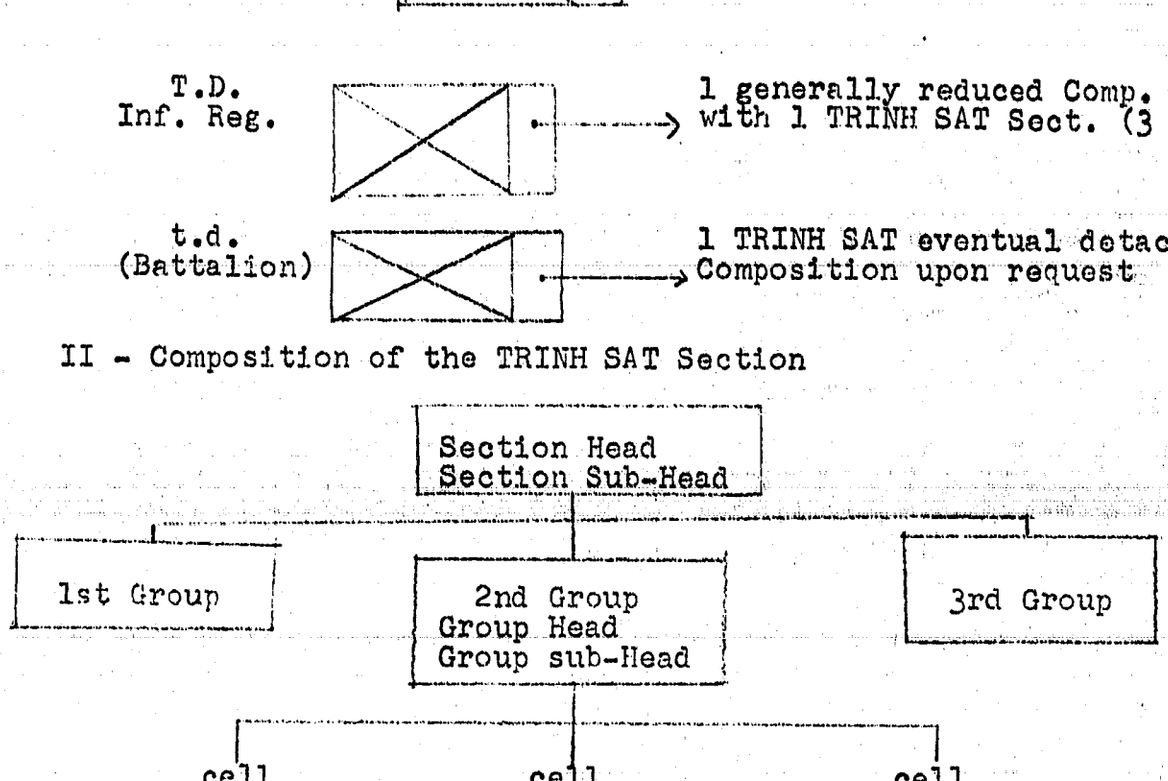
I - Adaptation of the TRINH SAT units to the V.M. Tactics.

D.D.
Infantry Div.  → 1st TRINH SAT Comp. with 3 Sect.

T.D.
Inf. Reg. → 1 generally reduced Comp. with 1 TRINH SAT Sect. (3 group).

t.d.
(Battalion) → 1 TRINH SAT eventual detachment Composition upon request

II - Composition of the TRINH SAT Section



NOTES :a.This organization is for administrative purposes; the composition of an operational TRINH SAT detachment, for each mission, is determined in accordance with need.

b.Each T.S. unit is commanded by a cadre of a higher echelon to that of the unit; for instance, The Head of Section and his adjutant are "Company cadres".

c.The TRINH SAT combattant is most of the times a group cadre.

C H A P T E R II

CONTROL OF THE ARTERIES AND SENSITIVE COMPLEXES

As soon as rebellion takes ground on a region, it becomes imperative to set up:

- a complex designed to guarantee access to the minimum of roads and waterways if and when they exist;
- one or several impregnable bases, to be some sort of "manoeuver centers" which are essential to the conduct of operations.

The ready availability of arteries has been a constant and major source of worry; due to the wide coverage of our communications and the transportation difficulties however, we quickly discovered we had to be content with protecting only certain roads and only during the day, as it would have been prohibitive in the way of personnel to maintain surveillance nightly and to extend it to the routes deep in the forest or to the foot-hills of the Annamite range.

As far as the waterways are concerned, ready availability of communications was furnished for most of them, in South as well as North VIETNAM, at the price of ever-increasing difficulties to sweep for mines before the convoys and to furnish a sufficiently strong escort on the waterways to clear the ambushes.

Control of a road channel was obtained by:

- A string of posts designed to guarantee the control of sensitive points along the route.

In addition, the posts provided within the visual range of their look-outs daily protection of a piece of roadway, while the action of positionned mortars and artillery extended this protection to the invisible zones.

- Surveillance of road-clearing detachments who swept for mines periodically in the intervals between two posts and left behind small flank-guard elements.
- Finally the potential action of reserves who stationned within certain posts and sometimes included armored units.

According to the degree of insecurity, this element was to be more or less deployed; particularly where the posts were closer together with varying degrees.

All the same, the security of the arteries under our control, in principle (1) was always relative. At all times, motor vehicules and troops could be taken to task by rebel infantry weapons fired from a great distance (250 to 350 ft), or be the victims of an ambush laid after the clearing of a road (by elements under the disguise of civilians for example, even a s women), or blow up on an undetected mine.

Control of the waterways was provided in a similar fashion, but the posts were more rare, Except on well-traveled channels and where the width of the river itself constituted good protection, traffic was generally effected by heavily escorted convoys preceded by mine-sweeping formations (2).

DEFENCE EQUIPMENT ON THE ARTERIES.- The work we were to undertake in order to control a road was not limited to the construction of posts.

Experience proved to us that it was just as necessary to provide for:

- the clearing of trees and the clearing of undergrowth over 100 to 200m(35 to 70 ft) deep on each side of the roadway, with the additional measures of prohibiting cultivation of certain plants with tall stems (such as corn, sugar cane, etc.)

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(1) - Outside of the rare zones which were really pacified

(2) - See the chapter devoted to river actions.

- Road surfacing which makes it extremely difficult to conceal mines or traps.

Finally, the "clearing out"of villages located less than 200 feet from the road becomes absolutely necessary. As a result of our reluctance to take such unpopular action, we have seen once too often "chronic" ambushes kill men while crossing the same village where the inhabitants welcomed V.M. regional units whether they liked it or not.

One exception can be made for the communities that were friendly without a doubt and whose willingness was to be proven by the founding of a militia and by the regular intelligence reports.

THE TOWERS SYSTEM.- The concern over the day surveillance of a whole route led to the trial of a watch towers system conceived by General DE LA TOUR and implemented in South VIETNAM in 1948, then in Central VIETNAM.

"The watch-towers were complexes occupied by a few men (5 to 6 auxilliaries), who were posted along communication channels (usually within sight of each other, at intervals of about 1 km, (300 ft approx.)) in order to:

- prevent cutoffs, protect works of art, watch trafic, effect clearing.
- assist motor vehicles, act as moles for their defense in case of attack.

Some towers, designated as "Mother towers" could be provided with a greater number of personnel and weapons(1).

Any alarm given by these complexes allowed to stop all traffic immediately in case a convoy was being ambushed, while it started the action of the mobile garrisons from certain posts.

This system produced excellent results at first, but it became rapidly inefficient. Indeed, as early as 1950, the Viet Minh began to use the first

furnished by CHINA; no brickworks could resist and very often the smaller garrisons avoided giving the alert or abandonned their position in self-defense rather than be inexorably exposed to destruction.

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(1) Instructions directed to South VIETNAM Forces.

Thus experience has proven that from the moment a rebellion cannot be quickly repressed, the surveillance of our land arteries must depend on strong posts which will actually form the backbone of such a filiform defence.

STRUCTURE OF POSTS.- The number of posts never ceased to increase during the campaign and their great variety has spoken for the evolution of our concept as far as defence works are concerned.(1)

Initially the rebels only disposed of automatic weapons and hand grenades. The brick tower, the "banco" wall and the bamboo fence proved to be sufficient to break their assault. In addition, elevated works were sought after to dominate the horizontality of the rice paddies and make adequate shooting fields.

With the advent of V.M. mortars this fortification in the form of a shoddy superstructure was to crumble. Protection against shells was discovered under shifting forms and as masonry works buried under earth mounds. The defense was entrusted to some closely spaced flanking elements and the rectangular or triangular shaped complex brought some answers to the establishment of the blockhaus, deriving directrly from the scarp boxes.

Such is the way the triangular post built in South VIETNAM starting in 1951 came to bring to mind certain works advocated by Brialmont. (i)

However, a double and quite often triple net of barbed wire constituted the obstacle and the trench was used only in exceptional cases. In addition, the necessity to have an elevated observatory led to the maintaining of at least one mirador in the center of each post.

But a crisis was to emerge with the advent of the Soviet rocket-launcher, or S.K.Z. From the moment the V.M. obtained Chinese assistance with a sufficient number of these missiles, the fortification was automatically downgraded.

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(1)- This evolution was in fact very similar to that which came about during the last century in Europe.

(i) Translator's note: Belgian General and writer, specialist in the construction of fortifications.

A repellent of fortune was found by covering the front of the most threatened embrasures with wire-netting and around the miradors. While observatories were being built, the pedestal of which were buried within a mound of earth for protection.

A satisfactory solution, however, could only be found in concrete. Thus was created the TONKIN-type base of operations.

The post internal courtyard, rendered unmaintainable by mortar shells in case of an attack, was eliminated and not one rampart subsisted. Only the three or four blockhaus which were necessary to insure the flanking of the nets emerged from the ground.

This was a comprimise between the advocated organizations in the years 1913-1914 and what was accomplished in certain areas of the front during the winter of 1939-1940. However, the use of tank turrets, mounted on the roof of some blockhaus' and of tunnels for mortars built in the solid mass of the other blockhaus' gave a note of modernism.

Those bases of operations had been initially designed to protect the access to the North of the Tonkinese Delta, when Marshal de LATTRE was given reason to fear that the year 1951 would be noted for a Sino-Vietminh offensive.

Then, little by little, this form of fortification was extended to the whole periphery of the Delta(1). And finally, it appeared on certain land arteries.

In the interval, it had merely been somewhat improved(2).

Until 1953, this type of structure impressed the Vietminh who rarely braved an attack; but the assault on the YEN VI post, on May 26 and 27, 1953, although unsuccessful, showed that the combination of the artillery, the mortars and the S.K.Z. could be decisive: One the one hand, the adversary dealt mortal blows at the embrasures, and on the other hand, the striking forces opened breaches in the nets without any difficulty, then drove at the end of bamboo perches explosive charges within the blockhaus battlements or dynamited the steel doors.

(1) The last structures were completed during the summer of 1953 at the S.E. end of the delta.

(2) Namely the addition of blocks, combining living quarters with one or two firing chambers.

From then on, other attacks took place and, towards the end of the conflict, the moment when a type of fortification such as the blockhaus would be obsolete seemed to be imminent.

No doubt, the obstacles should have been up-graded, the number of blockhaus' should have been increased and they should have been provided with a greater number of turrets and choches for curving fire missiles, proven shelters should have been provided against counter-attacks, a redoubt should have been arranged to enclose the CP and with emergency exits, etc.

The evolution was therefore not accomplished. Unfortunately its traces remained engraved in the ground, for it was impossible to modernize all the older posts and it was necessary to maintain completely obsolete fortifications.

A count taken on January 1st, 1953 in the Tonkin delta shows, for example, that out of a total of 917 posts or small structures, only 80 were modern, 25 were relatively recent and 810 were obsolete by barying degrees.

The author of a Report summarized the situation with the following humor... " let us not forget that the "Dubout" style posts we denounce in 1953 were strictly according to regulations in 1947, with their straw huts, their banco little walls, their interlaced bamboo hedges".

All the same, the V.M. potential varied according to the regions, since the enemy provided its units with modern weapons only gradually.

Thus, the posts coming into contact with the zones of deployment of the V.M. battle formation were relatively much more obsolete than those in Cochin-China, where the adversary was deprived of artillery and did not dispose of much ammunition. Such structure, which still made a good show in South VIETNAM in 1953, was totally obsolete in the HUNG YEN (TONKIN) as early as 1951.

A constant renovation of the posts was therefore necessary, but the command efforts were always dampened by financial considerations, and especially by the staggering needs in man-power, in hardware and machines.

Often, we found ourselves faced with the old problem fortifiers experience when asked to refurbish a structure: It is always difficult for them to avoid a bad compromise if not granted authorization to raze the old structures.

A general lesson can be drawn from the Sisyphean labour accomplished by the Engineers in Indochina: One must build immediately posts which are proof against arms superior to those then available to the rebels. More specifically, the automatic weapon and grenade stage must be passed and one must build structures proof against heavy mortar as well as rocket-launchers.

One must immediately have recourse to concrete and adopt low-built structures.(1)

These elementary cautious measures will prevent the enemy from obtaining a series of easy successes some months later, when he will be provided with more powerful weapons. In addition, the presence of impregnable posts will not fail to impress upon the indegenous population and will facilitate pacification actions.

DEFENSE OF THE POSTS

The adversary has systematically attacked posts during the night and, of course, by surprise. Under the circumstances the resistance of a structure was naturally a function of the fortification's quality, but it was just as much dependent upon the decisions of the Command and the garrison itself.

As far as the territorial authorities are concerned, it is fitting indeed to assign to the post:

- Adequate personnel to not only shine but also to give the men, by turns, some necessary relaxation.
- A munition supply adequate enough to sustain a long night battle.

Experience led us to furnish each fortification with 3 to 4 firing units, sometimes more. This figure varied with the degre of possibility to supply the post by surface transportation (2).

(1) When concrete is impossible to use, it is best to resort the field fortification, for the latter will resist much better than a structure with high walls and towers.

(2) The "decay" in certain regions was sometimes such that some posts were exceptionally supplied by land or water. Parachute drops were the only sure contact they had with the outside world.

The same was true for food supplies, the volume of which varied with the degree of isolation of the garrison.

- Finally adequate support for the positionned artillery.

The arms equipment of the post must be a dependent variable of its strength. Providing a structure which might succumb rapidly with a large supply of arms cannot be justified as it would only increase the enemy's booty without due consideration (3).

The experimentation consisting of assigning a few armored elements to certain garrisons resulted in a clearly negative effect. After a temporary psychological impact the tanks were of little assistance whenever they were imprisonned within a limited space and were forced to serve as "armored sentry-box" which our regulations have always proscribed(4).

Save an exceptional case, where the preparations for the attack of a post were discovered and where it was possible to take counter-measures, the security of a garrison was dependent upon a triple alarm system:

- At some distance, ambushes were laid on the most probable incoming access routes of the assailants.
- At a short distance, call devices and patrols watching the intervals between stretches of land that were mined or laid with lighting booby-traps.
- At close range, watchers and dogs whose vigilance was ensured by a service on guard duty.

When the alarm system did not work due to its inefficiency or to internal complicities, the conduct of defense operations was out of the question: After an outrageously brutal and brief attack, the defenders were felled by the assailants before they could take up arms and before the radio contact could be effected with the District or Sub-sector Commander.

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(3) This consideration is applicable only to the equipment described as "sector". The unit occupying the post must, whatever the circumstances, be organically equipped.

(4) In particular during the attack on the LE KHU post on September 4, 1953, three Sherman tanks were put out of action before the crews could man the arms onboard.

The latter remained in a state of indecision as to the attacked post until the flash of an explosion and the raging fires gave him some indication. The only thing he had left was the satisfaction of opening a time-fuse fire on the ruins of the structure and harassment on the probable enemy retreat routes.

But the adversary could only conduct such an assault with success after meticulous preparations, based on outside as well as inside observation of the structure. The first parry was thus to prevent observation of the post's defenses, to change and conceal the essential elements.

Some garrisons did not hesitate to adopt extreme solutions, and we can relate the decision of 2nd Lieutenant X..., a Vietnamese, who upon being assigned as Commanding Officer of a post equipped with 5 powerful blockhaus', carved a real success for himself by posting all his defenders in perfectly camouflaged trenches, at the foot of the blocks themselves, which attracted the enemy fire.

When the alarm system worked, the whole garrison was posted on the battlements and radio contact had been effected with the higher echelon at the crucial moment when the enemy opened the first breaches in the nets.

Resistance then depended on four conditions:

- Heavy fire directed precisely on the assault waves or on the assailant fire positions.

  " If the Post Leader managed to determine the objectives, to adjust interdiction fire on the enemy and his own fire, he had a good chance of succeeding. Otherwise he didn't, for the V.M. knew the art of avoiding classical interdition fire". (1)

- Organization of a "redoubt" capable of giving some depth to the defense and providing a refuge for the survivors of the blockhaus' taken by the enemy.

- A reserve force likely to be launched to counter-attack.

(1)- Captain X... Officer on Duty, relating the attack on the Y... tower in the TONKIN, on November 11, 1953, during which the V.M. firing position was set up within the nets surrounding the tower and on this side of the proposed interdiction fire.

" From the moment the enemy went over the accessory defenses, the only hope left to the post is with efficient counter-attacks. Their efficiency depends upon their timeliness and their violence".

" It is necessary that the counter-attacks be prepared in detail, organized and rehearsed constantly, night and day, under bad weather conditions and in the smoke, according to the various assumptions which correspond to the enemy capabilities of penetration (all aspects and angles, etc..)(1)

In this connection, the concrete basis of resistance offered a precious advantage for the positionned artillery could open a violent time-fuse fire perpendicular to the half-fallen post (2) in order to prepare a counter-attack emerging from the central redoubt.

The adequate operating of transmissions due to personnel and supply reserves, the provision of emergency filarial antennae to replace whip-antennae, the existence of a missile code and the distribution of these missiles within each block.

The lighting of the battlefield by lighting traps and shells has always been a valuable assistance asset. The use of the "Luciole" Dakota-type plane to drop lighting bombs had become normal at the end of hostilities, but it assumed that the attacked post was in a position to maintain radio contact with the crew flying over it.(3)

The nocturnal intervention of the Air Force has been the object of many studies and files, particularly concerning certain structures in TONKIN, which showed the objectives located closest to those fortifications (probable positions of the opposing fire apparatus, zones where the reserves were most likely grouping, etc..) were set up. But experience did not allow to determine whether these bombings were first of all feasible and most of all whether they were productive.

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(1) Note from the General, Commander-in-Chief, of November 1953.

(2) This type of fire is actually just a new version of the "Clearing Fire" practiced by the fortress gunners of the "Ligne Maginot".

(3) In addition, the intervention of the Luciole plane could not be envisaged at the beginning of the attack for a ten-minute delay was necessary from the time the alert was given to the airfield, plus the time necessary for the trip to the post.

The conditions under which successful defense could be accomplished were thus very varied and very difficult to combine. In the last months of the campaign, a zone commander could write:

" Experience shows that, when an isolated post is attacked at night by a force which is about three times superior in number, provided with storm equipment, i.e. bazookas, recoilless guns, mortars, explosives, etc., and ignoring its losses, it falls; the success of the defense depends on favorable circumstances, which must be considered exceptional if the assailant has obtained the element of surprise"(1).

EXTRICATION OF AN ATTACKED POST

The intervention of reserve units to come to the aid of an attacked post at night was exceptional. Even if the arteries remained free, the local Commander always hesitated to launch his weak reserves in the dark.

However, we have seen the case where a post was immediately extricated via a river operation. It is true that, when a river exists, some river-going vessels can go through while the land route is interdicted, and their fire power, which is particular to them, can be a decisive asset in the defense of the attacked post. Unfortunately our ships are slow and few and their availability for intervention in due time can only be an exception. In addition, they are noisy and could never benefit from the surprise element (2).

Till daybreak, the Sector and Battalion Commanders could assist an outpost only by opening artillery fire (rarely with mortars). In the case of posts which were located in the coastal regions, seagoing ships were sometimes asked to provided these artillery fires and some posts were thus supported for several days (DUONG DONG at PHU QUOC, QUANG KHE AND FAI FOO on the Annamese coast) by several Coast Guard ships.

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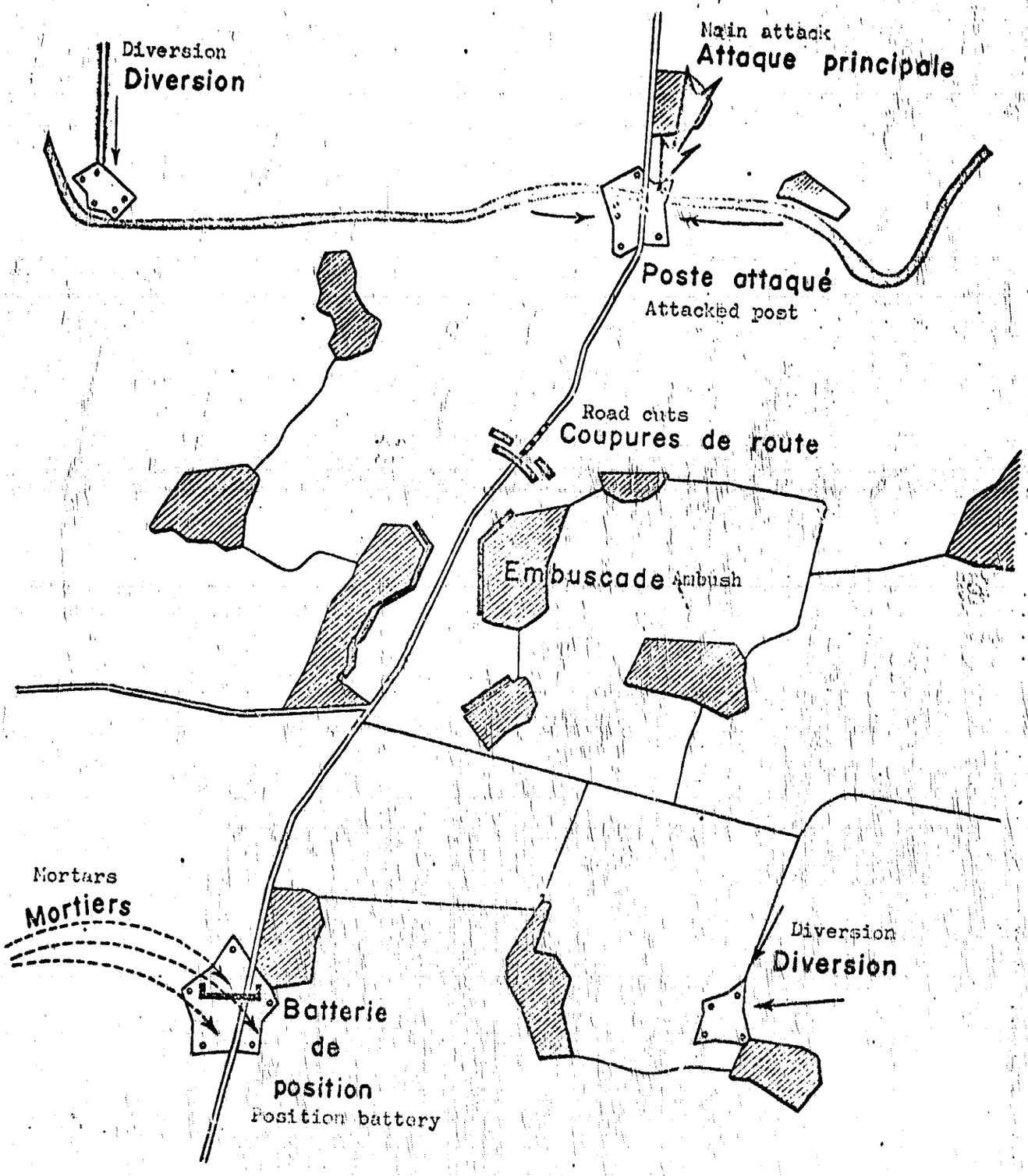
(1) Colonel X.. Commanding a Zone in North VIETNAM.

(2) We can cite however, for the noise of the motors, (but this was in 1946) one case when the start of a LCVP section 5 Kms away from the attacked post was enough to make the assailant give up.

ATTACK TO A POST (Sketch)



Every time it could, moreover, the Viet Minh tried to interdict or at least delay any support, and during the last two years of the war, every attack launched against a post included almost certainly:

- Diversions against neighboring posts to confuse our retort (short distance automatic weapon fires to simulate the preparation of an assault, harassment with mortars, etc..).
- Neutralization of the positionned battery in the region (violent mortar fires).

What was called the "extrication of the post" could therefore not be attended to until the following morning and was merely the taking up again of contact with the post.

If the latter had fallen, the adversary had already accomplished its sacking and had disappeared; if the garrison still held, it was frequently the case that the enemy had also withdrawn (1).

On the other hand, we were certain to meet with bad ambushes. The V.M. tactics improved and towards the end of the hostilities, the General, Commander-in-Chief wrote:

"Let us never forget that the enemy does not always consider the attack of post as his main objective. The latter can very well be the destruction of the support units with well-placed ambushes; the taking of the post was only a minimum objective and served as a bait for our elements"(2).

During the first years of the war it was possible to come and assist quickly garrisons which still held on in the morning following the attack by calling in the paratroop units: Alerted during the night, a company or a section could take off as soon as aerial observation had determined the post was still holding. The jump was executed in the immediate vicinity of the post and, in some favorable instances, over the complex itself.

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(1) Sometimes it continued to blockade the post from a certain distance and prepared a new assault for the following night.

(2) Note dated 13 November 1953.

During the war years several operations of this type were conducted and a total of 25 posts were supported by air. Moreover, 30 garrisons, which were more or less victims of a blockade, received paratroops support before being actually attacked, or between two assaults.

But the advent of a V.M. anti-aircraft defence made such operations quite exceptional and the extrication operation was normally an action of the force which required air support and the cooperation of all available artillery (1).

DEFENCE OF SENSITIVE COMPLEXES

The protection of logistics installations, of the large Command establishments, as well as the rear positions of the mobile units, led to the erection of fortified complexes.

The towns thus became vast entrenched camps, whose borderline was defended by a cordon of posts or simple blockhaus' interconnected by nets.

But in most cases, it was impossible to include within the protected perimeter the airfield(s) serving the area. The airfield then constituted almost always an independent center of resistance.

During all of the hostilities, the objectives enclosed within these haven attracted sabotage and the actions of the V.M. commandos (2). The airfields were, in particular, the victims of raids, on several occasions, which resulted in the destruction of some aircraft.

The parries that were developped from experience are therefore worth being presented here.

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(1) On December 6, 1953, X... post (TONKIN) being attacked, fell during the night with the exception of a few defenders. The element sent to extricate the post (a reinforced battalion) was ambushed the following morning by two V.M. battalions. Losses were heavy on every front in spite of the fighters intervention.

(2) Mass attacks on cities seemed to be avoided by the V.M., for it was necessary that they maintain the possibility of sending numerous emissaries to obtain all sorts of manufactured goods and medicines.

On the Command level, it first appeared necessary to create an "Inspection of sensitive spots" whose leader was a General, directly under the Commander-In-Chief and who had as such all the capabilities required to correct errors and shake the apathies.

Coordination of defenses for all the sensitive spots forming a complex was entrusted to one leader only, even if the various installations were from different branches of the Service. In addition, this sole authority was assisted by a Security Officer responsible for checking the orders constantly and bring about some improvement of same.

On the defence plane itself, it was necessary to set up a guard unit required by his particular mission, which was being measured by the number of blockhaus' to equip and by the necessity of maintaining a strong reserve for counter-attack.

The clearing of civilian populations inside the defence perimeter was desirable but impossible to accomplish in the case of cities. On the other hand, the forced evacuation of communities outside the enclosure but close to the most sensitive spots proved to be necessary (1). Nevertheless, it must be followed by the levelling down of all trees and bushes which could serve as refuges for the assailants.

Finally, a partitionning designed to permit resistance inside the sensitive complex: wire nets to channel the enemy attack, organization of independent redoubts or better still some defense cross-overs.

The attached sketch gives an example of what could be accomplished at an important air base.

CLEARING OF ROADS

Each night the roads were abandoned to the enemy. Nevertheless the experience of controling the roadway with armored elements, circulating at night and provided with infra-red devices was attempted.

(1) The evacuation of two villages located in the DO SON Peninsula became imperative after a raid on the airfield and a fuel stockyard by a commando who had found among the inhabitants all facilities to accomplish his mission.

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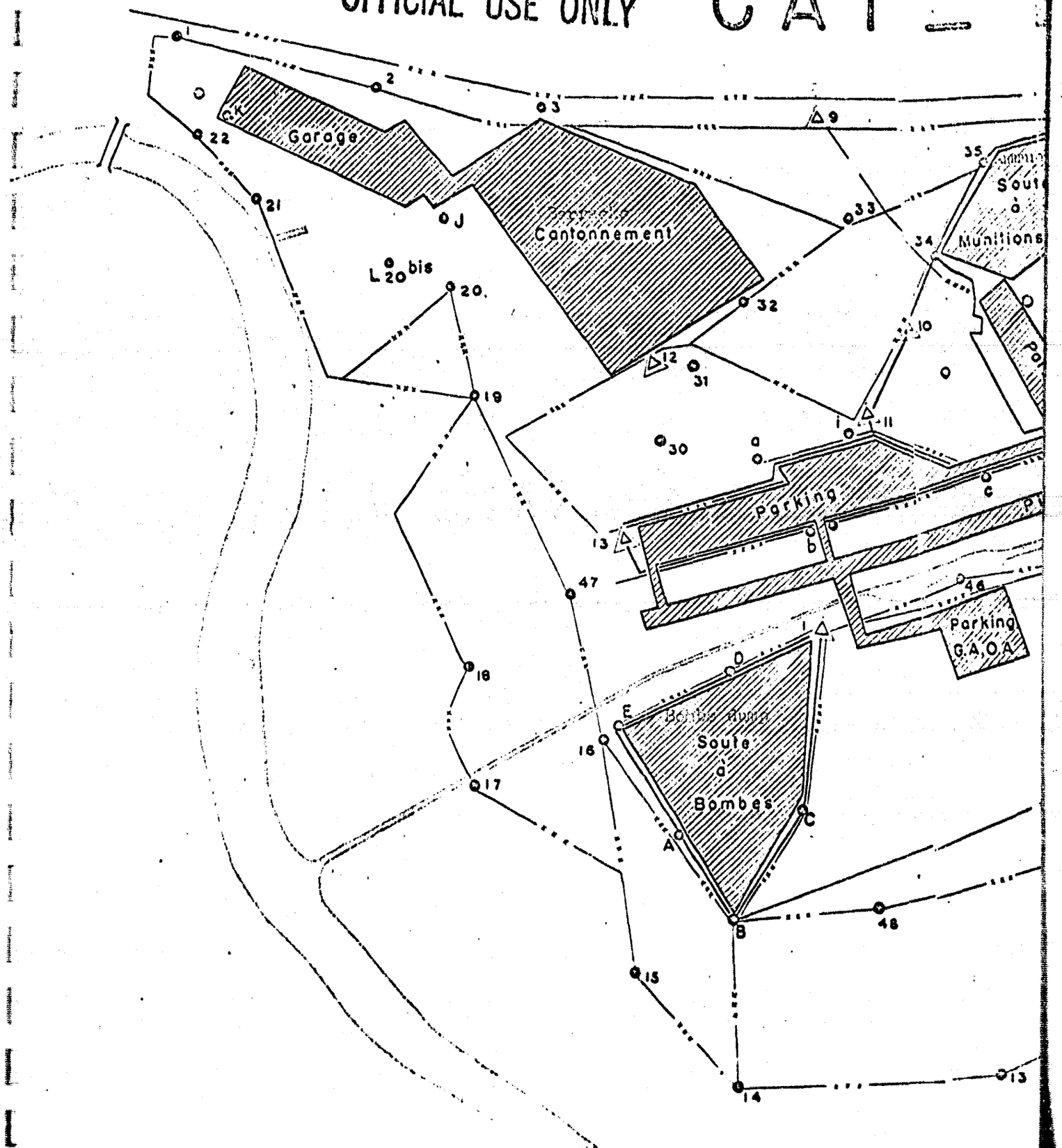

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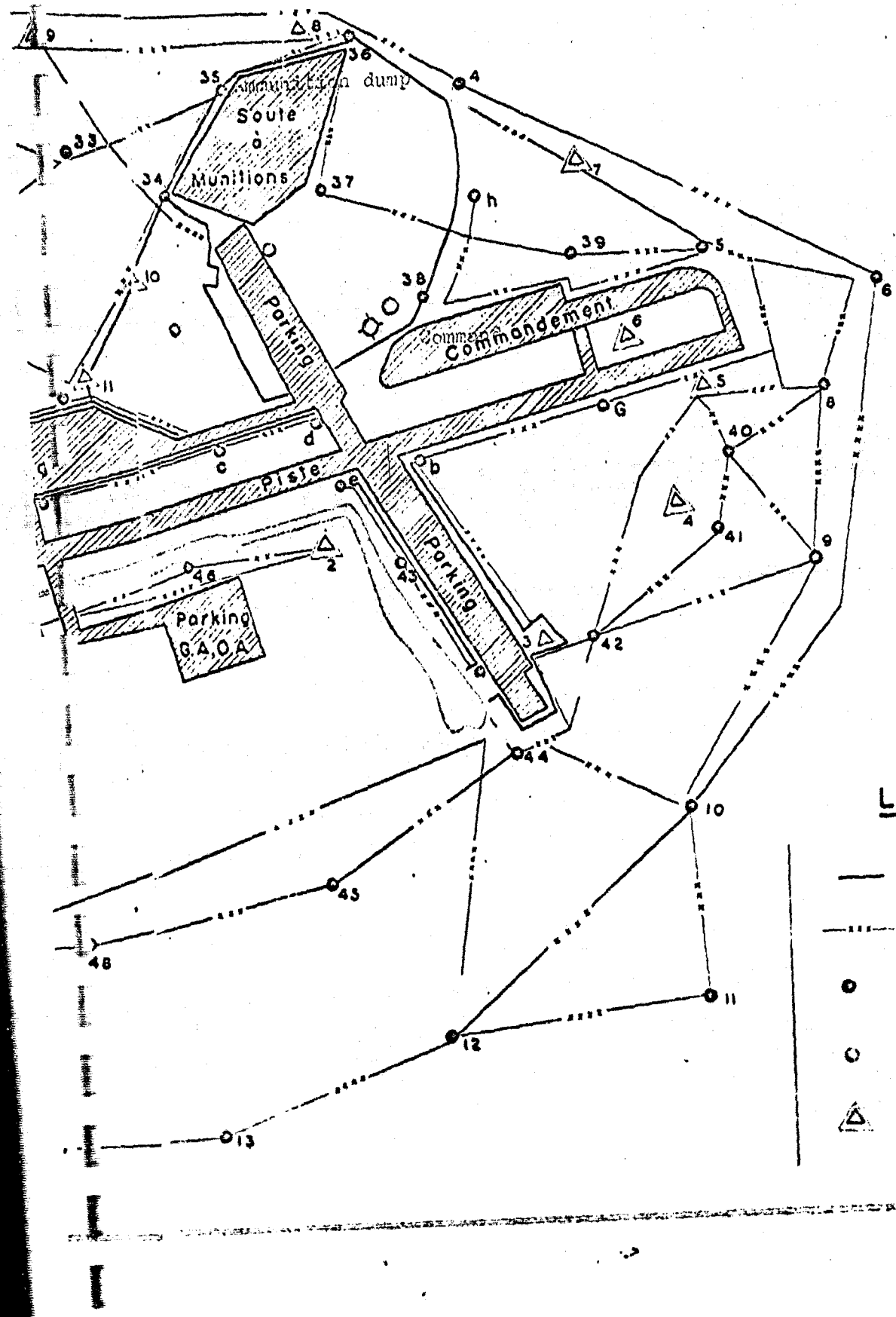

LEGENDE

——	Cloture Enclosure
—···—	Barbelés Barbed wire networks
●	Postes - Blockaus Stations - Blockhaus
○	P.C. C.P.
△	Postes F.T.A F.T.A. Posts

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This attempt was fruitless. It was really not surprising in vue of the fact that the elements utilized were not adapted for observation: they were either machines to be driven at night, or firing pieces of equipment (observation vehicles themselves could only be utilized when stopped anyway).

Inversely, we were able on several occasions to make automobile convoys with headlights on full go through without being attacked or suffering any losses due to mines. The surprise element was there and the V.M. had had no time to prepare ambushes. Nocturnal trafic several nights in a row would have probably caused the most deadly attacks.

Some of our elements were able to envisage the possibility: "of maintaining the routes open at night by an incessant trafic of armored or motorized patrols equipped with powerful lighting apparatus".

"The latter should permit the lighting, not only of the whole route, but both sides, with overlapping lighting beams, in the same way as two guns overlap their fire"(1).

No matter, the procedure was to open each morning the stretch of road between two posts when an exceptionally essential artery to our transport was at stake.

On the secondary roads, however, the operation was conducted only at varying intervals and, in certain areas which were particularly dangerous, a route was cleared only exceptionally. The normal supply of the posts was then handled by parachute drops or via river, but this was another type of operation for an escorted convoy, preceded by sweeping elements, had to be formed.

The clearing operation had a tactical aspect in that the objective was to "rouse" the V.M. ready to trigger an ambush, but it also had a technical aspect due to the sweeping of mines and traps the enemy had set.(2)

The means to be available were a function of the local possibilities of the adversary and also of the importance given to the security of the route.

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(1) Study by the General Staff of the F.T.N.V.

(2) A quite similar opening operation was sometimes conducted on a river-way, both progressing on the water behind the sweepers and on the ground on both banks.

This was being done only in the case of an operation designed to increase the flow of later traffic.

According to different cases, the opening could be entrusted to a small element which, in the mopped-up areas, could be reduced to the equivalent of a battle group and which, in the worst battles of the Tonkinese Delta, required at least one, if not two battalions, reinforced armored and engineers elements, supported by powerful artillery fires and lighted by an observation plane.(1)

The operation stayed within the most standard rules of the infantry manoeuver, since it was always a "search for the enemy" in the immediate vicinity of an axis.

But the greatest danger it offered was that the rebels knew the route, the schedule and the means ordinarily utilized.

We rarely were in a position to have such information at our disposal and yet, we were almost forced to give it to the enemy.

The Command constantly insisted on the necessity to vary the procedures for a clearing operation, but the executants declared themselves incompetent for the most part.

Very rare indeed were those who could write: "Contrary to many of my comrades and to a widespread opinion, I found relatively easy to vary the opening procedures and avoid almost systematically the surprise element during these operations".

"At the Sub-sector echelon, the first thing to be done is to not assign the same time every day to the subordinate units responsible for the road openings, which reduces the chances of surprise as far as time is concerned".

"However, impress upon the Garrison Commanders to open only on piece of the road at a time (they usually have at least two pieces, in opposite directions). If all available personnel does not participate in the opening of each piece, those who do not can be used as reserves".

"Frequently change the direction in which a piece of the road is opened up (for example from West to East two days in a row, then from East to West, etc.)"..

"Manoeuver now from one side, now from the other, from the road, sometimes across it".

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(1) Such is the case of the daily clearing of the HANOI-HAIPHONG road in May-June 1954 in the vicinity of DAN YEN NHAN.

"Open up with force at irregular intervals. In such a case, utilize all available personnel for the opening of the road, from one end to the other".

"Sometimes conduct opening operations at night; or, during the night, position the personnel responsible for the opening of a piece of the road, outside the road."

"Leave some night ambushes in position close to the road, and on that day, clear with a reduced force while relying on the positionned ambush elements".

"Actually, the variety of tricks we can use to upset the enemy's ambushes is infinite, and the clearing of roads takes on the monotonous aspect often attributed to such operations only when the troops are mediocre and badly led". (1)

This last judgement is certainly exaggerated for the best of units finally grow weary of executing the same task constantly and the sluggishness in their reflexes which might ensue is the greatest danger of all.

Lieutenant X... who was in charge of a garrison in TONKIN thus described this kind of fatal relaxation:

"Every day, I send out the clearing team. In spite of calls to order, habits are formed, and if we don't watch, the automatic riflemen are placed in position at the same spots, and the infantrymen walk in a column behind the mine-sweeper's frying pan".

Control of the arteries proves to be quite expensive:

As an example, a study was made to determine what the utilization of four pieces of the Tonkin road, chosen for their importance(2), cost us, over a period during which the enemy contested the privilege with the greatest tenacity, that is during the preparations and the development of the battle of DIEN BIEN PHU (January to July 1954).

The statistical data thus gathered is of the maximum value.

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(1) Major X...

(2) Study made by the General Commanding the F.T.N.V. relating to:
the 65 Kms of the HANOI-HAIPHONG road (R.N.5)
the 36 Kms of the road connecting BAN YEN NHAN & HUNG YEN (R.I.39)
the 28 Kms of the HAIDUONG-SEPT PAGODES road (R.P.17 North)
the 26 Kms of the SEPT PAGODES-DONG TRIEU road (R.P.18)

On those land arteries, the posts were located at average distances of 5 to 8 kilometers, (3½ to 5½ miles). If we add up the garrisons, based only on the personnel actually taking part in the defence, and if we consider the subsidiaries (militia and auxiliaries) for only half of their strength (which is reasonable considering their task servitudes), we can readily see that a density of 20 to 30 fighting men per kilometer was realized.

The clearing of roads resulted daily in the engagement of about 10 men per kilometer, while 4 to 5 were sufficient in normal circumstances. The daily losses were no less severe: Each day we counted an average of 3 to 10 men killed, wounded or missing for every 100 kilometers (approx. 75 miles), as a result of attacks against outposts as much as ambushes during clearing of roads. It is also noteworthy that mines were to blame now for ¼, now for ½ of the losses.

On these conditions, we managed to maintain control of the roadway for six to ten hours.

That is to say that the spur of necessity must be present for one to consent to such a high price! Save this case, control of the arteries must be sought after only with the hope of achieving more or less rapidly the mopping-up of an area.

This idea is particularly worth being emphasized:

"If we bring in the time factor, considering the great expense in personnel the control of an axis costs, we cannot but realize that control of an axis without any pacification is an onerous solution".

"For example, control of part A of a given road requires a Battalion and an Artillery battery permanently. This part is located in Zone B the pacification of which would require (for example) three battalions for 6 months, after which time the security could be entrusted to some local elements".

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"Given a two year period, it is therefore more economical, if possible, to pacify Zone B (18 Battalion/months) rather than control part A (25 Battalion/months)."(1)

A former Sector Commander (2) is even more precise:

"The objective of territorial expansion must be productive... and not mean to open up roads, which will only serve to supply posts, themselves implanted to guard these roads".

Consequently, the Command must forego the control of roads which are not strictly indispensable; even if they must be re-opened with force to insure the success of a particular operation and to keep them open during the whole operation in question.

Several examples have shown that this concept is perfectly sound:

- Re-opening of a part of R.C.2 for the "LORRAINE" operation.
- Re-opening of R.P.59 for the operation "MOUETTE", etc.

But in such a case the retaking of the roadway goes hand in hand with its rebuilding in many parts and the employment of large elements of the Engineers must be foreseen.

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(1) Captain X... South VIETNAM.

(2) Colonel Y... South VIETNAM.

C H A P T E R III

SURFACE CONTROL

Control of the arteries and the defence of posts must be put down as a liability of the surface war, for they neither lead to the neutralization nor the destruction of the enemy(1). They are a necessary investment which produce no interests.

In the asset column of the balance sheet, can be registered only the actions of "Surface Control" which are aimed at wiping out from a zone the rebels who might be hiding there. This sort of surgery, based on the diaghosis of the most contaminated communities and of the villages still relatively healthy, must produce the removal of the cancerous tissues and open the way to a convalescense represented by pacification proper.

Therefore, control of the arteries and surface control are at opposite ends of the game in their objectives: The first submits to operational activities, the second is inspired by political considerations.

In practice, both these "Passive" and "Constructive" forms of the surface war interfere on one same territory. It is true, for example, that the control of the arteries, while increasing the civil trafic possibilities, favor the return of economic life and contribute greatly to the development of pacification.

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(1) Except for the losses which the adversary must suffer to take a post.

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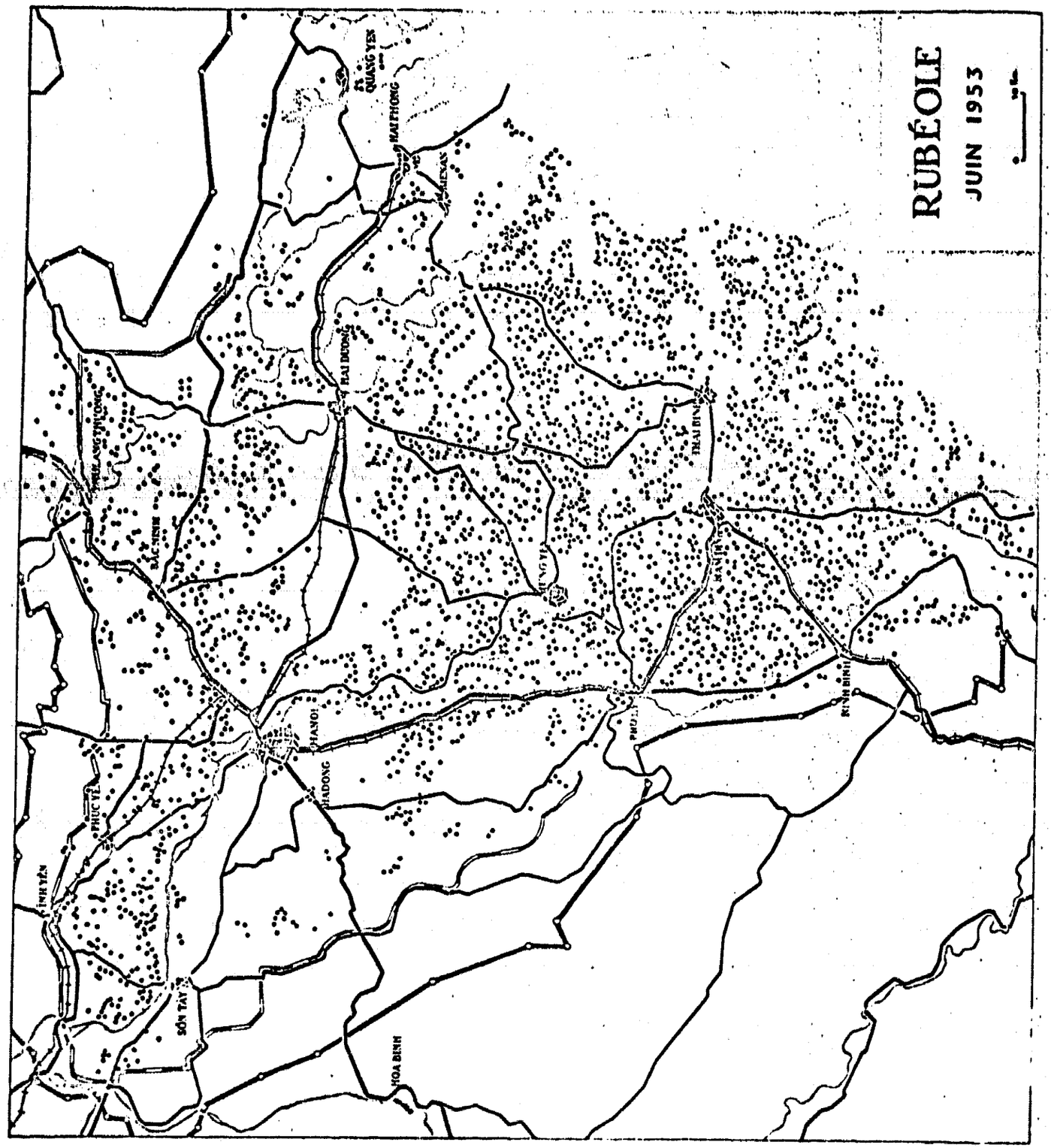
GERMAN MEASLES

June 1953



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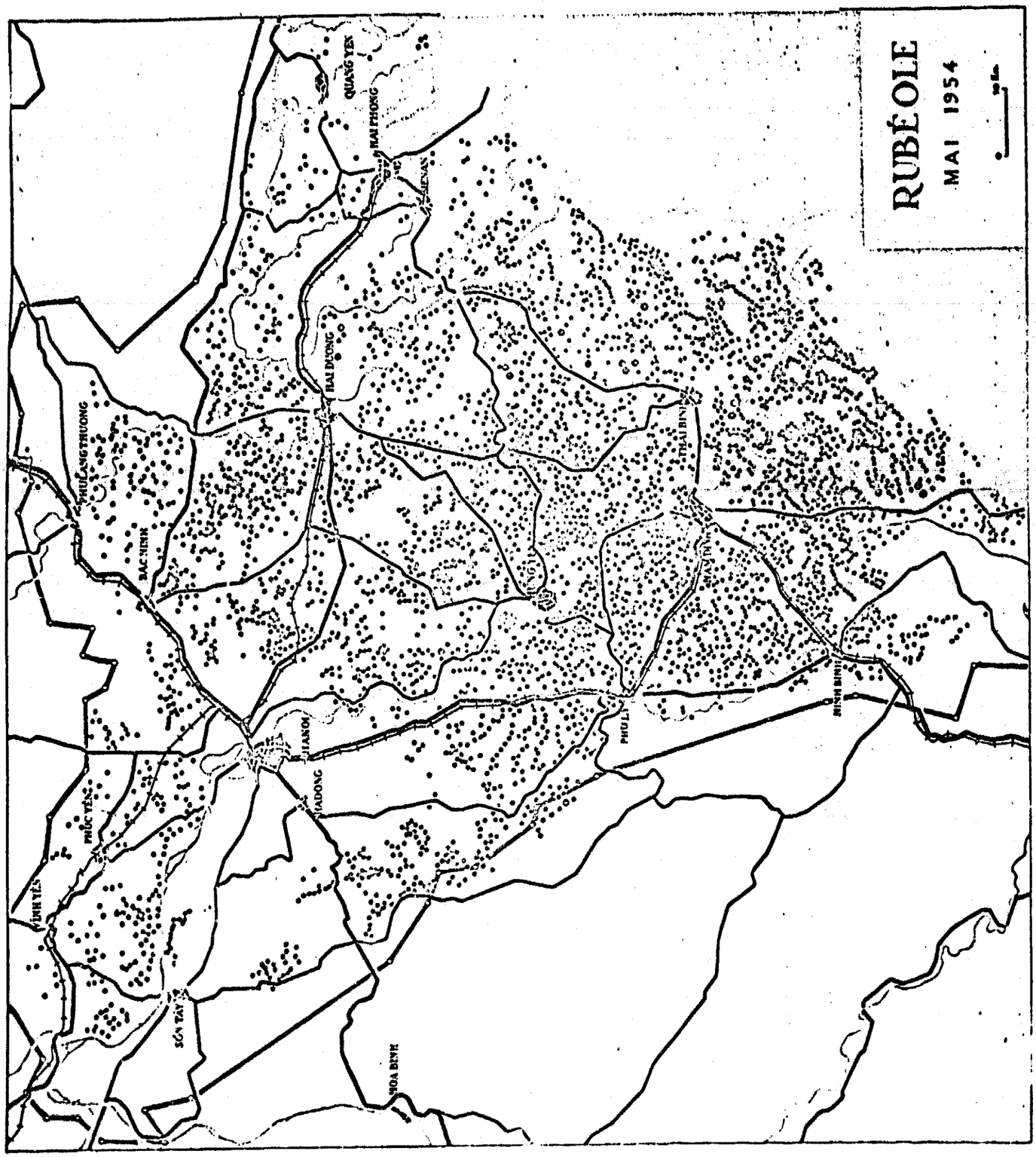
GERMAN MEASLES

May 1954



CONDITIONS OF SURFACE CONTROL.- In South Vietnam, a favorable climate permitted to, rather rapidly, pass from the control of the arteries to the surface control, at least in some areas (1). With the help of political action, pacification followed. In 1954, however, it was in a state of recession following "too great a disaffectation that led to the replacement of the towers by more powerful and less numerous posts, but with insufficient personnel".

"In short, one post replaced six towers and, since there must have been a gain in personnel, absorbed the garrison of three towers only... As the new posts, triangular in shape, were provided with a mirador at each summit, the three towers' personnel was absorbed by guard duty and could hardly perform efficient patrols.."(2)

In North VIETNAM, on the contrary, military, political and geographical factors have come into play and prevented an efficient "surface control".

We have gathered a large amount of negative intelligence and this is where we must look for the causes of failure.

SURFACE CONTROL IN NORTH V.N. - In TONKIN actually, our forces were at first imposed upon by the pledges resulting from the presence of the V.M. divisions all around the delta. Not only was it necessary to be able to repel them, as was the case at VINH YEN in 1951, but it was also necessary to intercept the units which the opposing Command re-introduced in the areas locally purged. This mission was never to be adequately accomplished.

Politically, we were powerless to extend the action of our forces by propaganda, and consequently to remove the ferments of decay. The Vietnamese Administration's default did the rest, and little by little, surface control, which is always short-lived and localized, had to be abandonned except in a few areas of the delta.

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(1) This control, for the most part furnished by the statical net of the towers, could have still been improved by extending it to the rivers:"A partitionning by a multitude of loops could have been made possible by using the "wizzards" extensively". (Captain commanding the River Flotilla in South Indochina. See chapter devoted to the river forces).

(2) Captain (Navy) COFLUSIC.

Terrain-wise, the delta hydrography has been a constant handicap to us: Out of an area 12,000 kilometers square, 8 million inhabitants were conglomerated into three of four thousand villages.

Very soon the road and trail embankments were cut up by destruction and the villages became an archipelago that no vehicle on wheels or caterpillar could approach. Five hundred meters (ap.3/4mi.) of flooded rice paddies defended the rebels against any surprise, while a jumble of ponds, hedges and gardens offered them in every community a thousand and one refuges.

The speed of progress was from then on similar to that of an infantryman sunk into quicksand and all our manoeuver graphs were reduced to a strange equation: One village = one battalion = one ½ day.

Thus everything banded together to make us give up the idea of surface control and reduce us to the control of the arteries only, which led inevitably to the multiplication of posts.

But the personnel of these posts quickly became insufficient to spread around and establish a perimeter of security clear around each structure.

If one wishes to argue, in fact, on the most current type of garrison (60 to 80 men), one can ascertain that the permanent guard duty obligations immobilized about 1/3 of the men during the day and more than 3/4 at night. Therefore it was possible to let one squad go out during the day, at the most, and practically no-one at night.

The enemy, on the contrary, could hold out with much inferior forces, for the support of the population allowed him to concentrate his efforts and attack, at the time and place of his choice, the garrison which might have ventured itself too far from its battlements.

"In the X... Sector, says Major Y..., two well-known but elusive V.M. provincial battalions emplaced in a central position, could get into action against one of the 100 Sector posts, manned by approximately 7,000 men, every night. Each of these 7,000 men logged 4 hours of guard duty or night defensive outside action to provide security for these installations".

This elimination of the expansion of posts, which was the result of decay, was translated into a quarantine of the garrisons:...

"...Sometimes the post doesn't realize what is happening: it lulls itself to sleep with the monotony of the tasks and days going by, without seeing that the people who come to it are no more than shadows, that the Canton leader will spend the night in the District, that the partisans' wifes have gone to nurse their sick old mothers in the neighboring village. Then one night, the post falls like a necrotic bone - or this is the most frequent case - it becomes a sort of strange body, a cyst in a living tissue: the tissue made room for it then closed in around it. All the nerve and blood vessels surround it".

"The Vietminh surgeon does not feel like operating, because the post does not interfere, it does not move, it no longer represents anything".(1)

At the end of 1953 our activities tended to merely be punctual and it could be said: "It isn't the V.M. that is infiltrated in the delta, but us"(2). A count taken as of January 1st 1954 shows, in addition, that 82,470 men of all races were immobilized behind barbed wires in 920 posts, more or less important and more or less delapidated.(3)

The equipment of several divisions was thrown in:

- 9,714 automatic-rifles and machine-guns
- 1,225 mortars of every caliber
- 426 anti-tank guns (4)
- 125 position guns

At the same time, the Viet Minh maintained within the delta only 37,000 men (5) at the most.

(1) Reserve Captain X..."The Dead War".
(2) General X...
(3) Including within the delta the QUANG YEN - HONGAY area, the occupation of which was essential to the utilization of the port of HAIPHONG.
These 82,470 men included 1,080 Officers and 7,515 Non-coms.
To these huge forces were still added those assigned to the static defense of the air bases and scattered installations within the cities of HANOI, NAM DINH, and HAI-PHONG,; finally the elements guarding the air bases of all our mobile units (mobile groups and various formations).
(4) A great number of these guns were made up of the tubes of former tank turrets, which were being used in some posts.

(5) These 37,000 fighting men were sub-divided into:

- 13 to 14 regional battalions corresponding to the various provinces of the Delta, to which were added three independent regiments (42nd, 46th & 50th R.I.) and one battalion from a recently organized regiment. Moreover, the 246th R.I. was sending one battalion in the delta in rotation.
- 120 to 130 District Companies, including the units maintained by the districts bordering the delta.

Therefore, if we disregard the V.M. divisions to which we opposed the mobile groups and the General Reserve units constituting our battle formation, we had come to spend twice as many men and three or four times more equipment than the enemy in order to keep up with the surface struggle.

Such a balance sheet meant the eradication itself of fortifications since the latter did not spare our forces, quite the contrary!! Moreover, it was another proof of the miscalculations of the Command when it accepted the cheapness of a string of posts and it did not prefer the quality offered by a small number of modern structures.

In conclusion, the General, Commander-in-Chief, could well write: The system, over a hundredyears old, inherited from the colonial wars, was adequate against badly armed and relatively few in number rebels. It had been only symbolically modernized by the replacement of walls and fences by barbed wire, and the construction of fire shelters with field means or masonry".

"In opposition to an adversary with at his disposal numerous seasoned, well trained, modernly armed units fitted with powerful means of destruction and having developed particularly efficient techniques and tactics of attack, it completely failed. All the posts that were attacked with determination fell; the resistance put up by some of them, quite often honorable, was sometimes successful only due to outside assistance (artillery or air support), or due to very unusual circumstances (difficult terrain, strength of the constructions, exceptional drive on the part of the post Commander, error of the assailant)". (1)

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(1) Instructions of March 8, 1954.

NINH BINH Resistance Center

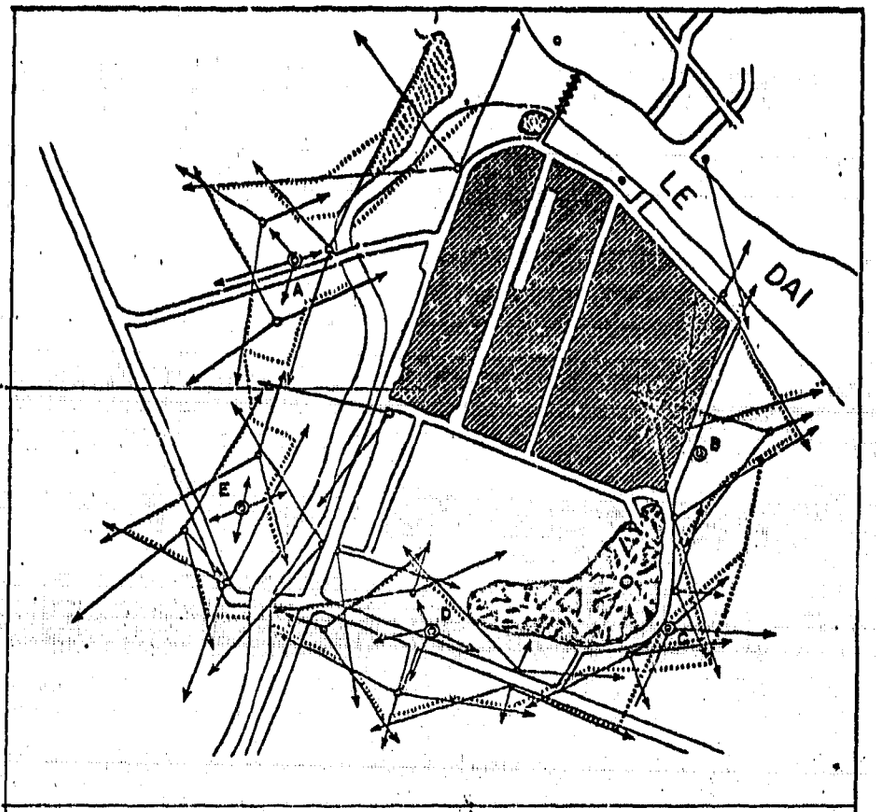
(flat terrain)

(63 Machine guns 11 Automatic Rifles)

226 men

Place of the village of Ninh Dinh which was entirely destroyed.

Scale 1 km



CHO GANH Resistance Center

(Accidented terrain)

(69 machine guns 17 Automatic rifles)

250 men

Scale 1 km

Therefore, it was projected to substitute, little by little, this system by a small number of entrenched camps.

These would serve as" support and base of operations for a group of mobile forces, composed mainly of indegenous troops, roaming around the coutry, living as much as possible with the local population, regulating and assisting the activities of the self-defense elements and tracking without truce nor respite rebel detachments".

This new concept suggested the abandonment of a large number of posts, in particular those that were spread along the land arteries.

It would be necessary to make a finesse on the points whose rehabilitation would require little time and small means... and stock on defended points...the equipment for the rebuilding of a route".(1)

But circumstances delayed the implementation of the principles defined by the High Command.

The attached sketch nevertheless shows the aspect of the CHO GANH and NINH BINH resistance centers which met the requirements to a great extent.

The action of the mobile forces of an entrenched camp is thus described by a Captain: "The unit moves about constantly on its own initiative, while knowing it must remain somewhere for the necessary time, dispersing, gathering together, partitionning without haggling, "upon request", acting somewhat like an Amoebia, untiringly...".

"It follows... all villages are known completely, one by one, terrain is known by heart like the routes, contacts with the population are frequent, when unexpected, intelligence is plentiful gathered from the source...".

The mobile elements of an entrenched camp must be so that they are able to go within half a day or overnight to the most remote point of the territory to be controled and return. Under these conditions, they will provoke permanent insecurity in the opposing camp.

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(1) Colonel N...Zone Commander in TONKIN.

An entrenched camp might have done with one company to secure control within a 10 to 15 km. radius in a zone easily accessible, with a clear vue, with a sparse population, where the rebel elements were few and only lightly armed.

In a completely decayed area, not easily accessible and densely populated, like some sections of the TONKIN, the garrison of the entrenched camp could not go below that of 3 or 4 combat Companies (Regulars and auxiliaries). With such a strength, it would have been possible to control efficiently a radius of not more than 4 to 5 Kms, for all exits would have to be done with force and with the slowness inherent to strict security measures.(1)

In order to obtain an adequate coverage it would have been necessary to set-up entrenched campas capable of sheltering forces equal to a mobile group and foresee that fortified installations of this caliber would be located approximately every 15 Kms.

In this fashion, we would achieve a density of occupation varying from 25 men per 100 Km^2 approximately, to 6 or 700 men per 100Km^2; while at the beginning of 1954 the rapid multiplication of the posts resulted in an expence of 660 men per 100Km^2 within the Tonkinese delta.(2)

SURFACE CONTROL IN SOUTH VIETNAM.- Contrary to the TONKIN where initiative eluded us more and more, South VIETNAM was the scene of a slow progres for a surface control conducted according to the most approved principles.

As a function of a "Oil Stain" policy, control was gradually established over an area. Little by little it was laced with a communications net, closely guarded by posts close to one another. The arteries within the periphery were equipped with defensive nets so as to prevent the return of rebels in the zone to control, and surface operations would drive them out.

One must admit that the task was greatly facilitated by the support of various sects (BINH XUYEN, HOA HAO, CAODAISTS) who played a role similar to that of the rallied tribes during our previous campaigns.

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(1) In particular, the Companies would have remained within the scope of gunfire of the post's 120m/m mortars.

(2) Only counting the troops implanted in the posts, as seen previously.

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The conduct of operations was no less delicate and the example given hereunder represents only a sketch.

The Cisbassac region had about 800,000 inhabitants, for a 4,200 square Kms. area. Towards the end of the Summer of 1951, it sheltered about four regional rebel companies. The two main routes were scantily guarded by one of our Battalions, and the fall of several towers and posts bore witness to our precarious position..

In the last months of 1951 and the first months of 1952 control was placed in the hands of forces totaling approximately five battalions. About ten operations, which lasted each four to five days, resulted in the capture of 200 prisoners and a hundred weapons, while the rebels left 120 killed on the terrain. In the Spring of 1952, the remains of the V.M. units, after being relentlessly pursued, took refuge in Transbassac; from then on pacification activities progressed rapidly. However, in February 1953, the enemy infiltrated again, but the base of its companies was totally destroyed and it was to be its last assault in force.

CLEAR AND SEARCH.- The activities of a Sector include daily operations of extremely varied forms and importance. But the most significant are always identified with clearing, then searching for the question is to constantly sweep the area in order to find armed rebels, as well as political cadres, propagandists, guides, etc..,without mentionning supply depots, workshops, caches,etc.

Clear and Search is "to run a tooth-comb through an area and its dense population" (1); for the Infantry progresses through the countryside at a maximum speed of 1 Km.½ per hour et the search of a densely populated village (10 to 20 hectares, 2,000 inhabitants), can require several companies for several days.

The discovery of hiding places is helped by interrogating the inhabitants and sorting the suspects: Finally time will bring the rebels out of their holes or loosen tongues.

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(1) Colonel N... Zone Commander - F.T.N.V.

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But a thorough search is absolutely essential and the cadres were unanimous in deploring the rarity with which enough time was devoted to it.

I spent 18 months of G.M. operations in the delta", writes Captain R..., "My Company has so-called searched hundreds of villages. But we never had the time to make a thorough search and we left when the inhabitants might have been able to talk. The rule was that upon our leaving a village our last elements be fired on by the guerrillas they had been unable to find".

It appeared that we obtained quite excellent results by specializing some indegenous units in the search of villages.

"Search is an important and difficult operation. Within the Battalion, we have obtained excellent results by specializing the Auxiliary Company in this operation. Our Vietnamese in the end knew all the V.M. tricks, how to explore and destroy the underground installations. The Legionnaires, strange to the country, could have never succeeded so well".(1)

A Commando Leader who performed only search operations recommended the following recruiting method:

"Militia-men, peasants, ralliers, prisoners separated from all branches of the service, volunteers who wished to enlist in the "COMMANDO" were required, before being integrated, to furnish formal proof of their intentions, either by providing exploitable intelligence, or by producing papers as proof of their military status, in the case of veterans".

Experience has given the most practical methods for search proper:

"Defensive grenades had no effect. Offensive grenades are very efficient for small underground installations, but should only be used in case of emergency, because the V.M. elements overtaken by the blast, cannot talk for at least two hours, which constitutes quite a loss of time to gather intelligence.

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(1) Lieutenant V... F.T.N.V.

"Tear-gas is very efficient when used in undergrounds the length of which does not exceed 20 meters (7 ft approx.). The capture of prisoners is always achieved. There is but one inconvenient: further search is very difficult due to noxious gas which persists and the documents can only be read one hour after their seizure for they have to be aired in the mean time".

"Smoke or phosphorus grenades are efficient since they allow quick detection of air holes and up to then unknown exits".

"Their inconvenients are the same as those of tear-gas grenades, their effect is not as lasting".

"Naturally it is necessary to insure the ventilation of the underground opening to force the smoke within".

"Persuasion is the best weapon. It must be composed of an intelligent dose of threats and promises by interpreters or astute Vietnamese soldiers".(1)

TROOPS WEARING AWAY.- All actions of a surface war are essentially a matter of the Infantry. But contrary to conventional war, where the two adversaries wear each other out simultaneously, the side which does not benefit from the support of the population drives its men too hard.

Colonel X... emphasized "the inconsiderate wearing away of the Infantry, preventing it from operating at night after a full day's activities". The same held true for the posts' garrisons ... the defense of which demanded even more of the personnel since it occurred at night, every night, whether the troops were threatened or not.

On the other hand the enemy did not suffer such a wearing down: "No one thought often enough of the fact that some night raids during which such V.M. Battalion showed such vigor and fury were sometimes the only fight of the year for this unit".(2)

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(1) Report from the previously cited Commando Leader.

(2) Leader of Z... Battalion

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C H A P T E R I V

MOBILE FORCES ACTION

All units which wer not implanted to insure the defense of posts and sensitive points were designated as "Mobile Forces". Some of them were assigned to territorial sectors, but most of them formed the reserves of each Territory Commander(1).

The conditions of their utilization were similar anyway, the interventions of some being possibly more powerful and more protracted than those of others.

Gallieni* had already differentiated the "quick action", conducted by mobile forces, from the slow action entrusted to the territorial elements:

"Quick action is the exception: It is the action of military columns. It must only be implemented against pre-determined objectives, where force is necessary, since force is particular to columns".

Fifty years later, we took up again the mission of the mobile groups and of general reserve elements under a much more brutal formula: "To break the Viet". For here was the main point and surface war is still subject to the same necessities of any other form of operation: Find the enemy and destroy his units one by one.

All our difficulties laid, unfortunately, in finding the opposing units.

Indeed, as soon as the latter had infiltrated into the zones we claimed to control, they roamed around in groups of various sizes from village to village, in a perfect "hunting ground", where they found a multitude of clandestine depots and a politico-military infrastructure which allowed them to live and work in security.

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(1) The General, Commander-in-Chief, "mortgaged" the units he wanted to use as his own reserves.

* Translator's note: General, one of the great French colonizers in Africa & Tonkin.

Intelligence only gave us a blurred picture of this enemy. We knew that V.M. elements had spent one night here or there; from cross-checks we could deduct that a battalion was located in such and such zone the boundaries of which were not very precise; but all this intelligence was quickly outdated and the adversary appeared to be "a sort of mobile cloud, with a vague and ever-changing outline, spreading to dissolve itself like a mist or concentrating to burst like a violent storm, quickly gone and leaving behind just a blue sky...and a few ruins".

For the enemy systematically avoided any engagement in which he might have risked being destroyed. On the other hand, as soon as one of our units became isolated, he attacked by surprise with the advantage of numerical superiority and a lot of punch.

Our operations in the V.M. disputed zones were therefore inspired by the ever-present concern over finding the opponent and this explains why they took on the form of a converging march made up of several groups each looking for the enemy from a different direction. These concentric actions were to determine, it was hoped, the encircling of rebel elements of some importance and and permitted afterwards their destruction, thanks to our superiority in artillery and aviation.

These characteristics were found again when we wished to penetrate within V.M. controled zones, for the V.M. then used the same vanishing tactics. But we had to forgo inevitably any converging manoeuver and we could only progress in one or two directions, with the hope of enticing the adversary to attack us, wrongly believing to surprise us.

ACTION IN V.M. DISPUTED TERRITORIES.- In the territories we were seeking to control, the enemy disposed of a nucleus of guerillas (DU KICH) in most of the villages. The regional or provincial forces (DIA PHUONG QUAN) finished the job of securing his ascendancy over the population, which allowed him to not only recruit his fighters and cadres (1), but also to obtain the rice and manufactured products which were essential.

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(1) The Delta areas englobe 9/10th of the annamese population in Indochina.

For the V.M. Logistics system was based on the following principle: "the fighter must live off the land where he operates".(1)

In order to deeply penetrate such organized areas and to undertake the uncovering of the opposing units, we had to throw in, near the end of the conflict, several battalions and often, several mobile groups. In October 1953 one could write:(2)

"If detachments equal to or even inferior to a battalion can still fight efficiently against regional, provincial formations and guerillas, they must be much more circumspect when regular V.M. formations are involved".

"In the latter case, without confining itself in a guilty inertia... they must launch actions, mainly of the type "commando", i.e. quick raids, ambushes, surprise attacks... With an incessant harrassment of the regular V.M. units, the smaller territorial units will ensure their own security... and will prepare destruction which, thanks to them, will be a sure thing."

"This destruction is the main task of specially trained operational forces and particularly of the mobile groups which constitute the basis of a battle formation".

The experience we had gained in Tonkin showed that a strength at least six times superior to that of the opponent was necessary to encircle and destroy it.(3)

On these conditions, the general sketch of any operation was the following: After rapidly and discreetly taking position, clearing operations began in several directions in order to throw back the enemy to a natural line, if possible, which we first occupied, or towards other friendly units, advancing to meet the first ones.

Theoretically, a more or less complete encircling was to result, to be followed by a phase of destruction of the opposing elements and the search of the area.

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(1) Chinese supplies were never sufficient to allow the V.M. to do without the ressources of the deltas.
(2) Note from the General, Commander-in-Chief, on the battle procedures of the Mobile Group, October 1953.
(3) This proportion, unfortunately, was attained only exceptionally.

This sketch was practically never implemented in whole. Now, a recent and accurate piece of information (or believed to be so) let us to go into the destruction phase directly, preceded if necessary by a preliminary encircling. Then, on the contrary, the first phases of the operation did not produce the anticipated result and the encircling closed in ... on nothing.

So, it was necessary to change the set-up and continue the operation as a function of the new information obtained, either by attempting to cut off the retreat route of some enemy fractions, or by taking up the same attempt to encircle in a neighboring zone.

An analysis of the various phases of the manoeuver will clearly show the reason behind our repeated failures, as well as the difficulties of the undertaking.

PREPARATION.- It was to be done in secret, of course, or nothing could have been more trying.

On the one hand, the services and especially the General Staffs operated in the cities, in the heart of a population worked on by propaganda and with cells of the V.M. organization (1). They naturally employed indegenous workers and the mess server as well as the "boy" of an Officer could be the source of serious "leaks" whether consciously or unconsciously.

On the other hand, the least change in our set-up, in the placing of our depots, in our communications, was instantly known to the V.M. agents hidden among the population.

For this reason operations were often prepared at a high echelon (Territory, even Commander-in-Chief) by a small number of officers and the executants had knowledge of their orders only at the last minute.

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(1) DICH VAN action.

This probably resulted in additional difficulties and hardships. Such G.M. (Mobile Group) Commander complained of learning that his G.M. was going to embark (1) only after the garrison had left. Such Group Commander deplored being sent in an area where he did not even know if he would find an adequate position to deploy his batteries etc..

But the inconvenience which stems from maintaining strict secrecy is certainly less than the advantage obtained by the enemy's indecision as to the time and the exact conditions of the operation's beginning.

DISPOSITION.- Revealing our intentions and our manoeuver, displaying our means in broad daylight, the dispositon phase was essential to the success of the operation. Consequently, it was stamped with the mark of speed and entailed the acceptation of certain risks (2) for its successful performance eliminated any possibility for the enemy to slip away.

Concentration of our forces in the zone involved was therefore not preceded by any special aerial or ground reconnaissance, any building or improvement of tracks, any setting-up or depots. In short, nothing was to draw the attention of the V.M. observers who were watching all our activities.

Our motorized means and utilization of rivers permitted us, in the deltas, to start from remote places; but the scarcity of roads always imposed to go on foot for the last trek of our movements over several kilometers.

These movements were made at night as far as possible in spite of the difficulties presented by the movement of the Infantry in all kinds of terrain.(3)

We did our best of course to bring in this fashion all units to their base of departure during the first morning hours. But the least incident sufficed to upset the minutely established schedules: a vehicle exploded on the embankment of a road, in the flooded rice paddy, and the whole column was immobilized for an hour or two(4)... or more if a single section of regional elements stationned in the neighboring village swept the ground with mortar fire.

(1) G.M. No. .... in the GERFAUT operation.
(2) Movements made over roads not previously cleared of mines.
(3) the crossing of a natural waterway 4 meters wide over a "monkey bridge" in a dark

(4) Since it was impossible for a vehicle to pass another, it was necessary to clear the road and fill the funnel by hand.

Thus it was difficult from the beginning to obtain a perfect synchronization of the elementary manoeuvers, for the chances of meeting with the enemy depended afterwards on the speed with which our units converged on the objectives calculated to achieve an hermetically closed circle around a pocket.

Since our air capabilities and our artillery prevented any recognized V.M. formation to pass between our columns during the day, we could count on the assumption that the enemy would gradually be imprisonned and that, towards the end of the day, we would occupy the pre-determined perimeter to achieve an effective blockade.

ATTEMPT TO ENCIRCLE.- A simple statement of the conditions of encircling is sufficient to illustrate their difficulties.

The mere nature of the terrain prevented our infantry from moving fast, and the necessity to search every shrub delayed its progress even more. Consequently, the delays accumulated and the battalions were still far from their objectives at nightfall, in most cases.

Frequently, however, contact was made with the adversary in the course of the day: After encountering the DU KICH fire which gave the alarm, and after passing round minor resistance, we came up against an adversary ambushed in a village.

The enemy most certainly avoided communities which might attract our fire during the dry season; but in the rainy season, "in the middle of this maze of rice fields, flooded by varying degrees, and of this network of waterways and streams, the major terrain element was the village and its annexes (gardens, banana plantations graveyards...)". (1)

The ensuing battle could most certainly bring the destruction of an enemy unit, as we will see further. But more often, it did not bring about any decision before dark and contact was by then broken.

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(1) Note from the General, Commander-in-Chief, on the mobile group combat procedures in October 1953.

To make a long story short, instead of a close formation without any gaps, we were, at the end of the first day of operations, in a sinuous and discontinuous line.

After which our forces were not large enough to give the necessary density of men for an impervious barrage. Small wonder then that the enemy managed to get away under cover of darkness.(1)

Naturally, we attempted to improve the sealing conditions by taking advantage of natural boundaries (river) whose surveillance was provided by mobile elements (river marine) and a curtain of infantrymen posted along one of the banks.

The results however have been deceiving as a whole. One obstacle (river, dike) handicapped the V.M. only slightly (1) and only allowed a small reduction of the occupation forces (from ½ to ⅓ according to the observation means in any given night).

It would have been necessary for the sealing formation to include:

- "A surveillance curtain night and day to expose crossing attempts and detect their direction".
- "A stopping position constituted by a single or double chain of bases of operation interdicting the routes and possible crossing zones".
- "Mobile reserves, to be moved according to circumstances".
- "A security formation for deployment in order to ward off any outside attempt to extricate". (2)

DESTRUCTION OF THE ENEMY.- As we have seen, contact with the enemy was almost always made in villages or dense shrubs (cocoa plantations, tall crops, etc...).

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(1) See the study of V.M. infiltration procedures in Volume III

(2) Note from the General, Commander-in-Chief, on the mobile group combat procedures in October, 1953.

The chock could, of course, occur at night when some of the opposing elements attempted to break through our sealing curtain by force or when some other elements thought they could easily triumph over one of our units which was badly guarded.(1)

The meeting took on then the form of a defensive battle: The attacked element resisted as much as it could the V.M. assault, while our artillery fired a series of stopping rounds. The encounter was almost always settled at daybreak and the occasions when we could pursue the opponent with fighter patrols or gunfire were rare.

The most common aspect of the clash of our mobile troops with the V.M. infantry was therefore the attack of villages and greenery islets emerging from the flatness of the delta and the coastal areas. (2)

The problem at hand was then to not only get a foothold amid the tangle of vegetation in spite of the fire that swept the icy surface of the rice paddies, but to triumph over counter-attacks launched inside the bush and, most of all, terminate the battle before nightfall or before the enemy had a chance of disappearing in the caches. A clever manoeuver of our infantry and of the heavy support fire was thus imperative.

At the end of the hostilities, "the attack of a 200 to 300 meter-square village (3), well defended, required:

- "An Infantry Battalion ...
- "Artillery group fire...

"... the contact was to be made at a chosen point allowing a concentration of efforts and to lay hold on a mooring point of sufficient size".

"From this islet, we proceeded to a methodical mopping up operation by gliding along the borders..." (4)

Often, the configuration of the communities and the fact that they stretched like a spindle justified an attack and mopping-up operation of the infantry in the most favorable direction.

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(1) Favorite objectives of the V.M. units were artillery groups, the C.P.s of mobile groups and concentration of trucks.

(2) See V.M. defensive procedures in Volume III

(4) Note from the General, Commander-in-Chief, on mobile group combat procedures, Oct.1953.

(3) These dimensions correspond to a small village.

ASPECT OF 10 OPERATIONS CONDUCTED AT TONKIN

Conventional name of the operation	Duration	Number of Batt. Committed	Friendly losses			Remarks
			Dead	Miss.	Wound	
CITRON	5 days	14	67	19	143	(1) The heavy losses of these operations were due of course to their duration, but also to the considerable number of mines and traps the V.M. planted in the respective regions.
MANDARINE	8 days	17	58	9	170	
TUNY	6 days	8	6		25	
Mercure	13 days	18	69	28	182	
PORTO POLO TURCO	) 12 days	11 puis 15	69	29	262	
BRETAGNE	35 days	18	61	121	386	
ARTOIS	9 days	11	23	1	107	
I NICE II	) 9 days	14 14	39	6	171	
BROCHET	19 days	18	130	1	597 (1)	
GERFAUT	30 days	20	138	21	467 (1)	

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Changes of direction were thus necessary and the quaternary formations naturally proved to be very adaptable to these manoeuvers which permitted "to carry out right angle or gradual wheeling actions against certain objectives, making use of the route network or the dikes".(1)

Support fire depended of course on a precise determination of the objectives and especially on an adaptation of their size to the capabilities of the artillery. This requirement was all too often neglected and it was too frequent that some groups were asked to fire on undetermined targets or to destroy communities covering about twenty hectares with 200 rounds of 105m/m.

Many claimed that the 105 shell was ineffective on Viet-Minh village organizations. Most certainly, a 155 m/m caliber would have been better suited to the task, but the 105 would have obtained good results on most of the structures built of mud (2) if the consumption corresponding to the accepted schedules had been authorized(3).

But the available road network and our supply level made such consumption impractical and difficult.

It remains that too much, or too little... was asked of the artillery, without denying its decisive role in the annihilation of V.M. units when these could be cornered in a village.

Moreover, it is beyond argument that air artillery led most certainly to the annihilation of V.M. organizations in the villages. The 500 lbs. bomb, and especially the 1000 lbs. one, were greatly effective, both materially and morally, for the fighters were "in chock" for a sufficiently long duration within a radius of a hundred meters approximately.

---

(1) Note from the General, Commander-in-Chief, on mobile group combat procedures, Oct.53.
(2) The undergrounds are not involved here since they are not combat organizations but hiding places.
(3) As an example, it takes 1,000 rounds of a 105 to enfilade a 100 m. trench & destroy it. it takes 100 to 400 rounds of 155 to destroy a good shelter in country according to the distance; it takes 80 rounds of 105 in 4 min. to neutralize an hectare, and 120 rounds per hour to maintain such neutralization (General Directives on firing of August 8, 1946).

At the end of the first night of operation, the enemy very often had managed to filter through our first sealing.

Then, only two possibilities were left to us:

- Go over the doubtful zone in every direction, arrest any suspect, find and destroy depots, refuges, and organizations of any kind.

  This searching phase could extend to ten or fifteen days and sometimes provoked some engagements when the enemy reappeared in the wake of one of our Mobile Groups.

- Conduct the same manoeuver again in a neighboring zone in order to effect another sealing or attempt to cut off the enemy route, by a movement of the battalions according to the gathered intelligence.

In this fashion, we ended up with "scalloped" manoeuvers, which were exhausting for the Infantry and sometimes were successful in annihilating a V.M. unit that was pursued, tracked for days, even weeks.(1)

During this period we had to guard against nocturnal surprise attacks. The Mobile Groups had to look for their security in a defensive formation, every night, and sometimes over two or three days.

In such a case, the necessity to have large bases of operation supporting each other re-affirmed itself. The artillery element and the C.P. of the Mobile Group had to be included in one of these bases of operation, of necessity.

The minimum strength required to protect them was that of a company, and better than a battalion.

But "nomadization in a rather extended zone and the minute preparation of the offensive reactions in various directions constituted the best security for the M.G., as they guaranteed its freedom of movement and ensured the effective coverage of a zone much larger than that which could be covered by static implantation".

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(1) The attached synopsis gives an idea of the ten major operations conducted in the Tonkin from 1951 to 1954. The losses inflicted to the enemy could not be listed, as it was very difficult to discriminate between suspects, guerillas and regulars.

(2) Note from the General, Commander-in-Chief, on mobile group combat procedures of October, 1953.

"This nomadization was made very effective by a systematic deployment of ambush barrages, varying each night across passing and traffic zones".

COMMAND ORGANIZATION.- Not matter how important an operation was, the problem of knowing who would direct it was ever present.

The Territorial Command was the only one well aware of the political situation in the area. It would have been therefore logical that the direction of the operation be under it since tactical considerations took second place after local opportunities.

However,"there was always a problem of rank. The Chief of the territory on which the strength of a small division (3d M.G.) came to operate was at most a Lieutenant-Colonel, sometimes even a subaltern officer. He didn't carry much weight with the young and brilliant Colonel who came to establish his operational C.P. with a hundred or so vehicles within his post and in the vicinity".(1)

In most cases, consequently, it was necessary to go up to the Zone or Territorial Division echelon in order to find the proper Authority to conduct the operation. But this Authority was sometimes "far from the scene of the operation" and "not in the know". (2)

A close liaison between the Sector and Sub-sector territorial P.C.s, and the M.G. operational C.P.s, could have avoided these inconveniences. But one must admit (2) that "such a liaison was satisfactory only in the case where the operational leader and the territorial leader knew and respected each other, which was rather rare".

Consequently, the following fact, related here by a Sub-sector Commander, frequently occurred:

"The objective was to destroy a provincial battalion with which I came to grips every day. Generally, I was kept informed, sometimes consulted in the course of the operation, but my opinion was never sought on the concept and the disposition which are the phases from which everything depends".(2)

---

(1) Captain C... N.V.N. Company Commander

(2) Battalion Leader X....

The solution to this problem of Command was complicated by the difference in outlook between the mobile forces cadres and the territorial leaders. It ended up in regrettable lacks of understanding and "the tendency, alas! all too natural, to scoff at everything that is not from us...made the M.G. cadres consider with contempt, listen condescendingly to the territory cadres".

For the Mobile Groups spent whole months seeing the enemy vanish before them and most of their engagements ended up in the disappearance of the opponent, sometimes in its destruction. Then they often arrived in posts whose garrisons could barely show themselves in the neighboring village (1) and were being harassed every night.

Due to the presence of the newly arrived, the area suddenly became calm and the new elements wondered if "the posts people did not exagerate somewhat".(2)

So we can deduct, as did Colonel X...(3), that "destruction operations must, with no exception, be conducted within the territorial scope and in Indochina, if this principle was accepted, it was not implemented...".

"The preferential treatment frequently accorded to the specialized forces during operations has dug a ditch between the two unit classifications which needed to be united...".

ACTION OF MOBILE FORCES ON THE BORDERS OF V.M.-CONTROLED ZONES.- The activities of our mobile forces on the borders of V.M.-controled zones were aimed, at some time and according to a "oil spot" policy, at expanding our occupation.

But, besides these undertakings of a politico-military nature, many operations designed to destroy rebel units or installations and to thereby thwart the great Viet Minh offensives, or which tried to compel the opposing battle formation to fight took place.

---

(1) It happened sometimes also (case of the DAO VIEN - TRUONG XA - DONG LY posts... in June, 1954) that the posts' garrisons could not gather the supplies that were air-dropped until dark.
(2) Lieutenant X... Company Leader.
(3) Zone Commander in TONKIN.

For this battle formation included five Infantry Divisions and one heavy Division beginning with 1951 and 4/5 of these great units were based in the middle region of North VIETNAM, as well as on the Tonkinese Delta periphery. So, we were constantly called upon to go out and meet these forces in order to reach at last the opponent where it counts.

The Viet-Minh, faithful to his tactics, having confidence in the difficulty of movement in the areas he controled, never tried to oppose the progress of our forces when they emerged, in one or two directions, from the path of our outposts.

As the operations inside the deltas, the fight that took place during our forays never took on the form of a struggle to seize defended objectives. The V.M. Command cleared everything before us, abandonning at times without any resistance the installations it could not evacuate, sabotaging the routes as much as possible, slowing our advance, at most, by blows and threats of ambush.

It took the maximum advantage from the fact that it disposed of an infrastructure of hidden depots and inconspicuous communications means, while we were forced to rebuild the roads as we advanced.

This infrastructure permitted it to gather quickly some of its units and to hit by surprise one of our elements which seemed particularly "up in the air" to it, when our array was sufficiently spread out.

The offensive wedge we drove into V.M. territory had to be quickly transformed into a defensive installation. For, as we advanced and time went by, the security of our communications line required the immobilization of large forces in order to organize a string of bases of operation.

We then established a sort of provisional entrenched camp like a "tree trunk", from where our units radiated (remaining cautiously within the scope of action of our artillery) and the operation took on the form of a "tactical wait".(1)

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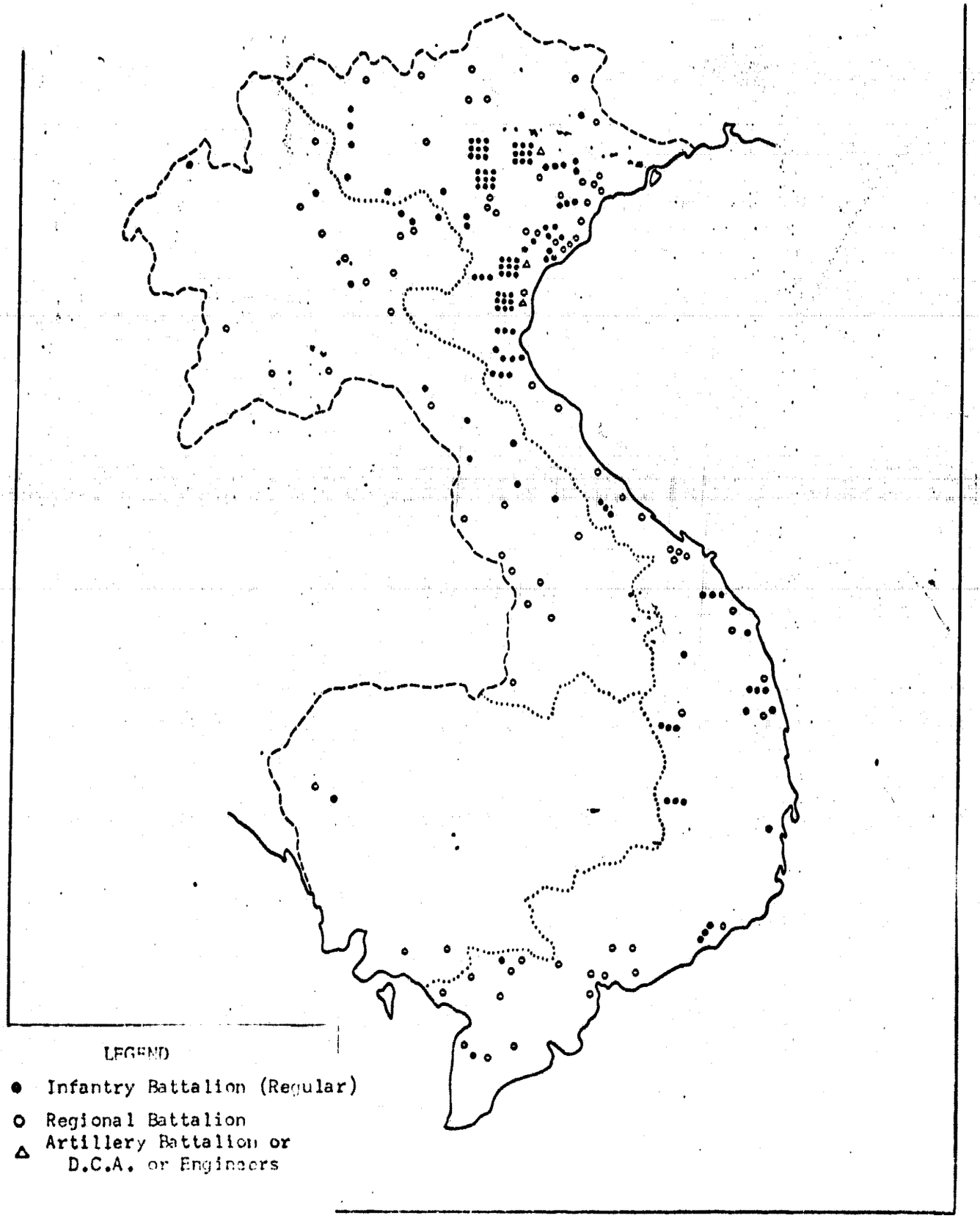
(1) For example entrenched camp of HOA BINH for the "LOTUS" operation and entrenched camp of LAI CAC for the "MOUETTE" operation.

V.M. IMPLANTATION

in 9 - 30 - 1953



The various engagements which occurred during this phase of the operation were as many occasions to achieve the wearing out, if not the destruction, of a fraction of the opposing forces. But the protraction of such a situation ran the risk of turning to our disadvantage.

Our stay in the HOA BINH basin from November 1951 to February 1952 entailed immobilization of three Viet Minh divisions (304th, 308th and 312th), but it required an expense of forces equivalent to 9 Mobile Groups and cost us heavy losses.

In addition, the farther into V.M. territory our wedge was drive, the more difficult it was becoming to withdraw.. The HOA BINH withdrawal was successful, because it had been possible to establish a security corridor several hundred meters wide with a series of veritable posts and the clearing of trees.

The "dismantling" of the MOUETTE operation, conducted according to the same principles, was also successful. But with the "LORRAINE" operation, we encountered a serious ambush (1) and other examples have come up to show that retreat manoeuvers must be conducted according to the same rules as for a European war, and should most especially not... be late.

To conclude, our operations on the borders of the V.M. zone, in spite of their importance and their interesting character, did not bring us any special teaching which could find a place under similar circumstances. However, they pointed up clearly the necessity of closely considering the duration of the undertaking: By judging too short, we risk loosing the opportunity to engage and put enemy units in a bad position. By judging too long, we expose ourselves to the chances of a particularly difficult disengagement.

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(1) The 36th V.M. Regiment annihilated the equivalent of a battalion on the R.C.2 November 17, 1952.

C H A P T E R V

PACIFICATION

The necessary stages of pacification have been accurately outlined in a 1949 report:

"For a province to be recognized as pacified, the authority of the legal government must be recognized by the establishment of normal (political) institutions, the purge must have been conducted by the population, finally the collectivities must have organized self-defense formations capable of protecting the sensitive points in the province".(1)

But the assumption in such a program resides in the two terms "legal government" on the one hand, and "authority" on the other hand, and it is not necessary to bring back to mind the fact that these necessary conditions were only slightly achieved in VIETNAM.

In addition, the pacification work requires"... that the efforts of all converge towards the same goal... which is impossible unless the same authority has all civil and military powers".(1)

Complete re-establishment of law and order and restoration of normal living conditions were therefore an undertaking, if not absolutely impossible, at least bound to produce precarious and incomplete results.

---

(1) General X.... South VIETNAM.

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Thus it seems appropriate to pass judgement on our pacification policy in confining our study to the first stages of the return to stability:

- the quelling of any hostile action on the part of populations.
- the emergence of self-defense organizations in most of the communities.

SUPPRESSION OF REBELLIOUS FEELINGS.- All surface war operations should be derived from political opportunities. But this necessity was not always present in the interested minds and Lieutenant Colonel X...'s remark has been justified many times... "An operation was conducted and political consequences were thought to be derived from it".

The contrary has been equally observed on many occasions. In order to meet requirements of a strictly military nature, certain areas where pacification was, if not going along well, at least feasible, and where the Viet Minh was later able to implant themselves deeper as the inhabitants rightly accused us of having betrayed their confidence, were evacuated.

"Nothing was more costly to our Armies in Indochina than the abandonment of certain populations, because our plans were changing, or that our undertakings were not in tune with our means".(1)

In this respect, the necessity to evacuate the Highlands in the North East at the end of 1950 had grave consequences for it alienated some minorities from us. The same was true when we were unable to stay in HOA BINH and had to forgo the rallying of the MUONGS.

The LYAUTEY tradition, which first gave its Indegenous Affairs Officers the plans of an offensive action and launched it only when "time is ripe", was not altogether forgotten.

General X...(2) wrote the following directives to his cadres: "In the area of pacification... not one rule should be considered as imperative nor eternal... But one could not discard the following principles, which are, moreover, found in all colonial campaigns, without running to certain failure".

---

(1) Major T... F.T.N.V. (S/Sector Commandant).

(2) Who was the originator of pacification in South VIETNAM.

"Politics alone cannot solve anything. Military Force alone cannot lead to a decisive result either".

In various regions and at various times, these considerations were to be implemented appropriately.

The re-occupation of the two dioceses of PHAT DIEM and BUI CHU, in the Tonkin Delta was not only based on feelings which were hostile to the V.M. ideology on Catholic communities, but also on informal connections: "political preparation aiming at bringing the population to wish for the implantation of our troops and of our administration over her is a long phase, which was stretched over 6 months in BUI CHU".(1)

Pacification was practically prepared by a close study of the areas where the V.M. communist Mysticism clashed with a militant Christianity (case of the TONKIN Catholics) or with pseudo-religious feudal systems, (case of the South VIETNAM sects) or still with racial oppositions (case of the minorities).

In other cases, advantage was taken of errors of the opposing side and of a veering of mind in a region. In 1949, for example, General X... thereby justified his plan for the reconquest of a region in South VIETNAM... "the political climate is favorable, as the pressing demands of the populations weary of V.M. control attest daily".

However, the experience of eight years of war must lead us to modify the principles inherited from LYAUTEY and the great colonial Leaders, by submitting them to an imperative postulate: It is impossible to undertake a policy of pacification in the areas where the inhabitants have been subjected to Communist impregnation, as long as the Marxist organisation persists.

First, the revolutionary machine must be destroyed, or at least dismembered before our counter-propaganda can be opposed to the enemy's methods of indoctrination.

For the politico-social ascendancy of the party shuts out from the individuals all other form of thought and life, and we must first abolish the village cell, the informer, the functionary, etc.. to give each back his own free will.

---

(1) Colonel X... Zone Commandant in TONKIN.

Subject to this none of the standard methods have lost any effectiveness.

Besides, the V.M. Command never concealed the fact that one of the main objectives of the guerilla was to prevent us from implementing our pacification procedures.

For example, a doctor, former war prisoner, reports: "The V.M. told me numerous times that their worst enemy was a doctor looking after the populations".

The officers who successfully brought back general well-being and prosperity in an area related their favorable results with as much enthusiasm as their predecessors. Here is for example Major X...'s story:

"...From the beginning of 1953, I was determined to make my villages happy, and defend the inhabitants not only against the V.M. but also against the auxiliaries. Later, I had to defend them against the landowners' rapaciousness".

"Through direct contacts, through my own activities, I made them understand that the Frenchman was neither a colonialist, nor an enemy".

"A Navy Doctor, understanding and courageous, was my major asset: He risked his own skin to answer any call for help. V.M. wounded men were taken care of at his dispensary: we were no fools, the rebel knew it, but I played the game".

"With the population and the notables, I feigned confidence. I told them: I ask nothing from you except to work your fields and be happy. The war is my business. Finally, they were passing intelligence to me themselves".

"I provided them with seeds and fertilizers, for which I provided transportation myself, helped them sell their wood, work the undeveloped rice fields collectively; in 1953 I helped them sell, at a good price, 400 tons of excess paddy, the first excess crops since 1945".

"I had the R.P.19 repaired, reconstructed three bridges, and gave them to the villages, I re-established communications means, and in spite of the risks involved, authorized the Sampan line from X... to Y...; the prosperity of markets returned".

"With or without the support of the Province, I opened schools; I encouraged a Scout movement, put vehicles at its disposal. My first reward came when, in 1953, I presided over the prize-giving in three new villages".

"For, within two years, my area had become a rich area: 25,000 inhabitants instead of 5,000, new and clean villages, one of which bears my name".

"Since January 1st 1954, security in my camp is complete.

When it has reached such a point, this stage of pacification is always known by a significant sign: Denonciation of rebel elements who could still be hiding by the population itself.

ESTABLISHMENT OF A SELF-DEFENSE.- Participation of the collectivities to their own defense must be started as soon as they have given some token of faith, but there exist no definite rules for the constitution of self-defense militia. As Colonel X....(1) puts it: "Militias must represent the armed expression of the will of social groups..... any uniform rule would be erroneous, for social groups are quite varied. Village Militia where the group is the village... Parochial Militia, for the parish... anything can be conceived and achieved, providing the proper balance is kept between the social group and the organized unit".

This establishment of self-defense formations will alleviate the regular troops' task, but it will not eliminate the necessity to keep some territorial forces in order to intervene quickly and powerfuly in case of an offensive return of the rebels. Major X.. (2) draws the attention on this major mission: "In my Sub-Sector, in 1953, the stage of pacification had been reached. We had been able to arm the villages from which the V.M. bases had been completely eradicated, and the population was doing its best to prevent the return of the rebels whom they feared".

---

(1) Zone Commander in TONKIN.

(2) Sub/Sector Commander in TONKIN.

"But from the beginning of 1954 the situation deteriorated. The V.M. re-infiltrated units more powerful than the marching company at my disposal. The Mobile Groups, busy in more sensitive areas, were unable to intervene in time. I had been kept informed on the state of decay against which I was powerless for some time; then, village by village, the inhabitants, faithful in spite of everything, came to return to me the now insufficient arms at their disposal for their defense".

"In order to save the pacification, I should have had a strong reserve".

For pacification remains fragile for a long time and its final success requires the perseverance we sometimes lacked.

A typical example is the deterioration of the situation in COCHIN-CHINA over the last months of the war. A recrudescence of V.M. activities could be noted, which would have immediately required on our part a new campaign of pacification:

"Only the zones maintained by the "Confessionals" were relatively healthy. The rest of the zones under our control was gangrenous".(1)

To conclude this short Chapter, we can only restate a principle of General X... while deploring the fact that circumstances did not permit its constant and full implementation.

"...The use of Armed Force must never be regarded as an end in itself. It is but one means of reaching a goal".

"It is imperative that the same Authority dispose of civil and military powers"

"...The indegenous elements must participate more and more in the struggle for pacification".

---

(1) Captain (Navy) commanding the River Forces in South Indochina.

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C H A P T E R VI

THE FORTIFICATION

Among the various types of structures that were built during the campaign, three of them are worthy of a detailed study, for each met the requirements of a given situation which might occur again:

- In the regions which are not yet seriously contaminated, or at a time when the rebel bands do not dispose of any artillery and recoilless guns, the small surveillance structures of the type "Tower" can still be of some use.
- In the more infested sectors, but where the enemy Infantry does not have highly powerful weapons at its disposal yet, which was the case in South VIETNAM, the posts that were achieved offered an acceptable resistance, while affording a rapid and economical construction.
- Finally, in the regions where a strong fortification is imperative, the concrete base of operations of the "Tonkin" type seems to be indispensable.

After describing those three types of fortifications, it seems appropriate to summarize the lessons of the campaign relating to the two problems which were constantly facing the defenders of the posts:

- Cover of the structures by adequate obstacles.
- The most effective procedures to insure surveillance at night.

WATCH TOWERS.- Initially, the towers were composed of masonry works with walls 25 to 40 centimeters thick, surrounded by a low wall. The door was located at least two meters from the ground and one had access to it by a ladder.

The mirador was five to six meters high and its roof was sufficiently open to permit grenade launching.

In 1949-1950, protection was improved by surrounding the tower by a 30 centimeter-thick, two meters high brick wall, leaving a space of about one meter between it and the tower sides, or by surrounding it with one or two curtains of areca or bamboo trees. The objective of this device was to prevent the enemy from placing explosive charges at the foot of the wall, or against the sides with the help of poles.

But, of course, these shields of fortune were insufficient against shells and we tried to separate the observation element, being of course the most vulnerable, from the main body of the structure, which was to provide the garrison with the means to live and defend itself.

From 1952, we came up with the following formula which proved to be, as a whole, satisfactory after a few improvements:

The main body is surbased as much as possible and buried in a mound of earth, profiled in order to provide maximum resistance to blows.

Living quarters for the garrison are inside this main body. They are conceived to give a surface of about 16 square meters with two meters high ceiling.

One can enter either through a ground level entrance, or through a manhole arranged in the ceiling.

The defense capabilities are provided by battlements fashioned about 1½ meter above ground level and protected against curved fire projectiles by a sighting device and a "Diamond" ditch.

The main body is made proof against blows (particularly from shells) by making the mound of earth at least two meters thick (1). In addition, the earth is given sufficient consistency by a covering of sod.

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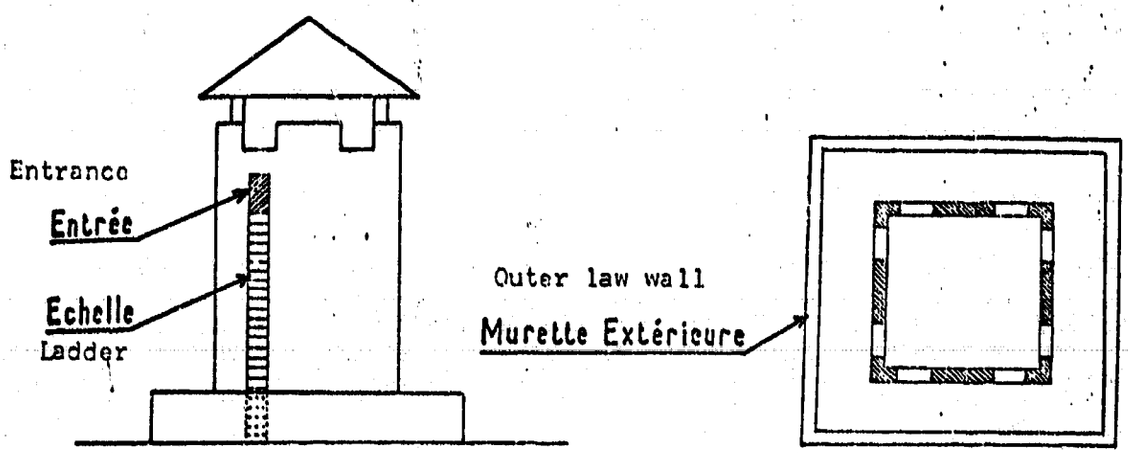
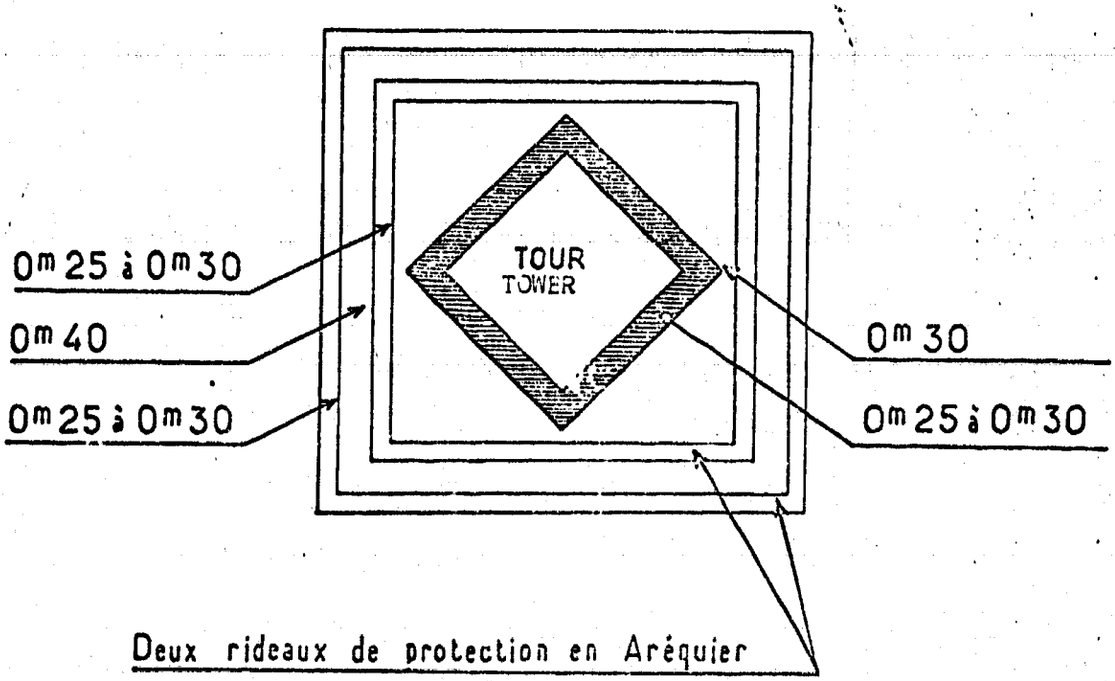
(1) The earth comes from the digging of the DIAMOND ditch.

WATCH TOWERS 1948



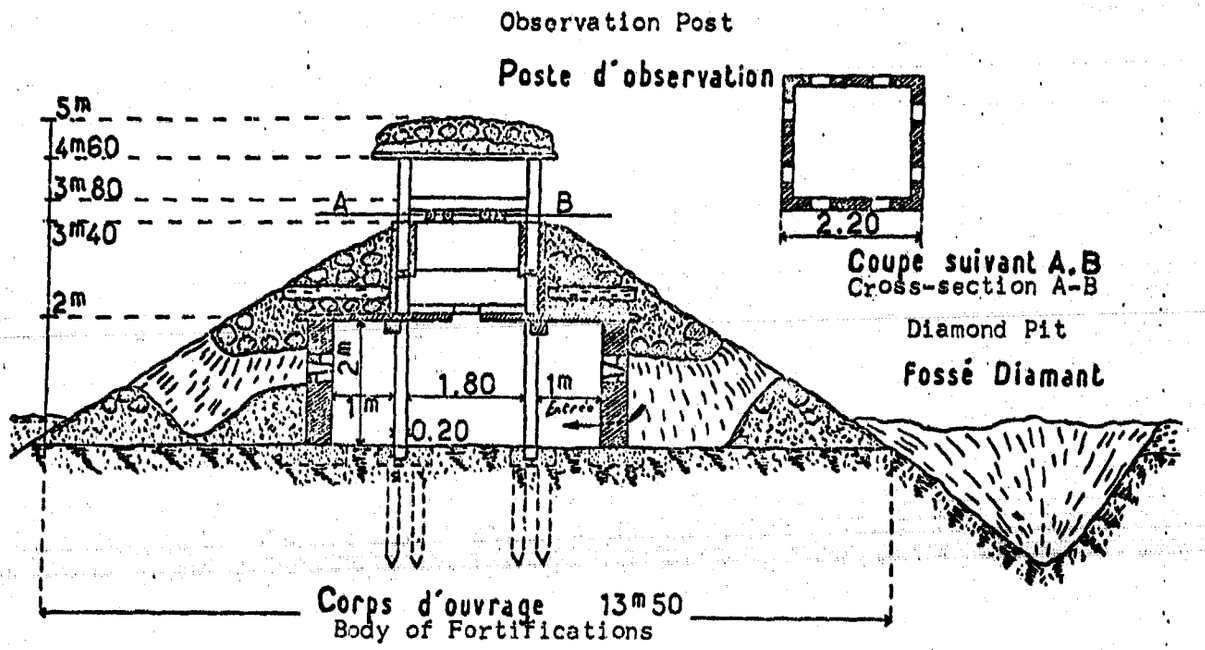
TOURS DE GARDE WATCH TOWERS
en 1949 – 1950 1949 - 1950

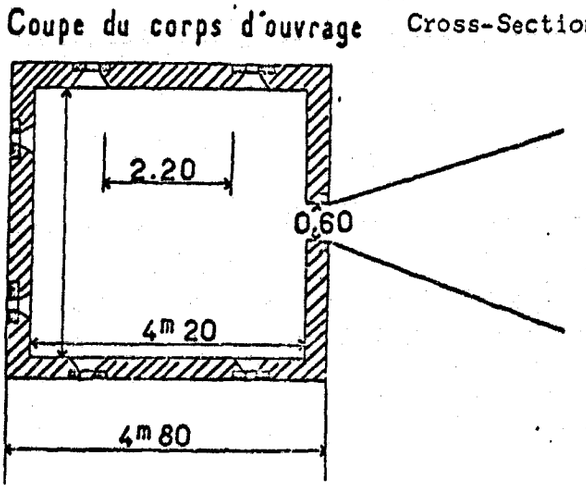


Deux rideaux de protection en Aréquier

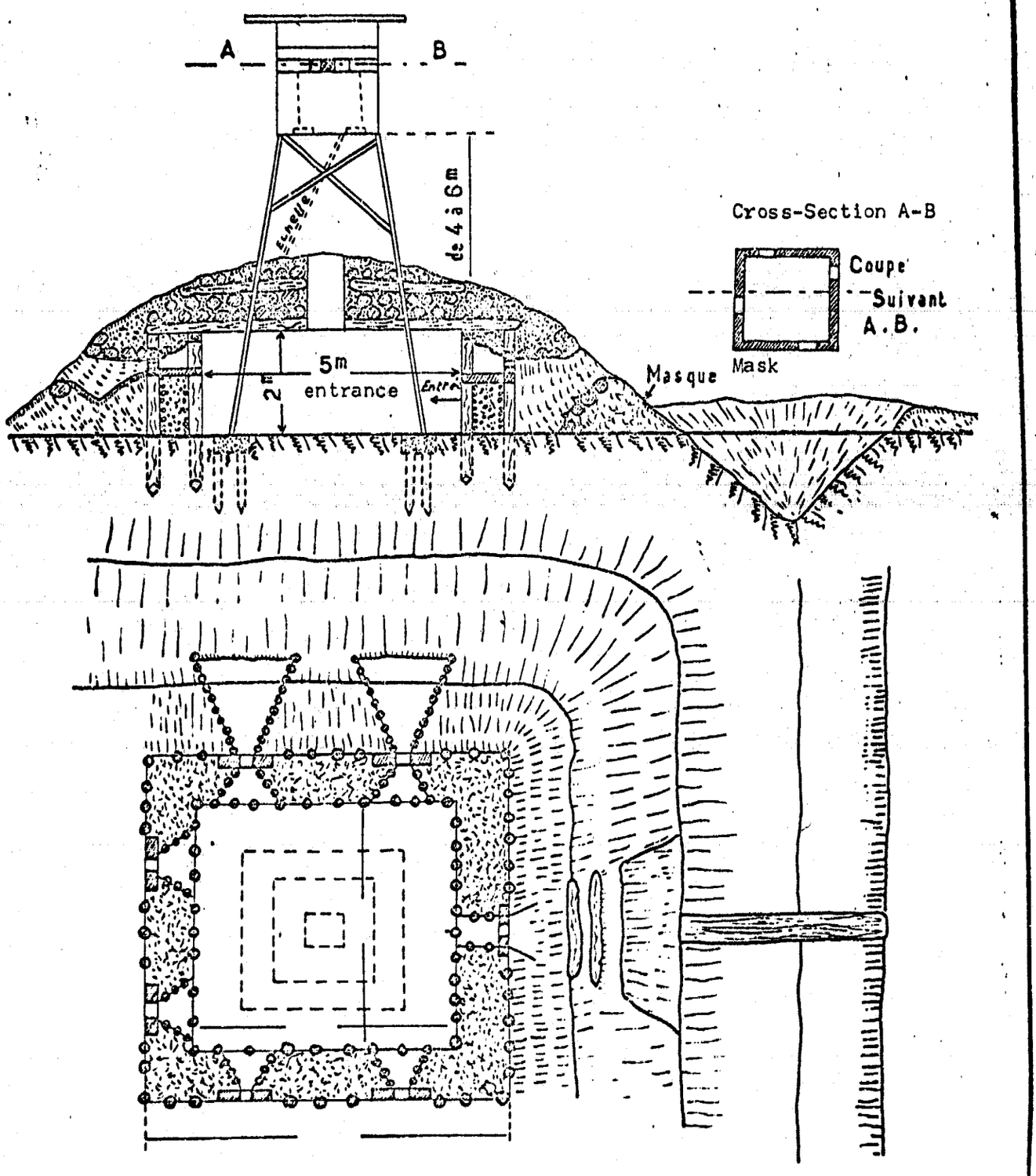
2-screen Arequier Protection

TOWER "ENGINEER F.T.S.V" TYPE

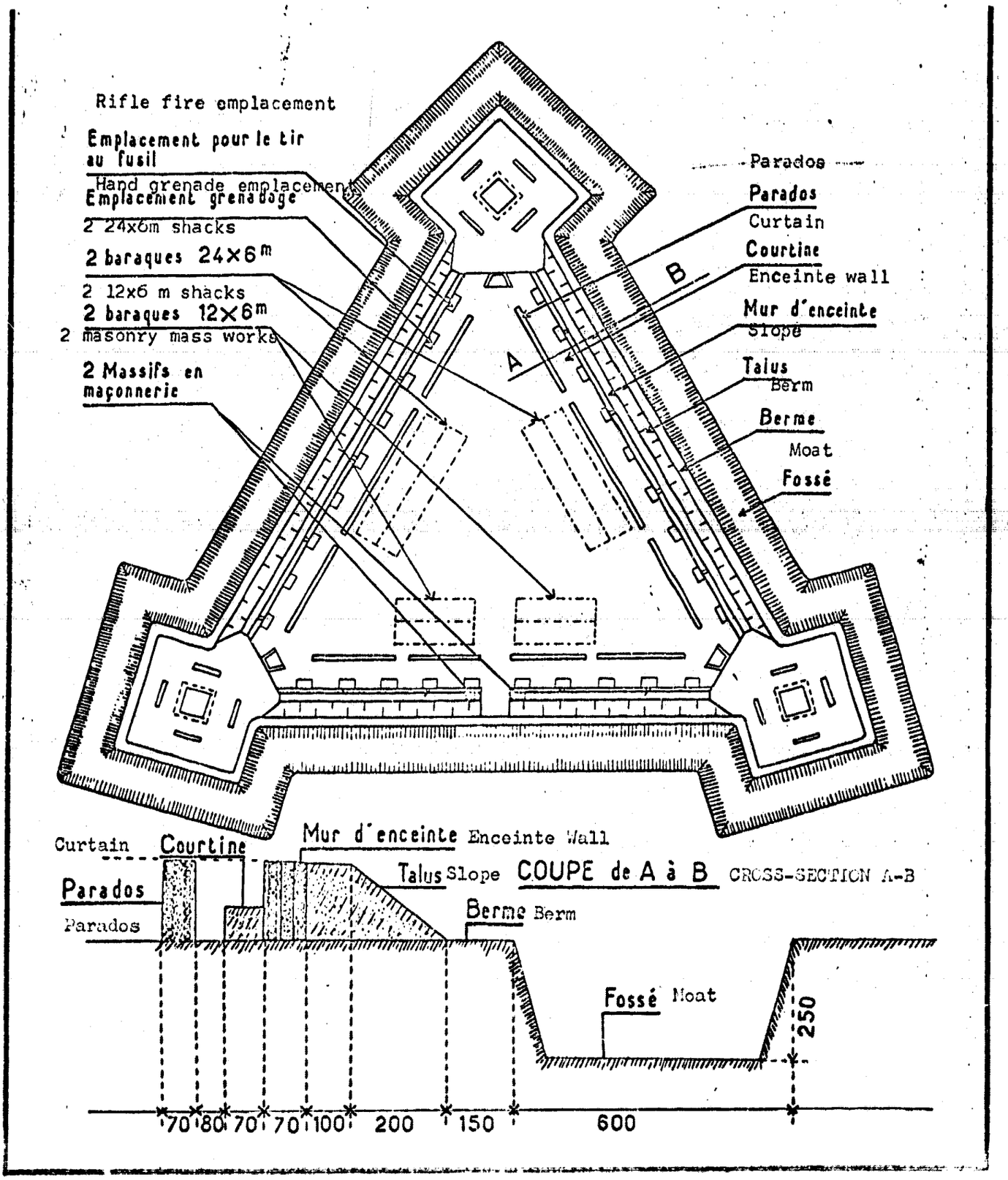




TOWER WITH METAL LOOKOUT



TRIANGULAR POST for 60 men



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The lateral sides are composed as follows:

- of bricks or of 30 to 40 centimeter thick agglomerated concrete;
- or a wood or log framework, supported by stakes driven in the ground (strengthened at the upper portion by bolted braces);
- or a 90 centimeter thick wall of dirt and logs.

Finally, the upper side can be covered by a thin concrete coat. Its protection is ensured by a 75 centimeter thickness of dirt and logs (two cross-coats).

The observation post is unusual in that it is absolutely independent from the main body from a construction stand-point, consequently from the resistance to blows stand-point. Its frame can be of metallic tubes, which offer the advantage of lending the minimum of hold to projectiles, or of timber pillars.

Moreover, the observatory is of the smallest size possible (1½ square meter) while allowing use of an automatic rifle.

The sides are proof against machine-gun bullets and the height of the roof permits grenade launching.

SOUTH VIETNAM 1952-1953-TYPE POST.- This small structure was nevertheless capable of resisting to a regular assault.

Since it was designed for usually flat terrain which characterizes South VIETNAM, it could take on a geometrical form and the triangular shape was generally adopted as it required the minimum of flanking elements while facilitating reciprocal supports.

ENCLOSURE AND THE BLOCKHAUS .- The enclosure protected the defenders against bullets and, to a point, against shells, while at the same time constituting a last obstacle to the assault.

It was made up of a dirt and log low wall of a height of at least 1 meter 80 and connected on the outside to a ditch by a glacis. This rampart had a thickness of a minimum of one meter.

A certain number of crenels, calculated in proportion to the strength of the post, were built, and each of them had a roof and a splinter-proof shield.

At each salient of the structure was a flanking blockhaus (1) that jutted out and gave the image of the towers being built in South VIETNAM from 1952 on.

The blockhaus was expected to not only enfilade the networks with close, grazing fire, but also give the capability to observe the surroundings and throw grenades.

Thus, the fire chamber had crenels which could never be frontal (2). It was connected to the observation and grenade floor by a trap. The latter could, however, house an automatic weapon for distant firing.

COURTYARD AND REDOUBT.- In case of an attack, the post courtyard was a shelter for shells, therefore, it required splinter-proof shields and, if necessary, underground communications to allow the defenders to reach their combat positions when the opposing shelling surprised them brutally.

Mortar(s) with which every garrison was furnished had to be buried in pits supplied by zigzag trenches. The same was true all the more so when the post was equipped with one or two fixed artillery pieces.

The redoubt covered the vital elements of the post, that is the C.P., the radio (3), a munitions reserve; but, in addition, it had to provide shelter for a counter-attack element.

Last, it had to be a refuge for the men who had been thrown out of their combat positions. Its location had to be such that it was spared the first blows. A centrally-located redoubt is the best answer to these requirements, but it implies a smaller surface inside the post, and especially the addition of extended fire weapons. So, it is best to leave it to rectangular-shaped posts.

---

(1) In some rectangular-shaped and little exposed posts, we could do with two diagonally positionned blockhouses in order to flank the four sides.
(2) The frontal crenel can be exceptionally justified only to cover a dead angle out of range of the neighboring blockhaus and when grenades are not sufficient.
(3) Spare antennae had to be provided and their easy replacement carefully planned.

Regarding triangular posts, the redoubt is constituted by one of the angle blockhaus in most cases. It is then covered by a triangular enclosure, two sides of which merge with the post rampart and the third formed by an interior low wall in the shape of an arc, joining those two sides.

LIVING QUARTERS AND ARMORY.- While providing a certain comfort to the garrison, the living quarters must meet the defense requirements, especially not obstruct the redoubt's range of fire or interfere with the manning of mortars.

They must shield the occupants from shells (at the minimum from splinters), and also from any fire, which will often lead to have them buried or laid as close as possible against the rampart (1). The aid station of course will benefit from the maximum protection available.

Finally, some of the entrances provided with zigzag trenches and crenels to allow a close defense in case of enemy penetration inside the post (namely in case of treason).

The armory(ies) must be located within the buried quarters and proof against mortar blows (2). In addition, they are proof against thefts (doors solidly closed, windows, if there are some, barred); those for ammunition must be proof against humidity and, as far as possible, meet with ammunition conservation requirements.

Fuel supplies must be protected against fire and especially against deflagrations. Except if it is too small, it must be well ventilated and far from the munitions depots and from the redoubt. If the fuel supply is considerable, it must be placed in the open air and distributed among several merlonned interstices.

The risks of theft being inconsequential, it might be advisable (especially if the post is small), to store fuel in interstices located outside the enclosure, widely spaced but close the interior network of accessory defenses, so as to remain under surveillance of the guards.

---

(1) Naturally, their construction will be of the strongest, and any inflammable material will be proscribed.

(2) Two layers of logs and dirt are necessary to give a minimum thickness of 75 centim.

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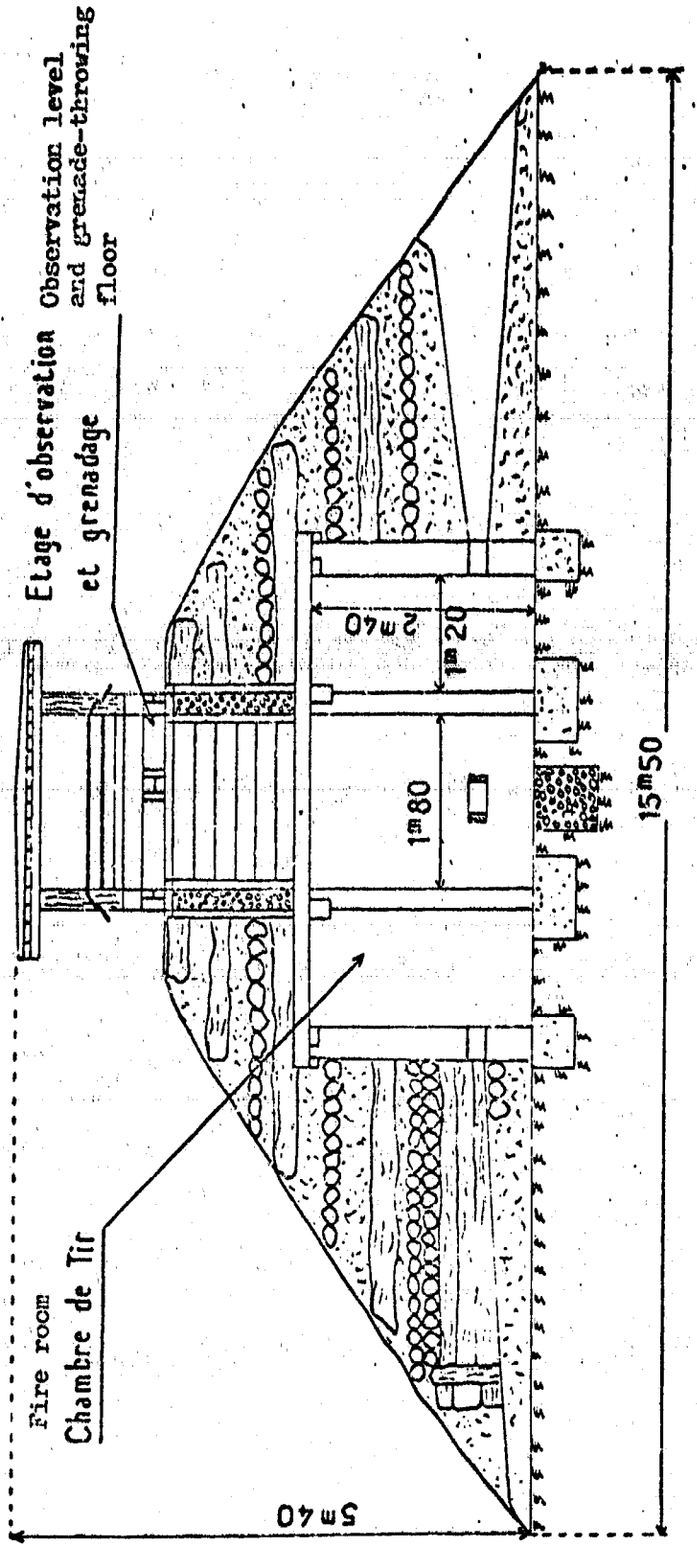
83 A

SKETCH OF BLOCKHAUS



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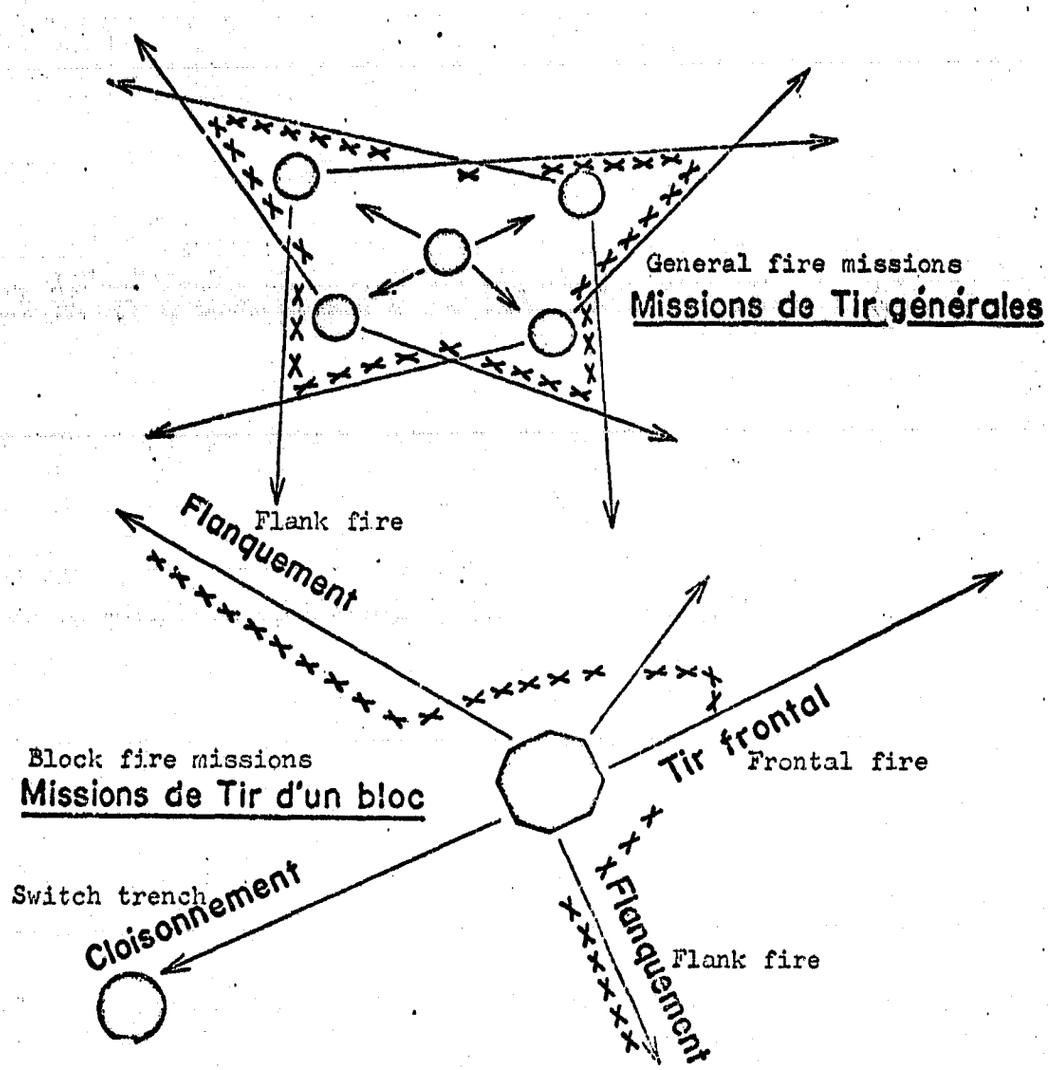
TONKIN CONCRETE BASE OF OPERATIONS.- The concrete base of operations covered a much larger surface that the older posts for it was made up of several peripheric blocks, supported by one or several central blocks, the whole being surrounded by a thick barbed wire net.

The structure represented then the concretion of a plan of fire and the number as well as the location of the blocks was a function of the terrain characteristics.

ARRANGEMENT OF EACH BLOCK.- As the elementary cell of this type of fortification, the block was to generally insure two flanks and one interior partitionning, while permitting, at the same time, a frontal defense at short distance.



Some blocks, moreover have been conceived to accomodate an observatory, or execute a remote action fire, or an anti-tank fire.

Their construction was subjected to hardships which have influenced the volume, that is the number of arms and crew as well as the degree of protection.

The problem was to act quickly, in a guerilla atmosphere with rare local materials, or they had to be brought from far away (stones, sand), with a qualified manpower in small number and ever-changing, insufficient funds, and we had to build on soft ground which could only stand a light single pressure.

All these difficulties led to the development of a small structure, of a shape easy to apply, capable of using in some parts some replacement equipment, with only the strict necessary protection against the opposing weapons so as to be light and economical.

But before developing the standard block which is the object of our later study, there were numerous tentative efforts. From 1951 till the end of the war, the Engineers, in fact, had planned and built many models before developing a completely satisfactory form.

The following diagrams will give an idea of the peripheric block's evolution which was effected by simplification.

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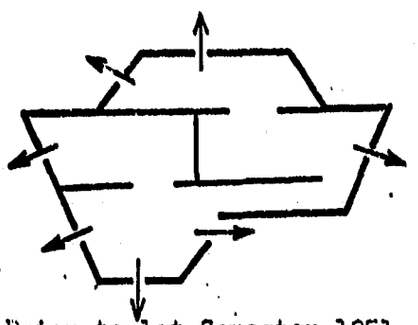
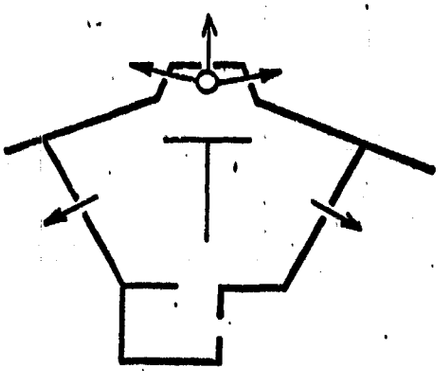


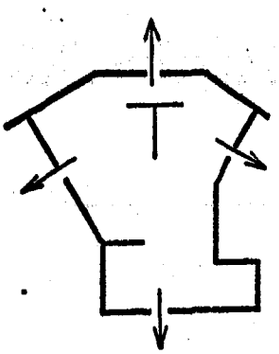
Prior to 1st Semester 1951
150 m3 Block

Avant 1er semestre 1951.
Bloc de 150m3



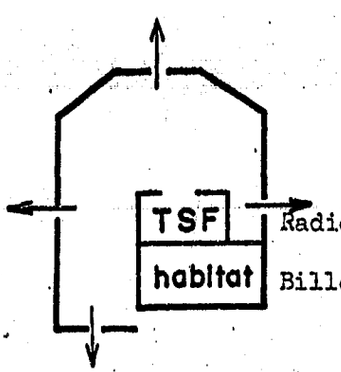
2nd Semester 1951
135 m3 Block

2ème semestre 1951.
Bloc de 135m3



1952-1953
Light Block 110 m3

1952-1953.
Bloc léger de 110m3



Beginning of 1954
130 m3 Block

Début 1954.
Bloc de 130m3

As far as the central blocks are concerned, we started with the circular form which is the most rational at first glance but, in fact, of a very difficult construction, passed to the hexagon (with the addition of caponiers or living quarters), then to the square.

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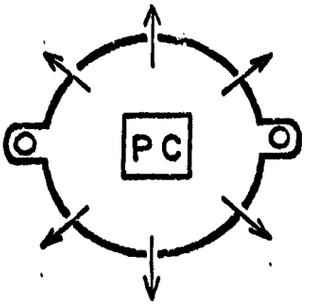
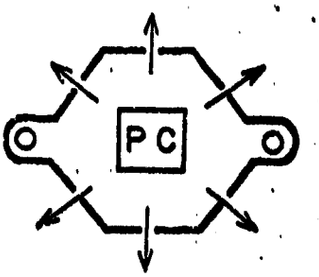
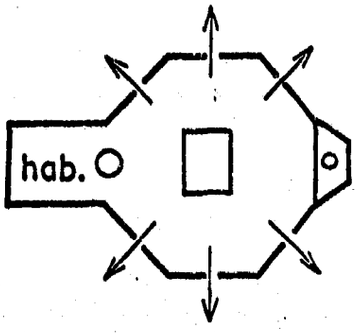


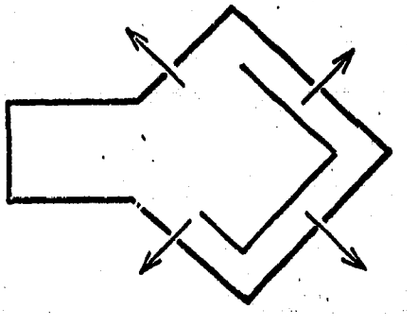
C.P.
End of 1951
200/240 m3 Block



C.P.
1952
225 m3 Block



1953
225 m3 Block



End of 1953/54
130 m3 Block

At this final stage of evolution, the central block merged with the peripheric block and we achieved the standard block 53-54 hereafter described:

Experience had finally led to consider only three types of blocks:

- One of them, a light fortification, would insure protection No.2, that is to say against the 81 m/m shell of great capacity or against an isolated 105 m/m blow. This would be the all azimuths block.
- As for the two others, built as a medium fortification, the differentiation between central and peripheric was kept, but both of them would insure protection No.1, that is to say against an isolated 155m/m blow or two 105 m/m blows.

The all azimuth block as a light fortification could be built in a month 1/2.

There were four firing directions obtained by so-called "universal-High Alps Type" battlements, each of which was usually lined with a small crenel for L.G.2 grenade-launchers (since the same crew manned the automatic weapons and the L.G.2 in case of necessity).

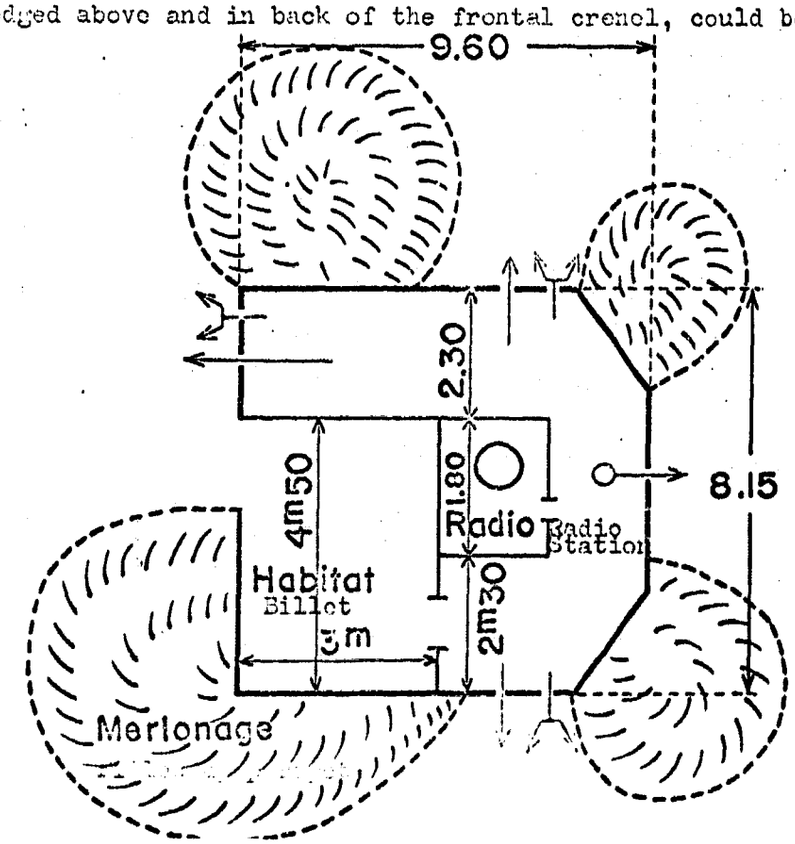
The radio, telephone and a bunk for the radio-telephone operator were grouped in a small room, 2 meters by 2 meters, connected with the observatory.

Laterally, living quarters were planned for eight lying men. Spouts for grenade launching were arranged at will near the crenels and accesses.

The latter were located under the shooting crenel in back and in the living quarters. They were obturated by double armored doors with a concrete plaque in a "sandwitch" manner. Finally, ventilation of course was provided through air-chimneys piercing the ceiling.

With a 30 centimers thick flagstone and i meter piedroits, the structure, completely equipped totaled 130,3 cubic meters.

Its layout was such that an observatory, furnished with a periscope installed above the radio-telephone room, or a tank turret (with a 37m/m, or a 47 m/m, or even a 57 m/m gun) lodged above and in back of the frontal crenel, could be added.



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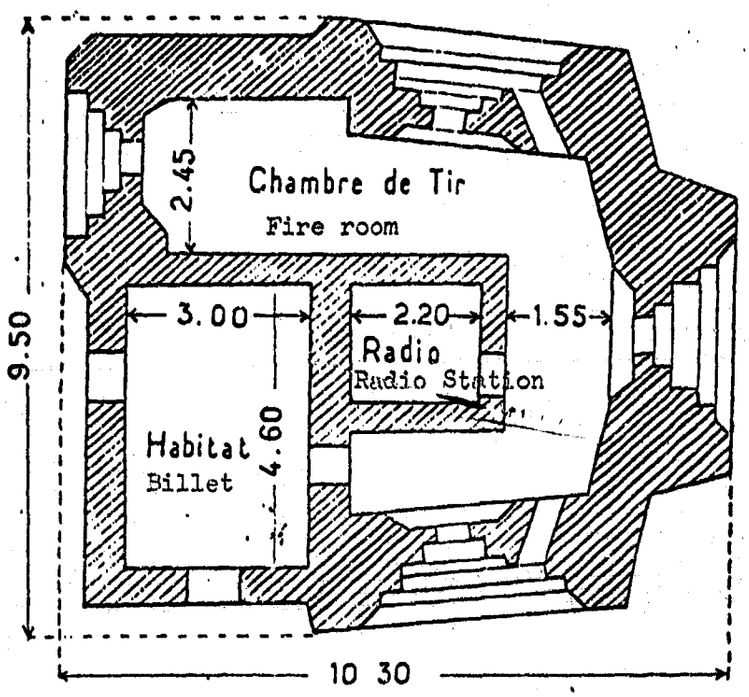
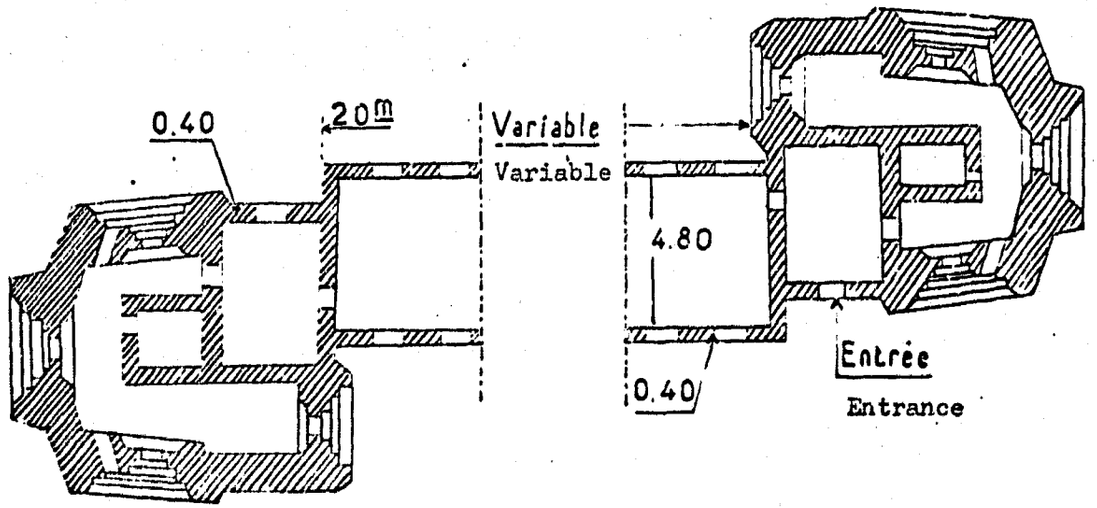
88 A

ALL-AZIMUT BLOCK



BLOCS ASSOCIÉS À UN CASERNEMENT

BLOCK CONNECTED TO A BILLET



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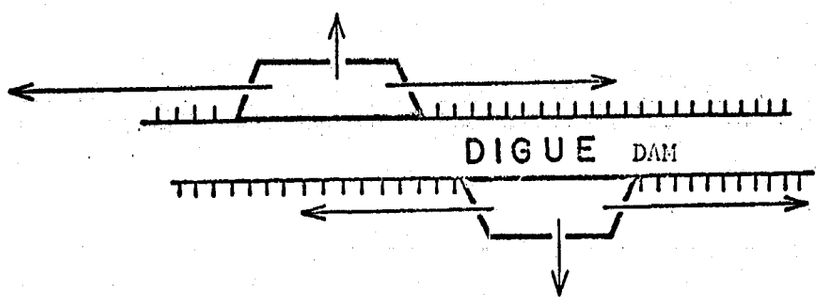
The all-azimuth blockhouse was first built of composite materials (masonry piedroits, reinforced concrete for the flagstone and revetment), not so much for reasons of economy (1) as for questions of technical feasibility (difficulties with the framing and shortage of irons). But the damage suffered at the KESAT and YEN VI posts after an anemy attack proved that one cannot cheat with fortifications.

Later, a mortar shelling on a garrison at BAN YEN NHAN in 1954 showed that the 30centimeter flagstones did not provide protection No.2 and that a thickness of 60 centimeters was necessary to obtain the desired resistance.

ADAPTATION OF THE BLOCKHOUSE.- In some cases it was necessary to place a blockhouse on one of the numerous dikes to be found in the Tonkinese Delta. In order to avoid a gap in the firing range we "splintered the work" (2) that is we split the structure into two semi-structures implanted on each side of the embankment.



In other cases the high number of peripheric blockhauses (usually over 4), made the protection afforded to the central one. Two were therefore necessary.

In addition such bases of operation had to be furnished with adequate installations to house troops passing through, personnel of a battery position, etc.

From this emerged a central structure, composed of two all-azimuth blockhouses connected together by some quarters. Those were formed of standard cells, measuring 6.40 meters by 4.60 meters, and varied in number. Ventilation was insured by windows under the flagstone, placed in position.

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(1) It came to less than 10% of the cost.

(2) It was naturally impossible to cut through the dike for fear of provoking a flood.

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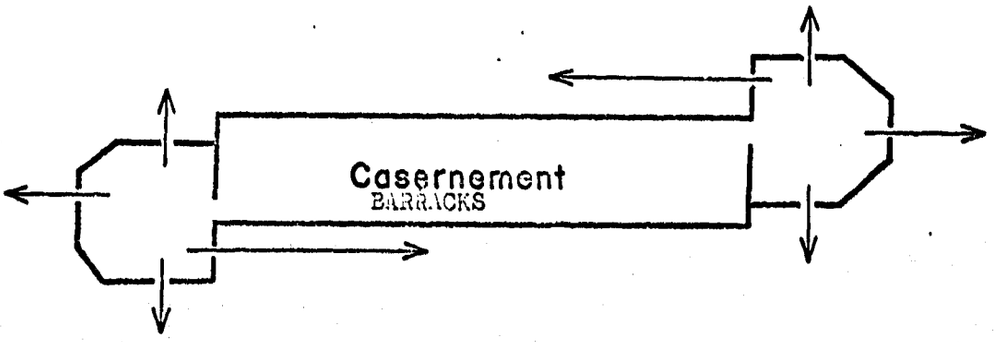

THE TWO MEDIUM BLOCKHOUSES.- The attached sketches show the layout of the blockhouses that were built in 1953 with special concrete.

Protection No.1 was insured by a 90 centimeter flagstone with less grillwork. The peripheric blockhouse measured approximately 150.3 cubic meters and resembled a simplified double casemate, with a front caponier provided with a frontal firing crenel. The flanking crenels were protected by a small wing-wall of 1.20 meter. A 3.60 meter by 4.40 meter protected habitat was installed in the back for the garrison.

The central blockhouse measured 245.3 cubic meters and derived from the hexagonal type with two turret-equipped caponiers, to which were joined a habitat, C.P., and machine shop.

A communications room was located in the center of the hexagon, under the observatory turret. The machine shop could be equipped with either a generating set or batteries. (1)

---

(1) All crenels were of the "Caric" type (60°) or "Gazin" type (90°) completely obturating the apertures.
An artifical ventilation was necessary, which required a more modern installation than the light blockhouses.

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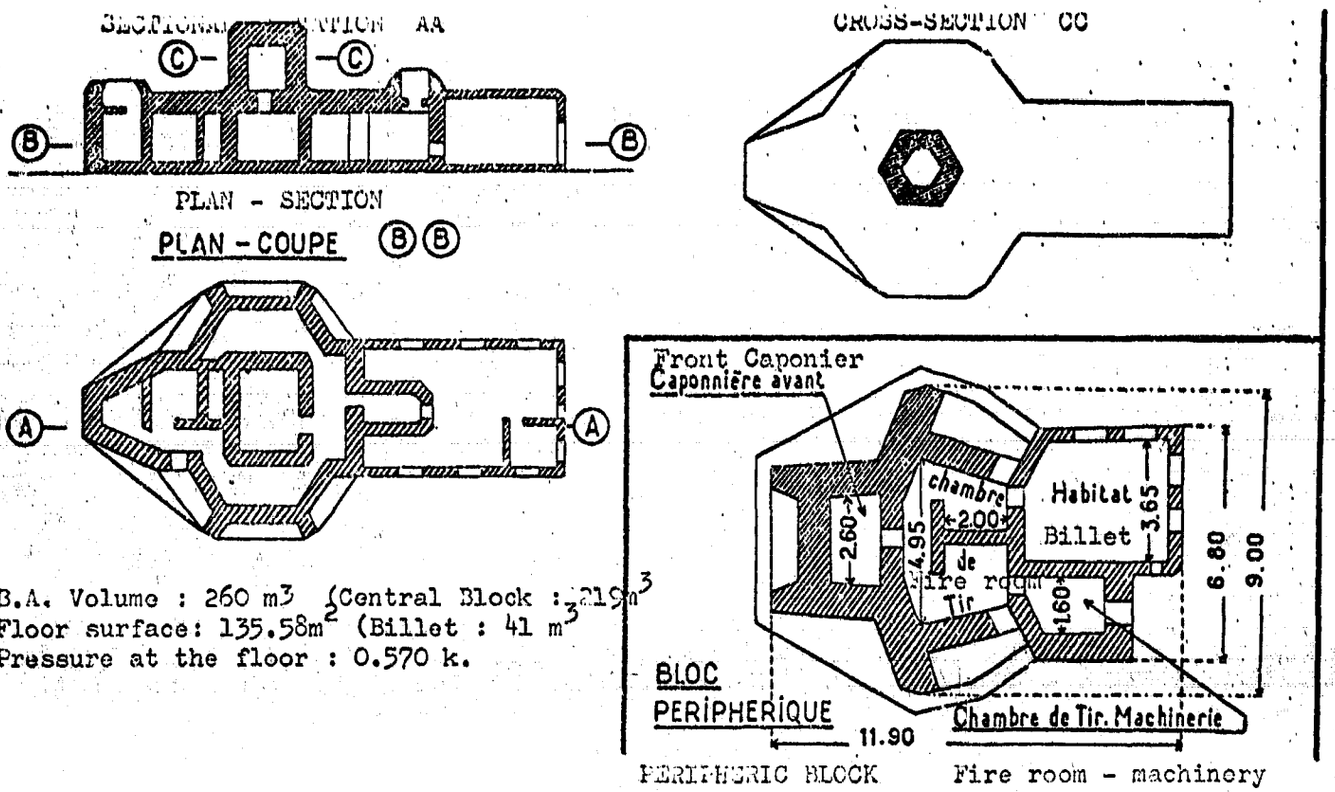
DOUBLE CENTRAL BLOCK WITH RESTING ROOM



B.A. Volume : 260 m3 (Central Block : 219 m3
Floor surface: 135.58m2 (Billet : 41 m3
Pressure at the floor : 0.570 k.

PERIPHERIC BLOCK Fire room - machinery

---

(1) All the loopholes are of the "Caric" type (60°) or "Gazin" type (90°) with complete obturation.

Artificial ventilation is necessary, which calls for a system less primary then that of the light blocks.

RESISTANCE OF BLOCKHOUSES.- A series of tests were made on light fortification blockhouses of 140 cubic meters (1) under the worst possible conditions for them (structure without merlons, without camouflage, favorable position of guns).

---

(1) These blockhouses had the following characteristics:

- frontal wing-wall and piedroits = 1 meter of reinforced concrete.
- flagstone: 0.90 meter.
- lateral and back piedroits: 0.50 meter.
- entrance door for personnel with double armour.

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The results obtained with different types of projectiles are given in the following table:

Type of Projectile used	E F F E C T
Vietminh Bazooka	1/- normal incidence 60 cms. of reinforced concrete pierced. 2/- incidence higher than 45° ricochet
57m/m recoilless gun shell	within 500 meters negligible effect
155 HM1 shell	90 shells fired, 10 of which were straight hits. - 2 made funnels 0.50m in diameter and 0.40m in depth in the flagstone. - 6 hit piedroits protected by 1 meter of rock-work. No considerable damage. - 2 hit the frontal crenel and the caponier had a hole ½ m. square.
Napalm	12 bombs fired, 2 of which hit their objectives. - slightly irritating atmosphere. - slightly modified temperature. - junction to cracked mortar.
Plane rockets	22 rockets fired, 5 of which hit their objectives. - ricochet on flagstone. - perforation in piedroit 1½ meter square. - inner side riddled with small splinters.
250lbs. bombs	22 bombs dropped, only one of which hit the objective and ricocheted on the flagstone making a 14centimeter deep hole. The other bombs, dropped over swampy terrain within a 150 by 50 meter rectangle, did not even upset the barbed wires.
500 lbs bombs with time-delay fuse	- 8 bombs dropped at a distance of 15 to 35 meters from the structure. None hit the objective. The blockhouse tipped over from 3 to 4 centimeters. At the end of three days the tipping had reached 20 cm. (vertical lines deviated from 2 to 3%).

With all the caution that is required in the evaluation of such an experiment (1) the following conclusions can be formulated:

- Concrete (even in a small volume) is proof against small and even medium size projectiles which do not hit under almost normal conditions.
- The planes used in the experiment were not hampered by any anti-aircraft artillery, the objective was not camouflaged; however, one single hit was realized out of 30 bombs. As one might have expected, rockets were much more accurate.
- Shells were of course the most deadly weapon.

We naturally tried to guard against them by installing a bursting panel in front of the wall to protect. But the firing crenels or observation crenels, of course, cannot be hidden. In addition, their protection with wire-netting (even tight) remains risky, while interfering with visibility.

On the other hand, the blind walls (whether the ones of the blockhouse or of the fuel tanks, for example) were effectively protected by a brick bursting wall (or made of dirt packed between two rows of stones) or a tight bamboo wall.

This bursting wall must be located at least two meters from the wall to be protected.

The experience of the last few weeks of the war seem to confirm these data. The Viets furious assaults on SONTAY, VIETRI, LUC NAM and SEPT PAGODES over the last few weeks, in particular, have met with bloody failures. But the garrisons were then adequately supported by our artillery and the nearness of several Mobile Groups.

It has been noted on several occasions that the concrete was not the best. This was due to several reasons:

- The construction companies were not supervised adquately and sometimes cheated on the materials' proportions (cement) or the quality (sand).
- The iron-work was sometimes badly done for lack of good specialists in the field of reinforced concrete.

---

(1) The neutralization effect on the garrison actually depends on too many factors to be gauged.

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Finally the poor quality of the soil was the cause of many disappointments and it took a long time to develop the technique applicable to fortification of the Deltas.

And last, the living conditions were quite poor whatever the type of structure. Two problems, in particular, had not been satisfactorily resolved: That of ventilation and lighting.

OBSTACLES.- Any V.M. attack of a post began with a silent approach phase, during which the opponent deployed his assault groups as close as possible, while at the same time preparing to open breaches in our barbed wire network.

This task was given to "dynamiting cells", who placed bengalores of fortune, made up of bamboo sticks filled with explosives (1). Their mission was also to clear mines.

In order to detect this ants' work, we had to create a complete watch system:

- Alarm devices and patrols, operating far enough to surprise the arrival of the assault groups.
- Dogs to watch specially the networks.
- Finally, watchmen to watch at the observation posts.

Experience has demonstrated that several 6 to 8 meter-thick networks (2) were required to stop the enemy, and that the most favorable disposition included a panel preventing mat-crossing.(3)

It goes without saying that the networks (or the panels) were to remain transparent and completely cleared of all vegetation, as well as the strip of land on which were applied the line of defense fire.

---

(1) The cells tried also to creep close to the blockhaus to place charges concentrated on contact with the crenels. The explosion of charges was almost always the signal of attack.

(2) In order to avoid the case where one single charge will shear the strip.

(3) The V.M. feared the straight panel, 2 meters high, going 40 cms deep into the ground (to prevent its crossing via a tunnel), made up of barbed wire mesh as close as possible (20 cms maximum) strongly bound at every angle. This panel had to be supplemented by a low network, surrounding it on every side.

Maintenance of this stripped "billiard table" required constant, but essential work.(1)

Sometimes the network's ground was covered with sand, the clarity of which facilitated surveillance.

The ditches, as for the XVIIth century fortification, were used especially in South VIETNAM. The model ditch was to be 6 meters wide, 2.50meters deep, filled with water if possible, at least bristling with bamboo darts for the Viet-Minh had found a way to cross on ladders thrown overboard. In fact, the ditches were of insufficient dimensions and this defect took all their effectiveness away.

Mines gave us more disappointments than satisfaction, for they have probably resulted in more losses in our camp than that of the enemy due to the many hardships they imposed. When placed inside the networks, they prevented later cleaning and the best proof of this is given by the fall of Camp ERULIN (TONKIN) on July 14, 1954.

This structure was surrounded by a deep barbed wire network, mined, and soon was invaded by a luxuriant vegetation. The successive chiefs of the post attempted to get rid of it, but fire gave no results and the cleaning by hand was the cause of many accidents. Thus, it was abandoned.

In the night of 13 to 14 July, the V.M. thus found a perfect undergrowth through which they successfully infiltrated with a diabolical dexterity, without suffering any losses.

The placing of mines within the networks should therefore be avoided. It is better to place them in an accessible and open location. They should not be left permanently, otherwise the enemy finally detects them, takes them up and uses them against us.

Contrary to the network, a minefield must not constitute an immutable obstacle, but be constantly modified. This entails of course rigourous hardships for the laying, lighting and detecting, which are not compatible with frequent changes of garrison.

---

(1) Several tests with herbicides were made but none were satisfactory. The power of vegetation in Indochina could have been conquered only by a massive use of such products, making the defense prohibitive.

LIGHTING.- Artificial lighting was necessary for the defender to adjust his fire against the V.M. nocturnal assault, and while waiting for the attack, this lighting system was to facilitate observation, particularly surveillance of the obstacles.

Permanent lighting by a belt of bulbs to illuminate a strip of network can be excellent, providing it is powerful enough to have no shadowy areas. However, it is not proof against an accidental failure, or against a failure brought about by the shearing of conducting wires or some form of sabotage.

In addition, it presumes of course an appropriate power supply: sector current or generating set. It was installed near the end of the war for the main sensitive points (plane parking, munitions dumps, fuel depots, important C.P. etc..).

Intermittent lighting by search lights proved to be effective only on the condition that they were well served. Routine, here as anywhere else, was the worst enemy, for a beam directed at regular intervals and sweeping the terrain always in the same direction was perfectly ineffective.

In the TONKIN bases of operation, the blockhouses were equipped with search lights (usually automobile lights) installed in the turrets of the central observatories or on the peripherics. But the latter were often unusable at the time of the attack and lighting was provided only by the central element.

The set-up adopted for the observatory of a central structure was the following: Four special crenels were worked out above the observation crenels, for automobile lights. The horizontal sweep of each light was better than 90°, consequently an all-azimuths lighting was the result.(1)

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(1) The equipment of a central blockhaus, with this set-up, and the power supply requirements for interior lighting and ventilation necessitated a 5 to 8 Kw generator set. When there was no generator set, feed was obtained by 6 to 12 volts batteries that were recharged periodically by Communications generator sets.
The Experience has showed that the model search light had a 25 to 30 cms diameter, a 500 watts power, a useful pencil of 50 to 300 meters.

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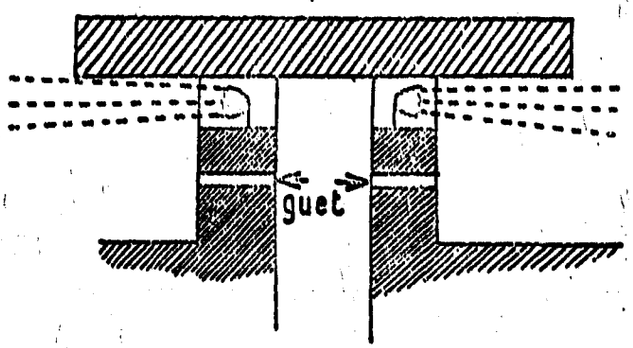

WATCH

To this surveillance lighting system was added an alarm lighting system which was obtained by pulling light traps, by lighting mortar shells and finally flares, which had to be stocked in sufficient quantities.

THIRD PART

UNCONVENTIONAL ASPECTS OF THE WAR

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C A P T E R I

ACTIONS IN THE GREAT WASTELANDS

To the war without front that took place on the territories for whose control both sides contend with each other, and to operations conducted along the boundaries of zones owing allegiance to the V.M., can be added another form of hostilities, which some have appropriately called: "The War of the Great Wastelands".

The contrast was, in fact, striking between the engagements that characterized each day in the Deltas or the coastal plains and the "countryside" ones whose theatre of operations was in turn part of the immensities of the High Tonkin, the Laos and the Central Plateaus, with an often rugged surface.

In these vast territories, the V.M. had the initiative of the operations, if we make exception of our activities of 1947 tending to reduce the LANGSON-THAI NGUYEN-CAO BANG triangle, then controled by the opposing forces.

Actually, the Viet Minh quickly realized that it could not prevail by main force in the rice field areas, as the number and fanatism of its troops were not sufficient to compensate for its material inferiority.

VO NGUYEN GIAP had understood, as early as 1950, that the results to be expected from guerilla warfare alone were limited and he wrote at the time: "It has been demonstrated that, without the war of movement, guerilla warfare can only develop to a certain point: Beyond that point, it slows down".(1)

(1) From the book "War of Liberation and People's Army".

The patient edification of his Battle Formation was going to give him the essential instrument to this war of movement.

The choice of the objectives remained: "Economic targets were not what the Viet Minh could aim at (there were only two such targets in Indochina, the two interdicted deltas), but outlying zones, where the French were weak, but the loss of which would nevertheless deal them such a political and psychological blow that they would have to, either bring in reinforcements conditions of inferiority which would weaken their vital position in the Delta, or suffer the results of their incapability of defending them...".(1)

The "Great Wastelands" offered also the advantage of being suited to the fluidity of the V.M. forces and to their knowledge of the jungle.

During every Winter season, was to deliver an offensive in the provinces where we maintained only a few garrisons: now to cover a communications links junction, now to support civilian authorities, now still to prevent the enemy from proceeding undisturbed to the setting up of cells within the populations.

Therefore, our parry could only consist of reinforcing some of the posts in order to preserve them and establish new mooring bases (land or aero-land bases). Then, counting on this infrastructure, we were to attempt intercepting the opposing columns or cutting their supply lines.

But the difficulties of this enterprise gave rise, little by little, to another tactical solution: the creation of aero-land mobile, to no longer envisage sweeping and pursuit operations, but on the contrary, to attract the enemy and constitute the localizing agent of his offensive.

---

(1) Outline of the Viet Minh strategy - Colonel X...

HOLDING OF GARRISONS.- During the first years of the war, our Mobile Forces directly intervened to help our posts of the Highland and Laos, but the scarcity or the absence of communications means forced us very soon to make wide use of air-transport or air-drops, to reinforce (for example: CAOBANG before its evacuation), as well as to take back (DONG KHE in 1950), or still to extricate (for example: NGHIA LO in 1951).

For reinforcement operations, it was proven at that time already, that it was necessary to dispose of an air-field capable of accomodating transport aircraft, while extricating operations pointed up the advisability of acting on the supply lines of the adversary. Indeed:

"Only large-scale manoeuvers, besides the land routes give results against an adversary who practically always dodges a direct attack, who systematically seeks nocturnal attacks or the ambush-type battle, but who must live off the land or be supplied by transport".

"These manoeuvers are particularly pay off when they can reach the travel zones which the Coolie columns are compelled to use and intercept them".(1)

From 1950, the strength of the V.M. attacks became such that our array of posts proved more and more difficult to maintain. Sometimes, we were able to preserve it with an elastic defense: such was the case of NGHIA LO in 1951:

"When, a few weeks before our HOA BINH offensive, the Viet Minh had attempted to seize NGHIA LO in Thai country, it had only succeeded, with the conditions under which it had engaged the 316th Division, in giving the dfenders the opportunity to feign retreat, then exert a brutal reaction which had been so costly to LIDDELL HART and MAO TSE TOUNG".

"Slowed down by an elastic defense, the assailant was counter-attacked by two Airborne Battalions dropped on one of its flanks, it stumbled on its objective which had been reinforced, and fell back to the Red River with heavy losses...". (2)

(1) Colonel B... Zone Commandant.

(2) Colonel X... Outline of the Viet Minh Strategy.

It also happened that the garrisons were reinforced in time thanks to an airlift: MUONG SAI, LUANG PRABANG, PLEIKU, or extricated by a land action combined with a threat on the V.M. rears (ANKHE, 1953 and the attack on QUI NHON).

Often, however, the garrisons had to fall back in order to escape total destruction by the enemy. These falling back operations were generally quite costly, in spite of the support given by our mobile forces to disengagement operations. The results of the CAO BANG, SAM NEUA, ANKHE withdrawals are well known, and we will cover this subject in more detail in the chapter devoted to forest actions.

More particularly, an Officer who took part in the LAOS operations of 1953 wrote: (1)

"The falling back of the SAM NEUA (2), SAM TEU, MUONG SOI, MUONG HIEM garrisons, etc., has once again pointed out the difficulties of such an operation carried out under enemy pressure".

"The teachings and the errors to avoid can be summed up as follows:

- Evacuation of a post must follow a plan prepared as minutely, even rehearsed, as a ship's abandonment plan.
- Falling-back routes must be carefully reconnoitred.
- Relief must be total.
- Action of the Leader, at all levels, is of the utmost importance in order to avoid general confusion, the risks of which are augmented by nervous tension and fatigue".
- The "Maquis" ' presence is a major asset for aiding the men who have fallen out".
- In addition, it is necessary to emplace aid posts on the falling-back routes that have been chosen.,".

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(1) Captain X... Chief of a Sector G-3.
(2) Only 220 men out of the 1700 who left SAM NEUA on April 12, 1953, were successful in reaching as a group the JARRES PLAIN, after an exhausting 8-day march. During the following weeks some of the missing elements were recuperated by our Meo Maquis. However, the major cause of vanishing of the SAM BEUA garrison must be mentioned as the lack of cohesiveness of some indegenous units.

PURSUIT OF THE ENEMY.- The difficulties our mobile forces met with to uncover the enemy when they operated in the deltas, where they manoeuvered in the squares of a checker-board made up of the controled roads and of posts arranged in quincunx, give an idea of what they could be when trying to uncover enemy units on a vast and covered terrain.

Our failures are, alas, too easy to describe:

"The various campaigns that took place demonstrated, in a general way, the incapability of our troops to annihilate even with far superior means an enemy who, in addition to his material inferiority, could not profit by the populations' complicity as was the case in the Deltas".

"For the Viet Minh disposed of vast surfaces to fall back in case of threat, to get supplies, to regroup, and from there fall upon our isolated posts, lay ambushes, surprise our battalions in the act of moving".

"In short, they managed to play strong against weak, because on the tactical plane, they lived in two dimensions against an adversary who, even with an Air Force, operated all too often in only one dimension: the axis of the road or the trail...(1)

We were lacking intelligence even more than in the Deltas. Here is what wrote Colonel X... on this subject:

"One must admit that the lack of intelligence was even more acute in Laos than in the Tonkin".

"It was practically impossible to know, just through local means, the Viet Minh Forces' strength, their bases, their movements... What little intelligence we had, in most instances concealed the truth and most of all were too late to be exploitable...".

The same h 'd true on the Plateaus and the following example is typical:

"The CHUH DREH operation, launched from PLEIKU and BAN ME THUOT, aimed at the annihilation of a Viet Battalion reported to be in the area. But once the operation was launched, four to five Viet Battalions appeared 40 to 50 kilometers N.E. of CHUH DREH. This unexpected threat compelled the Commander to change the objective of the operation and to direct his Chief to clear the BAN ME THUOT road as soon as possible".

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(1) Captain X... Battalion Commander.

Thus, for lack of timely intelligence regarding the opponent's big elements, an operation which began as a drive to destroy the Viet nearly ended as an operation of the Viet to destroy our elements".

Therefore, it is not enough to possess accurate and localized intelligence in order to carry out an offensive action. The latter necessarily comes within the framework of a combined situation and we cannot dispense with intelligence concerning all rebel units liable to intervene during the operation".

If on the contrary the Viet Minh P.K.22 ambush on the Ankhe road nearly met with success, on June 24, and caused heavy losses, it was due to the fact that the enemy did not ignore that he only had 24 hours in which to act before the reserve Mobile Groups came into play. The Viet did possess intelligence regarding the overall situation as well as the local situation".

"It seems useless to bring to mind the manoeuvers during which the High Command stated it was "making a finesse", a turn designed to conceal our ignorance of the opposing establishmentand calling to mind the boldness of a Poker player much more than the calculated risk of a Bridge player...".

"...As to the procedure followed to pursue the enemy, it proved quite inoperative as soon as the approach lasted more than 24 hours for the adversary, informed by his agents, had ample time to ward off the oncoming threats". (1)

In addition to being badly informed, our units were not well adapted to the terrain and even less prepared to fight in dense forests and bushes. (2) So all operations were characterized by an excessive slowness:

"...The battal' ns moved about a bloc in a single file. Their fire power could never be deployed with timeliness. The terrain was searched only on a narrow strip, at the price of an excessive slowness".

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(1) Colonel Y. M.G. Commandant.

(2) See the chapters devoted to this subject in Part III of this Volume.

"A few stoppers on the way slowed down the advance considerably and inflicted casualties. The wounded then had to be transported on stretchers and the units lost all maneuverability capabilities".

"Under these conditions, the enemy was in a position to easily play with time and space, to dodge contact in order to deliver battle on the terrain and with the means of his choice".(1)

Some of these deficiencies had become so flagrant that, at the end of 1953, the Commander-in-Chief wrote in a widely-distributed note:

"...The Leaders at all echelons still have the reflexes of the "motorized" too often, as they are used to maneuver with motorized units, limited to passable roads and strips; they tend to forget that our enemy is totally independent of motors and that he can rapidly group together and move large forces in difficult terrain, where we cannot pursue him and give battle if we are not willing to do away with our motorized elements".

"Certainly, in a battle taking place far away from the points of penetration, we are deprived of the great asset which our artillery fire represents, but to a point, direct air support can very well replace it".

"In any case, a good Infantry must not fear to encounter the enemy on equal footing and several of our Units proved that they possessed the will and the capacity to do so. All of our Infantry units should regard them as examples...".

"...Engaged in difficult terrain, our Units often give the impression of being blind, of moving about hesitatingly, of encountering the opponent only if the latter has been willing to be engaged, and then getting involved under improvised and often faulty conditions".

"If it is normal that some of our non-indegenous elements be initially confused by new surroundings, our Battalions, for the most part, dispose of Auxiliary Units or are supplemented by local partisans. If some formations are not provided with them due to the fact that they come from a different region, the local territorial Command

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(1) [illegible]

must do everything in his power to procure them rapidly. In this vein, a rational use of these elements is apt to avoid many a delay and surprises...".

"...When they run into the adversary by day, whether this be expected or by chance, too many of our Units have a defensive reflex. They can only think of sitting there to meet with the opposing attack... they don't have the reflex to attack".

"Well, against an adversary who can quickly reconnoiter a formation, maneuver with flexibility to catch it unawares, then attack in force and beat it with no consideration of casualties, it is fitting to adapt our combat tactics and procedures".

"Every time a formation is not sitting for some time, that security is not ensured, the personnel dug in, coherent firing plans, with no gaps, the only effective parry - if one doesn't want to be hustled out of one's position - is the immediate counter-attack, conducted if necessary by the whole unit, the direct rush on the enemy opposing shock to shock and surprising, and disconcerting the assailant".

"With troops lacking solidity and cohesion due to insufficient training and inferior officering quite often, it should be remembered that the offensive is easier than the defensive, that the attack binds together while the defense divides, and that "the flight ahead" requires less maneuverability than fixed resistance, or elastic resistance any time the resistant is not rivetted to the ground by a sufficient ground organization or that the units are not too strongly officered and energetically commanded...".

"... Some of our elements get harassed or attacked in their night bivouacs because their installation is carried out too long before night fall, it lacks secrecy (1) or is carried out in a zone within view of the enemy".

"The Chiefs must have the strength to impose upon their troops, in spite of the day's fatigue, the necessary movements, the rapid and sufficient organization of the terrain, all within an hour's time at the most".

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(1) In particular, too many units make the error of camping for the night in the vicinity of the supply D.Z.

"A unit which arrives just before the night on a covered terrain and establishes an improvised bivouac in secrecy is usually neither detected nor attacked in force(1)...".

"...Due to certain circumstances, some of our Units found themselves isolated in the middle of the enemy formation and attempted to join our bases".

"A few succeeded; those which, no matter what the efforts or fatigue experienced, made it a rule to move at night, to avoid well-traveled tracks, live off the land refraining to request for air-drops which are always indiscreet, to stay away from areas under systematic surveillance of the enemy such as posts, intersections, large villages...".

Our forces experienced the greatest difficulties to adapt to this "war of shifting fronts and light rears", imposed upon them by the Viet Minh, and few and far between were the "columns" or "groups" which proved capable of "roaming" like the rebel units.

Therefore, in order to remedy the situation, we had to anchor our maneuvers to mooring bases, qhich were both logistics bases and entranched camps of fortune as well as the destination points of our reinforcements.

As they were linked by land or by air with our supply sources, they permitted to feed the battle and push in the wake of battalions a few portions of tracks that were so essential to the use of our motorized elements.(2)

AIR-GROUND MOLES.- The concept of the mooring base was gradually modified by an evolution which seemed surprising at first glance, as the air-ground moles were to become, from maneuver auxiliaries, it's essential element and they were going to be expected to hold the enemy as did the old fortresses.

This new orientation became clear to NASAN:

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(1) A delay of one hour before dark must be the maximum.

(2) See the Chapter devoted to actions in forests.

"The Commander-in-Chief decided to force the enemy to fight on a terrain favorable to our joined forces, served by an air-field permitting the regular supply of our fighting units and finally, located at a distance from the enemy advanced guard such that it be possible to position our forces before the battle...".(1)

The advantage of this formula was, first of all, that the plane freed us from the obligation to defend a line of communications.

"NASAN achieved the three main objectives assigned to it: receive the garrisons of the North-West zone isolated posts, prevent Viet Minh exploitation of their NGHIA LO success near LAICHAU, finally hold on if the Center of Resistance was attacked".

"Without sufficient anti-aircraft defense and artillery, the V.M. Divisions at NASAN could neither neutralize the air-strip, nor seize the bases of operation..."(2)

From then on, the establishment of entranched camps and air-ground moles appeared to be the best parry to the seasonal offensives of the V.M. battle formation.

After the experiences of NASAN, of THE JARRES PLAIN, of SENO, the Commander-in-Chief wrote: "...the lesson from the recent operations in the High Region, in LAOS and on the Montagnards Plateaus, shows that the enemy bitter failures, or dropped the idea of attacking the coherent entranched camps, constituted by a system of several bases of operation in field materials, supporting each other, controlling an air-field and whose garrison was strong enough to be able to go out, scout, deploy, counter-attack and conduct the fight outside...".

"...When the enemy massively commits large forces, the mobile elements retract on the entrenched camps. The latter are reinforced, if necessary, via land, air, river and sea".

"The adversary is then forced to engage in real siege war operations which are lengthy, costly and difficult, and require large forces that cannot escape the aviation's attention and thus provide vulnerable objectives...".

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(1) Report from the High Command in Indochina.

(2) Battalion Leader X..., Battalion Commander.

Did the Battle of DIEN BIEN PHU sanction the failure of this doctrine? It is not the purpose of this study to examine all its strategic aspects, but the opinion of a combatant (1) seems to provide a fair appreciation:

"The failure of DIEN BIEN PHU is due to the fact that this isolated base was attacked by an enemy disposing of artillery and anti-aircraft defense, and the study of this failure can furnish teachings regarding the requirements to be met by an air-ground base in order to resist an adversary provided with such means".(1)

"But, with regard to potential hostilities on a non-European theatre of operations against rebels who probably would not dispose of any artilleery nor any anti-aircraft defense, the DIEN BIEN PHU failure cannot be applied".

"The concept of an air-ground mole clearly stems from the experiences of Indochina. It represents a solution particularly well suited to the problem of the re-establishment of our Authority and influence in areas distant from our bases, or inadequately connected to them by poor or not very reliable communications channels".

"For whatever can be done or said, our military establishment is such that our forces could not possibly have the capacity to "float in space" as the Viet Minh did successfully".

"In a war of the great expanses, we will always need rears, even if they are constituted by a tiny temporary air-ground fortress. The question is not to get stuck inside...".

So, the Indochina Campaign pointed up the advantages of strategic mobility, founded on air transportation, in territories devoid of communications means; but it proved that tactical mobility was just as necessary without being identified with motorization.

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(1) Battalion Leader X... Commanding a Center of Resistance at DIEN BIEN PHU.

In addition, all our operations have demonstrated that in actions of the war without front, just as those in the war of the great expanses, there comes a time when every fighter has realized the capabilities of the "rebel".

Then it is illusive to base one's success on the sole superiority of fire and equipment; nothing could possibly replace the number and quality, and only local recruitment can provide us with additional forces well adapted to the locale.

C H A P T E R I I

THE MAQUIS

In the vast territories that fell into the hands of the Viet-Minh as early as 1945 and in which we could never regain foothold, save on the occasion of an episodic raid (1), the creation of a maquis seemed at first possible as the terrain was eminently favorable: accentuated relief, dense vegetation often taking on the air of an inextricable jungle.

The appearance of the maquis, however, came rather late for ethnical reasons.

The success of the Viet-Minh approach near the Annamite populations and the ineffectiveness of our political action, left no hope of provoking any armed opposition against our adversaries in the regions with a population of high Vietnamese density. Our incapacity to interdict the slow decay of the Tonkinese Delta constitutes the best proof of this.

The only element which could still serve our cause was the racial repulsion which the Montagnard populations and certain ethnical minorities nurtured for the Annamites of the Delta or the coastal regions.(2)

In the zones with Thai populations, in those with the Meos or the Mans, the Annamite was the enemy, but it was difficult to arouse a hostile movement, all the more so a rebellion, as long as the Viet-Minh did not operate in the High Region of the North-West, that is before 1950.(3)

(1) For example: TUYEN QUANG, during the 1949 march, or PHU DOAN, during the LORRAINE operation in 1952.

(2) Due to this natural opposition, the Central Vietnam Plateaux enjoyed a long peace, and due to the existence of the NUNGS, the coastal stretch from HONGAY to MONCAY was proof against Viet-Minh infiltrations.

(3) The Viet-Minh armed forces penetration in the High Region is not the least proof of their adaptability and their training capability as well as their High Command's will, for it was still [illegible] that the "Vietnamese lowl[illegible] the mountains and the forests and cannot live there."

What have been the results obtained by our maquis?

First, the immobilization of a number of Viet Minh Battalions can be attributed to them. In January 1954, 4 V.M. Battalions were employed for the repression of the maquis in the LAICHAU region. At the end of April 1954, there were 8 of them; in addition other battalions were immobilized to guard bases which our partisans kept under threat of an attack.

Moreover, we have often been able to rescue the survivors certain isolated posts which had been attacked thanks to the presence of various maquis elements.(1)

Secondly, the maquis brought an uneasiness among the enemy elements and kept it alive. The V.M. political cadres considered their action as "one of the greatest schemes to undermine the V.M. establishment."

However, it seems this uneasiness prevailed mostly among the lower echelons and the isolated units: At one time, the V.M. High Command did not seem a bit disturbed by the actions of our Maquis. Some of them achieved some brilliant successes: For example the COC LEU-LAOKAY attack, on October 3, 1953.(2)

During the battle of DIEN BIEN PHU, however, the maquis met with total failure in their attempt to intervene against the V.M. communications facilities linking the PHUTO area and TANH HOA to DIEN BIEN PHU, while covering a 400 to 500 kilometers distance over forests and mountains. A common section, CONOI-DIEN BIEN PHU, 200 kilometers long, in particular, was never seriously harassed.

This low output of the maquis, which numbered 15,000 men at the end of the war, can be justified by numerous considerations.

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(1) Such as the Meo maquis of the XIENG KHOUANG region which permitted to round up many scattered groups of the SAM NEUA column whose withdrawal was almost tragic.

(2) An expansion of our maquis was set for October 1953 in the BAXAT, BINHLU, CHAPA, THAN UYEN regions. To make it easier, it had seemed necessary to make a diversion on a plausible and distant enough objective on which the adversary hung seriously: The double agglomeration of COC-LEU-LAOKAY was chosen. Six hundred partisans attacked COC LEU on October 3 with the support of the Aviation and one Paratroop Commando from the Tonkinese Delta. During several attacks, the partisans penetrated in the town and, supported by bombers, inflicted an estimated 150 killed and wounded casualties to the V.M.

OFFICIAL USE ONLY

At first, the effectiveness of the maquis was doubted for a long time. "The G.M.I. (1), according to one of this organization's reports, had difficult beginnings, quite often plagued by the High Command's hostility at the Zone or Territory echelons, with which our elements were closely related".

This lack of faith could be justified, for: "We had no ideology or xenophobia to inculcate, like the adversary. We had no politico-social system to propound".

"We were not sure to return to CAOBANG or VINH".

"We did not know whether there was a positive relationship between the obtained results and the reprisals which, sooner or later, the action of our maquis would bring on the foolhardy and the followers".

But most of all, this mistrust illustrated the scepticism of our cadres, for the most part, towards all unorthodox forms of the war.

In short, the struggle of the rears was started too late. It was only in 1951 that the Airborne Joint Commando Groups (G.C.M.A.) were able to perform an action. But by that time the Viet Minh hold extended already on vast areas. It could no longer be hoped to create a powerful organization and the difficulties we have met are obvious demonstrations that we must precede the enemy in the regions where he has not yet infiltrated.

Any zone held to be secure can some day become the theatre of battles. We must therefore prepare for this possibility so as not to meet with insurmountable difficulties later and the efforts must be concentrated on the creation of armed cells, the assignment of intelligence agents, the establishment of channels (2), finally the training of the required cadres.

The creation of the maquis was later slowed down by the shortage of officers who were familiar with the ethnical and geographical characteristics of favorable areas, and, a fortiori, spoke the Montagnard dialects. Here again, the absence of a Corps of Indigenous Affairs was cruelly felt.

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(1) The Joint Intervention Group (G.M.I.) was created on December 1st, 1953 with a view to conduct the fight on the rears. It replaced the Airborne Joint Commando Groups (G.C.M.A.).

(2) [illegible] uprising starts.

Finally, native cadres had to be organized and instructors were required to train the guerilla. A School was created at Cape Satin-Jacques, but it only began to function in June 1951.

The G.M.I. equally suffered from a poor relationship with the similar organizations in FRANCE and only obtained insufficient help.

As it had been difficult to organize the G.M.I., it initially lacked means. The effort later furnished on its behalf was considerable, particularly in the field of aviation. At the end of hostilities, actually, the following was granted as assistance to the maquis:

- 1,500 DAKOTA hours.
- 300 reconnaissance plane hours.
- numerous B-26 missions.
- air-drops of 300 tons of supplies and ammunition.

C H A P T E R I I I

ACTIONS IN DENSE FOREST AND UNDERBRUSH

The characteristics of combat in forest are well known, but in Indochina, they took on a particularly biting form, due to:

- The vastness of wooded areas which cover 2/3 of the Indochinese soil.(1)
- The density of the undergrowth (2) and its inhospitable aspect.
- The unusual rarity of foot-paths and trails (2) as well as the extreme poverty of local ressources (both human and food).

This explains why there was relatively little fighting in the Indochinese woodlands, for the rebels were not any more prepared than we were for forest combat: For the most part, their recruits came from the coastal plains and the two Deltas. They had to overcome a natural aversion for the semi-obscurity of the undergrowth and adapt themselves to new living conditions.

But the enemy found in the forest a way to escape our cannons and especially our planes. So, little by little, he came to conceal his bases, his workshops, his hospitals, and his Command staff under the umbrella of tropical trees.

Most of his units were equipped and trained in the wooded valleys of the mountains or the rivers flowing towards the Tonkinese Delta. They lived there between two operations, bringing their loot and preparing their future involvements at length.

Thus, it was due to a protection reflex that the Viet Minh favored the forest which he approached, in a way, from within.

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(1) 86% of the surface of Indochina is covered with a spontaneous and extremely dense vegetation, taking on the form of a forest for 47% of the area, at least.

(2) Except in clear forest.

For our troops, on the contrary, the forest only represented one more element of hostility. Far from finding shelter, they could only expect constant and hidden dangers, difficulties of movement and surviving.

Any offensive operation ran, first of all, against the defenses of nature: That is "the fatigue due to the inextricable entanglement of a vegetation aligned with the enemy, to the depressing climate, to the thousand hostile bugs". (1)

"It is the depression due to the stifling feeling one gets from solitude. The men felt desperately alone, out of range of any reinforcements...".(2)

We didn't have any good intelligence regarding the enemy, due to a lack of maps and a lack of agents, as well as "the disproportion between the time of transmission of intelligence and the ephemerality of the objectives". (3)

We managed, however, some progress, but at a speed which varied from 300 meters to 3 kilometers per hour according to the density of the undergrowth, and the fatigue was in reverse proportion to the speed. It was impossible to establish a definite march schedule, for the necessary security measures still slowed down the pace.

The enemy, in fact, used a very simple combat procedure against us, but particularly efficient:Our approach was always detected by a cordon of watchers posted along and on the paths penetrating inside the wooded areas. As soon as it was alerted, the Viet Minh unit sent out intelligence agents who followed us step by step while we were being slowed down by snipers, traps and mines. When our formation had been stretched, the enemy slowly dismembered our columns by ambushes laid in the clearings or along the paths while very flexible elements harassed us.

Any encircling and sweeping operation was an illusion with such a terrain and tactics: "In the forest, one encircles nothing". (4)

To this first lesson can be added another one immediately: The necessity to alleviate the units.

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(1) Captain X... Company Commander.
(2) Lieutenant Y...
(3) Battalion Leader Z... Commanding a Battalion.
(4) Battalion Leader X... Commanding a Battalion.

Actually, "the Delta-type Mobile Groups proved to be maladjusted to the war on the plateaus. Their limited efficiency is unquestionably due to their high motorization". (1)

"In the Bush war, Infantry units conduct close actions which require immediate short range fire power rather than continuous, dense fire. Combatants must be equipped as lightly as possible... The sections are formed of two light infantrymen groups and one support group with two automatic rifles, the companies only take one 60 m/m mortar most of the time, and the battalions only two 81 mortars". (1)

In addition, it has been shown on many occasions that at the time the fight began, "the advantage remained with the well trained infantryman who was lightly equipped, and trained to live in the forest".

When an important column meets, in fact, the enemy, only part of its elements can intervene, and one company which is well officered and well trained proves to be often more efficient than a Battalion.

We are thus led to conceive very light units, which could adapt to forest life and whose men could act as "trackers" to surprise in turn the enemy.

"Every time a friendly column penetrates in the dense forest surreptitiously under cover of darkness for example, the opponent ignores even its presence and, when it is discovered or vaguely suspected, he is incapable of determining the strength, the means and even the position of our element. When finally this element decides to act, therefore to reveal itself, the forest offers, once again, if desired, the means to conceal and discourage any tracking by setting booby-traps, stoppers, etc...(2)

But surprise is only possible, of course, under three conditions:

- Crossing the borders at night so as to escape the opposing watchers.
- Obliterate all traces of one's passing, now by missing up the tracks (3), now by following the stream beds, now by progressing in the cover.

(1) Colonel Y... Commander of a Mobile Group operating on the Plateaus from Jan.to Jul.54.
(2) Battalion Leader X... Commanding a Battalion.
(3) The following procedure is propounded by Captain X... "The column places a stopper, stops, makesone to the left and advances in line, as lightly as possible, for about a good hundred meters before resuming its direction. A false trail is created to the right."

- Conceal the bivouacs.

A base must be organized in the approximate center of the zone of action of such units, by way of air-drops or helicopter landings, so that they can subsist for several days and, if necessary, for several weeks.

Naturally, the establishment of such a clandestine base must follow the rules which have already been drawn from the experience of the French Maquis and which have been confirmed:(1)

- Select a deserted site.
- Carry on air-drops (or helicopter landings) only at night and with the maximum of secrecy.(2)
- Observe radio silence, etc.

Moreover, the shifting of the base must systematically be planned for within a few days.

The above procedure can be essentially applied to units of a size smaller or equivalent to a Battalion. When a more important detachment and especially a mobile group, must operate in forest, it must be divided into several columns, each of which must not be equivalent to more than one or two companies.

Part of the heavy equipment must subsequently be abandoned.

The Artillery and mortars have had, actually, a very limited output for reasons which are well known:

- Lack of accurate maps and incapacity to use aerial photographs for restorations, for lack of reference.
- Difficulties brought on by vegetation to maneuver pieces of ordnance.
- Inaccuracy of intelligence on the enemy and incapacity to observe.

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(1) Such an experiment was not tried in Indochina, but in Malaysia by the British. Several reports do include such a suggestion.

(2) Every time an air-drop was performed during the day in support of a column, the V.M. was able to identify the presence of our elements.

We must admit that the tubes will not be able to act except in clear forest or if clearings exist.

In addition, they have to be transported. In the absence of acceptable tracks, we must resort to mules, poneys, even to carrying on men's backs and this limits the equipment to 120 m/m or 4 by 2 inch mortars, 75 m/m guns (S.R.) and mountain guns.

Mountain guns and recoilless guns have the same inconveniences: Too weak effect of the shell in proportion to the tube's weight (for mountain pieces) and to the charge (for recoilless guns). (1)

Mortars, in spite of their greater dispersion and their short range, proved much more utilizable. The 4 by 2 inch U.S. model 30, in particular, has given satisfaction.(2)

Remains the problem of ammunition supplies.

"In one day, the mules can provide for renewal of a company's 24 rounds within a maximum distance of 12 kilometers. In two days, within a maximum distance of 24 Kms. These assumptions are purely theoretical, since some of the mules must be reserved to transport the remaining ammunition during position changes".

"Beyond one march of infantry, the output of the mule columns becomes negligible" The bulletin concerning Infantry combat in mountainous terrain of May 10, 1951, states that it is better to dispose of few weapons well provided with ammunition, than numerous weapons with little ammunition. This constitutes the condemnation of the company of heavy mortars on pack, which can be defined as a unit having too many tubes and not enough ammunition". (3)

Moreover, the vulnerability of the mules columns is extreme; their protection must be provided at all times... The drain on personnel becomes prohibitive as communications extend".

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(1) The mountain gun is blamed, furthermore, for its complication and the recoilless gun for the hardships due to rear belching out of flames.

(2) Let us remember that this mortar has a 5,350 meter range and that its probable deviation is only 1.3% of its range. The heaviest charge weighs 68 Kgs. and five mules carry the piece. A case of 2 rounds weighing 32.600 Kgs, one mule can therefore carry 4 rounds. This results in a requirement for 134 mules to provide one company with 8 pieces, with 28 rounds per piece.

(3) Study by a Colonel, Commanding a Mobile Group.

"We can thus conclude that it is impossible, in Indochina, to involve large heavy pieces of equipment on pack... This conclusion compares with that which was drawn from the tests of a 120 m/m on pack mortar company carried out in 1951 in the French Alps, and can be resumed as follows: Transport of heavy mortar on pack is not profitable". (1)

There is only one way to palliate a defect, and that is to insure supplying by air-drops, in spite of the inconvenience of signaling thereby the battery positions to the enemy.

Or, artillery or mortar support must be replaced by air support upon request and without delay. (2) Providing the pilot can easily and accurately pinpoint the desired objectives.

It is necessary to point out, regarding forest operations, the specific difficulties met with the security of motorized convoys when they must cover long distances in wooded areas. Indeed, it is out of the question to place along the route posts at close enough intervals to be able to watch all of them constantly.(3) These posts would be truly efficient only if the approaches to the road were cleared of all vegetation on 100 to 200 meters on both sides.(4)

There remain the standard procedures of security.

If the convoy is not important (about 50 vehicles), it is divided into several groups and provided with an armored and motorized infantry escort. Preceded by a road-clearing detachment, which performs the necessary patrols, reconnaissance and mine-clearing, it moves by leaps; in case an ambush is started, the escort thus distributed over several points of the column is always ready to counter quickly.

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(2) Battalion Leader X... commanding a group of several Battalions, states that one must "palliate the absence of artillery and any possibility of supplying via land or river by providing air support with fire and efficient transport by the assignment of a D.I.A. to their Staffs...".

(3) At the end of 1947, the V.M. successfully attacked a convoy on the way to DALAT near a post, thanks to excessively covered terrain. Colonel de SAIRIGNE was killed there..

(4) This system, although quite costly, was used in South VIETNAM on portions of roads or railroad tracks that were particularly dangerous. It proved excellent. (For example road from THU DAU MOT to LOC NINH. Or a portion of the road from BIEN HOA to BARIA).

(1) Study by a Colonel, Commanding a Mobile Group.

If the convoy is important (100 or more vehicles), before launching it, the route and vicinity must be reconnoitered, fixed flank watchers must be emplaced in the spots known to be dangerous, the artillery must be positionned in such a way that its fire will cover at least the most exposed portions of the route, and mobile reserves must be placed in appropriate locations.

In the "security corridor" thus established, the vehicles are feely released, either one at a time or by groups of two or three, at a few minutes intervals, so that the enemy who might have infiltrated and be lying in ambush can only attack a few vehicles at one time, thus limiting losses.

In all cases, the security of a convoy essentially depends on the development of a rapid communications system, and also reliable, between all the elements involved on the one hand, and on the organization of aerial protection on the other hand: continuous aerial observation, rapid delivery, on request, of fighter-bombers in a state of readiness on ground, and their guiding to the objectives. (1)

In conclusion, it can be said that the movement of a motorized convoy in rebel zone and in covered terrain must be planned like an actual operation. But boldness and the "dice throwing" must never be considered as a factor in the decision-making, for any negligence in the area of security might bring disaster. (2)

Remains to be noted that it was sometimes possible to resort to the airborne element when security in a wooded area became too slight. An aero-terrestrial base then served as a real port, where the motorized columns came for supplies.

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(1) The difficulty of aerial interventions in wooded areas is not to be pointed out. In fact, only the marking of the objectives by a light observation plane permits efficient treatment of the enemy by the fighters and avoids mistakes.

(2) We had such an example in the end of June 1954 when the convoy of a Mobile Group was taken by surprised. Casualties came to 50 killed, 253 wounded, 771 missing and 240 destroyed vehicles (among which the equipment of an Artillery Group).

Such was the case of the SENO base, which appeared like an island in the middle of the forest clearing of the Middle LAOS, and which grouped around a strip usable for Dakotas some important depots. One or two Infantry Battalions, reinforced by armored elements, the Engineers and some Artillery, provided for its defense against a raid, and further reinforcements could flow in, in case of a serious threat. Thus, SENO was the indispensable engagement point for the operations carried out in the Middle LAOS, particularly during the Winter of 1953-1954.

Under normal conditions, the base could be supplied simultaneously by road convoys (1) and by air. But in case of necessity, it was possible to use only the air.

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(1) A portion of the traffic could be handled by the Mekong until KRATIE.

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C H A P T E R IV

COMMANDO ACTIONS

The War Without a Front is full of occasions to execute commando actions: raids on C.P.s, destruction of depots, sabotage of communications channels or of logistics installations, ambushes, etc.. So, beginning with our spectacular raids on the Viet Minh Rears in the High Region until clandestine landings along the Annam Coastline, not to mention our actions against V.M. villages on the borders and inside the Deltas, a great number of our operations, whether land, airborne or amphibious, were conducted in the "Commando" style.

The same holds true on the Viet Minh side, and some of the attacks on our air-fields or C.P.s, as well as the sabotage of some of our depots can be considered as examples of this type.(1)

However, a study of these various actions is rather poor in lessons to be drawn. Universally recognized rules have been confirmed on every occasion, and it appears to us that success was closely related to accurate intelligence, secrecy and minutely planned preparation, and finally to the rapidity of execution.

The information at our disposal in such an undertaking were, if not rare, at least too often lacking precision, and this explains the relatively few occasions that could be usefully exploited.

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(1)- Attacks of the Tonkin air-fields: GIALAM on Nov.3, 1948 and March 4, 1954 - CAT BI on March 7, 1954 - DOSON on February 1st, 1954.
- Raids on the Vietnamese Officers School of NAMDINH on April 30, 1953, on the C.P. of the Divisional Element No.3 at THAI BINH on December 4, 1953.
Destruction at the ammunition depots of KIEN AN on March 21, 1953, of PHU THO on June 2, 1954 - at the gasoline depots of DOSON in 1953 - of THONG LY in June, 1953 - of NHATRANG in January, 1954, etc.

This lack of useful information is due to the lightness of the opposing C.P.s as well as to the secrecy with which the Viet Minh surrounded himself so well. It can also be traced to the dispersion of the depots, to their camouflage and especially to the fluidity of the V.M. Logistics.

Objectives justifying an operation due to their importance and their chances of success were rare.

Such favorable conditions were met virtually only twice:

- On July 19, 1949, when an amphibious back and forth raid was carried out on the TAMQUAN station where the biggest railway supply depot of the Viet Minh in Central ANNAM laid (1)
- On July 17, 1953, during the airborne raid over the LANGSON depots, known as the "HIRONDELLE" operation. (2)

But, on the other hand, many an operation fell short, from those conducted in 1947 in South VIETNAM to capture the impregnable NGUYEN BINH, to the unsuccessful drillings of the DINASSAUTS in 1953-1954! And how many more encountered a solidly encamped enemy, determined to defend himself...(3)

Secrecy of the preparation is just as difficult to maintain as for any other operation. All the more so because some of the Commando actions required the involvement of Joint capabilities and sources of indiscretion were thus augmented.

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(1) - Destructions achieved: 6 locomotives - 240 cars - one maintenance shop.

(2) - Result: 1,000 automatic rifles - 255 individual weapons - 6 trucks - 250 tires - 18,000 litres of gasoline - 55 motors - 1 ton of ammunition and considerable equipment.

The "MARS" airborne operation carried out in March 1951 on the Viet Minh work shops and depots in South VIETNAM can also be mentioned.

(3) - For example, the North Vietnam Commando raids to destroy V.M. ammunition depots which were concealed in the limestone quarries of the Along Terrestre Bay.

By the same token, it would be useful to recall that the success of the "HIRONDELLE" operation was due, for the most part, to the strict security measures which had been taken. (1)

Rapidity of execution was our only asset in order to avoid the case when the objective vanishes before being hit.

The mobility and fluidity of the Viet Minh C.P.s allowed them to "go past our nose" and there is no better example of this than the "LEA" operation during which the Ist Shock Battalion was air-dropped over BAC KAN on October 7, 1947, only a few hours after HO CHI MINH and his government had left the town.

But this "evaporation" of the objectives was again encountered when depots which the V.M. succeeded in evacuating or camouflaging were involved, even when we dropped paratroopers and the enemy only disposed of a few minutes interval between the paratroopers' jump and their arrival on the site.

For the protection of all depots was insured by an alarm system and the grouping of transport means allowing their evacuation in extraordinarily short periods of time.

Consequently, in order to win the speed competition entered into by the V.M. watchers and our Commando units, it was absolutely necessary that:

- our airborne or amphibious elements dispose of a D.Z. or a beaching located as near to the objective as possible, and that these men regroup almost instantaneously, take their bearings without hesitation and hurl themselves convinced that a few minutes' gain could be a major factor.

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(1) - PREPARATION OF THE "HIRONDELLE" OPERATION, from the report of the TAP Commander on the lessons to be drawn from the campaign.

"The success of the operation depending on the secrecy regarding its date and point of execution, all plannification will be conducted with absolute secrecy by the Group Commander with the only assistance of a G2 Officer. Orders from the G3 will be issued only from July 15th. Between the time of the general briefing and that of the embarking, Draconian measures will be taken to prevent any indiscretion through outside contact. The units will be alerted beginning at 1400 Hrs on the 16th and restricted to their quarters. The briefing of the Airborne Troops Commandant will take place on the 16th at 1500 Hrs.

The Commanders of subordinate units will dispose of one hour to conduct their individual briefings....

The first take-offs will begin at 700 the following day.

- our purely terrestrial elements (Commandos and groups in the maquis) be capable of infiltrating and living in rebel zone, in order to reach discreetly a base of departure near the objective.

But of course, the nature of the terrain, the degree of training of our troops and the Viet Minh vigilance were so many obstacles to the achievement of these conditions.

The withdrawal of elements having carried out a commando operation proved just as delicate, except in the case of the maquis in place far out in the V.M. rears, and except in the case of an amphibious action, since the return was executed with the same means as the first trip (for example: raids on QUINHON, TANQUAN, etc..).

But, when it was a question of raids by air or land from zones under our control, the return problem conditionned the importance of the raid and even the decision to carry it out. (1)

This was a result of our incapacity to move about, to make ourselves inconspicuous and to live in an area subjected to the politico-military hold of the Viet Minh, (2) and only particularly well recruited units managed to live more than a few hours beyond the advanced line of our posts.(3)

On the other hand, the same problem did not confront the opponent, who could vanish right away and find hundreds of shelters within the villages surrounding the objective.(4)

Therefore, for important actions we had to provide for the establishment of successive collection echelons. This is how, for the "HIRONDELLE" operation, the Commander had to deploy, half-way between TIEN YEN and LANGSON, a strength three times more important than that assigned to the raid itself.

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(1) In addition, the T.A.P. capabilities were limited by the necessity to retrieve the parachutes. (Cf. chapter T.A.P.).
(2) It seems useless to mention the evident Advantage of the helicopter.
(3) This was the case of the famous VAN DEN BERGHE Commando.
(4) The only serious failure suffered by the enemy happened during the raid on the KIEN AN ammunition depot, on April 21, 1953. Part of the elements which had taken part in the action were intercepted by our forces, while attempting to reach the TIENLANG. V.M. losses came to 300 counted killed, 139 prisoners and considerable equipment.

Finally, on a more general plane, which was that of the territory commanders or even the Commander-in-Chief, it seemed necessary to effect some measure of coordination of the Commando actions.

As it matters that all latitude be left to look for local objectives and to set up profitable raids at the opportune time, at the sector and zone levels, as it is fitting that important undertakings and especially deep raids be planned, then launched depending on the general conduct of operations by higher authorities.

A fortunate synchronism can be achieved between the often distant from each other actions, but converging as far as their effects are concerned. The V.M. provided us with a striking proof of this when they launched a series of sabotage actions on our air-fields of Tonkin at the time the first attackes on the entrenched camp of DIEN BIEN PHU were beginning. In addition, they stepped up their sabotage and ambush actions on the railroad track and the road linking HAIPHONG and HANOI at the same time.

In the same manner, our Commando raids on the shores of the TANH HOA in October-November, 1953, took place in conjunction with the "PELICAN" operation, which was itself a deception maneuver for the benefit of the "MOUETTE" operation.

This coordination of Commando actions comes also under the aegis of opportunity, for surface war brings such an imbrication of formations that a tempting raid or sabotage can cause regrettable repr' als, as much for ourselves as for the friendly populations.

We have had the bloody proof of this at the time of the enemy raid on the Convalescence Center at Cape St. Jacques, which was the blind reaction to one of our Marine Commando raids on a V.M. Summer quarters on a neighboring beach.

C H A P T E R V

RIVER AND COASTAL ACTIONS (1)

During the whole campaign, the Viet Minh who proved to be a remarkable Infantryman never was a sailor.

We never encountered any floating enemy (2), for not only the opponent did not possess any small craft equipped for combat, but every time small transport boats were surprised, their personnel did not attempt using any of their arms to defend themselves.

By some contradiction, the V.M. who did not hesitate to launch nocturnal assaults against our fortifications, always proved himself on water "timid and sometimes even chicken-hearted in the exploitation of the results obtained by fire or mines". In no case did the enemy attempt boarding actions, which many a time would have placed us in mortal danger". (3)

Therefore, we have only encountered terrestrial elements posted along the banks to contend with us for free traffic on the rivers (4) and in the form of:

- Either mines, controled from the bank in order to select the objective, (5)
- or ambushes, combined or not with the action of the mines.

Finally, sabotage actions by assault swimmers could be feared more than laying.

(1) Reading of this chapter should be preceded by that of Chapter XIII, Part 4 concerning "RIVER FORMATIONS".
(2) Except for a flotilla of a dozen craft of various types (ferries, tug-boats, etc.), one of which was equipped with a 75m/m anti-aircraft gun recuperated on the Aviso "Admiral CHARNER", which had been found and taken during a raid made between RACH GIA and CAMAU in February 1946 by a Section of the 6th R.I.C. boarded on 2 LOAs.
(3) Report by the Admiral, Commanding Maritime Forces in the Far-East.
(4) The enemy also erected barrages to cut all traffic on some narrow rivers and canals.
(5) Also because this type of mine was easy to use.

The V.M. used of his art to get information and obtain the adhesion of populations along the rivers through fear or persuasion, his meticulous preparation of the least of his actions, his usual mastery in the utilization of the terrain and camouflage, finally his perfect discipline of fire, which always guaranteed him the initial surprise.

"But he could also count on the efficiency of the amphibious maquis. For the V.M. was also well versed in the use of the countless flotilla of junks and sampans of the locale to infiltrate everywhere and extricate himself from the most minutely established of our formations."

"The systematic destruction of all indegenous small boats detected during the operations by our weapons has only touched a small proportion of a floating equipment well concealed. Besides, the method consisting of individual floats of the banana stump type has been largely utilized".(1)

Moreover, the enemy learned quickly how to combine action on our static elements (military or river posts) and action on the units sent as reinforcements (river convoys). On the other hand, the V.M. was handicapped by "the almost total absence of marine sense and the ignorance of the capabilities as well as the weaknesses of our weapons".

"They exploited only partly our navigation difficulties; had a knowledge almost childish of naval equipment; was always surprised after the first discharge by the swiftness and density of our retort".

They looked too hard for "protection and camouflage of their ambush weapons, settled in embrasures or caponniers and disposing of very insufficient angular fields of fire against objectives defiling at short distance, like our self-propelling weapons".(1)

Finally they did not concentrate their means, with rare exceptions:

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(1) Admiral, Commanding the F.M.E.O. (Maritime Forces in the Far East).

"Most of the time, one or two recoilless guns, a few mortars or automatic rifles constitute the formation; or when the arms are more plentiful, they are widely deployed along the banks".(1)

"There again, the search for protection (through dispersion) can prejudice the efficiency of the attack. Our weapons, always poorly armored, would have resisted a massive shock, unexpected, much worse than a fusillade or a cannonade extending in time and space and to which we were in a position to retort successfully after the first few wavering seconds occasioned by the clearing for action".

In short, the enemy proved to be incapable of "passing to the stage of the direct ambush or the individual action against anchored boats and coordinate widely the operations in time and space in order to handicap our concentrations; he also showed a lack of imagination in the selection of his modes and sites of attack which were practically identical throughout the campaign".(2)

Of course, this inferiority and incapacity to adapt to river action wouldn't have been eternal, and the increase in the opposing camp's possibilities, especially in 1954, threatened to make the three missions assigned to our River Forces much more difficul

- Navigation itself with requirement to go over the ambush areas.
- Storm landing.
- Security whild at anchor.

The methods devised to achieve these various tasks were improved over the nine years of war according to our means and those of the enemy, but without too much depth. The following procedures, which were prevailing at the end of the war, were practically the same throughout the duration of hostilities.

"They are obsessed by the fact that, contrary to terrestrial forces, river forces never have the opportunity to conceal themselves and rarely that of withdrawing. On the other hand, they have the advantage of being able to generally combine weight, therefore power and mobility. So, if tactical surprise is in a large measure denied them, the strategic surprise is liable to be one of their greatest assets".(2)

(1) Admiral, Commanding the F.M.E.O.

(2) Sometimes even over a several kilometers stretch, as in the battle of DAY Loop, in November, 1952, where approximately 20 75m/m and 57 m/m pieces and more than 150 rifles were strewn over seven kilometers of terrain.

CONVOYS.- Any group of ships navigating together (whether carrying charge weapons) adopted the following formation, at least in North Vietnam:

"At the front sailed the "clearing group" which comprises three sweeping sections, plus a spare sweeper. One L.C.M. Monitor serves as guide to the formation. A large piece of ordnance is in support about a hundred meters behing the tail sweepers".

"Behing the clearing group, at a variable distance according to the river configuration, but remaining within 2 to 300 meters, comes the main portion, in line of file and strictly in the swept waters".

This main portion normally consists of:

- Support ships (L.S.L.-L.S.I.L. occasionally L.C.T. gunboats or sections of L.C.M. Monitors)
- Charge ships or weapons (L.S.M.-L.C.T.-L.C.M. various lighters) (1)

When there is only one support ship, it sails at the rear and carries the Senior Commander. When there are two, one of them sails in front and the other brings up the rear, the latter carrying the Senior Commander (except in case of particularly touchy operation, for example at night).

When there are more than two, they are distributed among the front, center and rear, the one carrying the Senior Commander occupying the center position.

"The distance between ships is as reduced as the training of the officers on watch or ship masters permits. A distance of 50 meters between large ships and 20 meters between small ones is to be considered normal".

"In the case of important formations and providing we remain strictly within the swept channel, it is sometimes advisable to distribute the ships or charge weapons over two columns, to alleviate congestion of the formation as well as to insure a reciprocal cover for the columns (case of an attack on both banks). The solution of having the charge weapons moored two by two in pairs is often advisable".

At night the ships and engines sail without lights. Exceptionnally, some lamps with subdued flash can be "shown" to allow the capture or holding of a post".

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(1) Admiral Commanding the F.M.E.O.

"Experience proved that, even by an opaque night and in touchy areas, navigation of important groups in close formation could be carried out without any trouble due to intense training, inherent to the tempo of the operations itself".

"These night river operations gave rise to much rarer and much less powerful enemy reactions that during the day (let us note that it is much easier to detect enemy weapons at night than it is during the day because of the departure flashes)".(1)

These various dispositions limited the effect of ambushes; but, when intelligence at hand gave a hint as to the probability of an encounter and especially when his approximative position could be guessed, a series of additional measures could be taken: (2)

"The organization of the convoy is carefully planned. A plane provides the lighting. Continuous liaison is maintained with the Sector's terrestrial artillery".

"Where the C.L.A. (Light Escort Companies) composed of Dinassauts and frequently reinforcement troops are embarked and maintained on the alert to land for the assault. The ships' crews are at their combat positions ahead of time".

"In the phase of presentation, preventive bombings can be carried out on the suspected banks, either by the ships' artillery (particularly 120m/m mortars) or even by the air support elements when we dispose of corresponding credits of flight missions on the alert (a quite exceptional case)".(1)

Whether it had been possible to take these additional precautions or that the convoy sailed under normal conditions, a parry to ambushes was always feasible: Increase the speed and thus shorten the crisis.

In this respect, it was necessary "navigate to the post on guard, react instantaneously with the means actually set up in permanence, go straight to the combat position and obtain cover from an intense firing of all arms until forcing of the passage is achieved".

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(1) Admiral Commanding the F.M.E.O.

(2) Namely, this was the case on some of the Tonkin rivers.

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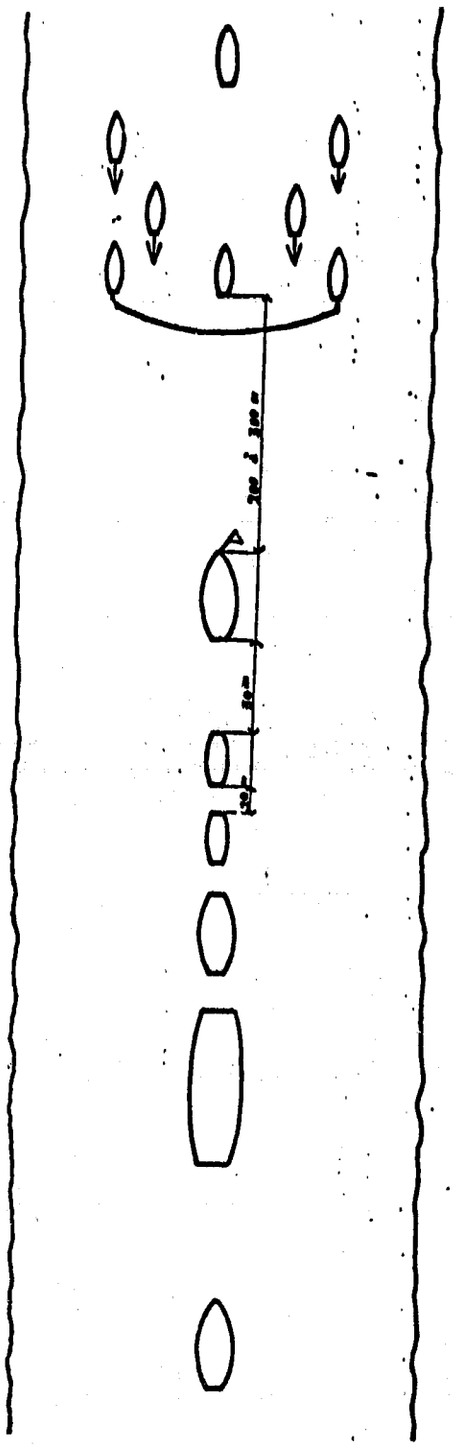
EXAMPLE OF RIVER CONVOY (N.V.N.)

Opening Group	LCM Monitor (guide)
	3 Mine-sweeper Sections + 1 mine-sweeper (spare)
Support	LSIL or LSSL or LCT Gunners or
	Section of LCM Monitors
	LCM or LCT or LSM
Cargo ships (2)	eventually 1 support ship at the center of the convoy (1)
Command and support (1)	LSIL or LSSL (High Command)



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(1) When there is a single support ship, it is forward; it is the commanding ship.
When there are 2 support ships, the command is in rear.
When there are 3 support ships, the command is in the center.

(2) Sometimes the cargo ships are in two columns, or tied in couples.

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"This is the tactics referred to as "ball of fire", which after all is said and done, has been our best defence for our river elements, where fire power has always prevailed over protection".

In this type of engagement, always short and brutal, energy and swiftness are the prerequisite qualities. It would be folly to search for different tactical combinations besides the closing up of the formation, designed to reinforce reciprocal support and the immediate fire power".(1)

This method was imperative especially when reinforcements or supplies must be forwarded urgently and "when gauging of the support vessels was incompatible with an extended battle. It has been the rule in offensive reconnaissance operations in non-controled zones".

Its major disadvantage is that it only inflicts moderate losses to the enemy almost always carefully entranched; it neutralizes him more than it destroys; it is not very well adapted to the cover of prior sweeping of mines (it is useful to note however that the enemy who wants to successfully ambush the main part of the convoy is reluctant to unvail his formation for minor vessels of the advance guard)". (1)

On the other hand, when we had wind of an ambush, it was possible to provide "a methodical counter-action by an assault landing".

The latter can only be carried out at the ends and tends to "maneuver the opponent by encircling, which is a rather hazardous proposition when one disposes of few convoy troops".

So, some Navy men advocated: "The systematic destruction of enemy positions, being attacked one by one with methodical and appropriate fire performed if necessary by stopped, even aground vessels. The forthcoming landing of escort troops taking place right in the heart of the position under cover of an intense, close fire".

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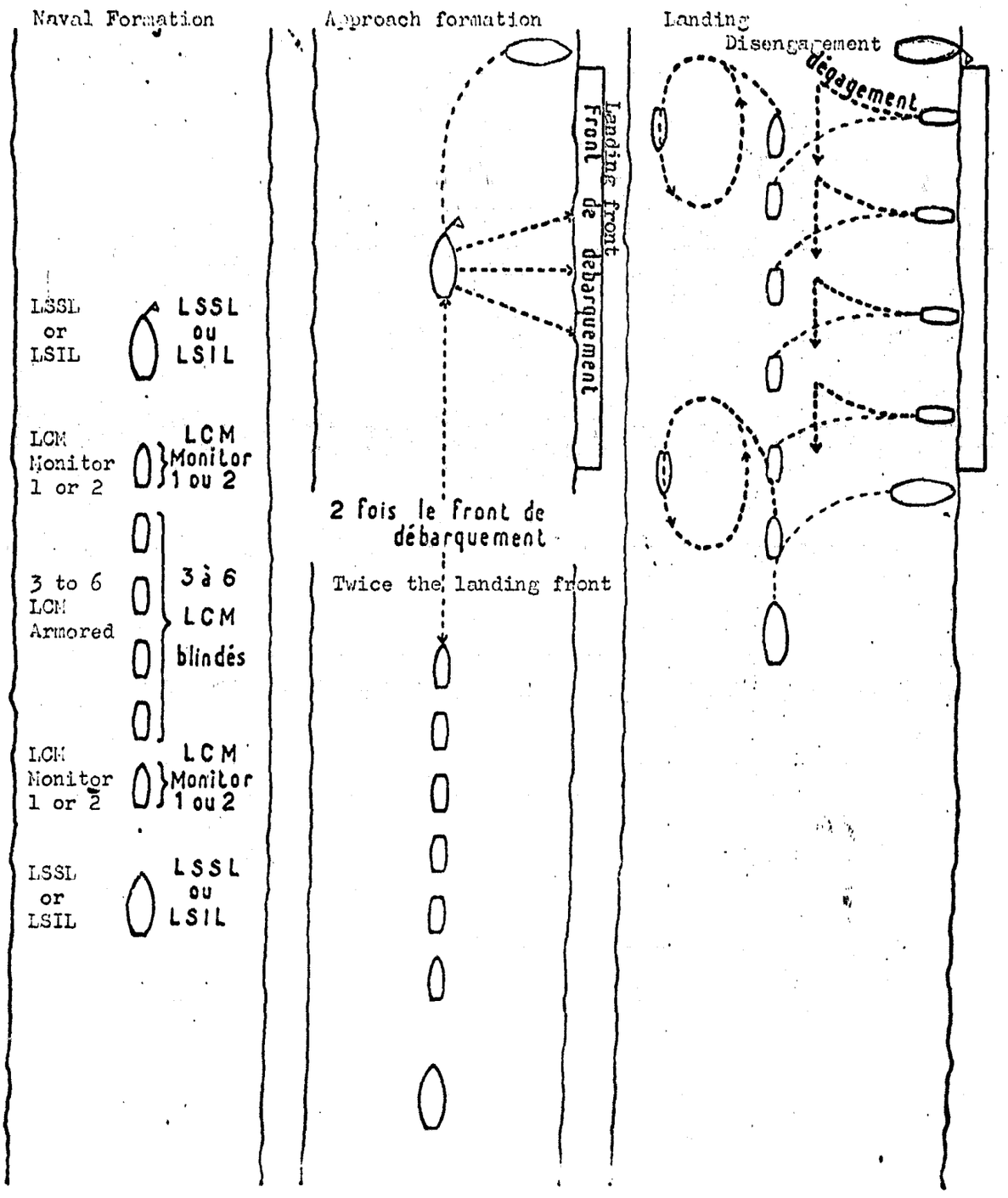
(1) Admiral Commanding the F.M.E.O.

SHEER FORCE LANDING (N.V.N.)

Shock Group Action



"This method has the unquestionable advantage of adquately overcoming the ambush and inflict heavy losses to the enemy, both in personnel and material. When carried out with determination and boldness, it can lead to a smashing success (1), likely to discourage for quite some time enemy attempts, all the more repeated that they count on a relative impunity".

"But it supposes naturally an inherent superiority of strengh, at least a local one, and the availability of vessels capable of "lasting" in combat. It can succeed with L.S.S.L.s as long as the enemy does not bring into play good caliber conventional artillery (105 m/m - 155 m/m). It is quite sensitive to heavy mortar fire. Finally it requires rather long delays, sometimes incompatible with the urgency of the mission".

It could not be adopted withour reserve unless a sufficient number of powerful armored gunboats were available, which was never achieved".

"In addition, no matter what the adopted method, participation of land or air artillery fire is rarely feasible at the time of crossing. But they must intervene whenever possible, before and especially after the crossing".(2)

Such a viewpoint is shared by an artillery Officer who writes:

"During the period from January to June, 1954, the Artillery Staff of the South Zone at NAM DINH, provided on numerous occasions some D.L.O.s aboard the convoys' escort vessels on the Red River".

Such a system was highly praised by the sea-men, who have always insisted to insure that a D.L.O. was present among their convoys. Actually, convoys were rarely attacked and experience showed that in such a case the protection afforded by the Artillery was an illusion".

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(1) Such as the engagement of March 27, 1954 at the 85 kilometer point of the Middle Red River.

(2) Admiral, Commanding the F.M.E.O.

STORM LANDINGS.- During ambush crossing, as mentioned above, landing of troops merely involved small forces and only led to the temporary occupation of a narrow strip of land. Any other landings were carried out in conjunction with a large scale terrestrial operation.

The problem then, was to get units often heavily equipped (artillery, armored elements, supplies) close to the bank in an hostile or suspected area. The action was scheduled according to our decisions however, and was no longer some sort of a counter-attack depending on the enemy intervention.

Although the effect of surprise was always sought after in such a case, the landing could be preceded by preparation of the terrestrial artillery or by air-raids. The launching was possible during the day as well as during the night, but the most favorable time was just before dawn.(1)

Finally, the point of boarding was chosen according to the banks' configuration and the necessities of terrestrial maneuvers.(2)

On this basis, the usual development of the operation was as follows:

"The convoy bearing the troops (composed of L.C.T. or L.S.M.) was preceded at a distance of 1,000 to 1,500 meters by a "shock group" which was sailing behind the "clearing group" described earlier. This "shock Group" normally included two support vessels (L.S.S.L. or L.S.I.L.), one as a guide, the other bringing up the rear (One of them carries the Senior Commander, Navy, and the Troops Commander), guiding three to six armored L.C.M. which carried the companies forming the first wave with two to three L.C.M. per company. The whole formation was accompanied by one or two L.C.M. Monitors sections". (3)

When the ensemble arrived before the intended landing beach: "The shock Group landed with maximum speed; the guide vessel separating to gain an interval equal to about twice the landing front. It defiled before this front letting out a preventive fire at close range and landed without stopping on the front base".

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(1) The result was an intensive training for nocturnal navigation.
(2) The normal front of landing was usually 150 to 200 meters.
(3) Admiral Commanding the F.M.E.O.

"The L.C.M. of the first wave, closed doors and the rear vessel sailed back up in the waters of the guide, wiped everything at the same time and landed in a fashion similar to that of the rear vessel, which took up the rear base position".(1)

"During the landing of the shock companies, carried out in combat position with the maximum of speed, the two base vessels covered with fire the two flanks of the formation while the L.C.M. sections Monitors patroled above and below the base vessels, or observed the non-engaged bank. The L.C.M. for transport disengaged as soon as ready".

"During this phase, the convoy remained stationned at about 1,500 meters on this side of the rear base".

"As soon as the shock companies had established their beach-head and after notice from the Troops Commander, the Navy Senior Commander gave the order to the convoy to take its turn. The L.C.T. then came to shore in the front line within the crenel formed by the two support vessels that had stayed on shore as bases".

"The landing of battalions and equipment was then carried out without precipitation and without losing any time, and the transport vessels were withdrawn immediately after".

"This method has always given excellent results, for the landings, taking place at a well chosen point and benefitting of the surprise effect, at least relative, rarely encountered deliberate opposition from an opponent better suited for the ambush than a battle in formation". (2)

Such an operation was an elementary one anyway, inserting itself often in a ensemble of landings, and in the Tonkin, the simultaneous landing of forces having the strength of about ten battalions was sometimes done.

As soon as the terrestrial units had reached their destination, the river elements were regrouped in order to provide fire support according to a plan conceived between the Terrestrial and Naval Forces. The vessels could also provide transport support and the big ships were, furthermore, frequently used as floating C.P.s for the land groupings.

(1) "There were two to three L.C.M.s per company, in order to leave every facility of movement to the troops at the time of beaching. The shock companies were either the C.L.A. Dinassauts, or detachments specially constituted by the battalions to land.

(2) Admiral, Commanding the F.M.E.O.

PROTECTION OF MOORINGS.- "The list of our losses or damage for the whole campaign shows that attacks at anchor have been more dangerous than engagements on the way".(1)

The term moorings applies to all stopping of vessels and battle ships, whether they are anchored at some distance from the bank, voluntarily aground or not, beached or anchored at berth. But it is necessary to distinguish fortuitous stops during the voyage or during an operation and the stays in port, or at a river post.

In the latter case "the enemy has all the time in the world to prepare his attack. He operates in most occasions with combat swimmers or drifting mines, or by artillery harassing, or even by commando raids".

"Inversely, protection can be examined in detail and achieved by static formations which are cumbersome and costly, but powerful. One of the banks is, by definition, under our complete control, and the opposite bank is generally covered by friendly elements".(1)

The parry to combat swimmers attacks or floating mines (2) has been sought after by placing nets aslant and upstream in relation to the current, and by considering the fact that this current could change with the tides.

The watch and guard were constant worries and systematic fire on every drifting object, patrols on vessels, preventive grenade launching, and finally lighting of the water plan have been performed.(3)

All these methods are all right, but they are insufficient and the Captain, Commanding the River Forces in South Indochina, complained in 1954 that different parries had not been envisaged against the actions of the combat swimmers:

- special shells, which would not ricochet
- horizontal leadsmen,
- electrical barrages, derived from the principle of electrical fishing.(4)

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(1) Admiral, Commanding the F.M.E.O.
(2) It should be noted that the Viet Minh never used drifting fire-ships which could have been very dangerous.
(3) The latter is only conceivable in a zone sufficiently well controled in order to reduce the risks of harassing by automatic weapons or mortars.
(4) Feasible at least in the brakish waters of the Deltas.

Protection against artillery harassing is a problem of counter-battery. When the latter is inefficient, the whole mooring operation can be in danger: this is how "in the beginning of 1954, the harassing by mortars of vessels anchored at SEPT PAGODES finally made this position impossible to hold and the first Dinassaut had to be withdrawn on LINH KHE then HAIPHONG".(1)

On the other hand, protection against commando raids constitutes a particular case for the security of sensitive points and the defensive organization of the river posts should not be neglected, as was often the case.

In the case of occasional moorings, the opponent rarely had the time to prepare his attacks slowly, and the use of combat swimmers or of drifting mines is then not to be feared so much. The enemy intervenes mostly by harassing with automatic weapons, with light artillery pieces or mortars, quietly positionned and aimed during the night.

"Defense cannot depend on static formations, with the principle of obstructing (2). It includes, in addition to the usual precautions (reinforced surveillance, maintaining of the crews to the watch post, etc..) lights completely out, and as far as possible, changes of moorings during the night, in order to upset the previously set battery positions".

The water plan is patroled by small craft. Liaison between vessels out of sight is carefully attended to, in particular for the "sealing" formations, where the isolated mining elements risk being allienated before being supported".

"If it becomes necessary to remain beached in hostile zone, it goes without saying that the front of the beaching must be covered by a landed element or at least by "alarms". But such a solution is always hazardous at night and mooring right in the middle of the river is generally favored".

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(1) Admiral, Commanding the F.M.E.O.

(2) The procedure of the portable net anchored in a point to the bank and maintained by a plug at the rear of the vessel was tried in 1952 for the 1st Dinassaut. It was finally abandonned for occasional moorings as being incompatible with the necessity to be able to rig without delay.

"In that case, there is no advantage to maintaining friendly elements on the banks which give a deceiving security as they hinder the freedom of reaction fire, provoke the risks of error and impose hardships for re-embarking in case of unexpected sailing".(1)

Be as it may, and in spite of a few successes, the enemy did not exploit fully the possibilities of attacking our vessels at anchor and particularly, he never used his medium caliber artillery, whose blows would have been deadly for our ships.

Therefore, it seems proper to remember that an adversary, better acquainted with the hardships of ships, could use means similar to those in the Viet Minh's possession at the end of the war, to interdict the practice of anchoring outside of zones tightly controled by a land formation.

COASTAL AMPHIBIOUS ACTIONS.- The rarity of our operations in Viet Minh-controled zones can be the reason why our amphibious actions along the 2,400 kilometers of Indochinese coasts have been rare. Until 1952 they were restricted to raids and actions of the maritime watch vessels conducted with their own means to destroy on land the accessible small craft and depots.

However, the advantage of such landings and their technique had been clearly exposed in pamphlet published in April 1951. (2)

"In Annam, as on the Cambodia coastline, large portions of coasts are practically inaccessible by land and amphibious operations are sometimes imperative in order to deliver troops, whether in view of a surprise occupation of the region, or to conduct a raid on rebel installations".

"These coastal operations which include transport, surprise or storm landing, can be carried out withoor without the assistance of the Navy".

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(1) Admiral, Commanding the F.M.E.O.

(2) Lieutenant Colonel X... "Amphibious Operations in Indochina".

"If the operation is important (participation of large forces, necessity of rapid transport), it is necessary to call on the Navy which will make use of its big landing ships: L.C.I., L.C.T., or L.S.T., or sloops or mine-sweepers".

"Therefore it will rather rare to be able to land directly on dry land some transport ships, because of the existence of shoals, or rocks. A transfer of personnel and materiel is usually imperative."

This transfer is carried out:

- either on junks or sampans towed by the battleship,
- or on small boats on board, motor boats, youyous, or on M.2 boats of the Engineers, brought on board the ships,
- or finally, in large scale operations, on special landing craft.

This transfer, by agitated sea, is an often delicate operation. Some of our elements (North-Africans, Indochinese Montagnards) display a natural clumsiness and an apprehension liable to provoke accidents".

"If the operation does not justify the assistance of the Navy, routing of the troops is insured by the means of sectors, or commandeered".(1)

"In this case the embarked forces are small and do not include infantry elements. Orders are given before departure and each has his mission at the time of landing: progression, fire support, etc.

"Finally, with regard to maritime surveillance exercized by the Navy on the littoral coasts of Indochina with a view to control navigation, intercept movements of rebel bands on sea as well as weapons smuggling, search of the islands and execution of unexpected landings on parts of the littoral inaccessible by land, laying of ambushes to obstruct the withdrawal of pursued Viet Minh bands, constitute as many real small-scale amphibious operations".

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(1) In addition, Terrestrial Forces usually lack the necessary amphibious training; there were no assaults against positions on the littoral liable to be solidly defended, but a simple landing on beaches non-held although often mined, the tactical formation being tied to the embankment, after regrouping of the units. (Captain Commanding the Naval Division in the Far East).

"Those actions are generally the responsibility of Marine Commandos on board, to the Maritime Surveillance elements sometimes reinforced by land units, and commanded by the Maritime Chief in charge of the Sector's surveillance".

The frequency of these raids and their importance tended to increase along with the V.M. capabilities and as the coasts offered more tempting objectives. Moreover, the enemy maritime traffic décreased and we were led to look for supplies and junks on solid ground.

"The general lesson to be drawn from these raids, independently of the progressive changes brought to the constitution (vessels and troops) of the executing forces as the coast was becoming better defended, is essentially the following:

-"the "punch" tactic, a standard one among the Commandos, is always more productive than the so-called "sealing" tactic, as the net in most cases closes in on innocent populations who then become practically the only ones to pay for the operation".(1)

Starting in 1952, more important operations were launched in spite of the limitations of our maritime capacity, for if we possessed sufficient tonnage to transport numerous forces, the landing problem was not altogether solved. The L.S.T. were usually not capable of beaching with the first wave, and anyway the sites permitting such a landing were rare on the Indochinese Coastline.

Therefore we had to use small craft such as the L.C.M. and L.C.V.P. which had to be brought on the scene. But the "FOUDRE" which is the only vessel we disposed of for such type of transport was put in service only in July 1953.(2)

Our amphibious actions during the last two years of the war were thus limited, while at the same time offering the double characteristic of:

- being carried out on non-defended or pporly defended coasts,
- being practically always coupled with a ground maneuver, while the synchronization of these two actions seriously augmented the difficulties.

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(1) Captain, Commanding the Naval Division in the Far East.

(2) Until then, we could only transport small craft on plane tenders of by means of fortune.

None of these operations was a failure, but they all disclosed various degrees of miscalculations in the organization and execution planification.

In 1952 the Admiral, Commanding the Naval Division in the Far East pointed out a lack of coordination(1): "These landings took on the form of a "setting in position" of the units transported by L.S.T.s. The "H" Hour determined was the time limit of landing of the last elements on board, instead of being, according to the official and logical principle at the base of combined operation, the time of landing of the first elements"

"The result being that the troops, sent aground with the maximum of secrecy, had to wait sometimes for several hours before getting on with their progress, in order to comply with the pre-determined time-table. Under these conditions, one could wonder what was left of the element of surprise which seemed to be so important to the operation Commander".

In January of 1953, the Commander-in-Chief, stated how future amphibious actions should be conducted:

"A combined operation requires,a close collaboration of the three branches of the Services, which must be evident in the planification as well as the preparation and the execution of the operation".

"Qualified Representatives of the Navy, the Air Force, as well as the Airborne if the air-drop of a unit is envisaged, must hold preliminary meetings with the Operation's Commander with a view to elaborate the plan of operation."

"Some adjustments will have to be accepted in order to reconcile the needs of the maneuver on ground and the technical capabilities of the other forces".

"The importance of the troops to be landed, the time-table of the amphibious phase, the choice of beaches can only be determined after agreement with the Navy, taking into account the available means (number and nature of the vessels and barges), of the meteorological and hydrographical conditions".

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(1) During 1952 the QUADRILLE, CABESTAN, CAIMAN operations had been executed.

"A possible postponment of the launching date for the operation and reduction of the amphibious phase must be anticipated, especially during an unstable meteorological period; an alternative must also be provided for such as the "return by land" of the landed elements in case the weather would not permit re-embarking".

"In addition, it should be anticipated under such conditions, that an enemy action against the troops and boats might be launched during the landing. The amphibious phase must not be considered like a simple transport operation".

However, these instructions were not altogether implemented and errors in concept and coordination were again noted during 1953 and 1954. In the realm of execution, the noted defects were due, on the contrary, to a lack of training of the executants as well as to the nature of the boats put to use.

"The crews of some ships and barges have no training whatsoever in landing maritime operations".

"The L.C.T. and L.C.M. utilized were river craft, that is they had been modified (armor, top) which,makes them inadequate for their initial mission, coastal landings, as their manoeuvrability and loading capacity is reduced, or transfer operations hindered".

"The L.C.V.P. were not in sufficient number to allow simultaneous and rapid landing of the three L.S.T. which, in turn, sometimes did not have enough transfer nets:

"The main obstacle to rapid execution of landings was the lack of training of the troops, who for the most part were incapable of descending with their gear along the transfer nets which they had to use, since the ramps were usually reserved for the outgoing hardware".(1)

This last defect was however corrected by the establishment of the Amphibious Training Center at CAM RANH in December 1953, where a Mobile Group and an Amphibious Group scheduled to participate in the first phase of the "ATLANTE" operation were trained.

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(1) General, Commander-in-Chief.

The QUI NHON landing was actually "executed in order to confront, during a storm attack, the organized resistance of a regular regiment supported by regional formations. But, like in the previous operations, we found a non-defended coast. However: the firm executionof units whose major elements had undergone the C.E.A.C. training proved the efficiency of this organization".(1)

The war came to an end before the amphibious actions on a large-scale envisaged for the Summer of 1954 could be carried out(2). So we can understand the following opinion expressed in an overall report on the conduct of the Naval War in Indochina.

"It can only be regretted that the seas over which we exercized total control, and which were easily passable from April to August along the involved coasts, did not take more room in the general plans of operation"(1) providing of course measures for specialization and training of personnel had been taken in time.

But such actions implied that we could dispose of sufficient forces to conduct the battle on the various territories at the same time and to open a new operational sector. These conditions, undortunately, were not met; therefore it was useless to wait for amphibious operations, the fixation then destruction of important V.M. Forces.

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(1) Captain, Commanding the Naval Division in the Far East.

(2(They were designed to extend the "ATLANTE" operation by a series of similar attacks.

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F O U R T H P A R T

ADAPTATION OF THE ARMS AND SERVICES

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TO ADAPT the combat procedures and the structure of the units to the conditions of the moment is a constant necessity.

The operations of Indochina have only emphasized it as they showed that units of a standard type, essentially conceived for the European war, were ill-suited to struggle against rebels on an Asiatic Theater of Operations.

- The "tyranny of the terrain" has asserted itself, especially due to the lack of good roads and the length of the zones of difficult crossing (brush, forest, rice-fields...). Aggravated by a trying climate, it has hampered our movements.

  Even with a country-type service like the Infantry, the lack of adaptation was acute and all Company Commanders could well observe: "We are too heavy, not mobile enough and inadapted to the terrain".(1)

- The variety of enemy demonstrations, going from the individual assault to the engagement of regiments (even divisions), forced us to constitute our units according to various formulas.

  In spite of this range, we often opposed limping formations to impregnable adversaries, or on the contrary, unshakable. So it is that one of our Company Commanders cried upon returning from a mission against the DU-KICH: "You can't go butterfly hunting with wolf-traps".

- Political considerations very often limited our freedom of movement. It was imperative to spare properties and populations even if the latter held allegiance to the other cause. This liability often led to deprive our units of the most effective fire support, but also the most destructive.

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(1) Captain ..., Company Commander.

Under these conditions, adaptation was difficult and each Branch of the Military obtained different results. The Infantry, for example, has often had to do without the support of tanks and the artillery, while deploring that its action "frequently fell in a vacuum, before an enemy that vanished"(1). In many instances the Artillery "did not see the objective and did not possess any exploitable intelligence on the enemy"(2). Tanks found it extremely difficult to deploy. Logistics was slow, its output poor and uncertain in many cases.

Our formation of new-type units or operational groups met with the requirements of the peculiar forms of combat, but this solution to the problem of adaptation has not been sufficient.

Here are a few examples of this:

- In 1945 the Units of the Expeditionary Force were heavy and awkward (9th D.I.C., Armored Division...). They soon burst and had to be dissolved.
- The mobile groups designed to be utilized in the deltas proved inadequate for operations on the plateaus and in the highlands (1953-1954).
- The Infantry battalions of the type "F.T.E.O.", created for the rice-field combat were handicapped every time they were utilized in the brush. When they were used as the defense for the posts or the defense of a base of maneuver, their putput was slowed down.

In addition:

- The heavy vehicles, particularly some armored vehicles, were not adapted to the terrain of Indochina.
- The administrative system of the troops was still impregnated with the peacetime rules of procedure; etc.

Such are the critics we have found among many of the reports.

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(1) Battalion Leader... Battalion Commander.

(2) Squadron Leader... Commanding an Artillery Section of a M.G.

On the other hand, the success of some formulas must be registered:

- The amphibious Groups and the "Dinassauts".
- The Mobile Groups, for all forms of combat in the deltas.
- The indegenous commandos.
- The operational detachments, constituted upon request(1).
- The light Vietnamese battalions (TDKQ), whose principle was good, but the use of which was not always appropriate, and whose training remained insufficient.

Whether with the cadres jointly formed or with various units of each Service, some procedures were tried, successive changes were made. In view of the experience of several years we can attempt to hand down an initial judgement on them.

For example the VAUDREY Group in Middle-Laos, in 1954.

C H A P T E R I

FITNESS AND MAINTENANCE OF UNITS

An essential characteristic of the Indochina War was the chronic wear of units, in spite of the system of individual replacements, for the replacement of personnel never constituted a defense against the constant erosion that afflicted the formations of all Services because of the harassing nature of the operations, of the absence of any truce, and of the practically permanent shortage of personnel.

More than any other, the Infantry suffered from these ills and many companies fitted the description a Lieutenant gave of his unit in the Spring of 1954:

"This Company has no Captain. The Company Commander is a young Lieutenant. He only has one Officer under him instead of two; the Sergeant-Major, wounded, is in the hospital; only one of the Section Leaders, a Master-Serjeant, is the recipient of a full Section Leader Certificate."

"The Non-Commissioned Officers cadre is complete, as far as number is concerned; the sergeants are generally good, even excellent. The strength (175) is achieved. But in the field, the Lieutenant only takes along about a hundred men. As a matter of fact:

- 5% of its personnel is on the rear (bookkeepers, etc...)
- 5 to 10% of its personnel is composed of a class of military men very special to Indochina: they are the infantry and operational unfit - physically defective for one reason or another whom the Company Commander is requested to employ at sedentary tasks" (?).
- 20 to 30% of personnel is absent: hospitals, convalescence (20%); training course - leaves, miscellaneous (5%)

"This Company has been a part of a Mobile Group Battalion for 4 years. The M.G. has had ten days of respite in April 1953; for the last nine months, it has been marches, counter-marches, and fighting without interruption. The forces have been supplemented by a reinforcement of 25 NCO's and men who have never used a weapon in the field, have never fired at night, nor thrown grenades".

"But this situation is standard, only the assistant (adjoint) Lieutenant, just arrived and not used to it yet, is bothered by it all. As far as I can recollect as an officer (some are in their third turn), the Battalion has never been seen to undergo training; the Company is down on its knees".

Indeed such a description can be applied to most of the infantry units at the end of the conflict no matter what the service branch; for a war, even a victorious one, ends with a handful of veterans and a mixture of recalled medical discharges and draftees hastily put in shape. But this situation unfortunately became that of our Infantry, for soon as the units arrived with Marshall LECLERC, they were subjected to the rule of relief...

It is therefore all important to analyze the main aspects of a crisis which lasted 6 or 7 years. These remarks apply just as well to the other branches and arms of the service, with few exceptions.

THE PERSONNEL AND OFFICER CRISIS.- While it was not contested that Indochina needed the facilities to maintain a huge supply of material, and little by little she was provided with food, ammunition and spare reserves for a duration of 4 to 6 mos., nothing was ever provided to replace the men who fell nor to insure the rest of the units that had reached the limits of human endurance.

The mother country has always calculated the Expeditionary Force personnel in relation to the requirements of the moment. It was therefore far from authorizing any addition to the contigent it so stingily approved.

As a result, the successive Commanders-in-Chief were always faced with a

dilemma: either they would organize a permanent personnel for themselves, but they would have to give up the establishment of new battalions, new batteries and new squadrons required by the increase in V. M. forces, or they would throw all their human ressources in the fight against the emergence of new opposing units and they would do without any flying personnel.

The requirements of their mission imposed on them all the inconsistencies of the second solution during eight years.

Many a time they had to wait for the arrival of a ship to regroup their battalion which had just suffered heavy losses, or to satisfy the SOS sent out by such Territory Commander or such Service Commander. At the time of the DIEN-BIEN-PHU battle there subsisted for example no other reinforcement available than about a hundred legionnaires and 200 to 300 North African riflemen, results of the G-1 economy.

Maintenance was in the Metropolis and the latter managed it according to the national considerations and not to the Indochinese needs.

We could therefore not insist too much on a lesson, which seems to be an obvious truth: Even more than in a European war, a campaign outside of the Metropolis must be conducted with a large reserve of flying men and officers. This flying reserve must be established and regularly procured in several depots where the new arrivals will complete their training while adapting to the country.

It is certainly not exaggerated to estimate that such a reserve, the absence of which characterized all the ills suffered by the troops, should be at least 10% of the total Expeditionary Force Strength.

As the Administration had remained of a peacetime character and the formula of the regiments was the exception, each battalion (or unit of the same size) had to leave approximately 1/10th of its personnel on the rear to provide for its material needs and to employ the convalescing or the unfit for the field.

The remainder of the strength suffered from the effects of casualties,

as the missing were not replaced, and the replacement elements generally did not come until the moment when the number of combatants fell under two-thirds of the established force.

The situation regarding the cadres was not any better.

In the Infantry, at the time the last years of the war began, at least half of the junior officers and NCO's were in their second term and strongly felt the effects of a physical as well as moral fatigue. In addition, the Infantry had been formed, for a third of it approximately, by cadres who were no longer able to adequately fulfill their task, either because reservists or elements from other branches had been called upon, or because elements obviously too old to command in combat had been employed.

Independently of their physical inefficiencies, these officers and NCO's were lacking in tactical experience and many troop leaders were led to write:

"The importance of the training and the resistance of the Infantry cadres does not have to be demonstrated any more. It seems that the Infantry should have a school where, with appropriate courses, the officers called upon to assume Command of the Infantry (Captains, Battalion Leaders, Colonels) would be trained and instructed in the current modern combat methods".

On the other hand, the young officers who came from other branches have, for the greater part, adapted themselves quite well and quickly to the severe requirements of Infantry combat.

"After a few months of training in the rice fields, the substitute Infantry Officers of my Battalion became real infantrymen. They had used their pride to render homage to their initial Service and were successful". (1)

The General, A.B.C. Inspector, feels that the cadres of his Arm who had

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(1) Battalion Leader X.... Commanding a Battalion in No. V.N.

served in the Infantry had acquired an enriching experience, but: it would be in the general interest however to limit the duration of their assignment to about 12 months".

To sum up, all these findings are not new: whether involved in a colonial theatre of operations or on European battlefields, the Infantry suffers from an extremely greater wearing down of men and even more of NCO's than all the other arms.

Therefore it is imperative that it be furnished with replacements in sufficient number and regularly. For each Section Leader and each Company Commander, one or two possible replacements who will complete their initiation in a training center must be provided for.

GAPS IN THE TRAINING.- Certainly, most of the units included, during the last years of the war, a good percentage of veterans, who started or completed a second turn.

But the major part of them was constituted by legionnaires or riflemen who only had a few months of service and had only received a much too brief instruction.

There is not one officer who did not emphasize the disastrous results of this lack of training. Here is what an Infantry Colonel, particularly well versed in the aspects of his Arm, wrote among others:

"...Many small scale operations would have had a happy ending...if the riflemen had been better trained...".

"The three usual deficiencies of the French Infantry were felt once again...: lack of physical training, of combat seasoning, of combat firing aptitude".

"Combat seasoning must include an adaptation to the noises of combat, therefore actual firing exercises...close combat experience, which gives to the combatant the necessary calm and self-assurance".

Major X...dwells on night firing: "In this war of Indochina, one had to

fire at close range according to one's judgment. But my men had never experienced such firing techniques in the Metropolis. This lack seems all the more serious that no one can advance that, even in Europe, an opponent would not attack our bases of operations, with the same means as the V.M. so successfully used here".

The progressive downgrading of the Infantry resulted in the same phenomenon as we have seen during the preceding wars.

Manoeuverability became more and more difficult and the battalions called on the artillery and aviation more and more to settle the incidents that infiltration or light weapons' fire could have liquidated. The increase in the expenditure of ammunition reflects this increasingly greater role which was given to the shell and the bomb.

The Tonkin Artillery consumed, over a period of three months in 1952, 4,800 tons (1) of projectiles and in 1954 it consumed 8,900 tons for a quantity of tubes which had not increased with the same proportions.

The same kind of progress occurred in Central VIETNAM, since the 1,200 tons consumed in 1952 reached 2,200 in 1954.

The Infantry consumed more and more mortar shells and grenades:

- In Tonkin 850 tons per trimester in 1952 (1).
- In Tonkin 1,980 tons per trimester in 1954, for a force which certainly had not doubled.
- In Central Vietnam 301 tons per trimester in 1952.
- In Central Vietnam 1,547 tons per trimester in 1954.

These figures do not have an absolute meaning, of course, for their interpretation would require consideration of various other factors; on the other hand, their general trend is quite clear: There was more and more fire, but the effects did not increase proportionately.

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(1) The chosen trimester (May-June-July) corresponds to a period of average activity, since the big operations had taken place mostly during the six months of winter.

As for the other Arms, specialists' training was less than adequate, especially in the communications department; so much so in fact that it was necessary to form them on the spot before they could be put to work. "This is how some young soldiers just arriving spent five months in communications training before being assigned to a formation; five months of stay which were not productive financially nor militarily". (1)

In spite of the imperative needs of the units, it was therefore necessary to create a series of training centers to palliate the deficiencies of personnel arriving in Indochina, since it was obvious that the increase in strength of the Expeditionary force was accomplished to the expense of quality and that we could not expect any solution from the Metropolis.

In general, actually, the pre-colonial training centers in FRANCE AND or AFRICA did not produce any noteworthy results, either because too many men or NCO's had been there, or because the training periods were too short, or because their organization had been at times deficient.

It became therefore necessary to train many specialists on the spot and create low ranking NCO's, if nothing else to give the best combatants the necessary notions about their promotion.

As a whole, the essential requirements of all Arms were thus satisfied, except...those of the Infantry. The following statistics computed for 1953 bear this out:

- 20% of Communications Personnel had undergone training during the year.
- 19% of paratroops personnel had undergone training during the year.
- 14% of the Artillery personnel had undergone training during the year.
- 12% of the Engineers personnel had undergone training during the year.
- 9% of the A.B.C. personnel had undergone training during the year.
- 7% of Railroad personnel had undergone training during the year.

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(1) Captain Y.... Company Commander.

and only 6% of the Infantry personnel, among whom were of course the indispensable chauffeurs and necessary dispatchers.

In a report of that period we have found:

"With the exception of the preparation to the second degree Armed Services certificate (and only a very small portion of the possible candidates were interested) at the Territory echelon, and 1 and 2 squads of the Foreign Legion, no serious training of the Infantry cadres could be undertaken in the TONKIN".

"In the other territories, where the units have a certain stability, the training of Infantry cadres was given under the most satisfactory conditions; however, they still could be improved", for the battalions in formation were too inferior to be capable of leading squads of NCO's. On the other hand, the Legion, for which the regiment formula was never abandoned, could well accomplish this task, and this fact constituted one of the arguments which, in 1953, led to a slow return to the formula of the homogenous M.G., arranged around an Infantry Regiment.

Unfortunately, nothing could be done "for the light grenadier, the most scarce, the most precious, the hardest to train specialist of the whole Infantry".(1)

"Every battalion commander could add his regrets for not being able to provide for the instruction and training prescribed during operations or combat, but for which he had never had the time nor the means to achieve seriously. And the Battalion was in dire need of it". (2)

So, a great many Infantry Officers wished for the existence of "an Army Training Center, where individual units and reinforcement elements would have stayed upon their arrival in Indochina, where they would have been rapidly conditioned and adapted to the country and the guerilla. Such training camps would

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(1) Battalion Leader X.... Battalion Commander in TONKIN.

(2) Captain Y.... Battalion Commander in ANNAM.

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have been very valuable for annual reviews which were so necessary," (1)

During the last months of operations, the General in Chief tried to solve this problem of re-training by constituted units, Four camps, each of which was conceived to accomodate one Mobile Group, were organized, and it was decided that the M. G.'s would go through one of these "areas" in turn commencing with the spring of 1954.

When the war was over, many minds had undergone some evolution. After having deplored the increasing deficiencies of the troops and cadres' formation, but having re-stated with no less vigor that we could not, at the same time "wage war and provide for training," most of the authorities finally admitted that we had to return to the solutions of the preceding wars, where training camps were operated constantly on the rears.

The outlay of instructors and necessary means could not, in any case, constitute an insurmountable obstacle, since only 1/400th of the Expeditionary Force personnel was absorbed in 1954 by instruction duties, and 1/200th would have been the maximum, had the other necessary schools been organized.

EVACUATION AND GEAR.- If the Expeditionary Force suffered from a chronic personnel shortage, it succeeded in saving the maximum of men from diseases and V. M. blows, thanks to the untiring efforts of the Medical Corps.

A perfect hospital organization was rapidly set up; it was characterized by the concentration of specialized hospitals in Saigon and by the installation of convalescence centers on the coastal town of DALAT. The evacuations were later on considerably accelerated by the use of planes; on the other hand, the tardy appearance of the helicopter made it difficult for a long time to transfer patients from the place where they were wounded to the surgery facilities. Nevertheless, the retrieving of the wounded reached a very high proportion.

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(1) Lieutenant Z.... M. G. Commander Assistant

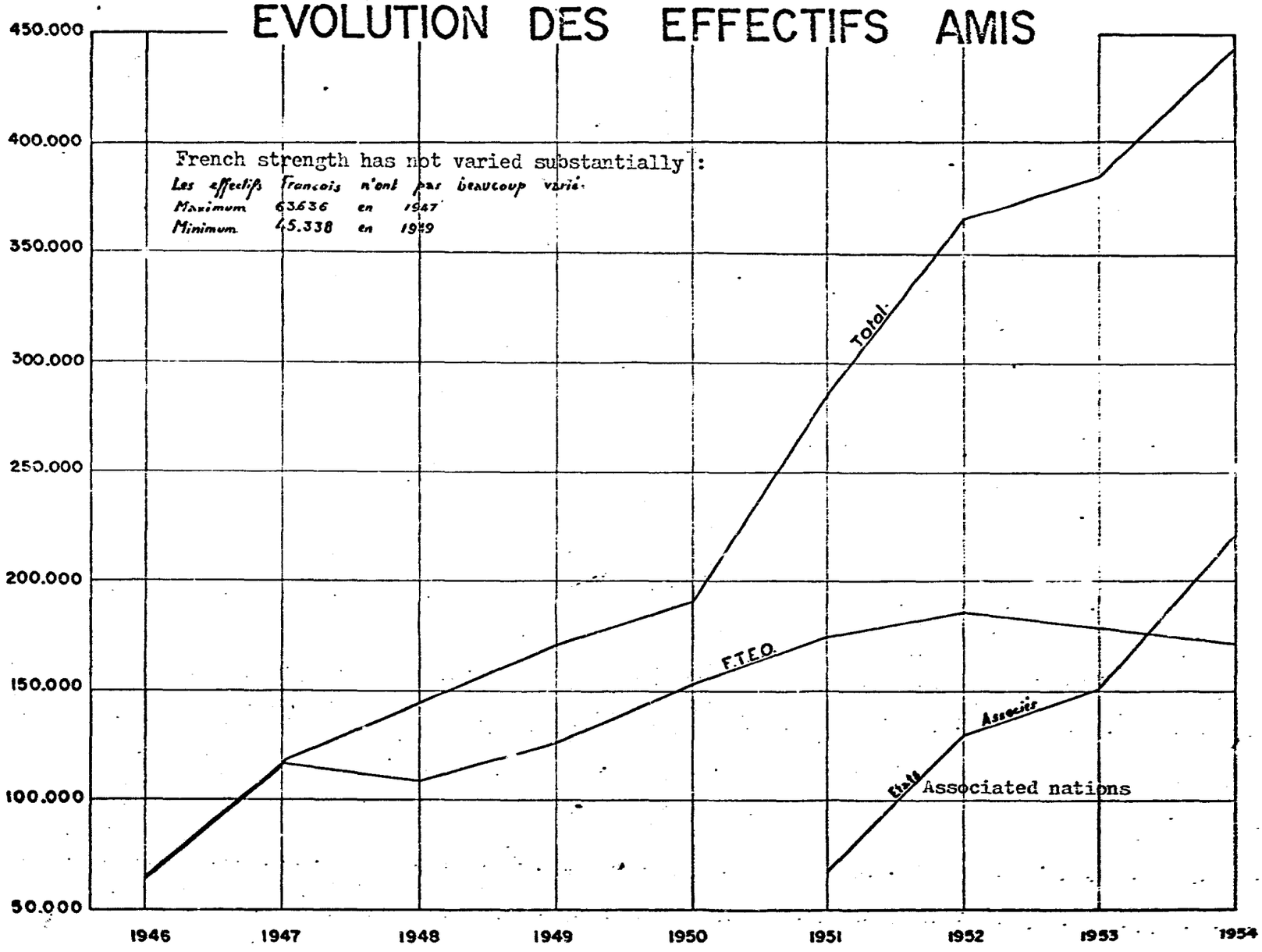
Out of the 45,000 men from French Union formations who were wounded from 1946 to the end of hostilities, 15,000 were repatriated to the Metropolis, but all others (about 65%) were re-incorporated into units.

As far as the struggle against diseases is concerned, there will be more detailed accounts in the chapter devoted to the Medical Corps, but it is imperative to point out here the progress which was achieved compared to the colonial expeditions before 1939.

At the beginning of the campaign (until about 1948) the Expeditionary Force suffered from the mediocrity, even the inadequacy of supplies and equipment.

These problems were later satisfactorily solved, in particular thanks to the efforts of the Metropolis, the U.S.A., and also the Services to which Lieutenant X... pays tribute in the following terms: "In spite of obvious difficulties, my company had fresh food to eat most of the time and we often had ice; as a whole, clothing and gear were adequate. The services did their very best to enable us to endure the hardships of the campaign".

EVOLUTION OF FRIENDLY STRENGTH



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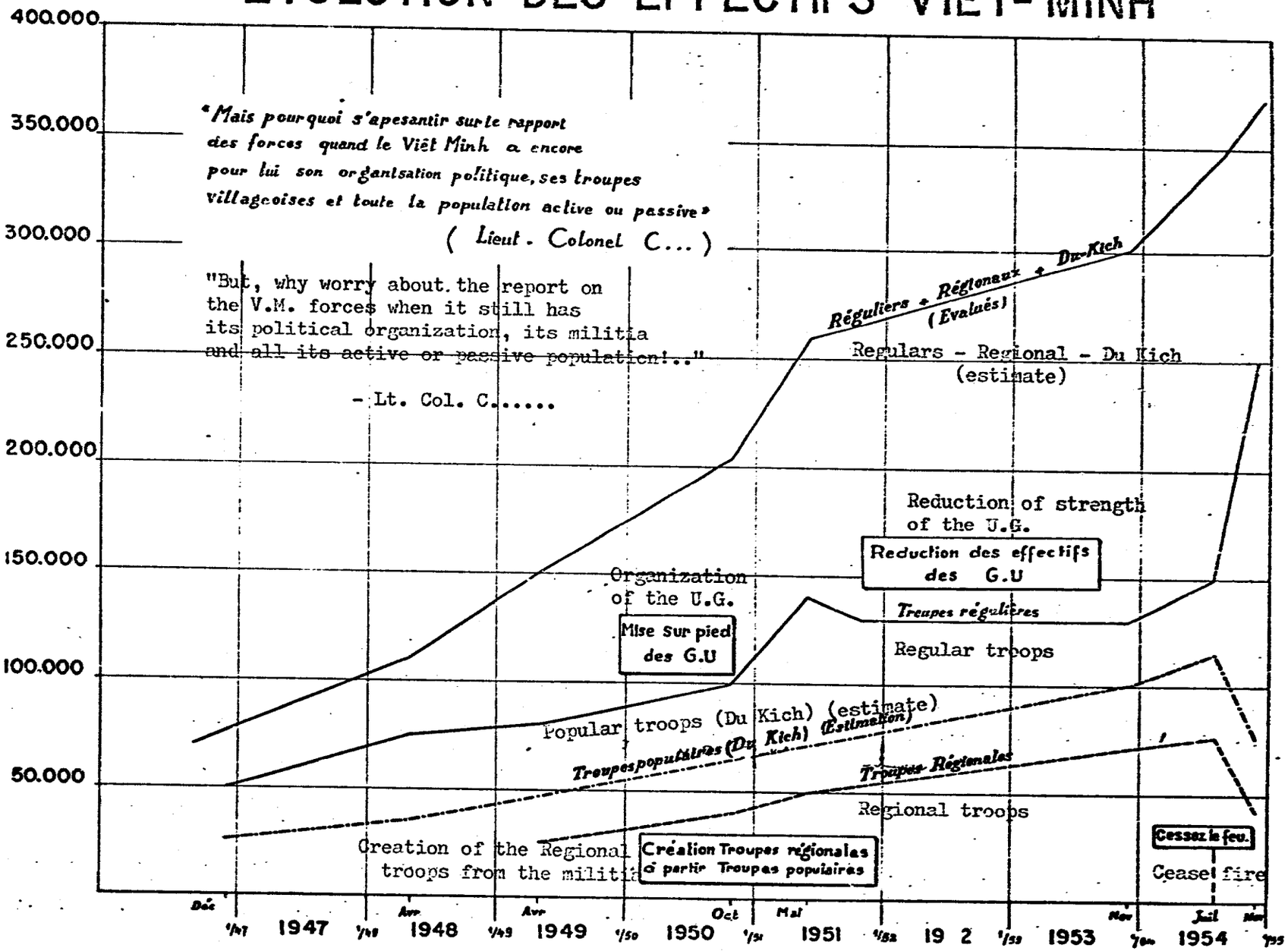
EVOLUTION OF VIET MINH STRENGTH

EVOLUTION DES EFFECTIFS VIET-MINH



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CHAPTER II

THE MOBILE GROUP

The Mobile Group has been, in Indochina, the adaptation of the Tactical Group formula. It is however worthwhile noting that the Mobile Group has not always constituted the basic tactical unit. In the Command calculations, the evaluation of the volume of the means was frequently done on the basis of "battalions" and the two units of measure were simultaneously utilized.

In the final analysis:

- the M.G.'s were organized only after 1951,
- they did not exist permanently on all territories,
- finally, and mostly, they absorbed only about a third of the Infantry, with the two other thirds composed of Mobile or Implanted Battalions.

At the beginning of the campaign, the Big Units arriving from the Metropolis: 9th D.I.C., 3rd D.I.C., 2nd D.B., were overpowerful and too heavy. The divisions had to be immediately dispersed, then the regiments. The basic tactical units became the Infantry Battalions, artillery groups and units of the same size. Only the Foreign Legion regiments subsisted, and even though their battalions were most of the time being used separately.

But, although the Viet Minh, at that time, had not yet constituted any powerful formations, the necessity for the Command to dispose of Joint Services Groups was nonetheless felt. Indeed, if certain operations could be conducted by isolated battalions, others required much more important means.

From 1946 to 1950 the old formula of Morocco was put to use: the mobile

column, bearing the name of its chief. For each operation the one who was to command it was designated, a staff was "set-up" for him - it was provided with a certain number of elements of all arms, in proportion to its mission.

From 1950 on - the creation and the increasing importance of the V.M. Battle Formation (2 Divisions created in 1950 - 3 others in the beginning of 1951), the form of operations itself, which in the surface war sometimes took on the aspect of "whirlwind manouvers" where the battalions passed from one command to another more and more frequently as the communications links became more scarce, led the Command to strike out the European formula by creating permanent Joint Groups: the Mobile Groups.

One of them already existed: the North African Mobile Group. Four others were created by Marshal de LATTRE shortly after his arrival in Indochina in order to face the grave threats which hung over the Tonkinese Delta. Their number increased and their maximum was reached in 1951: 11 M.G.'s composed of French Union troops and 7 Vietnamese M.G.'s.

However, in order to face up to the increasing Viet Minh strength, a return to the Divisionary formula was undertaken from 1954 by uniting several Mobile Groups (Light Divisions). Thus, the Indochina war was to see once again the Division Echelon which had characterized its beginning. But the evolution closing cycle came late compared to the V.M. Battle Formation.

ORGANIZATION OF THE MOBILE GROUP

The Mobile Group differed from the European Tactical Group on the following points only:

- more important command facilities,
- special structure of its infantry,
- existence of an organic artillery group (and not "adapted").

The Command facilities of the M.G. included a limited staff, a well provided for communications detachment in order to allow the absorption of considerable

reinforcements, and finally a command company and services that included a defending element from the C.P.

Thanks to the direct action of its chief, unencumbered by a large Staff, the use of field telephone, the complete motorization of the C.C.S. and of the Artillery Group, the capability of absorbing considerable reinforcements, "the Mobile Group could, in case of a crisis, rapidly become a very powerful complex, capable of clearing up a serious situation, that is a situation where regular troops, taking advantage of a field of action prepared by the provincials, the regionals and numerous sympathizers intervened in the rebel camp". (1)

Its infantry included three battalions of different origins most of the time: the Legion - North Africans - Africans - Indigenous. These battalions disposed of a limited motorized rear.

An Artillery Group was an organic part of the M.G. It was entirely motorized and included three gun batteries composed of four 105HM2 pieces. In certain M.G. this group was replaced by a Heavy Mortar Company (in view of the shortage of tubes and artillerymen). The M.G. was often provided with considerable reinforcements for a particular operation: Infantry Battalions, Armored or Amphibious Sub-Group, Commandos, Engineers Units, etc.

The M.G. was not provided with any of the services (except for a very limited medical service to the C.C.S.), for it was initially conceived to operate in a net of territorial services. Therefore, it had to be supported by the latter, or in some cases (ATLANTE Operation, for example), by some sort of a base of operation created upon request.

This organization, result of the experience from battles in the Delta, did not give rise to any severe critics. Only the Infantry structure has been the object of vigorous comments.

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(1) Colonel.... Commanding a M.G.

In the opinion of some, the diversity of the battalions constituted a factor for efficiency for "the mixing of different units allowed us to draw the maximum performance from the various capabilities of troops of different origins."(1) The partisans of the heterogenous M.G., maintain that "the formula produced excellent results (emulation, different character of each battalion which permits a particular utilization)". (2)

This diversity was no doubt necessary at the time when maneuvers stayed within the M.G. framework. It was hardly justified from the moment when several M.G.'s operated together (Operational Groupings, Light Divisions). The tendency at the end of the war in Indochina was thus leaning toward the regrouping of the battalions of the same race into one regiment, constituting the Mobile Group's Infantry. This evolution met with strong supporters:

"On the tactical plane, the search and destruction of the enemy and his bases by isolated M.G.'s composed of several of the Arm Battalions has become passe: there is always some advantage in that the M.G.'s be homogenous". (3)

"From the morale standpoint, the organization of the heterogenous M.G. has been a failure. Everyone likes to serve under the orders of a Colonel who wears the same badge and who is considered as responsible of his units in all areas, and not only in that of tactics". (4)

"Mixing of races must be avoided. The three battalion M.G. under the orders of his Colonel is clearly preferable to the mixing for three main reasons: better developed esprit-de-corps in battle, moral ties, management of personnel easier (distribution of reinforcements, promotions, rewards). On the other hand, a fourth Indigenous Battalion integrated within the M.G. can give excellent

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(1) Battalion Leader X.... Commanding a Battalion.

(2) Lieutenant-Colonel F.... Commanding a M.G.

(3) Colonel B.... Commanding a M.G.

(4) Lieutenant X.... Assistant Commander of a Company.

results". (1)

"The Infantry cries for its Colonels" mention several reports, which emphasize the fact that the Infantry Battalions are better committed, better commanded in combat by an infantryman than by officers of the other Arms, and hold that only an Infantryman can "feel" the needs and hardships of his men.

EFFICIENCY OF THE M.G.

The efficiency of the M.G. utilized alone varied, of course, according to the means employed by the adversary and, consequently, over the years of the war. As long as the Viet Minh forces were committed in small units, supported exceptionally by a poor artillery and irregularly supplied, the M.G. proved brilliant.

The worse that could be said against it then was that it was too heavy for some counter-guerilla activities, or when the only opponents it encountered were fluid regional or provincial elements drowned in the rice field populations.

The M.G. working alone on a territorial occupation plan of the terrain is either too important for the result anticipated if the enemy disperses and slips away, or insufficient if the enemy accepts to fight on surface. In all, the M.G. constitutes a formation which is too easily "maneuverable" for the enemy. (2)

Starting with 1953, the isolated M.G. was no longer satisfactory in the Delta; it was necessary to create actual small Light Divisions composed of three Mobile Groups and capable of providing for their own security or to attempt to conduct concentric maneuvers destined to rob the enemy from its faculty to disperse.

The efficiency of the M.G. was equally variable according to the terrain.

"My M.G.'s organization permitted a very honorable conduct in all operations it participated in around the Delta. But it is certain that from the moment it had to intervene in LAOS, under quite unexpected circumstances, this organization had to be modified many times in the face of most unforeseen circumstances". (3)

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(1) Captain X.... Staff of a M.G.

(2) Colonel N.... Zone Commander.

(3) Colonel Q.... M.G. Commander.

"The M.G. formula, in my opinion, does not seem adapted to the characteristics of the terrain nor of the enemy we have encountered on the PLATEAUS". (1)

Indeed, the means of the M.G. only allowed its full efficiency in areas with a sufficient road network.

"It seems that the M.G. was actually conceived to operate in view of activities within reach of a road network. Indeed, the some hundred twenty organic vehicles it disposed of inexorably tied it to the road, and to those were added the necessary means of transport for the reinforcement units and the impediments which never ceased to increase both in number and volume".

"...But, on the Indochinese Theatre of Operations, communications means were generally rare, mediocre, limited in their capacity, and did not permit the counterpart in auto columns. Their approaches were such that, except in rare open areas, it was difficult to deploy. In many spots, they were strewn with perfectly well-known death-traps".

So, in the areas with a very poor density of road (Plateaus, Middle-LAOS), the motorization of the M.G.'s became a source of many difficulties.

"The laying-out of the roads constituted the periphery of an area which progressively passed under control of the V.M. The latter had installed a real network of logistics emplacements covered and linked together, allowing him to manoeuver in a central position against the F.T.E.O. elements by using exclusively the roads and maintaining the communications connections with narrower and narrower spreading margins".

"...The M.G.'s could only insure, with two battalions, a limited security in the immediate vicinities of the road and they had no place to outflank broadly the ambushes, in short to manoeuver". (2)

"In addition, the battalions could not go more than 10 kilometers away

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(1) Colonel M.... M.G. Commander.

(2) Colonel M.... M.G. Commander.

from the road on each side without risking the loss of their guns' support. On the opposing side, all the V.M. had to do was not to get closer than 10 Kms. from the M.G. axis in order to be invulnerable unless the infantry chose to commit itself against them without any land support". (1)

Even in the areas where the road network was satisfactory other imperfections could be noted.

A Colonel commanding a M.G. summed up the noted defects as follows:

- "Undeniable awkwardness of the Command Company and of the Communications Detachment, and difficulties to insure their immediate security. In practice, generally were constituted: a FRONT C.P., as limited as the circumstances allowed (including if necessary some radios carried on backs) and free of liaisons with the rear as much as possible, and a REAR C.P., grouping all the non-indispensable means in front, and consequently very heavy. The Security Section provided for the T.E.D. was in any case very insufficient to maintain the ensemble. It could, in a pinch, suffice under certain conditions to protect the FRONT C.P."

- "As for the REAR C.P., it had to insure its own close security by keeping stationed in a post or in the immediate vicinity of a territorial formation. This was a real handicap as far as the M.G.'s mobility was concerned".

- "Lack of armored vehicles for reconnaissance and security".

- "Lack of Infantry, due to the permanent engagement of a battalion to guard or accompany the Artillery Group, various needs due to the general insecurity (convoys, route guards, etc.). In most cases, only two battalions were practically left to act efficiently. No maneuver was then possib'e".

- "Lack of means of transport".

The latter point remains to debate as the Infantry Battalions were motorized by one-third of their capabilities; the Artillery and the C.C.S. by 100%.

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(1) Lieutenant S.... Company Commander.

Therefore, three rotations were necessary to transport a non-reinforced M.G. by transport means. But the mediocrity of the road network and the necessity to protect all convoys, interdicted all additional assignment of vehicles. In addition, in order to obtain an adequate utilization rate it was imperative to centralize the motorized capabilities.

To sum up, the M.G., considering certain imperfections, proved to be "relatively well suited to operations in the delta zones or uncovered areas when the road network is sufficiently dense, usable, and maintained by a territorial infrastructure preserving objects of art". (1)

On the other hand, it proved "unusable and even very risky in all covered and partitioned areas. Motorized capabilities then constituted a handicap". (2)

Two solutions can thus be envisaged:

- only one type of M.G. capable of being "swelled" or "deflated" according to the situation.

- two types of M.G., one totally conceived to operate away from roads, the other for regions with roads.

The two solutions have their supporters:

"The M.G.," says a M.G. Staff Captain, "must be capable of operating within two limits:

- that of a powerful Joint Grouping,

- that of an Infantry Grouping composed of only one mobile C.P. with portable radio facilities and three or better, four reduced battalions; this group, going alone on foot, outside of the guns cover to engage the enemy in an actual infantry battle". (3)

"The M.G.," says also a Colonel Commanding a M.G., "must, in rough terrain

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(1) Colonel.... M.G. Commander.

(2) Major.... M.G. Chief of Staff.

(3) Captain L.... E. Staff.

where movement is difficult:

- "do away with its organic Artillery which is placed as 'general reserve',
- "be reduced to its infantry only, disposing of the whole range of its heavy equipment, somewhat lightened,
- "dispose of 'rears' constituted by porters and pack animals,
- "be provided with substantial aerial support,
- "be scoutedby indigenous Light Units". (1)

On the other hand, it seems to others that it is imperative to dispose of two types of combat units,

"On one hand, for zones pervious to automobiles, reinforced M. G.'s (4 Battalions - 1 Artillery Group - 1 Armored Squadron - 1 Engineers Company) and Armored Sub-Groups (1 Tant Squadron - 1 Infantry Battalion)".

"On the other hand, for the forest zones or rough terrain, some groupings totally independent of the road (M. G. of the brush or mountain type) which could include: a Staff and Command facilities, four Battalions, one or two 75 S. R. (2) batteries of which all fire capabilities and command facilities would be transportable on men's backs."

"More powerful fire support and logistic support would be essentially insured by a substantial and mostly decentralized aerial support. Supplies would be assured by air-drops, the evacuations and movements from the front to the rear via helicopters, or terrain permitting, via plane." (3) - (4)

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(1) Captain L. ..... .General Staff
(2) Colonel C.... M. G. Commander

(3) The use of 75 S.R. guns in rough areas is, however, subject to controversy. In fact, the problem of fire support in such regions has not been resolved satisfactorily yet (Cf. 3rd Part: "Actions in Forest").

(4) Colonel B.... former M. G. and Zone Commander

(5) The Commander of Naval Forces in the Far East wishes also for the creation of units transportable via rivers, of the size of a G.T., and suggests (in case the principle of the "Joint Combined Group" might be considered, the best thing would be to include in it a Tactical Grouping of 3 Foreign Legion Battalions and one Amphibious Squadron)

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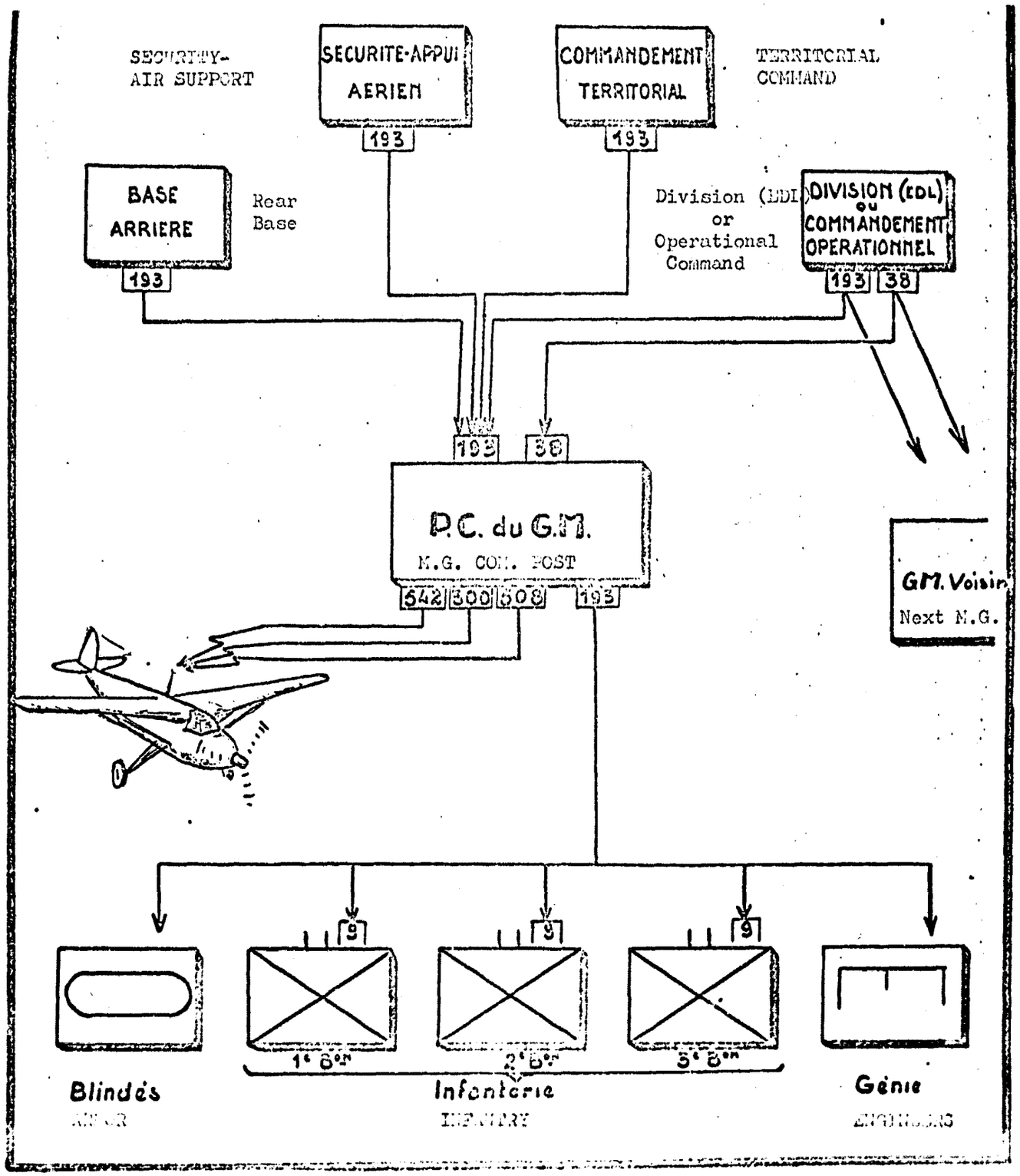
M.G. SIGNAL SERVICE



C H A P T E R III

THE INFANTRY

"One of the teachings of the Indochina War, and one of the main ones, writes Colonel X...., Zone Commander, is that the Infantry, in this War without a front, takes on a very special importance. More than ever, it conducts the fight".

There couldn't be any question, therefore, of treating hereunder the use of the Infantry as would be done for the other Arms: This would mean to absorb all tactical problems.

Thus, we shall only attempt to give back just the essential characteristics of the Infantry's organization.

The three components which make up good Infantry have been confirmed once more:

- MAN : "Essential element of combat" (Colonel B...)
- FLUIDITY : "Main quality" (Captain M...)
- NUMBER : "Major condition for an Infantry to be alive and active" (Battalion Leader B...)

Unfortunately those three assets were lacking once too often during the campaign.

MAN

In 1953, the Infantry represented 52.3% of the whole strength. But during

the same year, its losses reached a percentage of 65 in proportion to the total ...es of the Expeditionary Force and this was sufficient to show the frightening rate of wearing down to which this Arm was submitted.

The mobile units were first of all subject to constant strain: "There was never time to rest. As soon as an operation was over, another one was undertaken, or rather, as soon as a Battalion had completed an operation, a new one was quickly prepared for it. By day, it was the extenuating march along embankments or over trails, in mud or in the brush. By night, it was the watching, patroling, ambushes".

"This lasted for years: in six months, we did not go to the rear once. The Infantry was used to the last thread".

For the implanted units, it was the morale wear and tear. "The post was an example of military inaction; not that its occupants didn't do anything, quite the contrary, for activities were numerous and varied, but not one positive action was accomplished: the Post prevented neither road sabotage, nor V.M. crossing of troops or supplies, nor the laying of big ambushes. It served the purpose of waiting. What can work on nerves better than waiting?" (1)

For the most part, losses were due to the lack of instruction. "In the Metropolis, the infantryman underwent a rudimentary training and he was expected to fight with that, since he was thrown into the battle as soon as he arrived in Indochina. He got his real training under fire; at what price! It was often heard: if one can last the first three months, one has a chance to get out of it". (2)

In addition, the age of some members of the cadres was another handicap. In a report to the Secretary of Defense, the Commander-in-Chief was able to point out that the average ages of the Infantry Officers on the departure roster of the

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(1) Lieutenant X....

(2) See Chapter "Fitness and Maintenance of Units"

first trimester of 1954 were the following: 2nd Lieutenants - 31; Lieutenants - 35; Captains - 38; Battalion Leaders - 43; he could also state that:

"A French Union Battalion operating in the Highlands in December 1952 was led by a 42-year-old Captain. The average age of the 2nd Lieutenants was 36, that of Lieutenants, 38. Small wonder that this Battalion arrived on the battle field exhausted after five days of march and that it was roughed up in the first encounter".

FLUIDITY

It was a characteristic of the adversary, but rarely ours: "In the face of the Viet Minh, lightly equipped, used to the rough treatment, moving about with the rice pack, crossing rivers on banana tree trunks, we opposed a poorly trained infantry, weighed down by its impediments, too heavily burdened with supplies and ammunition."

"Lieutenant Colonel X.... had been nicknames "RICE-DRY FISH" during the years 1949-50-51 because for every operation under his orders, we left with everything that became his name. He was one of those rare ones who brought to combat fresh troops, and if we 'bellyached like thieves' about the imposed diet, we could also appreciate the alleviation brought on by this means of supply".

"On the other hand, at the start of the 'CONDOR' Operation on April 13, 1954, we left with five days of rations in our bags (or a weight of close to 15 Kgs., about 31 lbs.) and reserve ammunition. At the end of the second day of march, we had buried one Corporal and had to evacuate, the next day, 25 men who, otherwise, could have served as milestones".

This heaviness and therefore this lack of fluidity have been deplored in every single one of the reports. But isn't this questioning our very concept of the organization and use of forces and...the problem is far from being peculiar to the Infantry.

NUMBER

The Infantry at first suffered from a chronic shortage of officers:

"The miscalculations of numerous Battalions were mostly due to the quantitative and sometimes qualitative weakness of the French officer strength. In such a tough war against an adversary who could combine modern weapons and a perfect adaptation to the country it would have been necessary to have our units solidly officered. It would have been proper to have at least 18 officers and 60 to 80 French Non-Commissioned Officers present for each Battalion.

"But, if the theoretical strength was close enough to these figures, in reality there were never more than 10 or 12 officers and about forty NCO's during operations". (1)

But the Infantry suffered also from a lack of men. Here is an example among a hundred of them:

"The operational strength of two battalions of my M.G. was 420 men in February 1954, 350 in March, 450 in early April, 350 on April 18; at the end of May it reached a high of 575... And, a Battalion which does not count 600 men in combat is not a battalion". (2) Indeed, as soon as the strength of a battalion decreases, the light infantrymen are the most hit: losses in combat, re-affectation in other specialties, etc., and then comes the cry so often heard: "We don't have enough light infantrymen!"

And yet, "in the attack, the Infantry must in the end conduct the shock action: the shock, the Infantryman is the element of security and counter-attack".(2)

A good measure would have been to dissolve the Battalions as soon as their strength grow dangerously thin; and the particularly pointed remark of an Officer "The more a Battalion is weak, the more it suffers losses" comes to the support

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(1) Colonel B.... M.G. Commander.

(2) Colonel B.... M.G. Commander.

of a unanimous opinion: "Less Battalions but better Battalions".

But the Command, pressed hard by operational requirements, rarely proceeded to dissolutions. So, the Infantry, already worn out by losses and fatigue, was even more handicapped by the variety of its recruits.

Every Battalion in fact reflected the racial character of its men and, according to its composition, whether Legionnaires, North Africans, Africans or Indigenous personnel, from such or such region, it proved better in the offensive actions than in the defensive actions, or inversely.

Some were strong under fire, but heavier and slower than the adversary; then some others obtained a certain lightness, but proved unstable in action. Some engaged in night combat without any apprehension, some others felt an oppression when faced with darkness. Some were at ease in the rice fields, some others again preferred the mountains and the brush.

Finally, fatigue had quite different results according to the race.

A tactical specialization of the units according to their inherent capabilities could have emerged from these differences. But the multiplicity of the forms of war and their extension to the surface of Indochina practically prevented it, so the Battalions remained polyvalent, lest they limit the maneuver capabilities of the Command. From this resulted miscalculations in the large-scale operations as well as in small detail actions.

A comparison with the Viet Minh Infantry will finally illustrate how handicapped our Infantry was.

The Viet Minh Battalion was recruited on the territory where it fought. Ours lived off reinforcements that were not consistent as to their number and their timeliness. Now a massive arrival of new infantrymen required several weeks of breaking in now the gaps were insufficiently filled.

Now the next repatriation of a large portion of the strength was thoroughly felt, (physical strain and instinctive tendency to reduce risks): now, again, the

new arrivals all came from a same ethnical group and the desirable distribution between branches of a same race was no longer observed. This, of course, constituted an irretrievable weakness, since it was inherent to the formula of an Expeditionary Force, but it had the worst effect on the Infantry.

The Viet Minh Battalion was wholly Vietnamese whereas our Battalions didn't always dispose of officers and non-commissioned officers who had the opportunity to know their men beforehand. In addition, we cannot ignore the fact that some of them have never made the necessary effort to acquaint themselves with their troops' psychological characteristics.

In this chess game that was the Indochina War, one was able to say , "HO-CHI-MINH made his moves without a Knight".

We did have Knights, thanks to aerial, road and water transport facilities. But a Battalion, broken down by combat in the rice fields, did not pass all of a sudden to operations in dense forest, jungle or mountain terrain with impunity. This slow adaptation to the terrain which the Viet Minh Units possessed, because they went over it on foot and had, therefore, all the time to study, inderstand and evaluate it, could not possibly be an asset of our Battalions which were "thrown" in the space of a few hours from an area to another to straighten out an emergency situation.

They had barely noticed the changes in the relief characteristics and the density of the vegetation when they had to give up hope of assimilating different tactics and had to engage in a combat where there was no room for any error (whether on the part of the Chief or that of the executants).

Finally, our Battalion was infinitely more vulnerable than the V. M. Battalion. First, because the opponent always attacked with a local quantitative superiority. Secondly, because our cadres, impregnated with Western style combat rules, could not give up the artillery and air support and became totally confused without them.

This incessant call for the Artillery to reduce the least resistance was indeed a well-known sign of exhaustion. It could be noticed every time the Infantry suffered too many losses and its momentum was worn out by too many combats. The same held true for the encircling phoebia which struck most of our Battalions the minute they had the impression of being "in the air".

However, it would be unfdir to forget that the spirit of the offensive was justly restrained by the fear of mines and booby-traps, by the inadequacy of the medical evacuation facilities (1) and mostly by the thought that the initiative rarely prevailed in our camp.

THE INFANTRY BATTALION

Whether dealing with maneuvers in force within the scope of a Mobile Group, or with the defence of a post's blockhouses, or again with all-versatile counter-guerilla actions, the infantryman was fighting as part of a uniform type. (2)

This Battalion was characterized by:

- the grouping into one single company (the C.C.B.) not only of the command and escort facilities, but also of all services of the Battalion.
- coexistence of the quaternary rule (four Combat Companies) and the ternary rule (three Combat Platoons with three identical combat groups in each Company). (3)

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(1) A man wounded one or two hours before dark was practically always condemned to wait until the following morning for a helicopter; an evacuation by stretcher over rice fields or the brush for several hours would have assuredly killed him.

(2) With the exception of the MOROCCAN TABORS.

(3) The Combat Company disposed in addition of a Command Section and a Heavy Section.

- partial motorization.

A Company of indigenous auxiliaries was often added to it which brought, along with additional strength, an element of lightness and local character.

Thus constituted and provided with the administrative autonomy, the F.T.E.O. type Battalion was alleviated compared to its counterpart in the Metropolis, but it remained oriented toward the classical forms of Infantry maneuvers in normal terrain.

The formula thus was acceptable for Mobile Battalions, since it was adapted to the particular conditions of combat in the Far East. On the other hand, it lost all meaning for the Implanted Battalions; the distribution of capabilities was then made according to the number of posts to be occupied and the guns to man.

THE MOBILE BATTALION

Its organization - the C.C.B. structure was the most criticized:

"Any operating Battalion has been provided with its "Rear Base", an indispensable element, arduously put together by imposing upon the units (the C.C.B. in particular), but which was not shown on any organization chart. Alienating part of their cadres and their transport facilities for the benefit of the 'Base', the operational elements found themselves weighed down as a consequence".

Some are of the opinion therefore that "instead of wanting to freeze normally front-bound operational elements and inherently sedentary administrative elements into a single C.C.B., it would have been advisable to split this complex a priori into:

- "An Operational Command Company".
- "An Administrative Services (or Base) Company".

Others feel, on the contrary, that the system of the single company be maintained, on condition, however, that "the Battalions be relieved of the Rear Base burden, thanks to a regrouping of the Administrative Services of units of the same type in the Rear Bases Zones".

This formula is particularly desirable in the case where the Battalions belong to the same Regiment and the latter constitutes the backbone of a M.G. In the case of isolated Battalions, the division of the C.C.B. into two independent units seems preferable.

On the other hand, the quartenary rule applied to combat Companies met with unanimous support: "At the Battalion echelon, the quartenary rule allows the utilization of three elements to engage, cover, and maneuver, with the fourth element as reserve, either to exploit, or if necessary to face up to an unforeseen threat... The quartenary rule is of the essence in surface war".

The Battalion Command Company, in combat, lacked facilities to insure the security of the Battalion C.P., of the D.O. and that of heavy weapons, which had become necessary due to the fluidity of the Viet Minh Infantry and the spreading insecurity.

However, in order to insure such security, each Battalion Commander applied his own personal solution.

In some Battalions, "the C.C.B. was integrated into the offensive apparatus and worked under cover of one of the combat Companies. But with this arrangement, the heavy armament often found itself poorly set up within range of the opponent's Infantry light weapons, and generally too close to the enemy".

In others, "the Pioneers Squadron was responsible for the security of the C.P. and heavy armament. But this became a difficult task when the pioneers ahd to man 57SR guns with which the Battalions were provided, without any additional men to serve them".

Finally, some Battalion Commanders provided the C.C.B. with "two combat platoons charged with numerous missions: C.P. defense - protection of escort elements - raids - ambushes - watch of prisoners and coolies...etc."

In the war in surface, the problem of security of the Command and Escort elements comes up for the Infantry the same as for the other branches. But the

greater security". (1)

Its advantages and inconveniences have been well expressed by Lieutenant N...., a Company Leader.

"A preliminary remark is of the order: the lack of cadres initiated in the command of platoons requires an organization of light and easily led units. For this major reason, the platoon with two combat groups is justified, in spite of all the inconveniences it presents otherwise".

"Composed of two combat groups, the platoon no longer maneuvers and, in practice, fares in combat like a reinforced group, with two automatic rifles intervening in the front. It is enough that the Chief provides them with a cover, a protection of light-infantrymen; this does not require an experienced platoon leader: a good group Leader suffices".

"However, the result is that the maneuver begins at the Company echelon and that the Company Commander is practically led to split his unit along the binary line by grouping his platoons two by two under the command of an experienced Officer or Non-Commissioned Officer".

The disadvantages of such a system reveal themselves immediately: the weakness of the platoon with two groups does not permit it to be charged with a mission which would normally be entrusted to a unit of the ternary type capable of maneuvering, or it requires temporary reinforcements by drawing from another platoon".

"However, the great flexibility and lightness of such a system gave it its efficiency in the operations led in the Delta against the V.M. Regionals. But it became too light in a standard operation where the unit had to remain close in order to give its maximum efficiency and where the platoon had to be capable

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(1) Captain V.... Company Commander. The quartenary rule however diminished the fire power of an automatic rifle Company. The automatic rifle was often used to arm a security group, which most of the Company Commanders maintained at their side.

of accomplishing a search and maintaining of contact mission, with no other means than its own while waiting for support elements".

"It seems therefore that the quartenary formula was working in the particular case of the Delta war, where the presence of V.M. Regionals required lightness and flexibility, more than maneuver and storm action. It would be perfectly suited to light Battalions, but should apparently be proscribed in the M.G. units which operate rather in force".

The disadvantages of the quartenary rule appear even greater when the troops are in reduced numbers:

"Following losses of all kinds, my Company's strength only rarely went over the figure of 90 in operations", said a Lieutenant, Commanding a Company.

"The platoon according to the quartenary rule was reduced to two automatic rifles detachments (that is of necessity 10 men following the obligatory division of the fire unit) and a team of 5 or 6 light-infantrymen, including the two Grenadiers V.B. and the telescope rifle carrier. There was no longer any maneuver of the platoon, and that of the Company became weighed down on account of the necessity to assign the same limited objective to the platoon".

Thus we can remember, from these various opinions, that the quaternary rule only offers serious advantages when the strength of the combat platoons is maintained to a minimum of 30 fighting men.

The Heavy Platoon (a group of machine guns - a group of 60 m/m mortars) was designed to provide an immediate element of support to every combat Company. But the lack of men, the alleviation requirements, often reduced it to one machine gun and one 60 m/m mortar, with very low ammunition supplies.

In spite of the advantage found by most of the Company Commanders in disposing of such a minimum, some think that "the <u>a priori</u> distribution of machine guns, at the rate of a group of 2 per Company is not justified: it weighs down the unit and takes away from the Battalion Commander one of his facilities to

make his own personal action felt: the 8 machine guns must be regrouped with the escort Company, since their use at the Battalion echelon or their distribution among the Companies was done "upon request".

This leads us to note how much the splitting of facilities "upon request" was adopted at all echelons, even though it did meet with some opposition.

"Numerous small cadres, old Platoon Leaders, hold on tightly to their idea of the undivided group, of the automatic rifle as the 'spirit of the group', while the terrain and especially the vegetation did not permit the use of such a weapon except in rare instances... From the 'obsession' of the F.M., there sometimes resulted an aversion for individual action although it was productive in the areas where infiltration was the order of the day".

But it must also be pointed out that the distribution "upon request", such as was defined by the Infantry Rule of 1951 tended to harden: it had become commonplace to dub the temporary detachments by using terms designating the Infantry maneuver, FIRE and SHOCK, while giving these detachments a practically permanent character.

Thus we saw the appearance of the platoon which organically included:

- 1 firing section (2 riflemen detachments).
- 1 shock section (3 teams of grenadiers - light infantrymen).
- 1 support section (grenade-throwing rifles).

or - 1 firing section (2 riflemen detachments).

- 2 shock sections with 2 teams of grenadiers - light infantrymen each.

Various organization charts made the procedure official at the end of the campaign. The Auxiliary Group F.T.E.O., for example, was composed of a "Firing" Section and 2 "Shock" sections.

Some of the cadres went even further and envisaged companies made up of 1 firing section and 2 shock sections, while others advocated, as the Soviet Army

does, the creation within each Battalion of an automatic pistol Company for actions requiring great lightness or looking for the shock effect.

Finally, it was commonly envisaged to group elite Marksmen armed with telescope rifles, Marksmen with grenade-launchers, or group within the Battalion all mortars and machine guns.

These changes bear witness to the fact that the flexibility of formations which had been advocated by the authors of the 1951 regulation had been adopted, but they also show two very pronounced tendencies; first the systematic abandonment of the three automatic rifles of the section and then the splitting a priori of the section for missions more common in the Far East. So that, using of their right to split their capabilities "upon request", many Section Chiefs adopted a personal solution which nonetheless became a no varietur* formation.

This indirect return to conformism is self-explanatory elsewhere for psychological reasons; for, if the separation into a shock element and a firing element from the three standard groups of the section naturally permits to obtain a more productive split, this proportion has the serious disadvantage of cutting all friendly bonds of elementary units at the moment when they are the most imperative, that is at the time of close combat.

The a priori organization of fire nucleus and shock nucleus, merely signifies a reaction to the breach of bivouac comradeship by creating another esprit de corps.

It would be better therefore to approve what everyone was doing more or less spontaneously by making up new organization charts. The organic decomposition of the section into firing and shock elements would in no way sever the possibilities of constituting groups "upon request"; but the possible reshuffling would be made under more favorable conditions by combining "firing" groups and "shock"

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*So that nothing will be changed

groups in order to obtain joint groups than by accomplishing the reverse combination.

THE IMPLANTED BATTALION

The necessities of statical defense required the occupation of:

- the posts,
- organizations covering the Sensitive Complexes (Air Bases - Maritime Bases - Doports - etc.).

It may seem somewhat surprising that some sort of Infantry Position, some of the units of which would have been the extension of the working team Companies while others would have played the role of interim Companies, was never set up. The first ones would have been assigned to certain posts to erect works of an advanced technical nature (tank turrets - heavy mortars - power plant for the networks - etc.). The others would have provided for the normal armament and would have been responsible for all sorties (road clearing, patrols, ambushes, limited operations of control in surface, etc.).

But this solution was not adopted for several reasons.

First of all, the great variety of fortifications and the widely different quantity of garrisons rendered the constitution of Standard Companies very difficult. In addition, it would have been necessary to reshuffle the Organization Chart of the Unit assigned to such Post or to such Sensitive Complex every time a change occurred in the installations: construction of new blockhouses, increase in the number of Sensitive Points, etc.

Furthermore, it was very frequently required of the implanted Battalions to leave the structures in order to participate in operations of the Sector. The constitution of marching units would then have been quite complicated.

On the other hand, periodical transfers between implanted and mobile Battalions implied some interchangeability.

Finally, this formula of the fortification Infantry, which was unjustly discredited after the disaster of 1940, was more or less forgotten.

Nevertheless, a small number of specialized units for the defense of certain Sensitive Complexes was created. For example, the Colonial Battalion of SAIGON-CHOLON with 6 companies, the Grouping of units of Sensitive Points in HAIPHONG, the 31st B.M.T.S. with 5 Companies, the CAP-St-JACQUES Company. But these creations were the fruit of local initiatives.

The effects of the chronic shortage of troops inherent to the Infantry were particularly felt among the Implanted Battalions.

The Battalions were always under-officered, in spite of the evident necessity to entrust the Command of all important posts to an Officer.

But each Battalion had first of all to provide for the C.P. of the Zone with at least 4 Officers, while only 10 or 12 in total were available.

The occupation of the Posts then severed the organic bonds between units and the result was redhibitory needs: too many Posts were not even led by a Senior Non-Commissioned Officer and they were all lacking in the low ranks.

To this quantitative insufficiency was added the qualitative lack: All too often, the mediocre elements were assigned to implanted units.

Therefore, there was little personnel left for sorties. Thus "the weakness of the implanted troops in a Sub-Sector did not permit the availability of sufficient intervention elements; the consequences were grave: the Posts' Garrisons did not expand sufficiently". (1)

The personnel, however, was subjected to periodical punctures as "it was necessary, for each operation, to constitute a marching unit, often characterized by a lack of cohesion and a poor maneuverability". (2)

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(1) Battalion Leader G.... Battalion and "Quartier" (Area) Commander.

(2) Captain A.... Battalion Commander.

This is a teaching which became so evident in 1940 in the fortification Infantry, the units tied to blockhouses are unavoidably diminished: "Due to the fact that the implanted Battalions generally remained tied down permanently, the result was a progressive devaluation of their personnel, as it was confined to static missions - mortally routine". (1)

"The many necessities of the Posts required, if not some activity, at least constant presence of the troops and, as a result, a 'fatigue coefficient' of troops above the average. During the day, the clearing of several acres, the repairing of accessory defenses, the maintenance of a large armament (one automatic weapon per man in some P.A.'s), participation for two-thirds of the force for cover and protection of roads, searches of villages, which took place at dawn as well as midnight or three P.M., were to be attended to".

"At night, there were numerous and anxious watches, the 'bells', the ambushes, Nervous tension was extreme among the men, but even more so among the Posts Leaders, who, every night, when the Post shut itself up, asked the question: 'Is my Post going to be attacked tonight?'" (2)

To physical strain was added moral strain: first because concrete did not generate any enthusiasm: "Concrete! this single word spoken in the assignment organizations for the new arrival's attention made him worry and think. The echos of this troglodytic life which came to his ears even before he had set foot in the place had already given rise to some apprehension at the idea of static combat". (3)

Another officer wrote: "Concrete alienates the best of will power, stuns

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(1) Battalion Leader G.... Battalion and "Quartier" Commander.

(2) Captain N.... Company Commander.

(3) Lieutenant R.... Company Commander.

the most experienced of men. Why must privileged Forces remain forever shut up in these reinforced concrete cages, when others would have asked nothing better than resting there for a few months?".

"Combat which consists in maintaining the entirety of a zone without having the means to go into the opposing camp is the worst I have ever known. To watch one's troops grow thin on account of ambushes or harassment of Posts, being unable to have an idea of the losses inflicted on the enemy, all this is un bearable to a fighting man". (Lieutenant G.... Company Commander)

"From the day we built concrete, in spite of all the beautiful posters plastered all over: 'Don't wait for the Viet, Go get the Viet...', an obligation to defend was created which inexorably took precedence over the attack. All zone and posts missions began by: 'to insure the entirety of...' This favored habit and intellectual decay, and it has never been the varying element in the clearing of roads, the moving of bushes around the barbed wires that would be called 'fight against routine'".

"This could have been called 'waiting' in another fashion, with its deplorable consequences:

- alertness which became lax, imperceptibly, because nothing happened, till the day when the Viet took advantage of a favorable occasion to launch a brutal action;
- the 'suburbanization' of some NCO's;
- the temptations of the populated areas, which were particularly great in the case of Sensitive Complexes". (1)

All this points up to the absolute necessity of relieving the troops and that is the essential teaching of the whole campaign: when the occupation and the defense the posts or Sensitive Complexes are attended to by normal Infantry units,

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(1) Captain J.... Company Commander.

they must be periodically relieved.

The duration of the implantation must not exceed a few months and the relieving of troops must necessarily be characterized by a new period of instruction.

THE SUPPLETIVE UNITS

The existence of the Suppletive Forces is a constant fact. From the FOEDERATI of the Roman Armies to the MOGHAZNIS of the Moroccan Operations, there have always been men willing to risk their lives for a small pay and without any hope of a pension for their families, against the guarantee of being able to fight within the limits of their province of origin and if only they are allowed to lay down their arms when they so choose. If only they can also return to their wives and children between two combats.

Such a formula can, of course, be implemented only during periods when general mobilization and totalitarian marshalling measures against the population have not been decided upon in the proposed territory.

Since before the war, implanted posts in the districts which constituted the border zone of the Tonkin employed partisans as auxiliaries. From 1946-1947, the gargantuan needs of men led to the recruiting of partisans on the whole territory of the Peninsula and their number never ceased to increase: in 1954, the suppletive strength went over the 55,000 mark.

These auxiliary forces prevented our regular units from being assigned to second-class missions, and in addition, they provided our indigenous units with the support of light elements with a perfect knowledge of the terrain.

The type of organization which prevailed was that of small units: The suppletive were grouped into "Compagnies de Suppletifs Militaires" (C.S.M.)*, of which every territory could establish a determined number.

It had seemed necessary to have all the Companies of a Territory directed by an Inspection and such a system worked well.

The organization of a C.S.M. was simple and the organization charts showed:

- an element of command reduced to the minimum: The Company Commander and two radios;
- four Platoons, each including one Firing Section (only one automatic rifle), and two shock sections.

The total strength was 100 men and the officer force was practically provided by one Officer, 8 Non-Commissioned Officers, and 9 Corporals.

The equipment was mainly composed of individual arms for the unit only disposed of four automatic rifles. The weapons were nondescript for quite some time, but tended to be uniform by the end of hostilities.

Thus organized, the C.S.M. was a very light formation, capable of supplementing the regular troops for certain missions but mainly of complementing them. Its maximum results were obtained when a C.S.M. was adapted to a Battalion, and this formula has always been satisfactory.

But other formulas have been tried at times: "Some units, such as the 'Groupement de Suppletifs Speciaux No. 1' (First Special Suppletive Group) of KIEN-AN, of the size of a battalion, were entirely satisfactory".

Some officers advocated the creation of light provincial battalions capable of being assigned independent missions, and this suggestion appears interesting. Anyway it is derived from the concept which prevailed for the establishment of the T.D.K.Q. (1) Battalions of the Vietnamese Army.

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* C.S.M. - Military Suppletives Companies.

(1) Tieu Doan Khinh Quan (Light Battalion).

PRODUCTIVITY OF THE SUPPLETIVE UNITS

The utilization of Suppletive Units in statical missions (occupation and defense of the Posts, watching of sensitive points or communication channels), should be cast aside:

"To give the mission of holding some Posts alone to suppletive formations seems to be an anomaly: the suppletive formations are not very valuable in wait and they need assistance and reinforcements atthe first alarm".

"A device set up for an on-the-spot resistance cannot be held by them, for they are not very well armed, badly trained, poorly equipped....Their recruiting is unstable, being subjected to outside influences (friends, relatives...) without any moral engagement attached to it. On the other hand, leaving suppletives alone in posts, with families, children, etc., would mean the creation of small civil-military societies that would be particularly vulnerable to the enemy's storm actions and propaganda". (1)

"Grave consequences could well be expected if these Units were employed for watch duties, to serve as 'boys' for some of the services, instead of being busy searching for intelligence or sometimes to handle all nocturnal sorties in the case of suppletive sections stationed in posts of regulars, under the pretense that they are light and that they might offer security risks compared to the others.

"Sometimes, the use of small elements was preferable; taking as a pretext that an excellent suppletives company was involved, it should not be given missions beyond its means and capabilities". (2)

It is difficult to see, however, to whom could be entrusted occupations of organizations such as the guard duties if not to the suppletives.

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(1) Captain L.... Assistant Battalion Commander.

(2) Lieutenant C.... Company Commander.

The productivity of the suppletives was excellent with other missions. For example, Colonel N..., Zone Commander, maintains:

"The suppletive units gave satisfaction and demonstrated with evidence that it was perfectly possible to create excellent tools, for weak defenses. Unfortunately, their number has been reduced as the result of the suspicion of too many "regular" Officers towards these irregular formations of which the outward appearance and discipline often presented startling aspects to European soldiers. It is quite probable that some of these light indigenous units could be organized on all theaters of operations".

Another Officer wrote: "Our Suppletive Companies were the perfect answer to the idea that some espoused on the character of the war in Indochina. These Units, light and very fluid, made up of men with a thorough knowledge of the enemy's tricks, tactics and terrain, rendered invaluable services although their efficiency had been influenced by the mediocrity of the Officer element and the poor training". (1)

This Officer force was essentially constituted of supplotive NCS's and the number of European NCO's rarely rose to more than two or three.

But, no matter what his rank was, the European NCO was automatically the Company Commander, which gave rise to paradoxical situations: French Sergeant commanding Suppletive Warrant Officers, or even a French sergeant commanding a C.S.M. to which was assigned a suppletive Lieutenant.

The suppletive Officer force, furthermore , was often of a poor quality.

"These units should have been provided with a first-rate officer force, well-trained in military matters, with a high morale and fully cognizant of the

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(1) Captain N.... Company Commander.

customs prevailing in the regions they were called upon to operate in; much too often, the Officer force of the suppletive Companies included elements preoccupied first with living off the country and providing themselves with personal material conveniences instead of carrying out the missions entrusted to them unselfishly". (1)

Training was elementary "the suppletive element often became a combatant from one day to the next and his training was acquired in combat; but this was insufficient. Tactical instruction can be left to the men's initiative as they bring out their inherent qualities, but technical instruction should be emphasized". (2)

Some materila improvements would have also been desirable: valorization of the Suppletives status, increase in pay, protection of families, guarantee of a pension in case of invalidity.

Finally, but this problem was not special to the Suppletives, the equipment could have included a higher proportion of automatic weapons and grenade-launchers.

With these considerations in mind then, the Suppletives assigned missions are in proportion to their lightness and their rusticity, while remaining essentially offensive.

- thorough search of a village or of a zone of resistance recently occupied;
- reconnaissance on both sides of a marching route;
- infiltration into difficult terrain;

in that same category come in missions which are defensive in appearance.

- holding by night between two strong points;
- indirect protection of a supply line of a convoy;
- ambushes and night reconnaissance missions.

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(1) In some territories, Suppletive Officers Schools were created and produced some excellent elements. But they were few and far between.

(2) Colonel N.... Zone Commander. Providing this training is well oriented and controled.

Lastly, each C.S.M. is liable to constitute, in the same vein as the V.M. units, an Intelligence Service center (10 to 12 selected men). Working with local elements (self-defense militias, inhabitants), such a group can collect particularly interesting intelligence concerning the terrain, the population and the enemy, providing there has been a period of instruction beforehand.

Thus employed, the Suppletive Forces would act as a light Infantry, radiating around the regular units when the latter operate in a Territory whose characteristics are not well known to them. (1)

COMMANDO UNITS

The term "COMMANDO" has been the object of personal infatuations. It not only meant a type of action, a spirit, a doctrine, but it also served to designate units of all origins and structures: Commando Paratroopers, Joint Airborne Commandos, Marine Commandos, Landing Commandos, shock Commandos, plantations Commandos.... Bergerol, Vandenberghe, Lasserre Commandos. Even the Veterinary Corps used this practical word to designate one of its creations: the Cynocommandos.

This proliferation of Units produced a certain devaluation of the word "COMMANDO", but it is an undeniable proof of the constant and obstinate search for a type of action better suited to the war without a front than that of regular units.

The creation of Commandos derived, in fact, from the need to play the same game as the opponent. "We could not limit ourselves to traditional actions

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(1) Lieutenant Colonel X.... gives a better illustrated description, just as accurate, of missions which can be entrusted to the Suppletives: "Actually, they are required to beat the stand".

as a function of power, centralized, continuous, with the Infantry operating in close cooperation with the other Arms and tending to occupy the terrain. We also had to proceed with shock actions, guerilla actions dependent on surprise, decentralized, at a syncopated tempo, conducted by isolated detachments tending, not to occupy the terrain, but to destroy the opponent and his war machine".

The theater of operations chracteristics was well suited to missions which had become standard for Commandos, while providing a differentiation between:

- actions in territories actually under V. M. control.

The location of these territories resulted in that those were mostly amphibious and sometimes airborne actions. (See chapter VI)

- actions in zones where we contested the V. M. hold on the population and where we fought tightly imbricated.

The role of the commandos was then to provide the counter-action to the enemy raids and ambushes.

Missions of the first category were reserved for specialized units: Joint Airborne Commando Groups (which became GMI in 1953) and Airborne Troops in particular.

As for the others, initially, the Suppletive forces were merely used to handle them and various types of Commandos were thus organized in each territory.

But, from 1953, it appeared necessary to reorganize these often incongruous and unequally sized units. Under the aegis of "Indochina Commandos", a consistent organization was agreed upon, and accomplished little by little. This rapidly gave much better results, but, unfortunately, it came about too late.

ORGANIZATION

The major portion of the Commandos strength remained composed of Suppletive Indigenous elements, but they were given a truly valorized status compared to that of the normal Suppletives.

The problem in fact was to put an end to the instability of the troops which highly prejudiced the productivity of units that necessitated intensive training. Therefore, the men had to sign a year's contract, but in compensation their financial and material situation wau substantially improved.

At the Commander-in-Chief's echelon, an administrative service instituted the measures affecting the status, the training and the principle of utilization, while a "Commando Command" directed the administration and use in each Territory.

It had at its disposal:

- 1 Command Group
- 1 Administrative Center, thus relieving all units of such tasks.
- Some regular commandos and some shock commandos.
- Eventually, some Landing Com..ndos.

Under normal conditions, the Commandos should have been able to accomplish all the missions their name brings to mind, but experience led the authorities to specialize them in one or another type of activity which the Indochina geography and the form of operations had given rise to.

1 - In semi-controlled regions, some "normal Commandos" were kept at the subordinate echelon's disposal by the Territory Commander. They generally operated on the dissident zones' periphery at a depth reaching a few kilometers (in North Vietnam), and several scores of kilometers in areas lending themselves to infiltration or sparsely inhabited.

But most of the time they operated within the disputed sectors themselves

to back up the counter-guerilla activities we tried to conduct.

2 - The "Shock Commandos" constituted a reserve for Territory Commanders; they were theoretically designed to infiltrate deeper in the opposing formations with a view to deal them brutal and swift blows. But they were often to be used as back-ups for the regular Commandos.

3 - On the river plane, the DINASSAUTS availed themselves of the assistance of the "Landing Commando" (1) assigned to each of them for activities on the embankments. The officer force and the troops were furnished by the Army, but their utilization was entirely supervised by the Navy.

4 - Finally, for coastal raids, the Navy maintained "Marine Commandos". (2)

The organization charts of course don't have the same meaning for the Commandos as for the Regular Troops.

The creation of detachments on request is imperative before any action. Subject to this, there follows the constitution which organization and training facilities had finally led to retain.

The regular Commando included one Command Section and three combat sections, each composed of a Command element and two combat groups. The strength was very much the same as that of the Suppletives Company (106 at the Commando against 100 at the C.S.M.), but with a much better officer force.

- 1 Officer, 4 NCO's, 1 Radio Corporal for French personnel.
- 8 NCO's and 25 Corporals for indigenous personnel.

The equipment offered a wide range of capabilities: 47 automatic pistols, 15 U.S. carbines, 6 rifles, 20 grenade-launching rifles, 6 semi-automatic rifles, 6 automatic rifles.

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(1) Also designated as "Light Escort Company" (C.L.A.).

(2) Cf Chapter devoted to the Navy.

Finally, the communications equipment provided for a satisfactory articulation: 1 SCR 694 - 4 SCR 300 - 5 SCR 536.

The "Shock Commandos" and the C.L.A.'s disposed of practically identical facilities; but with a higher percentage of French cadres (9 with 2 officers).

COMMANDOS PRODUCTIVITY

The very existence of the Commandos gave rise to controversies and many were the cadres who were opposed to anything that used the name "Commando" or "Special Units". The position taken by Battalion Leader X.... summarizes quite accurately the arguments of this theory's supporters:

"The Command's infatuation for so-called Special Units is not justified by the missions given to them: quite often they perform the ordinary task of an Infantry Company, sometimes better because they may be better officered and trained, sometimes worse because they don't know the country. Special Units actually present a certain number of inconveniences:"

"They pass out the normal chain of command: which is contrary to the necessities of war as only one Commander has to provide for unity of Command and doctrine."

"Or they take orders from 2 chains of command, which creates unimaginable situations in territories where the little'Special' chiefs take on habits of insubordination that are quite incompatible with military life."

"The whole effort must bear upon the normal units. If the whole of the cadres, the credits, the training facilities, if the elite of the special units were assigned to valorize the regular units, the latter would be capable of accomplishing all missions, including the special ones, and the whole value of the combat formation, upon which rests after all the outcome of the war, would be considerably improved".

Lieutenant .... is more pointed!

"To proscribe to the maximum. A good and well trained fighter must be

capable of accomplishing all normal combatant missions. The truly special missions (frogmen, special agents) are only the feats of a minority".

"There is a much too great tendency to want to multiply so-called special units which, considering themselves elite elements, refuse afterwards to lower themselves to the humble task of the combatant and are no more than disguised parasites".

As one can readily see, the dispute over the Commandos has replaced that of the Volunteer Corps without resulting in any agreement of compromise, no doubt because in Indochina the Commando Units often gave deceiving results and this is even admitted by their supporters.

But the causes of their failures were numerous.

First of all, the Commandos were not always utilized wisely.

"For various reasons (shortage of troops, inertia of units in the posts, etc.), the Sector Commanders frequently turned Commandos away from their destination to make them clear or guard roads, and at night, to use them as alarms for protection of Posts or close ambushes which could have been handled by the Posts themselves".

"Inversely, the designation of 'Shock Commandos' inappropriately given to General Reserve Commandos, while those units were not any better trained than regular Commandos, many times led the local Command to involve them in operations beyond their capabilities. The Failures of the quarries of NINH-BINH and NAM-MAO in November, 1953, of GIAN-KHAO in January, 1954, have no other causes...."(1)

One objection could be: why wouldn't the Commando Cadres try to sollicit missions which would be better suited to their nature?

Captain X...'s answer gives an explanation of a psychological nature:

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(1) Battalion Leader X.... Commanding the Commandos in North Vietnam.

"Often, Sectors and Sub Sectors had a tendency to use Commandos stationed on their territory as normal companies, or on the contrary, as shock units and the restrictions voiced by the Commando in such instances were considered as a breach of discipline".

It is an unquestionable fact that a portion of our cadres had an insufficient knowledge of unconventional warfare and that, consequently, they knew nothing of the capabilities and demands of units created by clandestine activities on the enemy's rears.

It should be noted right here, in their defense, that the quality of the commandos didn't lead anyone in using them without discrimination. (1)

They were handicapped from the start by their suppletive recruitment, which was contradictory to the principle of homogenous and well-trained units:

"A 'Commando', in the full sense of the word, can only be formed by regular troops that have received thorough advance training and are periodically brought to the rear for reconditioning. Any other solution will produce a band, full of drive perhaps, but with all the faults and weaknesses of a band".

"The 'Suppletives' Solution, if it were advisable financially, was far from being so as a rational use of human resources. These units were too unstable to be coherently trained, even when they disposed of adequate cadre to do so. Indeed, in spite of the special one year contract created by the suppletive Commando Status, nothing was provided to pursue the men who decided to leave for the most varied reasons as deserters; Military Justice refused to pursue and this was soon known. Almost all Commando Chiefs report that all their operations were carried out with a high percentage of untrained recruits". (2)

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(1) The comments that follow do not apply to the Navy Commandos who are considered an exception. Besides, the principle behind their recruiting technique was different since those units were composed of personnel who had received specialized training in the Metropolis. But the Navy Commandos too were not always employed wisely.

(2) Major X.... Commando Chief in North Vietnam.

Actually, the units trained themselves perfunctorily between two periods of operations and none of the men received a basic training, not even elementary.

Moreover, the cadres were not only insufficient quantitatively, as most of the Expeditionary Force Units, but also qualitatively:

"Not just anyone can make a Commando Officer. To be a volunteer because one is dynamic and courageous is not enough. This is a trade that one learns and can only be taught in a Special Center in France. A much too large proportion of our cadres had not undergone such periods of training or had been there for a much too short period of time". (1)

Some efforts had been made in this area nevertheless. Courses of instruction had been organized at the FREJUS Center for some cadres waiting to depart, and a few training centers had been created in Indochina upon the initiative of certain leaders.

But these facilities remained insufficient until 1953 when a school furnished with the desirable facilities and instructors (2) was created at VAT CHAY (on the coast of the Along Bay).

Training of the troops followed.

Continuous periods of instruction permitted each commando to go through the Center for 6 to 8 weeks during which instruction was given from A to Z.

The results were excellent, but the operational requirements were such that at the end of hostilities, only a fraction of units had taken advantage of this conditioning. (3)

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(1) Major X.... Commando Chief in North Vietnam.

(2) The VAT-CHAY School inherited the facilities and buildings created by the Commando Training Center of North Vietnam. Thus an Officer School for all the FTEO's and a Training Center for the Tonkin Commandos were combined at VAT-CHAY.

(3) Two or three less elaborate centers had been created in other Territories and were just beginning to operate.

Finally the action of the Commandos were fouled up by the inaccuracy of intelligence. On many occasions a promising raid hit a vacuum, or on the contrary, failed because the encountered enemy elements were more important than anticipated.

Indeed, collecting intelligence was one of the major missions of the Commandos, especially of the normal Commandos, but they needed for that the required ability to "live" with the Viet Minh, to foil his tactics and lastly to dilute themselves into small teams.

All this stood out even more so on account of the gaps in the cadres and the lack of instruction of which suffered too many Commandos.

The success of the most famous of them (Vandenberghe, Lasserre Commandos) shows, if at all necessary, the major role played by the Chief and his auxiliaries as well as the importance of well-trained troops for these two units included a great majority of retrieved V.M. whose experience equaled months of training school.

The discredit often accorded the Commandos stems as much from their lack of success as the drain imposed on other units in order to creat them.

Without denying them some interest, one must, however, reserve to them only the missions a good infantry force can accomplish and anticipate two types of units.

The "Shock" Commandos were to handle deep raids and try to live the life of the rebels.

The "Intelligence" Commandos were to be advantageously provided with a structure similar to that of the TRINH SAT formations of the V.M., the methods of which were to be adopted. (1)

The Shock Commandos personnel can and must include a large proportion of

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(1) See Part II - Chapter I.

Europeans; the Intelligence Commandos must be composed, with the exception of a few cadres, of indigenous personnel.

The European cadres of the two types of Commandos was necessary. Experience showed that one will find among the indigenous personnel very few chiefs possessing the required capabilities for such missions.

CHAPTER IV

AIRBORNE TROOPS

The French Airborne Troops took their first steps in INDOCHINA: only the "sticks" of the 2nd R.C.P. had been able to participate in some airborne operations of the 1939 - 1945 war and it was in the Far East that the troops were to conquer their noble name, that the Command was to try out a utilization doctrine, and that the technique gained its experience.

For nine years, our Airborne Units never ceased to fight, but they never stopped either to search for the path to follow and this search was carried out under exceptional circumstances.

Moreover, this war had no enemy in the air. The control of the sky was thus guaranteed and this "sine qua non" condition to undertake airborne operations being secured, all possibilities were offered to us within the air capabilities at our disposal.

Also, this war was a war without a front, which placed the Airborne in a paradoxical situation, as it was essentially designed to "create the events" on the rears by the violation of land or sea frontiers.

From this double nature of the operations emerged a contradiction between what our paratroop units accomplished and what they wished to have accomplished.

GROWTH OF AIRBORNE UNITS

"Indochina offered great possibilities for the use of Airborne troops

due to its size and the relatively high number of zones suitable for jumping". (1)

These data, the benefits drawn from our first paratrooper drops and also the favoritism for a new Arm, for dynamic cadres and promising capabilities, were such that the Command constantly wished for the growth of airborne formations and favored it with all the means at its disposal.

This favorable climate explains the rapid growth of the units:

In 1946 we only had a few hundred paratroopers, all infantrymen.

In December 1950 the strength reached a total of 5,684 men, but one year later they had almost doubled (10,639 men), and Artillery formations made their appearance (two 75 m/m recoilless platoons), as well as those of the Engineers and Signal Corps.

In 1954 the contribution of the National Armies allowed a strength of:

--6 Paratroop Battalions under the Expeditionary Force. (1)

- 6 Vietnamese Paratroops Battalions.
- 1 Laotian Paratroops Battalion.
- 1 Khmer Paratroops Battalion.
- plus some units of the other branches.

TERRITORIAL ADAPTATION

At first, the companies and Battalions were utilized either isolated or by groups or semi-brigades (Colonial Paratroop Commandos semi-brigade SAS - Paratroop March semi-brigade).

With no particular infrastructure, under no specialized command, these units were forced to draw upon themselves the necessary elements for the operation

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(1) Among which were two Legionnaire Battalions.

of their technical services.

At the beginning of 1949 it proved necessary to create a "Command of the Airborne Forces" (1) which was to exercise functions analogous to those of the Artillery, the A.B.C., Commands, etc., and which was to undertake, in particular, the organization of paratroop units within the National Armies.

In 1949, the infrastructure problem had also been resolved by the creation of two airborne bases, one in SAIGON (B.A.P.S.), the other in HANOI (B.A.P.N.).

These bases, equipped to handle materially the air-drops, included command elements, air supply formations and parachute folding and maintanance services.

But their permanent character led to the annexing of other organizations: Jump Training Centers, Training Companies, Student-Officer Platoons, etc...Their strength thus augmented considerably.

In 1953 the state of development attained by the paratroopers formations made it possible to create divisionary elements (2) and three airborne groups.

As a parallel to these measures however, it seemed necessary to give certain territorial Staffs some liaison and study groups: "The Permanent Operational Staffs Elements":

- the North E.P.E.M.O. in HANOI.
- the Central E.P.E.M.O. in TOURANE.
- the LAOS E.P.E.M.O. in VIENTIANE.
- the South E.P.E.M.O. in SAIGON.

Their role was to prepare future engagements, looking for drop zones then establishing for each of them a file including all useful information. (2)

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(1) In 1950, this Command changed name and became "Airborne Troops Command in Indochina" or T.A.P.I. At the same time, an Airborne Troops Command North to cover all the Tonkin formations was created.

(2) Each file included:
- terrain characteristics (size, nature of soil, existing defense organizations, communications means, etc.);
- oblique and vertical aerial photographs;
- information relating to enemy activities and implantations in the area;
- drop capabilities (by full stick of half stick, etc.);
- periodical weather information (rainfall, wind prevalence, etc.).

2,400 drop zones were thus classified, 900 of which in the Tonkin.

Once an operation had been decided upon, the E.P.E.M.O. insured its planning with the appropriate services of the Staff under which it was operating. The time gained and the accuracy of the planning were obvious.

DEMANDS

If Indochina presented a vast field of operations for airborne operations, these were no less handicapped by the demands of the terrain and climate.

"Opposed to the vast horizons of the Deltas were the mountain region as much due to the rarity of landing zones as to obstacles presented by the relief and atmospheric conditions for the evolutions of transport formations; and it was in those regions that the heart of the Viet Minh might beat". (1)

If the climate presented a permanent problem for the maintenance of parachutes, it constituted no bar to airborne operations.

The dry season was especially favorable; the rain season, however, was not an absolute obstacle. But, like everything that pertains to air space, the use of paratroopers was subjected to the necessities of the weather. (2) The periods following or preceding typhoons, in particular, interdicted any operation.

But the most serious demands stemmed from the lack of transport planes and recuperation of parachutes.

TRANSPORT PLANES

In 1951, the Commander-in-Chief thus expressed our needs:

"Experience acquired by Marshall de LATTRE's predecessors had shown how vain the hope of seizing the enemy and submitting him to a ruining battle was as long as the Air Transport Service was unable to drop in one wave a force the size of at least three Battalions on the enemy rears".

But a year later, the Commander of the Air Forces of Indochina thus expressed our difficulties:

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(1) Report from the Commander of the Airborne Troops, Indochina.

(2) That is why the drop of three Battalions in the HOA BINH basin, scheduled for November 14, 1951, was delayed by fog.

"During the summer of 1952, the Commander-in-Chief, wishing to resume the offensive, had placed as a condition for the execution of any aerial operation the capacity to drop three Battalions, or approximately 2,400 men, in one single wave".

"To satisfy this requirement, one hundred DAKOTAS were needed while we only possessed fifty (to which could be added twenty-two old JUNKER 52's). The problem of finding those fifty DAKOTAS, the necessary personnel, pilots and mecanics, and supplies, was enormous".

"However, the miracle occurred. The grouping of a hundred of these on the Indochina Territory became effective on November 1st..."

"But, as the Battle of NGHIA-LO gave us the indication, the Air Transport was to be used, under the pressure of the situation at the moment, not for the offensive, but for the defensive".

"The rapid evolution of the military situation forced the Command to localize immediately the rebel threat due to the 'LORRAINE' Operation; oppose then immobilize it via the NA-SAN redoubt. In particular, the Air Transport was to lend a considerable support of a permanent character, out of proportion with the available capabilities offered by the Groups and their maintenance crews".

Unfortunately this state of affairs was to remain such until the end of the war, especially from the time the DIEN-BIEN PHU affair became felt.

During this period, the number of available C-47 planes went from 90 in January 1954 to a hundred at the beginning of April. American aid, which had provided us with five C-119's from October 1953 brought these to 15 by January and February, then to 25 approximately during the months of March and April.

But the number of available crews was inferior to that of the planes as a result of fatigue, disease and combat losses.

In short, we never had the air vehicles that would have been required to carry more than two Battalions, due as much to the inadequacy of our Air Transport

Force as to all the other demands (air supply, medical evacuations, air transport of other personnel, etc.).

RECUPERATION OF PARACHUTES

For a long time, the Airborne Troops had to provide for the recuperation of parachutes.

"Their availability being strictly limited, airborne operations would rapidly become impossible for lack of supplies if parachutes were not recuperated.

This task was the responsibility of the unit which had just jumped: Experience in operations led us to admit that as a rule a third of dropped personnel had to be employed for the first half-day to protect the drop zone and recuperate material... Any airborne operation orders included therefore a paragraph concerning recuperation of parachutes...(1)

The Viets were fully aware of the importance we gave this material and did his best to destroy it, compelling even women and children to do it. Here is an example of this:

"During the NGHIA DO Airborne Operation when on February 28, 1950, the X..BCCP jumped directly over the Viets who were attacking a post about to fall; the paratroopers found themselves engaged in hand-to-hand fighting as soon as they reached the ground."

"As soon as we held the terrain, the parachutes began to be picked up: only two-thirds of them could be recuperated. The remainder, or 150, had been taken away or cut up with knives and reduced to shreds". (2)

But once the parachutes recuperated, they had to be taken away at the price of a harassing carrying operation: "After the NGHIA DO operation, in order to evacuate the 350 retrieved parachutes, a convoy was formed which, from post to post was sent out across mountains for about 200 Kilometers to LAO KAY where was an

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(1) 1950 Report on the use of Airborne Troops.

(2) Report from the X..BCCP Commander.

airdrome". (1)

One can readily see how much the use of consumable material, or of helicopters to handle the parachute evacuation would have alleviated the demands on our units: During those years, the recuperation of parachutes was the heaviest burden that weighed on our paratroopers units.

This situation was to improve only towards the end of the conflict thanks to American aid and French manufacturers. In 1953, the "HIRONDELLE" Operation order still carried the "Parachute" paragraph, but the following had been finally added: "the parachutes of units which are to jump at LANGSON will be destroyed on the spot".

BALANCE SHEET OF THE OPERATIONS

At the end of hostilities, the Airborne Troops Command passed the following judgment on the units:

"The morale hasn't changed much during the campaign. It is that of the carrier soldier, volunteer for anything he believes the most difficult, sure of his physical fitness, willing to take the risks he believes he can surmount with his personal values; it is the "Para spirit". It was maintained to the end". (2)

The Officer force, young and vigorous, excellent in thr first years, remained satisfactory as a whole. However, it suffered from the aging caused by time and insufficient replacement of personnel and also by wearing out (considerable losses under fire; diseases).

After 1952, older cadres arrived or came back; although quite competent and animated by a very high senseof duty, they were not as dynamic as those of the first years".

The degree and level of instruction in particular constituted the variable

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(1) Report from the X..BCCP Commander.

(2) Report from the Commander of Airborne Troops, Indochina.

element. The Airborne Units, although benefitting from the advantage of arriving in Indochina in constituted battalions, were too often forced to admit in their ranks, as the years went by, some qualitatively inferior and insufficiently trained elements.

The Airborne Troops Command could never obtain that a period of adaptation be granted to the units arriving from the Metropolis, and those were in most instances put to the test immediately after landing. It has never been possible to obtain sufficient time nor the necessary facilities for the change of control and refresher training in proper camps of the units.

The indigenous elements, hastily recruited, scantily trained, in most cases prematurely enlisted, rarely achieved a satisfactory degree of instruction, and even then at the price of costly losses. The knowledge of weapons, markmanship, which are the basis of self-confidence in a soldier and of confidence in his comrades, could never be pushed to the limit for lack of time and, in the case of the fortified garrisons, for lack of firing range.

For the same reasons, the man-to-man storm actions were never sufficiently prepared. The lack of time also prevented a thorough study of night actions, and the thorough planning of small units' maneuvers.

While the Viet Minh Infantry progressed to the point of becoming excellent and redoubtable on its own terrain, ours became, for the reasons given above, less efficient. The superiority complex that prevailed among the paratroopers at first dwindled over the years 1952-53 to be replaced by a more accurate appreciation of their own values and that of their opponent..

This rough self-critic tends to dim the fact that our paratroop Units, in spite of a weakening of their value, remained an excellent infantry and that the slow devaluation of our land battalions made of the "Paras" the best reserve of the Commander-in-Chief.

From this comes the fact that they were used in all instances where the

straightening out of a situation, the need of an exceptional effort or simply the hope of success required the presence of an alert and vigorously led force.

The High Command was constantly required to involve the paratroop units and it couldn't be any other way because it was always short of troops and even more so of trained combatants.

Thus can be explained the number of land combat actions in which participated some airborne elements. In 1950, this already aroused the protests of the Airborne Troops Commander:

"The Commander must make sure that his paratroopers units were not used beyond certain limits in land operations where other units could have replaced them if he wants to preserve their indispensable capabilities for airborne operations. These capabilities must be preserved for productive operations which require their use and where they are indispensable...." (1)

Four years later, the Airborne Troops Commander formulated the same appreciation:

"...It would have been more rational, admitting that it seemed too costly to maintain about ten paratroopers Battalions destined to be used for strictly airborne missions, to reduce this figure and increase the number of Infantry Battalions".

A Company Commander is even more tough:

"It seems just as senseless to take the Paratroopers of an Airborne Division and require them to execute here a loop, there a reinforcement of sector, elsewhere a mop-up, than it is to distribute the tanks of an Armored

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(1) It would be useful to note that during the 1940-45 war the same thing had happened and that it could not be otherwise. The Germans were rapidly led to use their paratroopers divisions like large normal units and the Allies required their Airborne Divisions to hold certain sectors of the front.

Division among several Infantry Divisions to escort the Battalions or to use them as tank-blockhouses in the Resistance Complexes, with the only difference, however, that it doesn't come to anybody's mind to make such use of the tanks of an Armored Division". (1)

But, due to the necessities of the battle, the paratroopers not only fought often like simple infantrymen, but the airborne operations proper were too often small scale actions without much method instead of being massive involvements.

During the campaign, actually, the paratroopers jumped some 150 times which can be classified under four headings:

- 52 involvements ressembled commando actions.
- 63 drops were carried out to support or extricate garrisons.
- 33 drops had varied goals, but constituted a simple participation in the mopping-up or sweeping of a region, executed by land columns.
- 5 times only were the units promoted to carry out independent actions of a large scale.

The chapter devoted to commando actions contains the teachings drawn in this field and the drops designed to reinforce (1) or to

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(1) Aside from the performance often represented by a personnel drop in a 50m X 50m post closely encircled and from the risks involved (in 1949, 6 killed and wounded in the air out of a parachuted section to reinforce a post in Cochinchina) there is no teaching to be drawn from a procedure which consists in transporting by air what cannot take the road, as was done on a large scale at DIEN BIEN PHU.

extricate a post (1) have already been mentioned in the study on control of the routes.

But it wouldn't be useless to recall the doctrinal opposition which separated the cadres of the Airborne Units in 1945 and which gave rise to heated discussions for a long time.

Must we, like the British S.A.S., give preference to Commando actions and only require paratroopers to operate in small fractions and thus execute raids?

Must we, on the contrary, operate with constituted formations and, in the framework of joint operations, undertake the standard missions of seizure of sensitive points while waiting for junction with the land columns?

The first trend satisfied the desire to constantly harass the opponent and seemed well suited to a war without a front; but the second would be better adapted to the encircling maneuvers which were considered feasible.

In fact, the events were to convince the supporters of one or the other thesis. During the first years of the war, the shortage of transport planes naturallyforced the airborne units into actions requiring small forces.

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(1) Extricating actions proper have been rare. They either consisted of dropping Units on the rears of the assailant and cut off their communications (NGHIA-LO in February 1950 and DONG KHE in May 1950). The last two operations were the most risky. Nevertheless, they were successful:
- because in NGHIA DO, it was possible to cover a knoll from the beginning, which gave us control of the terrain.
- because in DONG KHE, the V.M. who had already taken the post, abandonned the terrain taking the garrison and material after noticing that their violent and efficient ARD could not stop the air-drops.

However, it can be conceded that such actions can be tried if:
- a powerful air intervention did actually neutralize the drop zone.
- the assisted post can protect the regrouping of the paratroopers with its fire.

But the only plausible action is a drop on the assailant's rears.

Besides, the relative weakness of the V.M. permitted small commando actions. (1)

But, beginning in 1951, the Command created the G.C.M.A. (2) in order to activate guerilla actions on the enemy's rears (3) and, on the other hand, the very structure of the units showed the abandonment of the commando formula: In 1946 the paratroop battalion with a completely French constituted force was a copy of the S.A.S. units and disposed, for example, of 60 to 70 jeeps equipped with three machine guns, while at the end of the war the same battalion had a structure similar to that of the normal infantry formations (quaternary rule) and included 50% indigenous elements.

This change did not make the units unfit for commando raids, however, since one of the last engagements of the campaign, and the most fruitful, was a powerful raid on logistics installations.

The "HIRONDELLE" operation, in fact, which the airborne troops classify among the five "large-scale operations" because it required the involvement of three Battalions, presented all the characteristics of a Commando raid, but in the framework of a war in which the enemy potential had believed to such a degree that a zone of depots could no longer be attacked without involving considerable forces.

"HIRONDELLE" showed, moreover, that it is better to cover a spread of recognized objectives with several battalions than to assign a company (or even a Section) to the sabotage of a small installation, often erroneously pinpointed.

AIRBORNE OPERATIONS AND THE WAR WITHOUT A FRONT

All that was said of the nature of operations in INDOCHINA, whether of our control in surface actions, our offensive wedge in V.M.-controlled zones, or

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(1) Thus, there have been 28 Commando operations in 1948-1949 and only 3 in 1953. However, in 1952 there were still 9 airborne raids in Cochinchina and in LAOS.

(2) Group of Joint Airborne Commandos.

(3) See chapter devoted to the "Maquis".

maneuvers in the great wastes, suffice to demonstrate that the absence of a front and the enemy's fluidity took all the meaning out of vertical encirclement, which is the very essence of actions in the third dimension.

Indeed, there is still the preventive conquest of an objective, towards which our land units converged, and three large-scale operations conducted by our paratroopers units had no other goal.

- "LEA" executed on October 7, 1947 was intended to cover the BAC KHAN, CAO BANG and CAO DIN-CAO MOI communities simultaneously in order to open a way to forces designed to permit our re-implantation in the High Region on TONKIN.
- "LOTUS" was launched on November 14, 1951 to occupy HOA BINH, when we took the offensive in Muong country.
- "MARION" allowed to reach PHU-DOAN at the first go on November 8, 1952 and was the prelude to the "Lorraine" Operation.

But every time, we saw the enemy vanish after a brief engagement and the standard airborne maneuver never saw a beginning of execution; because these conditions were not met: the enemy could not be pushed from the front and encircled from the rear, for there was no front and the enemy was never pressed hard by land columns at the time the paratroopers jumped somewhere behind him. Without being even linked together by a logistics communications network, he had all the facilities to slip away.

A fourth large-scale operation was carried out by our airborne units. The "CASTOR" operation which took place on November 20, 21, and 23, 1953 and gave us the DIEN BIEN PHU basin.

But this action was merely intended to bring about the rapid creation of one of those aero-terrestial bases which we used as the essential element of our maneuver in the "war of the great wastes". (1)

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(1) See chapter devoted to that study.

The goal was indeed to attract the enemy then undertake to destroy him, but through the trickery of a localizing abcess. The initial action of the paratroopers merely prepared for the air-transport of troops of all arms.

It took on a form similar to that of the three preceding operations: It was not a direct hit dealt from behind to the enemy. We can well understand the disappointment of our paratroop cadres who waited vainly for the occasion to execute the ideal maneuver for which the Airborne was conceived.

This real uneasiness was clearly expressed in a report on the T.A.P.I. operations:

"Pooling all their physical and moral resources that their choice permits, the paratroopers have accomplished in Indochina, day after day, for nine years, with hard work, suffering and heroism, a sizable task".

"Their regret for not being able to do better, even at the price of the bloodiest sacrifices, their bitterness before the mediocre results obtained after so much effort and pain, are tempered by the knowledge of having done their duty".

On the other hand, one could not participate in the judgment expressed in the same document as follows:

"Airborne operations were numerous, they have not always been wisely planned. Some of them could have been advantageously suppressed or replaced by surface operations".

We know that the absence of a front rendered the airborne maneuver, in its strict meaning, deceptive and we can only wonder if the airborne actions could have had different forms.

Such was certainly not the case as long as the enemy kept to the guerilla war and his logistics was impalpable.

On the other hand, from the moment the Chinese aid increased and materialized itself by depot zones, sensitive points and automobile convoys similar to those of the European Armies, it would have been possible to undertake actions like

"MARION" or "HIRONDELLE". Such is the opinion of the Airborne Troops Commander.

"Operations of the PHU DOAN (1952) or LANG SON (July 1953) type could have, it seems, been more often undertaken at the opportune time against enemy depot zones and communications means... The YEN BAY depots, Highway 41, the TRANH SON communications nucleus, the region of NHA NAM, THAI NGUYEN, to name just a few, could have constituted at some particular time, choice objectives". (1) (2)

Certainly, the execution of such raids wouldn't have been too difficult; but it must be pointed out that the return of parachuted units in the Delta would have been particularly risky.

The Airborne Troops Commander, moreover, e. .saged actions on the coastal regions:

"It should perhaps be regretted that operations such as those of CAPE FALAISE in 1949 or of QUI NHON in 1953 were not more often planned, then launched. All ports on the coast in Viet Minh hands could have been under the constant threat of joint operations". (3)

However, these raids could not have obtained immediate results as the V.M. received only a minimal part of his supplies by sea. The systematic destruction of the river force however would have dealt a very hard blow to fishing which was an essential part of his economy.

But mainly, the actions against enemy communications systems were considered when the battle of DIEN BIEN PHU started, for the big enemy units began to stick together into columns on the land routes while at the same time they became heavier with artillery and trucks. Thus they ceased to be unvulnerable.

Indeed, these divisions had not entirely done away with their usual fluidity, but while they flowed in DIEN BIEN PHU their supplies and vehicles became

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(1) Report from the Ariborne Troops Commander.

(2) Unfortunately, these prospects came during the first half of 1954, that is at the time the battle of DIEN BIEN PHU and the operations of Central LAOS centralized all activities of our Air Transport.

(3) Report from the Airborne Troops Commander.

tributaries of a road, highway 41.

So the Airborne Troops Command wondered if: "a joint airborne operation with actions of the Commandos and the Mobile Intervention Group (G.M.I.) (1) and aiming for enemy communications systems would have not been especially productive, due to the importance of the limited routes, which presented critical points and offered practically no possibility of flight". (2)

Actually, such an action was envisaged and studied. But the inferiority of our Air Transport facilities led to the abandonment of this project and the facts did not permit to judge whether this maneuver on the rears could have obtained the same results as in a European war.

In short, the war came to an end without having had the opportunity to really meet the requirements of utilization of airborne units as seen by the European doctrine.

This explains why our paratroop formations could never be a major asset in the Command's camp.

Certainly, they have constituted an element of many tactical maneuvers, but they found no way of being used strategically, as in contrast to the 1939-45 war, for the strategy requirements were no longer the same.

The uneasiness felt by the paratroop adres can thus be explained for psychological reasons and we can well understand that their Chief wrote after the battle of DIEN BIEN PHU:

"In the field of utilization of forces, it is once more proven that airborne units, the ultimate strategic reserve of the Command, can only find their full use and efficiency in a massive engagement and with the element of surprise. To use them like surface units because they actually are the best Infantry of the Expeditionary Force constitutes a sure way to lose".

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(1) Successor of the G.C.M.A.

(2) Report from the Airborne Troops Commander.

But we cannot avoid comparing this disenchantment of ardent troops to the disillusionment of our cavalry cadres after the first engagements of 1914 and during the long months of the war in trenches. The evolution of combat gave them however the opportunity to be cavalrymen more or less in the last days of the conflict and tactics gave them a large place only in 1939-40 under new signs.

The Indochina campaign only wanted the paratrooper to be a commando some of the time, and an excellent infantryman all the time.

CHAPTER V

ARMORED FORCES - CAVALRY

Initially carbon copies of their sisters of the Metropolis, the A.F.C. formations in Indochina were to become of many and varied types during the nine years of operation, according to the arrival of material (the armored, amphibious, working vehicles).

However, at the end of hostilities, most of the units were still furnished with standard machines, inherited from the campaigns of France and Germany. So, they had a structure inspired from that of European tactical groups.

Their utilization did not produce any unusual teaching. The amphibious units, on the other hand, found in Indochina a fruitful field of experience which allowed them to create a utilization doctrine.

The Armored Forces, initially tied to a material it had not chosen, slowed down by the shortage of adequate vehicles and often by the inferiority of the maintenance services, had to overcome difficulties which were particular to them.

As seen from the "armor", the Indochinese terrain is characterized by wide spaces, totally practicable for the usual military vehicles and rarely accessible to tanks, transpierced by narrow and few roads. The adaptation of the road network would have made the task of the A.F.C. easier, but it was still incomplete at the end of the war.

In particular, the deltas offered extremely variable possibilities according to the place and the season.

A Tank Squadron Leader deplored that practicability maps for the armor

had not been prepared and wrote: "The system of the seasons in the Tonkin is almost regular. It is therefore feasible to establish a 'terrain' map which would be perfectly marked month by month, would include accurate indications as to the routes, the practicable zones and compulsory points of passage." (1)

In fact the armored forces lacked ways and free space most of the time, for no "all terrain" material in the European sense of the word proved bo be such in Indochina. (2) Moreover, the heat and humidity rendered the combat in armor, with closed flaps, particularly painful.

In addition, the armored forces, like the others, suffered from a shortage of troops, and local recruiting was resorted to. But, due to his small size and his lack of muscular strength, the indigenous element was often unfit to conduct heavy machines. So a Commanding Officer proposed an increase of the Legion's units to offset the absence of qualified personnel.

"The Cavalry material is always fragile and somewhat delicate, the training of personnel is long and costly; if a branch should include career soldiers, this is the one. The Legionnaire is particularly well qualified to find his place in ti. It seems therefore that the Cavalry shouldhave a very important place among the Foreign Legion Units". (3)

Due to this maze of difficulties, all the efforts of adaptation of the A.F.C. could only bear upon certain combat procedures and the internal organization of Units.

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(1) Captain X.... Tank Squadron Leader.
(2) The performance of the material will be discussed in Volume III.
(3) But precisely the contrary prevails; the percentage of Cavalry Units in the Legion is less than the average obtained in the Battle Formation (two Foreign Cavalry Regiments for six Foreign Infantry Regiments). Lieutenant-Colonel X... Sub-Group Commander.

UTILIZATION

Under various aspects the Armored Forces found again the traditional missions of the Cavalry:

- Scouting for the Infantry, marching or stationing.
- Reconnaissance (clearing of roads, reconnaissance of villages, liaison with isolated posts).
- Escorting (protection of convoys and guarding the routes).
- Combat in conjunction with the Infantry (participation in the "encirclement" and the attack, as well as the counter-attacks and the cover of withdrawals).
- Pursuits and raids; although rare and of little importance.

The achievement of these missions, in the face of an enemy who excelled in the ambush combat and did not hesitate to launch an attack on tanks, require a large auxiliary Infantry.

"In the Deltas, swallowers of troops on foot on account of their big villages impervious to tanks, as well as the jungle in the highland, the A.F.C. units had to be well provided with portative facilities to sustain, support or extend the action of the Armored elements". (1)

But due to the shortage of troops, the Command balked for a long time at the assignment of a true Infantry to the Armored Regiments as it would have been unemployed during the periods of maintenance and conditioning of the machines and their crews.

So, the Infantry units destined to work in cooperation with the Armor were frequently renewed, while remaining true to the wise but necessary slowness of the traditional maneuver of their Arm. The cohesives of these temporary groups thus formed suffered, as did the flexibility and rapidity of actions.

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(1) Lieutenant-Colonel X.... Armored Sub-Group Commander.

"Actually, most of the time, once it was launched, the action took the rather slow pace of the infantryman's maneuver and took on the classical form adopted since 1918 of the Infnatry combat supported by tanks". (1)

More and more the monotony of the operations, constantly executed over on identical ground, the long waiting periods along communication routes to guard, the dispersion of threats, have too often influenced the Command towards routine. In addition, they have encouraged the static use and fragmentation of the Armored Units.

This fragmentation, in particular, was often pushed to the extreme, due to the shortage of facilities, on the one hand, and to the requests from territorial commanders at all levels, on the other hand.

This situation naturally reduced the efficiency of the units and brought about their rapid attrition, as the Regiment or Squadron services were not organized adequately to support dependent elements so widely scattered. (2)

It would, however, "have been normal to expect much more from the service which, with the aid of the motor, joins mobility to power; the Service of Reconnaissance and swift engagement, of pursuit as well as counter-attack; in other words: the Cavalry...." (1)

But, it was not until 1951 that the first experience in using the Armored Sub-Groups, with their own Infantry, was tried.

Until then, "the Armored Squadrons had rendered excellent services but had only obtained sporadic results, because they were organized like reservoirs of armored machines rather than like units capable of engaging combat alone". (1)

In the last part of the campaign, the A.F.C. included:

- Armored Sub-Groups (and amphibious groups) capable of engaging in combat

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(1) Lieutenant-Colonel X.... Commanding an Armored Sub-Group
(2) It has been ascertained, as if this were still necessary, that the smallest unit with the capability to live independently was the squadron.

alone and constituting implements of maneuver.

- Units capable of temporarily backing up certain Infantry units or meeting the normal requirements of territorial authorities. (1)

This organization, however, should have been supplemented by the creation of a Command element for the A.F.C. within each Territorial Command. Many difficulties would have been ironed out.

ORGANIZATION OF THE SUB-GROUPS

These Sub-Groups, organized towards the end of 1953, were essentially composed of a Squadron of M.24 tanks and three Squadrons borne by the G.M.C.

In addition, they included one half-track borne Squadron, a Mortar Platoon and a Staff adequately provided with communications facilities, which permitted it to absorb reinforcement elements (Engineers (2), Infantry Battalions, etc.).

"The high proportion of elements on foot, of an element the size of one Battalion for one Tank Squadron, gave the Armored Sub-Group its character of a well-balanced flexible and powerful Intervention element". (3)

The M.24 tank Squadron moved about easily in dry rice fields and sometimes even in flooded rice fields. On the other hand, the tanks could, in exceptional circumstances, penetrate inside the villages due to the numerous water lines and covers. In addition, the guns' trajectory tension was such that instantaneous fuse projectiles burst on contact with the first bamboo hedge.

Lastly, the combatants were unanimous in deploring the fact that the transport vehicles of borne support elements were not on the same footing as

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(1) While in North Vietnam the Armored Units were part of the general reserve and could be temporarily made available to a Sector Commander, units specifically assigned to Territorial Commands existed in the other territories.

(2) It should be noted that no dozer tanks were in Indochina. The presence of a bulldozer with its trailer-tractor constituted a heavy burden for the Sub-Group, if and when it had one.

(3) Teachings of the war of Indochina relating to the Armored Forces written by the Inspection Services of the A.F.C.

the tanks, which would have made it possible to provide for supplies and evacuations.

The organization of the tank Squadron in accordance with the Quaternary Rule (1) was perfectly in keeping with the requirements of a war without a front, in which the notion of directing an attack was often undetermined. Moreoever, the four tank platoon retained very satisfactory maneuver capabilities, as the splitting up into two patrols was unusual and was always executed on the spur of the moment.

It would have been adivsable to provide these platoons with self-propelling sweep missile fire. So the users have advocated the creation of a Howitzer platoon at the Sub-Group level, to replace the Mortars platoon. (2)

The combats engaged at DIEN BIEN PHU by the March Squadron of the 1st Light Infantry reminded us of the light tank units' vulnerability under artillery fire and of the difficulties to supply in ammunition under fire.

"Subjected to dense artillery fire, the Squadron suffered during the supply and maintenance operations losses nearly equaling those due to combat, in spite of the digging of tank pits.

"When engaged only against Infantry units, the tanks rapidly exhausted the ammunition of their magazines".

The need for palliatives became quickly imperative: transport of ammunition outside the tanks and on the floors, assignment of one tank per platoon to the supply. But the only satisfactory solution would have been to assign a supply armored vehicle to each platoon.

The borne squadrons (on G.M.C. or half-tracks) had been put, like the Infantry Companies, under the quaternary rule: Four combat platoons

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(1) The tables of organization provided for three 5-tank platoons and 2 Command tanks, but the adopted organization has been almost always: Four 4-tank platoons and only one Command tank (although a second one would have been quite often desirable).

(2) Solution advocated by the A.F.C. in tis report on the teachings of the campaign.

(38 men and 2 F.M.) and one heavy platoon (2 light machine guns and 2 60 m/m mortars).

The structure of this last platoon is questionable, as its armament was not a supplement to that of the tanks. Therefore, the A.F.C. Inspection Service advocated at the end of 1954 the procurement of one 38 SR gun and two 60 m/m or 81 m/m guns (depending on whether the personnel was being borne by G.M.C. or half-track). (1)

The half-track borne squadron constituted a slow, cumbersome grouping which lacked mobility, and the demands imposed upon by the watch of the vehicles reduced the combat force to about a hundred men.

However, thanks to its considerable firepower (36 machine guns and F.M. procured from three fire units), this squadron proved capable of accomplishing the missions of route-watching, liaison and escort, and depending on the condition of the terrain, of fixing. But, even in such cases, its inability to depart from the routes was a great handicap.

The Command and Sub-Group Services Squadron was torn between two missions: to guard the rear base and escort the C.P. in operation. Its task would have been facilitated by a splitting up into two elements each having a chief (2): a base element and a combat element.

In addition, the protection platoon (3) responsible for liaison escort and C.P. watch missions was obviously not adequate (4).

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(1) The inspection also pointed out the fact that the adoption of the quaternary rule should have been supplemented by arranging for the procurement of radio equipment for the squadron (seven ANPRC-10 posts instead of five).
In addition, the guarding of G.M.C. borne squadron vehicles would have been more efficient with the procurement of an additional automatic-rifle (10 F.M. instead of 9).

(2) Some cadres even requested that two separate squadrons be created.

(3) Two half-tracks.

(4) The A.F.C. Inspection required that the platoon include 3 sub-machine guns and three scout-cars.

AMPHIBIOUS GROUPS

Using equipment of which part had been conceived with Alaska polar expeditions in mind (the crabs) and the others derived from a lifesaving vehicle utilized in the flooded Mississippi area (the alligators) (1), the Amphibious groups proved in Indochina their special fitness to combat in flooded areas, that is in the Deltas or the coasts.

Their development gave rise to numerous experiments which were not all successful and the first engagements resulted in failure even.

Initially, the crabs alone were used. "Being limited in number and entrusted to an insufficiently qualified personnel, their burned out skeletons quickly littered the 'Plaine des Joncs'". (2)

In 1948, however, a group of amphibious squadrons (with two crabs squadrons each) was created in South Vietnam (3). So the crabs were used in units completely formed; they were put in the hands of trained personnel, assisted by adequate repair facilities, and "they went over the 'Plaine des Joncs' in all directions throwing panic in the enemy ranks". (2)

The results were so encouraging that two new squadrons were created in Cochinchina and Tonkin. (4)

"But the problem of support of the Infantry was quickly presented. The squadrons had remote reconnaissance missions and the standard Infantry could not follow or followed slowly". (2)

The assignment of one Infantry Section to each squadron did not give the anticipated results. The troops transported in such a fashion were not sufficient and the considerable weighing down of the vehicles made them lose their mobility

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(1) The exact name of the crabs was Cargo Carrier:29C. The Alligators: LVT4 or 4A.

(2) Note from the F.T.S.V. Commander on Amphibious Units.

(3) Under the 1st Foreign Cavalry Regiment.

(4) Under the 1st Foreign Cavalry Regiment and the 1st Light Infantry Regiment.

capabilities.

Thus was conceived the use of new machines: Alligators which were first distributed at the rate of one platoon (carrying an indigenous Commando group) per Crabs squadron.

This formula proved satisfactory and was extended. Thus were born the Amphibious Sub-Group and Group.

In 1954 the latter included:

- Two Crabs squadrons as elements of scouting, fixing and pursuit.
- Three L.V.T. Squadrons as the shock element.
- One Regimental Platoon of six Howitzer L.V.T. constituted a battery in support of the complex.

Two Sub-Group Staffs well equipped with communications facilities provided for all articulations on request.

The group derived its superiority, not only from its independence concerning the road network, but its firepower which was equal to that of a metropolitan armored group.

The large number of troops that could be engaged on foot (3 companies of 130 men), its perfect autonomy (3 days of combat) and the abundance of its communications made a particularly well suited group for deep penetrations into insecure zones.

However, its weakness lay in the fragility of its equipment which prohibited any halts on roads (1) and required frequent periods of maintenance. (2)

The CRABS SQUADRON organically included 33 Crabs split into three platoons. Its great fluidity, the noiseless nature of its vehicles, its considerable firepower (30 machine guns or automatic rifles, six 57SR guns, three 60 m/m mortars),

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(1) The Crabs had to be transported on G.M.C. trucks and the Alligators on tank-trailers, unless the equipment was loaded on barges.

(2) Thanks to the "acrobatics" executed by the Groups personnel, the Groups have not been unavailable more than 2 days out of 2. (Lieutenant-Colonel X.... Commanding an Amphibious Group).

compensated for the inconveniences that resulted from its lack of armor and made of it the essential element of surprise. So that a Commanding Officer observed:

"A piece of equipment without armor that no obstacle can stop is more efficient than an armored vehicle with a limited mobility".

The L.V.T. Squadron was split into three combat platoons and one support platoon.

"With its 11 pieces (thirty-six 30 and 50 machine guns and three 75 Howitzers) and its three borne Infantry sections, it constituted alone one Sub-Group". (1)

Thus it could be written of this Squadron:

"It is the only known unit to combine an Infantry Company, its own transport facilities and escort tanks. Nowhere is the Infantry Tank liaison is accomplished in such an intimate, permanent manner".

"Only the L.V.T. squadrons and the Howitzer platoon can participate in the conquest of the first beachhead in landing operation". (2)

Two commanding officers have suggested an unusual combat method:

"The ideal form of maneuver would be to be able to join the Group by air dropped or helicopter-borne Infantry once the enemy has been localized and fixed". (3)

The same process could be applied to the borne elements of the Armored Sub-Groups:

"In a really difficult terrain, the helicopter is the ideal means of transport since it brushes off obstacles and doesn't fear mines. One might think that the borne squadrons would be used to the utilization of such machines which would be adapted at the time of need". (4)

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(1) Lieutenant-Colonel X.... Group Commander.

(2) Lieutenant-Colonel X.... Group Commander.

(3) Lieutenant-Colonel Y.... Group Commander.

(4) Lieutenant-Colonel Z.... Armored Sub-Group Commander.

The Amphibious Groups have been utilized advantageously at night, as a Group Commander stated:

"We have seen at night, in a bright moonlight, within a few minutes, one single Crab Squadron inflict on the enemy, engaged in open terrain, losses estimated at 500 to 600 killed or wounded (120 bodies were left on the terrain)."

Another Commanding Officer added:

"As difficult as it was, in rice fields, to maintain a fixation at night, it has been noted that if it was effectively held, the regular Viet units lost courage and accepted the next day either total destruction (many times) or surrender (Tho-Lao, May 17th, 1952)".

In all cases, the most important thing is to avoid the involvement of an Amphibious Group in a terrain for which it isn't suited. This is a delicate matter which requires a great deal of experience on the aprt of the Chiefs, for terrain favorable to the crabs are not always so for the alligators and vice versa. The form of maneuver can be affected by this and, when the participation of amphibious elements is being planned for an operation, it is imperative that the Commander of these elements be consulted as early as the preparatory phase.

Generally, it must be admitted that very few have been the Territory, Zone or Operation Commanders who utilized the Amphibious Groups adequately and gave up the idea of considering them simply as aquatic escort tanks.

These elements give their best results when only cavalry missions are assigned to them.

A.F.C. RIVER UNITS (1)

They also answered to the preoccupation of making maximum use of the existing movement capabilities.

Having been equipped during the campaign with a great variety of boats, armored or not, they possessed at the end of hostilities practically nothing but

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(1) See chapter devoted to River Operations.

8 to 11 meters launches.

They had, on water, missions comparable to those of the land units along the roads (clearing, escort, liaison, supply of posts, fixing, etc.).

One unit commander pointed out that their participation had been of some importance in the pacification:

"Night activities were intensified, which had the result that the Viets were forced to watch around the clock. This climate of insecurity contributed to many rallyings". (1)

RECONNAISSANCE SQUADRON GROUPS

Organically, they were composed of one M.24 Tank Squadron and a Staff of Squadron Groups (2) to which were adapted, for a given operation, some Infantry elements of the size of a Battalion generally. This unit could be put at the disposal of the sectors in order to meet the needs of surface control.

RECONNAISSANCE UNITS (A.M.)

Generally utilized by platoons, or by squadrons at most for the territorial commanders, these elements mainly undertook road-clearing, escort, road guard and C.P. missions.

Their daily use had condemned, once more, the utilization of patrols composed of different elements: light armored cars and half-tracks. In addition, it reaffirmed the usefulness of carried support elements and of an auxiliary group (75 m/m automotor) within a platoon itself. (3)

On the other hand, some of them would have liked to see an increase of the borne facilities and envisaged squadrons with two light armored car platoons and two borne platoons. (4)

While appreciating the services rendered by their obsolete equipment,

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(1) Lieutenant X.... Commanding a Launch Squadron
(2) In addition it could include 1 or 2 organic suppletive companies that were used to operate with the tanks.
(3) Often, a company of Suppletives was assigned to a light armored car squadron proper.
(4) Articulation of the platoon into three patrols of 2 vehicles proved quite satisfactory.

the users, naturally, deplored its lack of adaptation to the terrain of many aspects, the absence of reversing device, the mediocrity of the gun... and many wished that the E.B.R. might be introduced first in Indochina.

THE M.36 TANK-DESTROYER REGIMENT (1)

This regiment was created at the end of 1953 as the answer to the possible appearance of Chinese Armored elements. But it was generally split into t platoons and rarely into squadrons (2) in order to satisfy the requirements of Territorial Commanders.

The M.36 equipment proved of a maneuverability in any kind of terrain equal to that of the M.24 tanks and its 90 gun applied much more efficient fire, in particular for attacks of fortified villages and for movements of troops up to 3,000 or 4,000 meters.

The afore-mentioned remarks concerning the M.24 Tank Squadron are fully applicable to the M.36 Tank-Destroyer Squadron.

ARMORED ELEMENTS AIR-TRANSPORT

The necessity to bring armored elements in places distant from any road led the Command to plan for air-transport.

The problem fatally presented many difficulties since the existing equipment had not been considered with their transportation by plane in mind. (3) Thus the use of air facilities was extremely limited.

However, our few experiences in this field have proven the advantages of this formula, for a country like France with responsabilities spreading over five continents.

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(1) The T.D. (tank-destroyers) were transformed by the addition of a turret roof and a conning-tower machine gun; the radio equipment was also modified.

(2) Four T.D. Squadrons, distributed over the whole Tonkinese Delta area, were supported only with great difficulty by the Regiment's services, as the latter did not have theescort and liaison equipment permitting to put its logistics facilities into use.

(3) The example of the air-transport of the M.24 tank is particularly striking. After being dismantled, this piece was divided into 82 packages of which the heaviest, the case, weighed 4,600 kilos. Two Bristols and five Dakotas were required for its transportation.

Small armored detachments air-transported to LAOS rendered great services there (1) and the action of the 1st R.C.C. Marching Squadron (2) taken to DIEN BIEN PHU was particularly convincing.

"This Squadron allowed, in the preparatory phase, the Command to be constantly informed on the free space that existed between our positions and the first enemy organizations."

Afterwards, "the tanks became the storm force of any action". (3)

But, the air-transport of armored units naturally creates the problem of transporting by air the maintenance facilities and supplies, the weight of which, being considerable, rapidly exceeds that of the equipment itself.(4)

Thanks to the efforts made in the logistics field, the Squadron of DIEN BIEN PHU still included on May 7th, six available tanks, two immobilized tanks (utilized in fixed blockhouses) and one out of action. Only one was destroyed. (5)

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(1) A five M.24 tank platoon at LUANG-PRABANG, a three M5-M8 tank squadron in the Plaine des Jarres.

(2) This Squadron included 3 M.24 tank platoons and one Command tank. One of the platoons emplaced in the "ISABELLE" resistance center was quickly cut off from the rest of the Squadron.

(3) Report on the action of the M.24 tanks in the battle of DIEN BIEN PHU.

(4) For example, more than 200,000 rounds of 75 gun were fired from December 7 to May 7; which represents approximately eight times the tanks' weight.

(5) All tanks, with no exception, were sabotaged by the crews on May 7. The optic, the collective armament, the radio were smashed or thrown into the water, the gun breeches dismounted and buried, the main of the tubes damaged with incendiary grenades. The panels, delcos, carburators, filters, were smashed with sledge-hammers. In addition several grenades exploded in the motor compartments. The participation of a tank in the Victory Parade organized by the enemy was only possible by assembling the necessary pieces taken from all the tanks to put one single motor temporarily together. The turret and the armament were sabotaged. These tanks were absolutely unfit for combat. (Report on M.24 tanks at the battle of DIEN BIEN PHU.)

THE ANTI-TANK STRUGGLE

The anti-tank struggle in Indochina "proved that, even in the absence of standard anti-tank weapons, with rudimentary means and particularly by using mines and explosives, it is possible to obtdin considerable results providing one displays tenacity, audacity and ingenuity and conducts the struggle over the whole territory". (1)

Mines can be classified at the top of the procedures implemented, considering the number of destroyed armored elements (a total of 85%).

Their variety was endless, for any explosive missile, any recuperated projectile, was a potential mine for the enemy. The detonating devices were just as varied, but the pressure lighters and command firing were the most commonly used.

In the face of this danger, our detecting devices were inadequate and a Squadron Commander observed that the tanks had become "exploding machines".

Portable anti-tank weapons (75 m/m recoilless, 57 m/m recoilless, S.K.Z. rocket-launchers and bazookas) came in second place considering the inflicted losses (about 8% of armored elements destroyed).

Once the armored element was immobilized, the opponent frequently attacked it with explosives, gasoline cans, etc.

Passive obstacles were placed on roads, dikes, usually at places where any outflanking was impossible. The V.M. utilized earth merlons, deep breaches, "piano keys", traps, indiscriminately, etc. Most of the time, obstructions were combined with mines and traps for the troops.

The parries we offered in this technical field (2) were quite varied:

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(1) Teachings of the Indochina Campaign concerning the A.F.C. (Inspection of the A.F.C. in Indochina.

(2) We are only talking here about the procedures applied during the campaign; the desirable devices will be mentioned in Volume III.

regular maintenance of roads, double armor of the lower part of vehicles, anti-mine covers and rubber rolls filled with sand on floors (1), makeshift reversing devices for light armored cars, covering of the armored elements with barbed wire to avoid an escalade, and with faggots to provide the premature bursting of hollow charges, etc.

All these procedures, which were not new anyway, proved their worth, with the exception of the two last ones which offered more inconveniences than advantages.

As to the tactical parries, they were also standard: articulation in depth and action of the "borne support elements". In addition, the role of patrols, the harassing fire at night executed on portions of roads known to be usually mined, as well as the laying of mines on the small dikes of access gave good results.

And last, in case of enemy assault, the utilization of "canister" shells, of grenades and of the individual equipment of the crew, as well as the rotating action of the turret procured an efficient defense.

INVOLVEMENT OF THE ARMOR AT NIGHT

The Armor rarely intervened at night and generally, if they did, it was under pressure of an emergency.

Attacks while in bivouac or in quarters caused us heavy losses every time the vehicles were not protected by Infantry fire barrage (2) and they were used statically.

On the other hand, when the armored elements counter-attacked under similar circumstances, their action was usually decisive. This was

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(1) The assembling of grill-work roofs to protect the vehicles into the open against grenades comes from similar preoccupations.

(2) The example of the attack on the LE KHU post already mentioned has illustrated this incapacity to insure the security of the Armor at night.

particularly the case in the "attack launched by the Armored Sub-Group No. 3 at TIENKHE (Tonkin), July 18, 1954, when the V.M. left 200 dead on the field (among whom 20 "dynamiteros" darrying explosive charges) and lost a considerable amount of weapons". (1)

The night interventions for the attacked posts were in some cases also determinative.

"In June 1954, a platoon supported by an Infantry company suddenly appeared in the back of some V.M. companies attacking a post, at one AM. Results: 19 counted dead, many wounded, retrieved weapons". (2)

But many users feared such actions.

"Night interventions are very costly and, unfortunately, rarely efficient. The V.M. mined all roads leading to the post scheduled to be attacked and slowed down, if they didn't altogether stop, the intervention elements".

Some even felt that "the use of the armored forces must, as a general rule, be proscribed at night". (3)

Be it as it may, actions carried out at night have shown the advantage that can be derived from procedures tending to increase visibility.

The lighting of the battlefield by Luciole planes, light-pots, turret flood lights, flares, have certainly contributed a substantial assistance.

"Mortar shell flares proved very efficient. In particular, they made counter-attakcs at night with tanks possible. The required consumption was of

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(1) Captain X.... Assistant to the Lt. Colonel Commanding the 3rd Armored Sub-Group.
(2) Captain X.... Commanding an A.M. Reconnaissance Squadron.
(3) Colonel X.... Commanding a Reconnaissance Regiment.

two 81 m/m shells per minute, regulated so as to light the terrain 400 meters in front of the tanks on a 600 meter front". (1)

The adjustment of weapons turret under the light of a flood-light directed parallel to the gun gave good results. (2) But the fact that in Indochina infra-red devices were not adapted to armored vehicles adequately, did not permit, unfortunately, to draw any definite conclusions on this technique.

Anyway, "the French Army must make all necessary efforts to learn to maneuver at night. This will not be accomplished without difficulty, for as men become more and more civilized, they become less and less comfortable in darkness". (3)

The Armored Force had begun the campaign by drawing on the facilities of a few regiments. It ended it with four Sub-Groups, two Amphibious Groups and two Reconnaissance Squadron Groups.

The Command had thus recognized the necessity of having armored units capable of waging combat on their own.

At the time of the cease-fire, this evolution was still considered insufficient: in spite of the difficulties of the terrain, of the widespread nature of threats and of the increasing necessity to assist the fatigued Infantry, the Command felt a growing need of units really capable of accomplishing Cavalry missions.

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(1) Captain X.... Commanding the Borne Squadron Group of an Armored Sub-Group.
(2) The presence of an automatic weapon for close-range defense, with a shield to protect its servant, proved equally useful.
(3) Lieutenant Colonel X.... Commanding an Armored Regiment.

CHAPTER VI

ARTILLERY

Through an imperceptible evolution, the small police operations move about as war operations. But the graph of this evolution shows a discontinuity when the gun comes into play for i it creates fear, it has often difficulty in descerning the rebels among the peaceful populations.

"In the war on surface, when the artillery must intervene as mounted police and not as local constables, the outcome of the game is in danger, for success... is much more based on political action than on the action of the fires". (1)

But can mounted police and even the local constable be done away with? So the artillery intervened from the start of the conflict and articulated itself quickly in the following way:

- Position artillery, emplaced or semi-mobile.
- Intervention Artillery, combining field Groups, assigned to Mobile Groups or maintained in general reserve, sometimes put at the disposal of certain territorial Commanders (zones).

The following table shows the continuous increase in the number of tubes and particularly of the ammunition consumption over the last years of the conflict.

YEAR	PIECES		FIRED ROUNDS
	Position	Intervention	(a)
1951	228	240	331.762
1952	257	258	573.125
1953	285	286	637.947
1954	323	370	792.690 (b)

(a) Only for the 105 HM2 Howitzer.
(b) Only for 7 months.

(1) Colonel X.... Artillery Commander in North Vietnam.

Therefore, the Artillery has played a major role, "less because of its power, outdone by the Air Force, than by the permanency of its support, the instantaneousness of its implementation, and the precision of its fire". (1)

Position and Intervention pieces have equally shared the honors of being "the Infantry's guardian angels".

A - POSITION ARTILLERY

From the moment the rebels have been able to activate powerful enough elements to successfully attack the field fortifications "the network of our posts scattered to provide protection for the roads and the safety of the populations had to have the permanent support of immediate and powerful fire. This was the reason for being of the position artillery". (2)

This position artillery (P.A.) dispersed over the essential territories (North Vietnam, South Vietnam) was "the evidence that instantaneous interventions were possible". (3)

Position Artillery, capable of supporting its fire, any fixed or mobile friendly element operating within the limit of its tubes' range, or capable of engaging any enemy making himself known, had a psychological as well as material mission to accomplish with respect to our own elements as well as the adversary". (4)

This mission, therefore, was of a permanent and omnidirectional character. Its satisfacotyr execution required first an Artillery Territorial Command, the organization which should be a carbon copy of the Joint Territorial Command.

But, due to the shortage of personnel, "even in Tonkin, the setting-up of Sector Artillery Commands sometimes gave rise to discussion".

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(1) Squadron Leader.... Commanding a M.G. Group.

(2) Colonel Y.... Artillery Commander in North Vietnam.

(3) Captain.... Artillery Commander in a N. Vietnam Sector.

(4) Captain Z.... F.T.M.V. Artillery Staff.

"This is wrong...the grouping of the section trajectories scattered all over on a single objective cannot be accomplished adequately nor within the proper time without an appropriate communications network and through intervention of essentially technical command elements". (1)

The setting of fire was accomplished through various procedures: from the ALOA observation plane to the Infantry Non-Com spacing the blows as best he could.

The lack of DLO and the inadequacy of terrestrial observation can often force Officers of any Arm to set up the firing line. It is imperative that the Officers be cognizant of a simple procedure, which can be implemented in all cases and particularly in side observation, like that of the objective grid.

The maneuver of material should supplement that of the trajectories.

"There is one maneuver of position artillery...this maneuver has a more 'sticky' aspect than in the case of the mobile units, but it exists". (2)

In Indochina, "position artillery proper was emplaced in fixed bases of operations in spite of limited possibilities of movement; the maneuver was not always pushed far enough". (1)

However, position artillery included, in addition to the pieces, "fixed" sections or batteries, "semi-mobile" sections capable of moving with a minimum of indispensable implements for a short mission (only 3 trucks). Additional auto facilities could be procured by the Command if necessary.

Moreover, whenever possible, a field artillery group (105 HM2) known as "zone group" was adapted to certain territorial sub-divisions of North Vietnam. This group was to remain mobile, never fixed, and as far as possible, was not to be dissociated.

The positions, of course, had to adapt to this maneuver, and:

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(1) General Commanding the F.T.E.O. Artillery.

(2) Captain Z.... F.T.N.V. Artillery Staff.

- Be relatively easily accessible.
- Be capable of receiving at least one additional section in the post enceinte (completely equipped emplacement).
- As far as possible include, near the enceinte, a platform (equipped topographically), for a field group". (1)

In rice fields, these conditions could not always be met. But it is precisely on a difficult terrain that the initial deployment of a position artillery must take them into due consideration, under penalty of hampering all further movement of the material.

The distribution of available material on the terrain is an eternal problem: either to scatter the pieces all over in order to cover the greatest possible space or sacrifice some zones in order to group the pieces by sections.

The second solution will always be preferable because: "if the piece suffices where the only requirement from the gun is to make noise, the battery comes into play as soon as a fire action is required. The battery can be limited to two pieces when economy is necessary". (2)

Moreover, timeliness and precision of artillery fire are closely related to the capabilities fo the Chief who executes them. A gun's number 1 cannot be required to have the same capabilities as a battery Commander. "If the Command elements are quantitatively and qualitatively inadequate, it will rarely be possible to deliver precise and timely fire. In particular, the isolated section and a fortiori the isolated gun can only deliver psychological fire without much material efficiency". (3)

Deployment by piece, or by section, was however utilized for a long time

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(1) Captain ZZ.... F.T.N.V. Artillery Staff.

(2) General Commanding the F.T.E.O. Artillery.

(3) Colonel X.... Artillery Commander in North Vietnam.

to provide all the fixed elements with moral support, but little by little, the Delta "decay" imposed a regrouping.

The year 1953 was noted in TONKIN for this re-organization. But some implanted units were no longer as well covered by fire and felt abandoned when the enemy was becoming more powerful. Consequently, some posts were successfully attacked by the V.M. (case of the LA-TIEN post in February 1954).

Therefore, a regrouping of the fixed units and the abandonment of certain posts should be the parallel to the regrouping of the artillery.

The troops at the disposal of battery Commanders were always insufficient, for not only theoretical personnel was under-calculated but it never materialized. The fatal results were:

- Exhaustion of radio personnel which was always insufficient.
- Impossibility of providing continuous observation.
- Inability to detach a DLO near sector troops during small clearing operations.

The position artillery material was initially varied. In order to equip these units, "every possible means were used" (1), which is the cause of the gaudy aspect of the tubes (75 1897 models, 25 Pounder, 105 1934 and 1935 models...).

During those first years of the campaign the users vainly waited for adequate ammunition allotments. Was it not the era when "a gun without any particular relation and support was granted a monthly ration of 30 rounds?" (2)

Towards the end of the conflict, however, most of the batteries had been equipped:

- Either with 105 . whose range however was inadequate (practically 10,000 m.) and whose double trail mount required instructions for the all-azimuth fire.
- or with 105 long 1936, with a satisfactory range (14,500 m.) but whose

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(1) Lieutenant commanding P.A. battery.

(2) P. DANNAUD: "The Dead War".

dispersion in scope limited the utilization possibilities. In addition, the gun was too heavy, rather awkward to handle in spite of the use of instructions, and ammunition was too limited.

The users would have preferred one same piece, all azimuth, not only for its aiming capabilities but also to reduce the size of the pits. An increase in range was also desirable (a gain of one kilometer to 11,000 m. produces a gain of 72 Kms^2 of the covered surface).

So, many officers wondered "why the French modern material such as the 105 ABS were not tried in Indochina, where they would have been so precious on account of their all azimuth and range capabilities". (1)

And, some officers suggested that a study be made of a material meeting the above characteristics and provided with a "protecting roof" in the form of a turret, or detachable panels.

Adoption of this line would imperceptibly lead to the realization of a "fortification artillery" the cost and demands of which are well known, but the results of which can justify its establishment.

The defense of a position artillery unit depended on the resistance of the post where it was housed. However, it sometimes happened that such a post was commanded by an Infantry Officer, even a non-commissioned officer of a rank lower than the Artillery unit Commander.

It then seems desirable that "the gunner who represents the Viet's main objective in the post, be master of his defense and command the ensemble". (1)

But we must not forget that "the artillery protects itself with the artillery", "the implantation unit is not a battery, a section, but two batteries, two sections, implanted in such a way as to insure the reciprocal support of one to the other". (2)

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(1) Lieutenant Commanding a P.A. Section, then Battery
(2) Lieutenant Commanding a P.A. Section, then Battery

This was not always possible, and the mortars (particularly 120 mortars), palliated the shortage of guns.

The vulnerability of position artillery had become, with the improvement of V.M. armament (in particular mortars and guns), a grave problem. At the end of hostilities, the attack of a post always included neutralization of the position artillery unit which was responsible for the halting fire in the area.

This counter-battery found its expression at DIEN BIEN PHU, where the two artillery groups deployed for the defense of resistance centers were neutralized, then disseminated by the opposing c oncentrations.

The problem of protection of guns was felt more and more accutely and the solution of the pits was no longer satisfactory.

A "protective roof" is acceptable only at the price of at least half (even 2/3) of the cpapbilities of directed fire, which comes to doubling or tripling the means for one same mission. Such a demand can only be justified in the special case of an installation on a hillside or a rather powerful "entrenched camp".

The solution of a turret, which has quite a few partisans, would perhaps be justified in the form of armored elements turrets, rapidly installed by procedures to be studied (for example: 105 Howitzer turret from a Sherman tank).

Position artillery, which had rendered the greatest services, was undergoing a cirsis at the end of the war and tis disappearance, or at least its transformation, was to be foreseen.

B - INTERVENTION ARTILLERY

The Intervention Artillery was articulated into groups of various calibers some of which were assigned to joint units (mobile groups) and the others made available to some territorial commanders, while the 155 HM.1 groups were

maintained in the General Reserve. (1)

The eight years of war have confirmed the value of our principles and "the various notes, studies or instructions on the uses of artillery that were issued from 1946 to 1954...are all dominated by the same governing principles". (2)

As early as 1946, the Colonel Commanding the F.T.E.O. Artillery (3) wrote: "as a general rule, the errors do not stem from a surprise brought about by the special nature of operations in Indochina, but simply from the fact that the great principles included in our regulations, confirmed and completed by the teachings of the last war are forgotten".

The organization of command was generally standard. Only one problem particular to Indochina arose when a jointly formed formation came into a zone or sector for an operation, or when the general reserve artillery was assigned to reinforcement tasks.

It was then the responsibility of the territorial commander to insure the conduct of operations, and the responsibility of his gunner to take Commanders of artillery, general reserve units under his command, as well as those of units assigned to joint groups alerted for the operation.

"If for personal reasons this is not possible, the artillery territorial command must be directly related to the R.G. Artillery Command which then takes its place". (4)

But the role of the Joint Formations Artillery commanders was made delicate due to the assignment of an Artillery Group to each M.G. and due to the fact that the M.G. operated most of the time in isolation or at least at considerable intervals from one another. The tactical and technical "double subordination"

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(1) There was even a 155 m/m Gun Battery in TONKIN.
(2) General Commanding the F.T.E.O. Artillery.
(3) Note on the use of Artillery, dated Nov. 15, 1946.
(4) Colonel X.... Artillery Commandant in North Vietnam.

thus was inclined to be only tactical.

So, the G.O.M.L. Artillery Commandant wrote:

"The action of the Artillery Commander in this type of operations (Middle LAOS) was often non-existant: the dispersion of the M.G. which were often several hundred kilometers apart allowed mass actions only on rare occasions". (1)

Moreover, if "the relations between the Joint Commander and the Artillery Commander were, as a general rule, inpreganted with understanding and trust" (2), it is nevertheless to be noted that "a certain number of M.G. Commanders did not possess:

- definite knowledge of the capabilities and demands of the artillery.
- full realization that this was the weapon with which they impose their decisions at the place of their choice.
- an accurate concept of their role in relation to the gunner no of the practical necessity, at least to have him participate in the maneuver planification". (2)

On the other hand, the Group Commanders were for the most part recently-promoted Squadron Chiefs. "Even if they were at least technically competent, their rank did not alone carry the desirable weight....In the special case of the isolated M.G., it would be desirable to see the group led by a Lieutenant-Colonel, technical advisor to the M.G. Commander, assisted by a Squadron Leader, practically commanding the group". (2)

The missions of the artillery in this war on surface can be summarized as follows (3):

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(1) Note on the use of Artillery, dated Nov. 15, 1946.
(2) General Commanding the F.T.E.O. Artillery.
(3) Colonel X.... Commanding the Artillery in North Vietnam.

- reassuring the friendly troops...while worrying the enemy -: PSYCHOLOGICAL FIRE.
- supplementing friendly action - offensive or defensive -: SUPPORT FIRE.
- preventively break enemy action : COUNTER-PREPARATION FIRE.
- harassing the enemy -: HARASSING FIRE.

This unorthodox classification brings forth a category of ifre which "have been executed in all wars...have been used extensively during the Indochina campaign and which, nonetheless, are never mentioned in our regulations: that is the fire aiming for a psychological effect:

- either on the enemy, whose action is feared, to give him the impression that the artillery is ready to get him under fire should he appear;
- or on the friendly element, to give him comfidence and remind him that the artillery is ready to support him"....

"...These low consumption fires achieved their goal most of the time. There is the certain danger of ahving them become widespread if they are incorporated in the regulations, but there is a definite hypocrisy in ignoring them.... It would be wise to take them under study and determine their mechanism and the consumption to be allowed (1) for the gunner artilleryman lives the combat and can understand the requirements of the infantry which bears the biggest load of fatigue and risks of the war". (2)

The general rules of the implementation of this Arm, as far as fire maneuver, remain totally true: BRUTALITY, PRECISION, TIMELINESS (3). But, it is also an undeniable fact that certain factors, such as the nature of the terrain and of the enemy present obligations which require adaptation or various shades of application". (4)

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(1) Colonel Y.... Commanding the Artillery in North Vietnam.
(2) Captain.... Commanding a Battery, D.L.O. Leader.
(3) Colonel X.... Commanding the Artillery in North Vietnam.
(4) General Commanding the Artillery in North Vietnam.

Offensive fire: Fire preparatory to or accompanying the attack, counter-preparation fire, fire determined as a result of intelligence (destruction or neutralization), harassing fire...they all have to be first of all BRUTAL. The enemy is fluid, amkes admirable use of the terrain and only the first rounds can inflict losses to him. After the first minute of fire, he is safe. Therefore, "a maximum of tubes delivering a minimum of rounds is imperative as they must hit the objective almost simultaneously". (1)

Defensive fire: halting fire, emergency fire requested by the D.L.O. to stop a counter-attack...must be first of all TIMELY, that is, triggered instantaneously. The enemy assemble together in secrecy and reveals himself only through an attack: sometimes his base of departure is on this side of our halting fire (night attacks). Without considering losses, he pushes ahead with fury in the space of the first minutes. The artillery fire must aim first to stop him for, should he penetrate our position, the artillery can do no more than hamper the succeeding waves.

In this case, "rapidity of fire opening takes precedence over the mass effect. When a Group supports widely spaced units (battalions, posts...), this leads to regulate each battery on a different halting fire contrary to the standard doctrine of utilization. During the minutes following the opening of fire, the other batteries overlap the first". (1)

Observation: this natural reflex of the artilleryman has not been sufficiently exploited in Indochina:

- on account of the terrain: disheartening horizontality of the delta, brush of the middle and high region.
- on account of the scarcity of our means which did not permit the

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(1) Squadron Leader.... Commanding an M.G. Group.

detachment of a group adequate to insure continuous observation in "the" post possessing a good tower, or in"the" village possessing a belfry.

- finally, due to the fluidity of enemy whose movements and preparation activities were undetected until the actual storm action.

Constant observation would have greatly inconvenienced him, but patience was of the essence: "How many days went by without seeing a thing, then came a worthwhile fifteen minutes". (1)

As a general rule, communications worked satisfactorily. (2)

"The striking thing when one comes to Indochina is the acquired adaptability in radio networks..."

"The groups worked on one frequency and usually managed to dispose of all their traffic. In France, they have 2 frequencies at their disposal and the standard question is to find out if it would be better to use the m with one working normally, and the other as a clearing device, or on the contrary, to distribute a priori the posts on two networks, one fire network and one command network. The obtained results would seem to support the partisans of the first alternative; but it might be interesting to see what its results might be with groups capable of putting up three D.L.O. with four Officers and each possessing a radio set". (3)

However, some Group Commanders wished to have a second frequency available in Indochina. "The single network in a group requires a very strict operating discipline...; moreover, it is practically impossible to support simultaneously two infantry battalions that require emergency fire". (4)

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(1) Lieutenant, Liaison Officer, guide-observer of an M.G. Group.
(2) The problem of equipment and particularly the case of DLO, SCR 609 post will be treated in Volume III.
(3) Colonel.... 3rd D.M.T. Artillery Commander
(4) Squadron Leader.... M.G. Group Commander

Besides, a "general artillery frequency" existed in North Vietnam; it was the second pre-set frequency of the 609 posts, which was at the disposal of the Command and, in case of emergency, was used as a clearing frequency...although it had not been intended for such use.

Artillery Units movements caused grave worries to the Command in all the territories.

"A movement on a path requires considerable construction work by the Engineers. The M.G. Artillery group, in the first days of February, took one week to go from THAM LAY to MAHAXAY (Middle LAOS), or a distance of approximately 15 Kms, and at the price of tremendous efforts on the part of the troop".

"Movement of a group on a road is a nightmare for the Command. The enemy knew this weakness and his documents insist on the efficiency of an attack against moving artillery units".

"Moreover, he obtained considerable success in this field:

- X... Group... April 4, PAKSE area.
- X... Group... June 24, 12 Kms from AN-KHE.

"The group requires, in position, on bivouac, or on the road, a security unit the isze of a Battalion". (1)

But, the best guarantee was obtained by the fire of other units in position. "Certainly, the movement in security, where every element is constantly covered by the artillery (itself protected) is slower, but it is practically sure of its success". (2)

In this respect, the withdrawal maneuvers of our installation during the "MOUETTE" operation, or the HOA-BINH evacuation maneuvers, as well as the falling-back of our M.G. from BAN NA PHAO to MAHAXAY by the R.C. 12 in 1954 can be cited.

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(1) Colonel.... G.O.M.L., then F.T.S.V. Artillery Commander
(2) General.... F.T.E.O. Artillery Commander.

All our deployments have been influenced by three factors particular to Indochina:

- The exiguity and scarcity of utilizable platforms.
- The absence of enemy air forces and the rarity of his artillery intervention.
- The importance attributed to the close defense against the V.M. infantry.

"These conditions have contributed to impose a form of deployment where all the group elements are drawn tighter together in order to make maximum use of a limited area and to reduce the perimeter to defended. This drawing close is obtained by an entanglement of guns, vehicles, individual and collective tents, which give more the impression of a Gipsy camp than of an artillery group in position". (1)

"The extreme limits of the possible spreading of the group appear to be on the one hand the INDOCHINA-type deployment (2 to 3 hectares) and on the other hand those usually advocated in the mother land which easily reach 40 to 50 hectares for a group of 18 pieces. If it is impossible to suffer an air and artillery attack from the enemy with the first case, the second, however, does not lend itself to the organization of a close defense". (1)

"This problem of close defense which stemmed from the absence of a front was resolved by various procedures;

- Immediate support of the infantry...
- Cover fire delivered by other artillery units.
- Firing on sight delivered by the attacked units." (1)

Experience demonstrated the importance of the two last procedures, particularly of flares, prepared for particularly dangerous points or orientations (for example: the group of one of our M.G. took particular advantage of such a situation at HAYEN in January 1953).

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(1) Colonel.... G.O.M.L., then F.T.S.V. Artillery Commander.

As to "the size of the infantry support required for the protection of the group and of an M.G. Command Post; it varied from one Company to one Battalion according to the situation". (1)

The total strength of the group, or 474 men comprising 21 Officers, 76 Non-Coms and 377 gunners, being already low, was never realized. Thus the group set up three D.L.O. with 2 Officers, with difficulty, while the M.G. often included 4 Battalions, 1 armored squadron, some Engineers elements, and some from the sector....

A group with two 6-piece batteries was experimented in order to save on the troop cadres, particularly the Non-coms. But this advantage was offset, as could be anticipated, by a lack of adaptability in the fire maneuvers.

Moreover, it was only possible to permanently equip an observatory by calling on personnel from other teams, while the permanent radio monitoring on the forward network (D.L.O.) and the rear network (A.D.), presented problems that were practically impossible to resolve when the A.D. was beyond the range of the S.C.R. 608 (or A.N.G.R. 5).

And last, the personnel required for close defense was constituted, with few exceptions, of men who already had other tasks to perform.

In order to provide a D.L.O. with two Officers, which is a minimum, each battery must have four Officers. Only on that condition can the battery Commander maintain imtermittent contact with his unit.

All Captains complained of having been "forced to practically hand over command of the battery to the Fire Lieutenant, being the only one to know the Non-coms and the men since he lived with them". (2)

The group had a "rear base", a rest cantonment where some elements from

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(1) Squadron Leader.... Commanding an M.G. Group.
(2) Captain.... battery commander.

the B.C.S. and the batteries head bookkeepers remained in permanence. But the general insecurity quickly imposed a reinforcement of these elements with guard personnel, which reduced the "operational" troops by that much.

However, the brevity and rarity of contacts between the unit and its rear base made it possible to group around a contonment suitable for a firing group, the services of several groups and thus realize economies in guard personnel.

No noteworthy change therefore was made in the use and implementation of the Artillery; the adaptation to the particular conditions of combats sometimes appears as a distortion (too tight positions, insufficiency of terrestrial observation...).

However, one fact emerges from the evidence: the increasing importance of the Artillery during the conflict, recognized not only by our own Infantry, but also by the Biet Minh who, rendering judgement on our bases of operations and our defense tactics wrote: "of all the French defense facilities, the Artillery support is the most efficient". (1)

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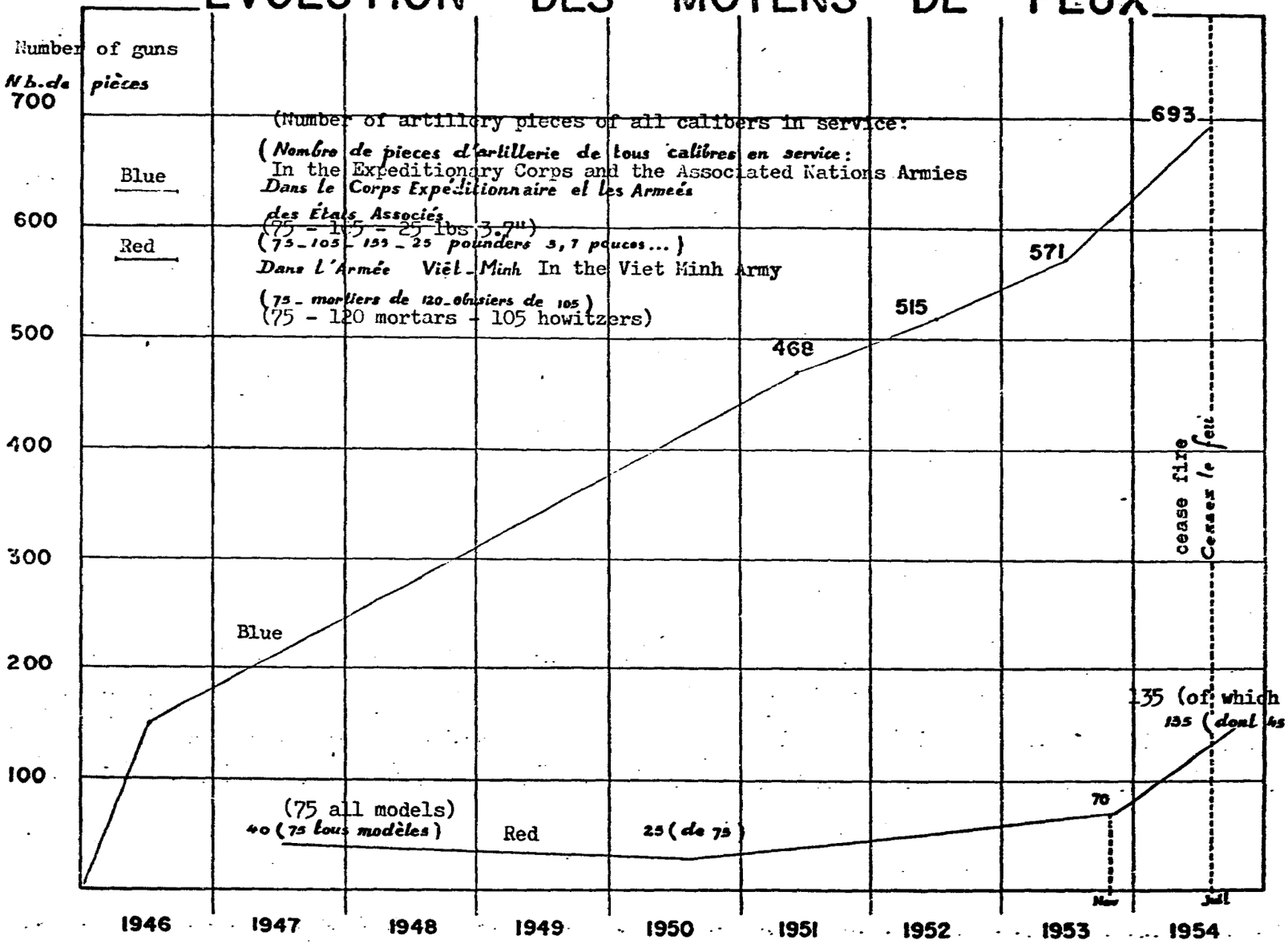
(1) Intelligence Bulletin - No. 885/FTNV/2 of February 25, 1954.

EVOLUTION OF FIRE RESOURCES

EVOLUTION DES MOYENS DE FEUX



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CHAPTER VII

LIGHT ARTILLERY OBSERVATION AVIATION

(A. L. O. A.)

The campaign of Indochina showed, if such was the need, that the Army required aerial facilitels.

From the start of hostilities, the Command requirements and those of the Artillery proved to be huge and from 1945 to 1947, the Piper Cubs of the 9th D.I.C., then the "Morane 500" Groups, sent out successively, failed. The Command of the Artillery Aviation, created in September 1, 1946, did not succeed in redressing the situation, so in August 1947, the Artillery Aviation was at its lowest stage.

But the Air Force had evaluated the services which the A.L.O.A. could render in the scouting for fighters and even bombers. Therefore, an effort was made to the profit of the Artillery Observation Aviation Groups (G.A.O.A.) which then existed and put back into shape in 1848. Until 1952, they were to remain at the disposal of the Air Force.

On March 3, 1952, the decree joining the A.L.O.A. to the Army was signed; but in order to avoid the return of the difficulties encountered in 1946-47, the application of the decree was progressive in Indochina: A new A.L.O.A. Command was merely created on January 1st, 1954; the relief of personnel was accomplished only in April of the same year and the application of all facilities was not yet placed under the responsability of the Army without reserve at the end of the war.

This sketch permits an appreciation of the delays which are necessary to give independence to an organization such as the Light Army Air Corps (A.L.A.T.) in spite of the imperative needs of the Units.

These needs were varied:

"All sorts of demands were placed upon the Air Observation Corps: Artillery and mortar fire ranging, search of intellignece, escorting the troops, radio relay, guiding of fighters and bombers, search for D.Z., food supply, mail and medicines, medical evacuation, etc. (1); the following can also be added: command liaisons, general surveillance of the battle field...without forgetting armed reconnaissance at the start of the campaign, during which the observer shelled on the ground the objectives which he had judged detrimental to his F.M. (1)

Artillery fire ranging by observation place was particularly advantageous in Indochina due to the shortage of terrestrial observatories.

There remains an essential mission of the A.L.O.A.; but, despite the excellent overall results, it was not utilized sufficiently in Indochina. The lack of planes was often deplored at the very moment when the artilleryman needed them, that is after taking position at the end of the day, after deployment...and in addition, an anonymous or unknown observer was not always trusted. Certainly the Officers of all Branches are capable of appreciating the overall efficiency of fire, but a Group Commander prefers to entrust an exacting performance to a gunner.

In the coordination of the artillery-aviation fires, the air observer played an intermediary role between the airman and the gunner. The latter could only avoid the "fire hole" between air action and the artillery shelling by

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(1) Lieutenant-Colonel Commanding an A.L.O.A. of the F.T.E.O.

remaining in constant contact with the "cricket" who informed him of successive air interventions and announced the moment when they started off.

"Reconnaissance on sight was rarely productive in general. The reasons for this were: fluidity and dilution of the enemy (in open terrain the Viet is invisible if he remains motionless), the difficulty of observing in wooded areas and also the alarm given a long time ahead by the noisy and slow Morane".

"On the other hand, reconnaissance of a specific point permitted practically always to confirm or deny information...."

"At the beginning of the campaign, reconnaissance on sight was executed at low altitude (between 200 and 600 meters). At the end of hostilities, conditions of utilization had to be modified in view of the introduction of a light A.A. more and more dense...the flight altitude was then brought to 900 and 1,000 meters; a passage at low altitude could be executed but could not be renewed. The results of the missions was not worse,...the Viets, less cautious, were often taken by surprise". (1)

Several observers pointed out the advantage presented by photo-taking and reconnaissance missions at night. Towards the end of the campaign, a few cautious attempts were made in this domain, but they have not been pushed far enough to allow the drawing of significant teachings.

The escorting of troops, "either during an operation, or to scout and guide a convoy...was very productive...." (1)

However, an observer was frequently requested to watch constantly the immediate approaches of the units involved. In such cases the observer could not hesitate to stray from our troops as the most productive intelligence was often gathered a few kilometers away and even sometimes outside the zone of operation.

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(1) Lieutenant-Colonel Commanding an A.L.O.A. of the F.T.E.O.

Several reports point out the advantage to be derived from conducting an operation from an observation plane: "In fact, when dealing with large-scale operations, the Operation Command itself should direct it from the flying observatory of a plane. What could be a better place for it in order to encompass the whole operation and separate the details? (1)

Of course it is unthinkable to wish for the Chief to exercise his command from one end to the other from a plane. But, this periodic overall view, of the set-up and the terrain difficulties would be so useful to him! (2)

Armed reconnaissance is of course not possible without a plane adapted to this mission. In the face of an extremely fluid enemy, the transience of the objectives is such that many occasions were lost due to the inevitable slowness of liaisons. Here is an example among a thousand:

"...On December 1st 1953, around 6 PM, upon returning from a reconnaissance mission on sight, we discovered about a hundred rebels grouped on the east bank of the SONG THAI BINH and preparing to cross the river on sampans. No fighters were available in HAIPHONG; a B.26 at the end of a mission arrived more than 10 minutes later, then two fighters sent from HANOI arrived another fifteen minutes later. In the interval, the rebels dispersed; the intervention was practically useless"... (3)

As Lieutenant T.... pointed out, "The light observation plane would have been able to intervene with success on limited and vanishing objectives had it been armed: a couple of machine-guns of rockets"... (4)

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(1) Lieutenant.... Plane observer.
(2) General G.... in particular used the Morane and was schooled in TONKIN.
(3) Squadron Leader.... F.T.E.O. - A.L.O.A. Commander.
(4) The CESSNA L.19 plane can be armed with rockets, but it was not put in service in Indochina until almost the end of hostilities (see Volume III).

GUIDING OF FIGHTERS AND BOMBERS proved to be a mission almost indisponsable for close air support, as a rapid plane does not see very well and is not in contact with the troops on the ground. But the air observer sees naturally the terrain in the same angle as the fighter of the bomber, but in addition, he knows where the friendly troops are, the situation, talks to the infantryman of the gunner as to the fighter. Therefore, he is a normal link between the ground elements and the air formations.

This guiding "consisted, for the observation plane, in providing ground lights with one or several grenades for an objective to be treated by the fighter of the bomber".

This procedure "had the great disadvantage of forcing the observation plane to go down at a low altitude (100 m.). It was midified by the utilization of the U.S. rifle smoke grenade (grenade with fins) of the M.20 or M.22 type, thrown from 1,000 m. altitude and giving adequate precision.

"The use of this grenade should be generalized although we had duds on water and inconsistent terrain (mud)". (1)

One observer who performed many missions at DIEN BIEN PHU experienced the impossibility of performing the guiding by dmoke-grenades due to the enemy flank and suggested: "...the providing of lights by an artillery fire of smoke-shells, with a previous installation by the cricket of side views". (2)

The importance of this guiding mission explains why the Air Force wished to keep at its disposal the light observation planes, and why it wanted, at least, to insure their control through the Tactical Air Groups (GATAC). In addition, it justified this centralization of everything that flew by the fact that a GATAC must be informed of all taking-offs of friendly planes in order to provide security for them.

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(1) Lieutenant-Colonel commanding the F.T.E.O. A.L.O.A.
(2) Lieutenant.... Observer.

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These arguments were not considered as decisive by the partisans of an independent A.L.A.T., for the guiding mission seemed to them not worthy of more importance than any other mission. As such, it should have been left to the appreciation of the Joint Commander and if necessary, it should have been requested through air support channels, the operation of which is perfectly reversible. (1) On the other hand, the GATAC can be informed of aerial activities without the necessity of placing the planes under his command.

"It seems normal, actually, that the interested Command activate its A.L.O.A. or that it delegate its responsability to a subordinate authority; on the other hand, it is irrational that the Command should have to address itself to an organization outside his authority (GARAC aerial intervention C.P.) in order to utilize his own means". (2)

This argumentation finally won over and the A.L.O.A. had resumed partial independence at the beginning of 1954 and, if the war had gone on, it is quite probable that it would have become the essential element of the Army, as it already escaped the GATAC in numerous occasions.

"In more than half the cases, in the absence of an air organization in the vicinity, the detachments were finally put at the direct disposal of terrestrial Commanders". (2)

After the end of hostilities, a new step forward was taken and the implementation was from then on insured by the aerial support channel. This new procedure was satisfactory, but was not confirmed by combat.

For these various reasons (implementation by the GATAC, grouping of repair and maintenance facilities...and mostly protection facilities), the

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(1) In most cases the requests for aerial intervention indicate that one observation plane would perform the guiding mission. Then there is no particular request to be made.

(2) Squadron Leader commanding the ALOA of the F.T.E.O.

A.L.O.A. formations were stationed on air bases.

But this organization often required the constitution of detachments for which it was difficult to provide the cadres, and deploy them as close as possible to the C.P. of the authority in charge of the operation. In addition, the crews were not always allowed to work for the profit of the same units.

"It is impossible to determine some rules of organization applicable in all circumstances..."

"The ideal solution would be to provide the Commands up to the Division or Tactical Group echelon for example, and Arms up to an appropriate level (Regiment...A.D. or Group...) with a squadron of four to eight planes manned by personnel proper to the Arm in question..."

"If the means are not sufficient, the organization of squadrons of four to eight planes appears preferable to the organization of larger elements; these squadrons would be adapted to the users in accordance with their requirements. In such a manner, only the users could dispose of the necessary aerial means at the proper time and in the best conditions". (1)

Many observer Officers are of the same opinion: "It would have been preferable to have observers and even crews specialized in one area...the observer follows the appearances of the enemy, observes the progress of his activities... no more orientation and navigation worries..."

"To know the formations for which he works, is also important to the observer...and the same goes for the troops on the ground who would have welcomed having a well known observer..." (2)

This organization would have permitted the execution on the spot of a complete briefing before every mission. Because, as a Captain commanding a

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(1) Squadron Leader.... Commanding the ALOA of the F.T.E.O.
(2) Lieutenant X.... Plane Observer.

G.A.O.A. wrote: "In most cases, orders were given in very concise form via teletype from the GATAC. These orders generally indicated only the point of rendez-vous and the radio signals...and left theobserver without any idea as to the orientation or the size of the operation."

Such an organization would have also allowed the reduction of the intervention delays. The same Captain continues: "On the other hand, an unexplainable delay of several hours (1) passed between the ambush or the attack against the post and the arrival of the plane. In a delta of only 15,000 square kilometers, this can only be explained by the number of "unproductive" intermediaries which filtered, transmitted or modified the request". (2)

Finally, the terrestrial commanders did not dispose of any air facilities proper..."sometimes tried to occupy the Morane by making it circle around in order to save it, in case something might happen". (3) This misuse could have been avoided by a decentralization of facilities, which was only interdicted by the shortage of planes.

As to the dispersion of detachments, which presents certain advantages as far as their use is concerned, it was attended to according to the degree of security that can be provided.

Experience has brought to light some of the insufficiencies in the table of organization for the G.A.O.A. (4)

"A G.A.O.A. Command should be entrusted to a senior officer. The responsabilities are much too heavy for a captain". (5)

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(1) This delay varied: half an hour when the plane waited on the ground, with radio set in place. Several hours if the radio set had to be set on a given frequency, alert the crew...
(2) Captain.... Commanding a G.A.O.A.
(3) Lieutenant.... Plane Observer.
(4) A group of artillery observation planes (GAOA) with 3 squadrons of 6 planes included 19 officers, 50 non-coms and 88 men (total 166).
(5) Lieutenant-Colonel Commanding the ALOA of the F.T.E.O.

In addition to the present strength, it should have: one officer plane mechanic, one administrative officer or non-com, and two secretarial non-coms.

Moreover, the personnel needs an extensive adaptation: "In order to become operational, a pilot required training for one month, a mecanic two to three months. For an observer officer, 60 to 80 hours of flight during operations were required to make him confident and productive..." (1)

But, after according these delays, the crews were entirely satisfactory: "Very new at the trade and full of enthusiasm, they sometimes accomplished missions under conditions which would have made bemedaled pilots shrink". (2)

To sum up, the observation plane Has been in Indochina "the jack of all trades" (3), the "shoe-shine boy" (3), "the most precious auxiliary" (3) of the Command, and its appearance in the sky was a relief to the infantryman in difficulty, whether in the bursh, in the rice fields, or in an attacked post.

If the ALOA was mainly used by the Air Force, it was because of the lack of another plane capable of guiding the fighter force.

But its implementation by the Army is the desire of all combatants who have assessed the wealth of its possibilities and, moreover, wish for the integration of helicopter formations to this Air Force.

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(1) Lieutenant-Colonel Commanding the ALOA of the F.T.E.O.
(2) Lieutenant.... Plane observer.
(3) Opinions found in many reports.

OFFICIAL USE ONLY

CHAPTER VIII

HELICOPTERS

In spite of their obvious usefulness, helicopters appeared very late in Indochina.

Two of them were bought by the Headquarters of the Sanitary Services and put to use by the Army Air Corps. In 1952, this stock was increased by purchases and by private gifts and it amounted to a dozen of helicopters.

This increase made necessary the organization of units and between January and April 1954 the Army created a Command of Helicopter Formations. The construction of a helicopter field was begun in SAIGON, while it was decided upon a plan to obtain 100 helicopters that same year.

In the meantime, the Air Force had also decided to create helicopter units and the economic situation had forced the Army and the Air Force to unite their means and form a mixed unit, where the personnel of both would work jointly until the Army units would have reached a volume that would justify their independence. (1)

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(1) - The 65th Squadron was expected to include: A squadron command; a unit of 25 light helicopters; a unit of 25 medium helicopters; a unit for technical maintenance.
In actuality, it reached only a total of 28 helicopters after the cease-fire.

Thus, at the end of the hostilities, we were still at a phase of the organization that was characterized by a centralization of the administrative and maintenance facilities.

But it soon became apparent that to satisfy the requirements of the different territories it was necessary to utilize small detachments.

" In fact, we immediately agreed that there were two types of terrain, and we equipped them one after the other...."

" The zones of the delta (or coastal plains). Flat terrain with a high density of population and troops; short distances; metereological conditions generally good."

" The plateaus and the mountains predominantly covered with forests, specialized troops, in small numbers and scattered, high altitudes, often poor metereological conditions."

".... The light helicopter "HILLER", not powerful, with little autonomy, capable to lift two passangers at sea level, does wonders in the first ones."

" In the second ones the helicopter had to be powerful and sure, had to carry instruments for navigation, and to be used at high altitudes. The S.51 was not succesful and, fortunately, was abandoned for the SIKORSKY H.19." (1)

The dispersion of the detachments and, most of all, the distances, posed some difficult problems.

The operation of the H.19 in LAOS, which was done from SAIGON, was a waste of a potential 30 hours (to go and come back) out of the 150 available between inspections, that is, 20%." (2)

Sometimes, it was possible to transport the helicopters part of the way on ships or aircraft carriers.... But the urgency of the needs didn't always enable us to wait. Furthermore, " these movements did cost more than 15,000 hours, of which at least 400 could have been saved." (2)

Training of personnel. - " The first Air Force pilots had been trained in civilian schools for helicopter pilots in France, England, and in the military schools of the U.S.A.F."

" Army pilots were trained in French civilian schools (HELICOP-AIR, FENWICK, SNCASE)." (2)

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(1) - Report of the Air Commander in the Far East, March 1955.

(2) - Battallion Commander X...Commanding the G.F.H. (Groups of Helicopter Formations.)

Neither were ready for the operations and they had to follow a complete course of instructions in the air and on the ground, before being combat ready. These indispensable classes absorbed many hours of flight, and this often interfered with the operations." [Report of the Air Commander for the Far East, March 1955.]

The mechanics were originally those of the Air Liaison squadrons, " with a cadre of one officer and 22 enlisted men with a background in the field of helicopters, five of which had followed training in England with the WESTLAND Company." Later, other mechanics were prepared in France.

At the end of the war, the Army had pilots and mechanics as well prepared as the Air Force specialists, and this would have allowed them to create autonomous units.

Use during the hostilities. - " With a few exceptions, the helicopters were used as emergency vehicles. Their mission was the evacuation of the wounded, the sick, to pick up prisoners that had been liberated, escaped prisoners, isolated soldiers." [1. Battallion Commander X... Commander of the G.F.H. (Groups of Helicopter Formations;) 2. By 31 July 1954, there were 10,820 wounded or sick evacuated; 38 pilots and 80 escaped prisoners picked up; for a total of 5,400 missions or 7,040 hours of operations.]

Here are some characteristic examples of those missions:

" On November 30, 1951, a Hiller 360 was loaded disassembled on an aircraft Bristol in SAIGON, taken to Hanoi, and assembled the same day in GIA LAM. On the second of December it evacuated 24 seriously wounded soldiers of the column X, in the region of BAN MO (THAI)...."

" On December 14, 1953, one helicopter of the type H.19 evacuated 76 wounded from a support point at DIEN BIEN PHU to a central C.P. Later, between 50 and 60 wounded were evacuated by each plane several times. [Report of the Air Commander for the Far East, March 1955.]

".... From the 14th to the 25th of March, 1954, helicopters evacuated wounded soldier from DIEN BIEN PHU in 53 hours of flight...."

" From the 7th of May to the 20th of July, 1954, 80 people escaped from DIEN BIEN PHU were saved by helicopters in difficult conditions (altitude, forest...) with the use of winches or rope ladders."

".... One H.19, after the hostilities, has recovered the crew of a British commercial ship lost in the bay of Along." [Battallion Commander X.... Commander of the G.F.H.]

The execution of missions has often been made difficult because of ignorance of the use of helicopters.

In fact, many of our cadres lived with the memory of demonstrations done under the exceptional conditions of an air contest and provoked

this protest from the pilots:

" In regard to the Army, we must try to familiarize the officers and the enlisted men with the helicopter and to remove ideas that are too optimistic about its behaviour in a vertical flight, caused by too many insufficient landing strips and as many acrobatic maneuvers, which, fortunately, almost always succeeded." [Report of the Air Commander for the Far East, March 1955.]

The delays in the interventions were often long, because during the operations the requests were forwarded through the net of the aereal support and outside of the operations through the net of the territorial command.

" In the delta of Tonkin and in Cochinchine the delay of the requests was between one and two hours, to be added to the flight time, naturally; but during combined operations (particularly at the center ANNAM) these delays could be greater, up to five and six hours." [Battallion Commander X.... Commander of the G.F.H.]

The Vietminh D.C.A. often attacked the helicopters, not only at DIEN BIEN PHU, but everywhere. " At the time of the cease-fire all the aircrafts having worked in the delta had been hit by bullets from the ground. One of them had been hit 23 times in the sector of HUNG YEN." [Battallion Commander X.... Commander of G.F.H.]

The losses, however, have not been great: " of 42 helicopters received during the campaign, 9 have been destroyed by different causes, and only two have been downed. [Battallion Commander X.... Commander of the G.F.H.; of those 42 aircrafts, 9 were sent back on the Metropole.] But one shouldn't derive any conclusions from this in regard to the invulnerability of helicopters."

To insure the safety of the crews the following precautions had been taken:

An altitude of 3,000 feet (or about 1,000 meters) was made mandatory to avoid the light D.C.A. and to allow, in case of an accident, to land on the chosen spot. [This altitude allows for one minute and a half of flight with the rotors and an exact landing more than one kilometer away.]

Furthermore, " to facilitate the navigation on that type of aircraft where the pilot cannot easily study a map or use the radio, it was decided to follow secure routes opened to normal traffic and covered by friendly posts..." [Report of the Air Commander in The Far East.]

Lastly, if a unit requesting a helicopter thought it necessary, a patrol was charged with the security of the area around the landing strip.

This protection, however, could be interpreted as a braking of the GENEVA convention.

In theory, the convention assures the safety of the vehicles, aircrafts, boats.... transporting the wounded, the sick, or hospital personnel. [GENEVA Convention, 12 August 1949, Chapter III, Articles 19, 20, 35, 36.] But one believes only too often that it suffices to place a red cross on an aircraft to protect it.

In fact, in the delta of Tonkin, the guerrilleros often fired at the hospital helicopters and it became necessary to protect them.

" It is not forbidden to ask in what measure the use of the infantry for the protection of helicopters led the V.M. to consider them as enemies and to treat them as such."

In fact, very often, the troops on the ground requested " an evacuation with the use of covering forces with only the intention to utilize the patrol for their purposes. As soon as the helicopter landed, the pilot was assigned objectives and was requested to transmit positions to the patrol by radio."

Whetcher he wanted it or not, he gladly rendered such services and, thanks to him, every time a helicopter arrived it meant a precise and murderous attack of the troops on the ground...." [Report of the Air Commander in The Far East.]

...." All this to such an extent that the helicopters became chosen targets at DIEN BIEN PHU and for their protection more and more soldiers had to be used (up to 16 for one mission) and even some B.26 (6 airplanes for straffing and bombing, and two for smoke curtains.)" [Report of the Air Commander for the Far East.]

In the future, it will therefore be of advantage that the articles of the GENEVA Convention in regard to the safety priviliges granted by the Red Cross be distributed at all echelons and strictly respected, so as to be able to expect from the enemy the same respect of its terms under the penalty of reprisals.

Tactical employment. - The small number of aircrafts did not allow their tactical utilization during the campaign.

Nevertheless, " an H.19 delivered a commando for a special mission in two trips in the center ANNAM.... The mission was completely successful; the aircraft was not noticed...." [Battallion Commander X .... Commander of the G.F.H.]

Another experience was done in COCHINCHINA to take a group of commandos to an area belonging to the V.M. without living any signs.

A man was parachuted at night and reached a landing zone found on an aereal map. He obtained radio contact with the helicopter which carried the other commandos and guided them with the landing. The helicopter took back a wounded man, the parachutes and some materiel.

The Command's projects anticipated an increase of this type of missions.

The project to obtain 100 aircrafts, which was to be materialized at the end of 1954, would have been only one step, because the studies made in 1955 [Note on the use of helicopters in Colonial Wars - interallied tactical studies - 26 May 1953.] advocated " a tactical maneuver of a new type, far superior for its mobility and safety to enemy troops moving over the ground."

" Operating in successive concentrations of all available means without harming the security of the whole... operating without the worry of land communications and equally well in enemy territory, beyond enemy lines, and within the area under control, these successive actions should aim at the possible encircling and destruction of the Vietminh divisions, which generally operate at several days of march one from the other...."

To realize this project to its fullest extent, however, it would have been necessary:

- To dispose of 100 light helicopters, and 400 heavy ones.
- To train sufficient pilots and mechanics. A project was thus considered (based on the original issue of 25 aircrafts) to become effective in one year.
- A credit in the amount of 70 to 80 billions.

As it was remarked by the Air Commander in the Far East " the expenses for the Indochina war could have started a rebirth for our Army based on new formulas which would have allowed reduced forces to have their capabilities considerably increased." [Report by Ma s, 1955.]

Without being so ambitious, the desires of many officers of the Army were beginning to be heard. A captain of the A.B.C., among others, wrote: " the machine gun, the tank, and amphibious vehicles do not suffice any longer to fulfill the traditional missions of the cavalry. If we are unable to maneuver tactically in the three dimensions we will be again behind time for the next war."

Desired by most, a light Air Corps belonging to the Army and composed by helicopter units could alleviate these preoccupations. Perhaps, it was on the point of being created in Indochina. (1)

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(1) - For your information, here is a list of the aircrafts of the Army Air Corps, organic to each division in the United States.

	Airplane 2-seater	Airplane multi-s.	Helic.	Total
- Division Headquarters	1	2	3	6
- " Signal			2	2
- " Engineers			1	1
- For 3 Infantry Reg.	3		3	6
- For 4 Artill. Bns	9	1	1	11
TOTAL	13	3	10	26

(The information above was found in a study published in the magazine "Officers Call".)

CHAPTER IX

THE ENGINEERS

The war between 1939 and 1945 had already shown the growing importance that had assumed the Engineer Corps. Its role, however, was pointed out even more clearly during the Indochina Campaign, because the Expeditionary Corps found itself in an immense territory where the Department of Public Works, desorganized by the events of 1947 and lacking the necessary funds, was incapable to repair and maintain the structure necessary for the operations.

The work of the engineers was even more considerable than in Europe, but their strength remained " always inferior to the needs, because it comprised only 4% of the Expeditionary Force, while to resolve the difficulties derived from the geographical characteristics of the country the strngth should have been between 12 and 14% of the total, as planned by all foreign armies." [Report on the operations of the Commanding General of the Engineers in the Far East.]

The lack of personnel increased the difficulties and, if the Corps succeeded nevertheless to fulfill its numerous missions, a basic lesson to be drawn from the campaign is that the Engineer Corps must be made up of a greater number of units than previously.

On the other hand, the absence of a front and the general lack of security forced the Engineer Services and the combat units to face the same risks, to resolve the same difficulties and often to fulfill the same missions. In this way, for instance, " the entire road system of Tonkin was the responsibility of combat units and of the Engineers and sometimes directly the responsibility of the latter." [Lt. Col. X.... Commander of the Engineers of Tonkin.]

The action of both type units was therefore inseparable and it is appropriate to examine their operations simultaneously.

ORGANIZATION - COMBAT UNITS. At the beginning of the campaign the different elements of the Engineer Corps were made up according to the metropolitan model, as the formations of the other corps. Consequently, they had to be adapted to the nature of the operations and mainly to the amphibious character of the most important battlefields.

The combat battallion included two or three combat companies with the same structure as comparable units in France and one headquarters company.

Reserve units included:

- Service battallions, with the mission to support combat units and to supply other Corps with materials. [The service battallion included:
  - One Headquarters & one General Services Company;
  - One Equipment Company;
  - One Company for Maintenance and Repairs;
  - One Company for Bridge Tranport.

- ... Companies of tilting trucks.]

- Companies of road sappers, everyone of which could build about 5 kilometers of new road per year.
  [Each company included mainly:
  A section of workshops and machines;
  A section for the operation of quarries
  A section for transportation
  A section for the works.]

- A company with appliances necessary for river operations, which insured the operation of a certain number of ferry-boats.

- A company with armored boats which operated especially heavy engines used in river works.

The units of these last three categories were, therefore, of a special type and reflected the particular needs of the theatre of operations.

This organization of the units, which reflected the serious lack of personnel, was insufficient for the operations of repair and maintenance. The support of combat companies was obtained with difficulty because of " the existing disproportion between the number of machines and the workshops available to repair them or prepare them for operation." [Captain X.... Commander of the Engineers of the F.T.N.V.]

The consequences of this lack of means of repair facilities later became more serious for the following reasons:

- " The condition of materiel used intensively for many years,

- " The lack of spare parts which had to come from SAIGON and sometimes had to be fabricated locally,

-" The great variety of appliances utilized, French and American [For instance, there were at least 20 makes of generator sets, for a total of 42 models.] which required more specialized personnel, a considerable variety of spare parts, the installation of very well developed shops and a service of receipt and delivery utilizing numerous and highly qualified personnel, [Report of the Commanding General for the Far East.]

-" The grave error of the distribution of materiel to isolated units: whether boats or jet engins, generator sets or digging equipment, the maintenance of their engines is very difficult. Each unit has this responsibility, but, because of the lack of training and knowledge they take back only what is deadlined or, worse, they merely notify that something is .

Once more the specialist leaves his shop to go out and finds mostly .... a lack of maintenance.

If the damage is not serious, especially when it has to do with small engines that exist in large quantities, it becomes very serious whenever the materiel involved is as important as a bulldozer. The driver does all he can on his own; but if the vehicle stops, most of the time he is incapable to repair it and ends up by calling up the repair facilities." [Report of Colonel X.... former commander of the Engineers in the Far East.]

The service - When the Expeditionary Force arrived, it found and organization identical to that in France, including, therefore, a section for Bulding and Works and a section for Materials. [This section was directed by an Assistant Director of Materials, who resided in SAIGON. His mission was to supply materials of the Engineers to all territories that needed them. The Building section had staffs in all territories and an assistant director attached to the Engineers Headquarters.]

Both depended on the Engineers Headquarters, but could be put to action independently by the Headquarters of the Commanding General which gave the orders (although all the orders of execution still had to be processed through the Commander of the Engineers.)

This organization was maintained and later several special units were attached to the Service for the execution of special tasks:

- Administrative companies, which administrate personnel and distribute materials to the construction units and whatever materials are needed by the troops in general.

- Construction companies with large pieces of machinery needed for important digging operations and specialised in the preparation of air fields.

All this did not make it impossible for the Service to request the help, as is done in France, of private enterprises and local industries to execute the majority of the works, often even in the less secure areas.

In certain respects, this peacetime organization has been satisfactory, because " the Corps Headquarters, relieved of the worry of the fihances, could dedicate itself almost entirely to missions connected with the operations."

" On the other hand, the Service, relieved of these missions, has been able to grasp better the problems in their totality and to prepare for the future." [Report of the Commanding General of the Engineers in the Far East.]

Nevertheless, many engineers would have liked at least a wartime organization and that military staffs replaced the local ones. Because the latter functioned according to the regulations valid in France before 1945 and included specialized sectors under the orders of one officer.

The administrative regulations and job descriptions were those used in France. The organization was done in each territory by an assistant director, delegated by the director in SAIGON.

But one could ask if the general organization of the combat and service units actually sufficed to the requirements of a war without front, where the distinction between "Combat Engineers" and "Service Engineers" lost most of its significance.

Command organization - In each of the territories in Indochina the formations of combat engineers depended from the Engineer Commander of the Territory, while service units depended from a Territorial Assistant Director.

" This situation was of no consequence in North Vietnam where the Engineer Commander worked closely with the Assistant Director: the open cooperation in matters of responsibility, made easy by a close contact, simplified the problems and smoothed difficulties."

" In Central Vietnam, the geographical separation of the commanders complicated the situation. Everywhere, just a conflict of personalities could have had very serious consequences."

" Certain difficulties arose from this situation. It seems that it would have been preferable that the Engineer Commander had also been Assistant Director." [Report of the Commanding General of the Engineers.]

This unification of command would certainly have allowed a better distribution of tasks, because the combat units participated, just the same as the administrative units, to the operations of general interest for each territory.

On the other hand, it was necessary that for every operation, a fraction, more or less important, of the units be attached to the mobile units and receive missions of support. Specially in Tonkin certain battallions were attached to the Moving Divisions and their commanders were pulled between the requests of the commanders of those divisions and the orders of the Engineer Commander of the Territory.

To satisfy these contradictory orders, some officers wished that the battallions included four companies " of which two would have been utilized as a work force under the sole command of the Commander of the Engineer Division, the other two attached to the Mobile Forces to accompany them in the operations." [Battallion Commander X.... Commander of a battallion attached to a Moving Division in Tonkin.]

Actually, this solution would have been only a mediocre compromise, and if the lack of personnel had not made it impossible, the Engineer Corps should have included:

- Combat battallions in sufficient number to satisfy the operational needs of our mobile forces.

- General reserve units, including other combat battallions and a variety of specialized units to fulfill the mission of equipping the different territories and to reinforce occasionally the Engineers to the front.

THE MISSIONS - The tasks assigned to the Engineers were very varied, but two of them absorbed the greater part of their efforts:

- The maintenance of communications which the Vietminh sabotage constantly destroyed and which had to be also considerably improved.

- The building of fortifications, which has already been the object of a special chapter, and which required works of considerable extent and time.

The Engineers, however, had to fulfill other missions, too:

Construction of camps and numerous military installations.
Setting up airfields [See volume III.]
Improving or building ports and landing areas [See volume III.]
Installation of electrical powerhouses.
Setting up water supply points.
Building of depots (ammunitions, fuel, etc....)
Maintenance of certain railroads.

The variety of those tasks was not the only difficulty and the Engineers had to solve problems of resupply of materials and of work force that were especially delicate. The reestablishement of communications was certainly the mission that required the greatest efforts and the most ingenuity.

Procurement of materials - Most construction works required cement, iron, wood, stone, etc.... To satisfy such needs over an immense territory, it became absolutely necessary to resort to specialized enterprises. These, however, could satisfy, by 1950, only a fifth of the requirements, at least in Tonkin.

" Thus, iron was bought in JAPAN, HONGKONG, MANILA. The Laotian woods were exploited and saw-mills opened,

quarries were equipped, and a flotilla was built for river transport, and numerous independent enterprises were created locally with the initial financing and the cadre of the Engineers. [Colonel X.... former commander of the Engineers in the Far East.]

The greatest difficulty was the supply of crushed stone, material which was also required for road construction, for airfields, and for works utilizing concrete. For instance, in 1951, in the region of Tonkin " the entire program for the construction of fortifications almost failed because the quarries did not produce sufficently." [Report of Colonel X.... former commander of the Engineers in the Far East.]

Later, most difficulties were resolved, but the problem of transportation still remained, because the amount of tonnage made it necessary that only the roads or the rivers be utilized.

In the regions without road nets the resupply for working areas could not be accomplished and this failure was especially felt when land bases for airplanes had to be equipped during the last two years of the campaign.

The Engineer Service had also to resupply many units with all kinds of different materials. For instance, the usage of barbed wire from October 1953 to June 1954 reached 8,200 tons, with some monthly "highs" of 1,400 tons and one "low" in January of 17 tons.

Naturally, air lifts did not suffice to insure " any supply lines" [DIEN BIEN PHU, however, was supported by air with: - 2,877 tons of barbed wire and stakes,
- 150 tons of wood,
- 28 tons of mines and charge plates.
- Lastly, 760 tons of metal sheets necessary to set up a landing field were transported to DIEN BIEN PHU at the beginning of our installation project there.] It was not even attempted to build concrete blockhaus or to reinforce the shelters with rails or metal sheets.

Because of this, the Engineers found it deplorable that none of their heavy engines were airborne, and to utilize a minimum of bulldozers, it was necessary to perform certain disassemblies on the spot and to abandon the equipment later. [In the plane of Jarres, for instance, the three bulldozers that were used for the setting up of the airfield had to be left there; the same happened at NAM BAC.]

The work force - The lack of personnel always forced the Engineers to make use of local employes: prisoners and coolies of both sexes.

If the output of the individuals was not high, the number was sufficient to perform all the work necessary for the digging and filling up of areas at sometimes surprising speeds. For excavating, for instance, between 2,000 and 4,000 cubic meters of earth, small containers manipulated by dozens of workers could be faster than the bulldozer, and one Engineer officer wrote: " The advantages of machines over man is not always a dogma in all circumstances and under all latitudes....."

"..... If we admit that the best solution of a certain difficulty is that which allows to obtain results with the least expenses and the least delay, it is then better to accomplish an occasional work in a certain terrain X .... to hire 200 coolies, to give them picks and shovels and to make them work for 15 days, than to request a bulldozer, its equipment and gasoline, from the nearest depot (and especially from SAIGON, which was 600 miles away) even if this modern machine could perform the work in 48 hours." [Colonel X... conference on the complicated service structures of the Indochina theatre.]

The Vietminh have given us numerous proofs of the rapidity with which they could repair the damages due to our bombings and develop the structures needed during the last year of the war.

The reestablishment of road systems - The road system of Indochina had been conceived to insure intercommunications and not transportation. Thus, it was not dense, it was light [the maximum weight of bridges was of 6 tons and up to 12 only on the main roads. Furthermore, the narrow roads did not make it possible for modern military vehicles to pass] and in the deltas and the numerous waterways it followed their pattern.

In these regions the roads were generally above the water so as to be protected; they run over an enbankment and could not be passed around. The roadway was also very light and was built with a layer of crushed stones over a bottom of clay and sand.

These conditions were eminently advantageous for the enemy, whose destructions were always perfectly well calculated.

The most important works were destroyed initially with improvised methods: toppling of bridge roadways (pulled from their positions by buffalos,) setting fire to woodden bridges, destruction of concrete constructions with picks and drills, etc.... Later the enemy utilized the traditional methods of destruction with explosives.

In the rice paddies the Vietminh accomplished the destruction of roadways in three steps. In the first step, at night, they laid mines and opened a " piano keyboard." [Lateral openings,

approximately one meter wide and spaced about 3 to 5 meters one from the other and leaving a narrow passage for the circulation of pedestrians.] All the material removed was thrown in the rice paddies.

In the second step, the piano keyboard was transformed into a ditch. In the third step, the ditch became longer and the whole structure of the road was eliminated leaving no road for several hundred meters. The waters covered the road, which scattered in the rice paddies.

In the high and middle regions, the bridges and all the passages built on the mountain side constituted the most delicate points, and the powerful vegetation made necessary a continuous state of maintenance: an abandoned road was literally devoured within two seasons and had to be built all over again. [That was the case of route number 6, abandoned in 1950 and utilized again in 1951 for the operation in HOA BINH.]

The opening of a road net in such terrain could be done only with the use of digging equipment because the clearing of the smallest obstacles necessitated the construction of elaborated structures or the establishment of frames that the next floods would remove. The road number 4 , South of XIENG KHOUANG, opened for 40 kilometers, had to be rebuilt entirely after only one season of rains...

The tasks faced by the Engineers were, thus, very hard, since they not only had to reestablish circulation, but also to accomplish, little by little, the following program:

- Enlarging all the principal roads of Tonkin for two-way traffic and according to a classification 30 (18 for roads in other territories) with the aim to build a first road-net called " operation road-net."

- Construction of bridges, in place of the existing trail-bridges, over all the above roadways.

- Construction, whenever possible, of other less vulnerable bridge frames next to those mentioned above.

- Lastly, reestablishment and reinforcement, according to the classification 18, of all highways and roads penetrating into enemy territory that presented a certain interest from the point of view of the operations.

This program demanded the complete reconstruction of roadways and it absorbed an impressive tonnage of materials, that had to be transported by truck. Once rebuilt, these roads could not withstand a continuous stream of traffic, unless they were considerably improved. During the rain season, the movement upwards of the water because of the phenomenon of capillarity, caused all roads to become muddy and this increased their deterioration.

Considerable maintenance had to be performed, and for this reason work groups had to be organized and important vehicles mobilized: tipping trucks, tankers, etc....

" The fight against the wear and erosion of roads was actually never won, because to do it, solid foundations had to be built. The tonnage of materials used was enormous and it reached up to three tons for one meter of road." [Colonel C.... former commander of the Engineers in the Far East.]

Bridge building ..... posed problems of more complex techniques.

Although badly needed, the means necessary for traditional bridge building originally arrived from France very slowly and we could not find locally but some materiel abandoned by the Japanese and some Eiffel material, light and simple, but too narrow and unable to withstand weights greater than 12 tons.

Later, the situation improved thanks to the arrival of materiel sent as part of the American aid. The company EIFFEL produced also, in Indochina, under the guidance of the Engineers, the metallic bridge VY, that could be disassembled in small parts and the use of which was beginning to spread at the end of the hostilities.

For financial reasons, we often had to be satisfied with building pontoon bridges next to those that could not withstand a sufficient tonnage, so as to insure the movement of the heavier vehicles. Similar constructions were built next to the important bridges that could not be doubled by other frames, so as to insure the passage of vehicles in case of destruction.

In the deltas, the muddy consistence of the banks was a source of miscalculations and the laying of the piers necessitated great amounts of materiel, and even the support of mooring posts.

" Furthermore, fixed supports caused unexpected disappointments. Generally speaking, the woodden bridge pile was not recommendable, first of all, because it had to be transported, secondly because it could be attacked by termites, lastly, because we never knew in advance the depth to which it had to be laid in the rice paddies." [Report of the Commanding General of the Engineers in the Far East.]

A cement bridge pile was thus utilized, that was driven to dephts of 25 and even 40 meters (as in the case of the bridge of LAMHA, near HAIPHONG.)

In the deltas, it was necessary to fight also against the tide, which was felt even 150 kilometers inland and which sometimes varied daily up to three meters.

"It was impossible to change the piers each time, and the bridges had to withstand these differences of water levels. The solution adopted and the one that was very satisfactory was the use of the floating Bailey."

" Bailey bridges were replaced by lines of 8 to 10 pontoons of the U.S.Navy." [Or similar materials, which the Engineers had fabricated in Indochina.]

" The U.S. 60-tons bridge with independent Bailey girders was also used in exceptional cases." [Report of the Commanding General of the Engineers for the Far East. - Permanent bridges, both of the fixed and the floating types needed a special security apparatus to finish the construction of the blockhaus on the banks: illumination of the site, nets across the river both up- and downstream to protect the site from the attack of swimmers or boats, metallic covers around the piers all the way down to the bottom of the river.]

Rivers constituted incredible obstacles. Whenever they were larger than 250 meters, the crossing could only be assured by boats, utilizing, generally, metallic boats, fabricated locally and propelled by 2 engines Trégurtha.

Powerful trail-bridges, made up of 4 pontoons, propelled by four Trégurthas, were also used successfully especially in Tonkin.

But the conditions ..... : all over the rivers in the delta were so variable that only a small number of river boats accomplished a regular service under all circonstances.

Only the L.C.T.s of the Navy could navigate at a speed higher than 3 meters per second, speed that was obtained during the floods (as on the Red River around HANOI from the 1st of July to the 15th of September.)

The Indochina campaign has given the Engineers the possibility to acquire a real mastery in the reestablishment of road systems in the most difficult terrain . At the end of 1952, the Engineers could already be proud to have rebuilt 1,800 bridges, representing a length of 3, 500 meters and to have opened to traffic 4,500 kilometers of improved and uninproved roads.

This considerable mission, accomplished at the same time of other important and very varied work, was successful, even though there was a lack of personnel and the supply of materiel was difficult.

In such a way, the Engineers have earned the right to say:

" It is necessary that a sufficiently exact estimate of the utilization of the Engineers be made in regard to all French territories that may one day become the theatre of a modern conflict."

" Only then, the Engineers, undoubtedly always understrength, but at the best of their capabilities, will be able to fulfill their mission rapidly and to everybody's satisfaction." [Lieutenant Colonel X.... former commander of the Engineers in Tonkin.]

CHAPTER X

TRANSPORTATION

The length and scarcity of road communications [The road-net system was approximately fifty times less dense than in France] and the wealth of river roads, at least in the deltas, forced the Transportation Corps to modify its organization and the structure of some of its units to get adapted to very different conditions of transportation.

The Indochina campaign was for the Army a school of flexibility, and, at the same time, it showed the necessity to coordinate all means of locomotion.

THE ORGANIZATION OF UNITS - Since 1947, the Transportation Corps had created an organization copied from the Territorial Command: a TC Headquarters of the Expeditionary Force had been created in SAIGON and attached to the Supreme Commander Headquarters, while in each territory, the different units of the Corps depended from a Regional Command.

The make up of all units had been corrected so as to face the lack of security of roads and river roads. Thus, they all included some combat troops to " allow them, in case of an attack, to gain enough time to receive support from others." [Squadron Chief X.... Commander of a Transportation group.]

Furthermore, their means of transmission had been figured out keeping in mind the length of their journeys and the necessity to take over civilian means of transportation, which normally served as reinforcement.

The transport group - As in France, it generally included two and even three companies; but, it was never used as a whole. The Headquarters platoon and its services were also greatly reduced and did not perform any administrative work.

The Transportation Company included 3 or 4 platoons and its Headquarters Platoon was made up of one administrative section, one security, and one transmissions sections. [100 enlisted men and drivers.]

The security section had scout cars and half-tracks. " It was divided into elements that possessed one light armored vehicle and one personnel carrier and there were as many elements as there were transportation platoons in the company." [Squadron Commander X.... Commander of a Transport Group.]

Many officers found these means insufficient and requested two armored vehicles for each transportation platoon, or nine for a company.

The scout car, that some had predicted as good as the carriers, was criticized by all the administrative & combat personnel. It could not be utilized in all types of terrain and especially mud made it useless whenever it had to leave the road, as in the case of an ambush.

Combat troops requested rifle grenades and light mortars in greater quantities and less machine guns " which could not be utilized properly over roads surrounded by dense vegetation." [Second Lieutenant Y.... Platoon Leader.

To show the need for weapons with a high parabola, here is the narration of an ambush happened in 1954, which caused us particularly heavy losses in woodden terrain.

" At 1300 hours, the Nth Battallion, having reached X.... contacted an enemy block of an estimated strength of one battallion, positioned across the road. A violent combat begins.

At the same time, another enemy battallion, camouflaged, and positioned away from the road, approximately to the North of it and at about 700 meters to the East, begins an extremely violent bombardment with heavy weapons of the second series of the convoy. In a few minutes, under the violence of the fire, intensified by the explosions of the ammunition trucks, all the vehicles of the series were destroyed."]

Formations utilizing mules - These did not give good results, because mules " do not easily adapt to tropical countries. They suffer from the climate and the food; they move with difficulty in the rich vegetation; they sink in the rice paddies. They are not liked by the natives who prefere buffaloes and ponys." [Report of the Commanding General for Transportation in the F.T.E.O..]

The two mule companies of the Expeditionary Corps, however, have been useful for supplying certain posts and to lighten sometimes the loads of infantry units; but, " the frames used to place the loads on the mules were of an old model and weighed more than 30 kilos." [Report of the Commanding General for Transportation in the F.T.E.O.]

A new frame, invented by a veterinary, was under study. It would have certainly increased the efficiency of mules. [It was called the "Proton".]

Actually, " two or three helicopters would replace a mule company and be more advantageous." [Report of the Commanding General for Transportation in the F.T.E.O.]

Units specialized in river transportation - These were not equipped with the necessary materiel until 1951. [The amphibious vehicles DUKW, tried since 1948, did not show advantageous results.]

The L.C.M.s were grouped in platoons of eight engines, commanded by an officer who had approximately 80 officers at his disposal. Two companies with four platoons each were, thus, created.

The leaders of the river units, however, did regret that their non-commissioned officers did not follow " some Navy-type training, to become familiarized with materiel that was completely new to them."

" The men in charge were very often incapable to maneuver and to land: the vehicles were often damaged because of the incompetence of the personnel on board." [Lieutenant X.... Platoon Leader.]

" Nevertheless, the platoons constantly accomplished missions that took them between 75 and 200 kilometers away, carrying 30 tons each, and the L.C.M.s transported provisions, materiel, personnel...." [Report of the Commanding General for Transportation in the F.T.E.O.]

Air drops units - Operating at first from other units' bases, these companies later became autonomous and were equipped with mechanical means of maintenance and transportation. [They were reinforce by a local work force and possessed more than 200 trucks.]

Other units, according to the requirement of the Headquarters and of the bases utilized for the transportation of the wounded (medical units,) were also created.

Mixed units (Headquarters, transportation, circulation) had to be split in Headquarters Auto Companies and Headquarters Companies proper.

Circulation Units - ..... The lack of road nets prevented their use on long trips.

They were charged with special missions: circulation in motor pools, stop areas along roads, control posts, regulation of transportation flow and civilian convoys, regulation in case of accidents....

" The help received from civilian police was little and in the cities the important points were controled by military circulation units. For this reason, the bridge DOUMER in HANOI always required a full platoon." [See the chapter dedicated to the control of roads.]

EXECUTION OF TRANSPORTATION - The lack of security of roads rendered the execution of the simplest missions very different from that of France. Whatever the itinerary and the time of the movement, this was never considered as "transportation" but as a "movement" that had to be performed "under guard". [See chapter on the control of roads.]

The means to achieve this protection varied considerably according to the degree of danger in the areas that had to be crossed.

In the opened areas that we had not fully occupied and where the guerrillas were not numerous, each moving unit was equipped for its own defense: it was a convoy system.

In the territories where we controled certain axes during the day [see chapter on the control of roads] the circulation was free or regulated in a "security corridor", created every morning by our troops.

The vehicles advanced separately or in small groups, in the form of a transport wave.

Lastly, when the enemy infiltrated heavily even those territories that we thought we controled, we had to utilize both systems: the units that kept guard over the itinerary and convoys that were armed for their sel-defense.

Convoys were organized over generally long itineraries (several hundred kilometers) and their vulnerability

was particularly felt in mountain or wooded regions [see chapter on action in forests] because a certain number of civilian trucks was always integrated in military convoys.

Experience has shown that the number of vehicles should never be over 100 to 130. Bigger convoys resulted, in fact, very inappropriate. " The commander of the convoy in charge of civilian vehicles left the motor pool two or three hours after the military vehicles, usually placed to the front."

" He didn't know anything about the rest of the convoy and often arrived at destination three hours after the departure of the military vehicles for another place." [Squadron Chief X.... commanding a Transport Group. This citation is taken from a report in which the author refers to a convoy of 249 vehicles.]

Important convoys were separated in sections, but this required a greater number of personnel and of radio equipment. [" If sixty trucks can be commanded during a movement by one platoon leader, this cannot be done any more if the convoy is divided " (Squadron Chief X.... commanding a Transport Group).] " The convoy commander must keep contact with the head and the tail of his convoy, and with the security units... he must be able to notify the unit..." [Squadron Chief Y.... commanding a Transport Group.] " Finally, he must, if needed, call the artillery positions or the observation airplane."

The establishment of Security corridors was preferable, but not everywhere possible.

Its realization depended from the degree of control that we had of the axes, because " the security of the itinerary was the responsibility of the territorial authorities and the road had to be opened and then protected.... A reserve of the motorized section and, if possible, with armored vehicles, had to be kept on the alert at a certain point of the road where it could be dispatched immediately...." [Notes on the Indochina campaign by the commander in Chief, March 1954.]

The roads with this type of protection, however, were never absolutely sure and the elements of the convoy had to maintain their own means of security.

This lack of security increased at the end of the campaign, when certain regions became more dangerous. [In Tonkin, since the beginning of 1954, not even one security corridor could be protected. On 12 March 1954, at noon, one company, reinforced by a platoon of half-tracks, was decimated on the road HANOI-HAIPHONG, near BAN YEN NHAN, although the road was considered opened and safe.]

The transportation wave was a gimmick with which we tried to discourage the enemy and to offer him very small targets.

...." To effectuate this in the best possible way, it was ordered that military and civilian vehicles would move in small groups. [Groups of two to four vehicles, at most.] This type of movement was called the "transportation wave". Its principal advantage was that if the drivers kept their distances, it was impossible to destroy the convoy because there was none."

" These transportation waves had the inconvenience that ... exacted from the drivers a very painful discipline due to their nervous tension caused by the volontary isolation, especially in dangerous areas. It also allowed the enemy to capture the vehicle he wanted without any difficulties and to acquire ...supplies. Two armed men sufficed to stop and capture one truck.

...." Nevertheless, the system of transportation waves gave good results and it was still utilized at the time of the cease-fire."

The system, however, demanded a certain security [for instance, in the roads of Cochinchina] and it was also necessary that the circulation be important because " a road that is not travelled cannot be used." [Notes about the Indochina campaign by the Commander in Chief, March 1954.]

Security over river roads was insured the same way as on land.

But the corridors of security could only be set up along the SAIGON, MEKONG, and BASSAC rivers and, at times, over some parts of the RED RIVER. [The routes SAIGON-LE CAP, SAIGON-PHNOM PENH, SAIGON-MYTHO, and SAIGON-KRATIE were sometimes utilized daily.]

Everywhere else the convoy was mandatory.

"In ANNAM and TONKIN the L.C.M.s partecipated in numerous operational movements. In these instances, they were integrated with a Navy formation and were made up as follows:

a) one dredging element,

b) one large boat,

c) Transportation L.C.M.s and L.C.T.s,

d) one large boat

e) around the convoy, an escort of P.T. boats.

" Sometimes, however, especially in central VIET-NAM, the L.C.M.s belonging to Transportation performed alone operational missions. But it was always necessary to complete the convoy with some P.T.boats and some M2 boats to find out about some spots (moving sand banks...). These convoys should become regular formations." [Report of the Transportation Commander in Indochina.]

GENERAL ORGANIZATION OF THE TRANSPORTATION CORPS -

" The Transportation Commanders were not, as in France and A.F.N., Directors of Transportation Operations. These fonctions were left in the hands of a Transportation Bureau that existed in every important Headquarters."

" The Transportation Commander delegated one officer, called of the 2nd Section, to work with the Transportation Bureau. This officer, chosen among the best, allowed the Transportation Commander to exercise actually the functions of Director of Transportation Operations on roads and river roads."

" This organization, however, was severelly criticized from the point of view of moral. In fact, it is at least abnormal that the Colonel or Lieutenant Colonel in command of Transportation in one territory could not theoretically even utilize one truck without the authorization of the Major or Captain in charge of the Transportation Bureau and that he was considered incapable to take care of the Transportation V.F.s in INDOCHINA." [Report of the Commanding General of Transportation in the Far East.]

Any other solution, however, would have seemed illogical, because the problems that required a solution, often immediately, were not only complicated by distances, the importance of personnel and of the tonnage to be moved, and the lack of security of the road nets. Units belonging to the Navy, the Air Force [directly ot through the liaison commands of the Navy and Air Force,] and the Army had to be utilized indiscriminately, and the maximum utilization had to be made of means that were always insufficient, while the demands were immense.

The problems, however, were not only technical. The most important factor was that the movements always represented the expression of the decisions of the Supreme Commander, whose "maneuver" was converted into movements of reserves from one point to the other of Indochina.

An example will suffice to prove what flexibility was demanded to face a certain operation of the Vietminh.

When the enemy offensive began on the 22nd of December 1953, in central LAOS, and enemy units threatened

a quick cut-off of the MEKONG road, it became indispensable to move some troops from Tonkin and South Vietnam to SENO.

The movement was done in the following manner:

- By air, from HAIPHONG to SENO, in 6 days:
  five airborne battallions
  two airborne artillery batteries
  one surgical antenna

- By air, from LAK SAO to SENO, in one day:
  one cavalry corps,
  one artillery battery
  two Laotian companies
  one transportation element

- By water, from HAIPHONG to SAIGON, in six days:
  one mobile group

- By road, from SAIGON to SENO, in five days:
  the above mobile group, reinforced by a maintenance section and a detachment of republican guards.

- By river road, then by road, from KRATIE to SENO:
  one platoon of tanks (six days on the river and three days on the road,)
  one reduced mobile group (in three stops.)

This operation was certainly made easier by the officers of the Transportation Bureau who lived the battle within the Headquarters and felt the urgency of the needs, perhaps more than if they had operated from a separate Direction of Transportation.

The same needs, though not as acute, were found at the territorial level and it seems certain that a Direction of Transportation must be an integral part of the Headquarters or, at least, operate in constant liaison with it.

Furthermore, its officers must have a background in the three branches of the Service or belong to them all.

The Indochina campaign has allowed the Transportation Corps to find solutions to new problems and some of them could be applied in other Theaters of Operations, especially those regarding airborne operations.

All the procedures utilized for the security of road transports must be retained, because in all areas where the guerrillas operate, they will retain their value.

CHAPTER XI

SIGNAL

" The organization of the Signal Corps and the way it was utilized, as the command to which it was adapted, remained of the traditional type. Nine years of operations, thus, only confirmed the observations that had been made in previous campaigns." [Report of the Signal Command.]

On the contrary, in the field of local exploitation, some interesting remarks can be made, because of the importance assumed by military telecommunications in a country almost entirely without an existing structure of Mail, Telegraph, and Telephone services. [What was learned about local exploitation and materiel is of a general character and it is covered in volume III.]

It is mainly in the technical field that the most important lessons were learned. Indochina was a field of experiences for many types of materials utilized under particularly severe conditions, while some of them still had not been utilized in France, or only in part.

ORGANIZATION OF THE CORPS AND OF THE SERVICE - The organization of the Corps, similar to that of the command in France, was always satisfactory. It included:

At the level of the Commander in Chief:

- One Signal Command,

- One headquarters for materiel,

- One battalion of general reserve.

At the level of each territorial commander:

- A Signal Command,

- A company or a battalion comprising all means available in the territory [" Experience confirmed that it was advantageous to group in the same unit all the Signal means available in a territory, whenever tactical considerations did allow it." (Report of the Signal Commander in the Far East.)],

- One forward materiel unit which, in some places, assumed the proportions of a depot.

Signal personnel did not amount to more than 5,800 men at the end of the hostilities, that is, 3.6% of the Expeditionary Force; but, to reach this number, the Corps had some problems, which could not be resolved with personnel coming from France. [To be remarked here are the excellent services rendered by the P.F.A.T.]

Help had to be received from qualified personnel belonging to other corps [especially the artillery, the foreign legion, and the A.B.C.] but, this expedient being also insufficient, it became necessary to train local personnel.

" Besides being useful for general services, the Vietnamese were capable to become excellent radio operators, while Moroccans, whose aptitude for heavy work has been known for a long period of time, proved to be qualified in laying underground cables and lead-welding." [Report of the Signal Commander in the Far East.]

On the other hand, with respect to the resupply of materiel, the Corps rapidly surmounted the difficulties it had at the beginning of the campaign.

Later, although the requirements were great, they were all satisfied. For instance, towards the end of the hostilities in Tonkin, there were 1000 radio stations to insure all territorial communications, and 4,000 more radios were used by the units. [In a territory with relatively few personnel, as in South Vietnam, there were, nevertheless, 350 stations to insure communications in the territory and 450 for the needs of the individual units.] Resupply and repair facilities were always available.

THE EXPLOITATION - The problems that required a solution were caused mainly by the climate, by the weakness of the structure of radio facilities, and the particular character of the war.

Humidity and heat were particularly trying for the personnel and the materiel. For this reason, it was necessary to equip some transmission centers with air conditioners. Only this means permitted the proper fonctioning of the materiel that had not been treated for tropical climates and a high production of the workers. [About 10,000 radio posts existed in Indochina. It is to be regretted that an air conditioning system was not used where all the electric batteries were stored, since the resupply of these was a problem that never found a satisfactory solution.]

The load of messages reached high peaks. The center that served the Headquarters of the Supreme Commander in SAIGON took care daily of about 3,500 telegrams, and it exchanged with PARIS between 100 to 120 messages both ways. A secondary center, as the one in HANOI (Headquarters for the F.T.N.V.) dispatched about 1,600 messages. [To these numbers have to be added all communications dispatched by phone, the volume of which was also important.]

The almost complete lack of Mail, Telephone, and Telegraph services forced us to make use exclusively of the means organic to the Expeditionary Force to insure the totality of liaisons required by civilian and military authorities. [This is completely different from the European Theatres of Operations, where the Mail, Telegraph and Telephone services greatly facilitate transmissions, especially telecommunications.]

The problem of integrating the civilian system with the military was, therefore, never brought up. The homogeneity of the telecommunication system was consequently greater, but the responsibilities of the Signal Command increased considerably.

On the other hand, the stability of the most important command posts, which were within well defended areas, and the lack of the enemy air force and long-range weapons, allowed for a greater utilization of fixed structures and big aerials, without the danger of their being hit and the communications traffic interrupted. [Some disturbances caused by broken aerials were noticed, however, in DIEN BIEN PHU.]

The concentration of equipment was actually planned, so as to facilitate the defense against enemy attacks and sabotage. This presented some inconveniences [interferences of.... transmissions] in the technical field, but it made easier the utilization and the job of the chiefs of the centers.

The general lack of security caused the elimination of telephone and messenger services. Radio services assumed a considerable importance, but, if they replaced easily the telephone by means of hertzian waves, they could not replace the services rendered previously by motorcycle messengers. The Signal Command thus often regretted its lack of airplanes, or helicopters, to carry written messages.

Contrary to what would have happened in Europe, the development of radio nets, in all their forms, was never hindered by cluttered radio frequencies. The small number of units involved and the utilization of posts that could work with relatively low frequencies eliminated all difficulties. [Especially in Tonkin. - The ANGRC.9, that operated between two and four megacycles, proved to be an excellent radio from all points of view.]

The good supply system made it possible to equip units with radio equipment more powerful than that issued to similar units in France; the telegraph and the telephone by hertzian waves were also greatly developed.

The best results obtained in this field were the continuous liaisons maintained with the garrison at DIEN BIEN PHU: although very far away and under constant bombardment, it was possible to insure contact with the Commanding General of the Operational Group of the North West and his Headquarters until the last minutes of the battle and the tape of these last conversations is the first document of its kind in military history.

The Signal Corps succeeded over all technical difficulties and obtained a flexible system of liaisons, which always satisfied the High Command even though, sometimes, the demands were questionable and some officers frequently did not respect radio discipline.

However, it must be hoped that the exceptional "comfort" enjoyed by the commanders at all echelons in regard to signal facilities, did not make them loose sight of the fact that the good operation of a telecommunication system does not only depend on technical performances, but also on proper discipline.

CHAPTER XII

AERIAL SUPPORT

The total absence of enemy air force and the weakness of the anti-air attack defense system until the last months of the war helped to give the aerial support a ceratin particular character and what was learned from the campaign is limited. We were able to measure only the maximum effects that bombers and combat planes had upon maneuvering infantry.

The action of our Air Force or of the Navy Air Force was often hindered by several unfavorable factors.

- First of all, the climatic and geographic conditions of Indochina, characteristics that have already been described several times. The difficulties of navigation were even worse since all metereologic forecasts were not accurate due to the absolute lack of information about the weather over the continent of China. Further, all maps of Indochina were inaccurate in many instances and the altitudes often wrong. Several accidents were caused by a false interpretation of the relief and some missions failed because of a wrong identification of the planimetry.

- The poverty of our means, in respect to the requirements, and a poor system concentrated just over the deltas, did not allow to act efficiently over the whole theater of operations. [The need for the protection of airfields against the action of Vietnamese saboteurs must not be forgotten. This subject will be treated in the chapter dedicated to the control of the axes and important points.] The dimensions of Indochina, which were vastly superior to the field of action of our combat planes, made it especially necessary to have a base for the aircrafts in a given territory before utilizing them, and, as our forces advanced, they had to occupy airfields, and often had to build newones.

- The characteristics of the enemy have already been described. Its strict camouflage discipline, its flexible positions, its primitive system of logistics, the nighttime execution of its movements and transportation missions, all this contributed to offer our Air Force only the most elusive targets. For this reason, the aerial attacks that pated off were only a few. We must then reconsider the ideas developed during the 1939-1945 campaign about the possibilities that exist for troops that do not have aerial superiority. [This problem will be treated in volume III.]

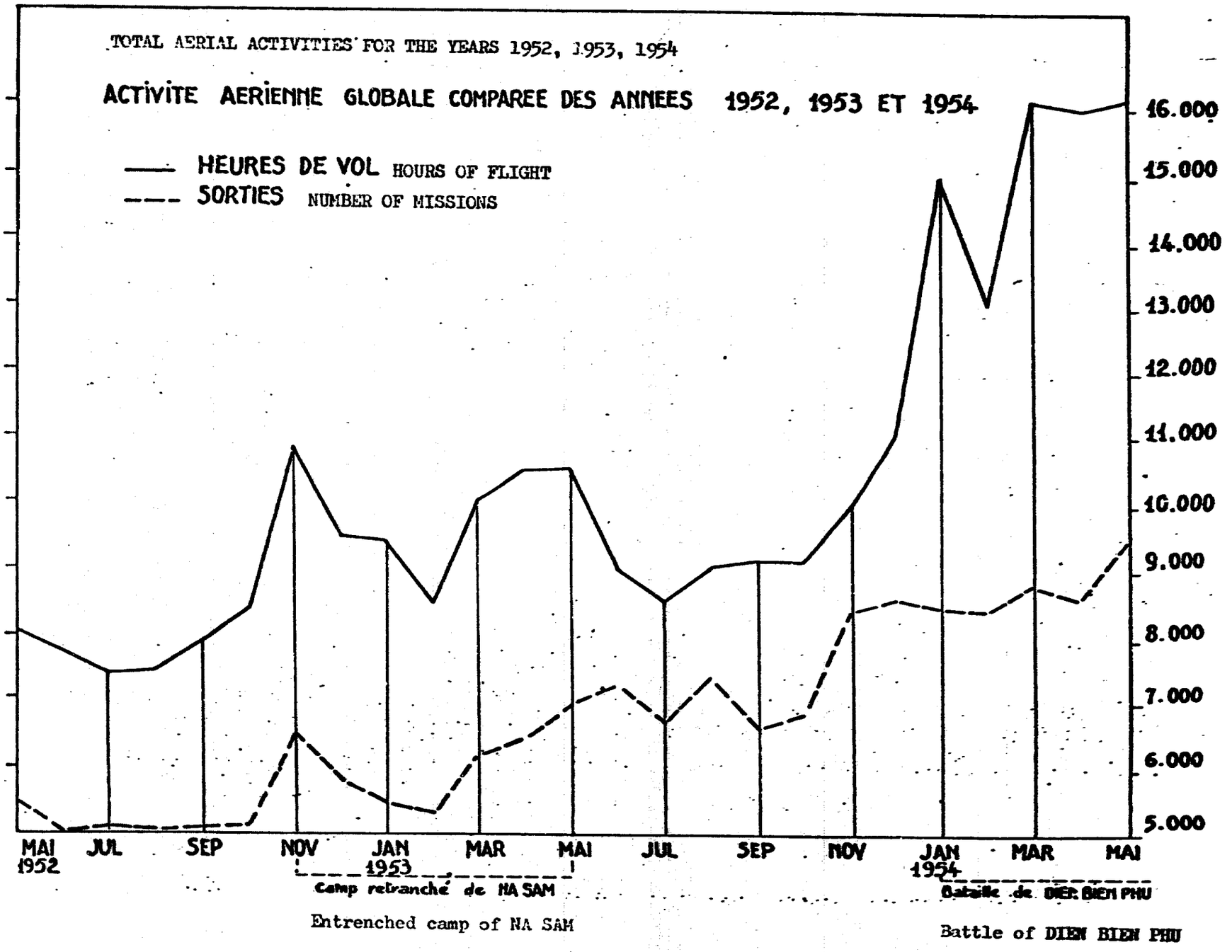
The relative importance of different factors did actually vary during the hostilities. The development of our system [see the chapter dedicated to the Engineers for the maintenance of airfields and airstrips] little by little spread our possibilities of action and our units increased in number, especially during the last year of the war.

The attached graphic shows this improvement of our potential and also the comparison between the activity of our formations and the intensity of land operations.

The power of the enemy increased simultaneously and .... a tremendous number of targets became the object of our attacks and caused a considerable inflation of our missions. The enemy's capacity to fight back, which was insignificant in 1946, became more and more serious as it received from Chinese help the weapons necessary for an anti- air attack defense system.

In brief, a periodical review of our capabilities for aerial support was necessary, and the battle of DIEN BIEN PHU marked the contrast between what we thought we could still do and what our air force was capable to realize.

" Our aerial superiority was theoretical and the often repeated word "superiority" had no meaning. Of course, our air force had no enemy in the sky, but the battle of DIEN BIEN PHU had created certain needs that the means at our disposal could not satisfy.



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Distances, relief, climate, the organization of the command, the structure and tactics of the enemy, contributed to diminish in a tragic way the effectiveness of an aerial fleet that was already modest." [Study of the F.T. - N.V. about the aerial support in North Vietnam.]

ORGANIZATION OF THE AIR FORCE - The totality of means and materiel varied greatly during the nine years of the war.

The combat planes were originally Spitfires, which did not perform well in the tropical climate. Later, came the King-Kobra (P.63), then the Hellcat (F.6 F.), which were replaced by the Bearcat (F.8 F.), which were used until the end.

Only two groups existed during the first years. A third group was created later, and then a fourth one. They all had twenty aircrafts and during the last phase of the campaign they were all based on the terrains of TAN SON NHUT in SOUTH VIETNAM, TOURANE in ANNAM, BACH MAI and CAT BI in TONKIN.

Bombers were not utilized during the first five years of war and to drop bombs we used the old Junkers 52 until 1951. The slowness and, even more, the insufficient autonomy of these planes, utilized also for transportation, could only satisfy the more urgent needs.

Only in October of 1950, it was decided to create groups of bombers.

- A first group (1/19 Gascogne) was created in February of 1951 in TOURANE.

- A second group (1/25 Tunisia) was created in March of 1952 (CAT BI.)

- A third one (1/91 Bourgogne) was created in June of 1954 (and dissolved in November.)

- Lastly, a fourth group was being organized in TOURANE at the time of the cease-fire.

All these formations were equipped with B.26, which could be utilized well in Indochina. [Two types of aircrafts existed: the leading planes had a glass nose and an aiming device for bombing; the planes that followed did not have any device and dropped their bombs when the leader did.]

In May, 1954, a special Bomber Group was created, and , although late, it allowed the standardization of methods and the unification of instruction for the personnel of different groups, and furnished information about all

possible questions regarding the use of the aircraft. [The tonnage of the bombs dropped by bombers and combat planes follows a constant progression:

- 834 tons in 1949
- 3,004 tons in 1950
- 8,621 tons in 1951
- 9,361 tons in 1952
- 12,802 tons for the first 7 months of 1954.]

The reconnaissance utilized different types of aircraft in Indochina. During the last phase of the campaign, two specialized squadrons were created and equipped with F. 8 F. and R.B.26, which proved to be useful from the point of view of their missions. They helped greatly, but the great need for photographic missions made it impossible for these two formations to satisfy all the demands.

The evolution of means of aerial transport was pointed out in the chapter dedicated to the Airborne Troops. The four groups which existed at the end of the war were equipped with Dakotas (C.47) and received a reinforcement of C.119 during the last months. [Aerial transportation was helped many times by the requisitioning of airplanes belonging to the civilian companies that served Indochina.]

Finally, two squadrons of light aircraft satisfied the numerous needs for liaison. They were equipped with very different models (Siebel, Nord 1000, Morane, Beaver, etc....).

NAVY-AIR FORCE FORMATIONS - The Navy constantly supported the campaign with its aircrafts based on land and, for more or less long periods of time, with bases afloat. Actually, since 1945, the Navy-Air Force was placed under the operational command of the Air Force and remained under it until the end of hostilities.

Initially, the flottilla 8 FE, equipped with hydroplanes Catalina, and the flottilla 8 S, equipped with Japanese airplanes and Loire 130, were based in South Vietnam.

The Catalinas were utilized essentially for " the surveillance of maritime traffic, destined to forbid the resupply of rebel zones by sea: it was a real block, organized over about 2,000 kilometers of coasts belonging to the Viet Minh, whose junks tried to penetrate the blockade to bring contraband weapons from China and Siam."

" During the day and at night, whenever their prehistorical radars allowed them, the Catalinas scanned the seas and signaled to our boats any suspect movement. This cooperative effort was effective, the captures were many in the beginning, and such activities greatly diminished, at least during the day." [Official History of the Naval

Air Force in Indochina. - Later, "junk hunting" was conducted with the Air Force. It succeeded in eliminating almost entirely the traffic along the coasts and to destroy a good number of Vietminh boats.]

The Catalinas, however, were utilized also for reconnaissance missions far away and even helped as command posts during certain missions.

In 1948, the flottilla 8F [which later became the 28 F, stationed for a while in Tonkin and then in Cochinchina] was issued an excellent aircraft, the Privateer, which was used until the end of the hostilities on bombing missions in distant areas, because of its good autonomy and big load of bombs. The flotilla 8S had received, first, some Catalinas, and later, some amphibious planes GRUMMAN GOOSE and a new flotilla, the S9, created in 1950, had been also been equipped with these.

The GRUMMAN GOOSE " became a good, light, support plane, and it was utilized for all kinds of missions though it was a poor hydroplane and a poor land plane, as most amphibious aircrafts." [Official History of the Naval Air Force in Indochina.]

They were utilized in Cochinchina and along the coasts of Annam.

These three flotillas were reinforced during the last three months of the war by two formations arrived, one, from France, 24 F, and the other, from Tunisia, 14 F. The first one was equipped with Privateers and stationed in TOURANE, the second one received some Corsaires and partecipated at the last two days of the battle of DIEN BIEN PHU.

Aircraft Carriers - " So long as our carriers were poorly equipped and the hostilities were not widespread, the carriers played a secondary role in Indochina." [Official History of the Naval Air Force in Indochina.]

The "DIXMUDE" and the "ARROMANCHES" came respectively once and twice in the Indochina waters between 1945 and 1951, while during the last three years of war the "LAFAYETTE", the "BOIS BELLEAU", and the "ARROMANCHES" completed five missions, having each two flotillas on board every time. [Each flotilla partecipated in at least two campaigns. Thus, there were the flotillas 1F, 3F, 9F, 11F, 12F, and 14F.] They wre equipped, in turn, with Helldivers, Hellcats, and Corsaires.

" These campaigns were generally done at a time when the atmospherical conditions were very unfavorable for aircrafts based on land and where the use of the carriers

allowed to oversee the inconveniences of bad weather.[These periods coincided with the winter and the spring in Tonkin, that is, with the season of the most important operations.] Direct attacks, with very low flying aircraft have been practiced frequently.

" Normally, we operated over a three weeks period of operations, with one week dedicated to resupply and the upkeep of planes and boats." [Official history of the Naval Air Force in Indochina.]

ORGANIZATION OF THE COMMAND AND OF THE AERIAL SUPPORT -

The flexibility of all air units had to be based on the geography of Indochina and this made necessary three groups of forces: in the North, the Center, the South. This organization, however, was set up only when our means became important enough to justify the existence of three air commands. [This type organization responded only to operational requirements. For all other operations, and especially for logistics, the Air Force depended on the Air command in Saigon, for the entire Far East, and the Naval Air Force on the Navy Command for the Far East.]

In 1950, three Aerial Tactic Groups were created (GATAC) which were the equivalent of the CATACs in France, but with less importance. In theory, the GATACs did not have organic aircrafts and the Aerial Command in the Far East balanced its forces with the Commanding General of the Far East. However, there were not many changes made, and the Air Commander had a certain prerogative over some formations.

The adaptation of the GATACs to the territorial commands was done at the level of the three main territories, but the zones of action of the GATACs were ..... greater than those of the territories:

The GATAC in the South (which corresponded to the F.T.C.V.) not only intervened in Cochinchina and South of the coasts of Annam, but it also covered Cambodia.

The formations of the central GATAC (adapted to the F.T.C.V.) could operate in Annam as well as over the Plateaus of Central Indochina and in Southern Laos.

Finally, the units of GATAC in the North (F.T. N.V.) operated in Tonkin, up to the Chinese borders and in Northern Laos.

In 1953, the necessity for operations there lead to the creation of a GATAC center in Laos, which did not exist for very long.

The fixity of land and aerial command posts and their nearness allowed to create excellent liaisons. Further, personal relations were created among the officers of the two branches and the solidity of these contacts was one of the factors that contributed to the very satisfying fonctioning of the aerial support on the level of command. [An Air Force Colonel has summed up with humour the necessity for an intimate liaison, which will free some pilots from their attitude towards those who direct them from the land:

" The pilot is a jealous animal who will not take off unless it has received orders from an Air Force officer - he is ready, to protect the autonomy of his branch, to take the most inflexible positions."

"It is in respect to fire support that our headquarters have the most difficulties in keeping good liaisons."

" The Infantry, and it is a natural desire, would like the Air Force work close to them, just as during the world wars it expected the tanks to advance with them. It is a mission which we will never refuse when a comrade is in danger.... But, please, do not ask us to chose objectives protected by cannons and inplaced weapons. Among other things, such utilization of the air capabilities is contrary to the rules.]

The process to request aerial support, to coordinate it and to utilize it varied frequently according to the place and the situation. One teaching point can be learned from these continuous modifications which were inspired by a constant desire for flexibility. It is not a good idea to make too great use of certain particular organizations which are temporary by their nature, because the personnel must be trained in the practice of a regulated process and for precise duties. Only under this condition, it can attain a convenient efficiency.

In Indochina, the fact that land units were widely spread out often called for a decentralization of the authorization to request aerial support. For this reason, it became necessary at times tc authorize an isolated battalion or post to request directly aerial intervention. Two ways of going about this have given satisfaction: the utilization of a light reconnaissance aircraft and the establishment of a "security net".

The reconnaissance planes Morane frequently transmitted direct requests to the GATACs. This method permitted a rapid intervention and it alleviated the lack of transmitting equipment. It must therefore be kept, especially for operations demanded by a surface defense of the territory.

Post garrisons and G.M.s could also send in requests to GATAC through their security nets, and bypassing the normal channels. The gain in time was then considerable

and the announcement that the aerial support of a mission had been granted immediately alleviated the units in difficulty.

This decentralization, however, had to be followed by an effort to train the cadres [courses were set up by the GATACs several times during a year] so as to allow the assignement of a sufficiently competent officer to each Mobile Group and to each Territorial Command at the level of a sector.

Finally, transmissions, which were fairly bad in the beginning, were later improved and, by the end of the conflict, became excellent.

DIFFERENT MISSIONS - Since our forces were perfectly free from the worry of having to acquire aerial superiority, the formations were dedicated entirely to the following:

- independent actions,
- fire missions (direct and indirect support,)
- reconnaissance,
- support of transportation columns.

Independent actions - These missions, which seen from the point of view of strategy as exemplified in Europe aim at the destruction of enemy potential, were never justified until 1953, because of the simplicity of the Vietminh war economy and ... logistics.

Beginning at that time, the importance of the traffic coming from China and the build-up of numerous depots, permitted us to effectuate actions of importance, but the necessity to support as much as possible our tired infantry and to check its losses, forced the Command to continue to employ its means for direct support.

For this reason, the GATACs never had at their disposal a sufficient number of aircrafts to attack what the aerial photos showed as targets on the roads near China.

A plan of action was, however, periodically established and missions scheduled following the importance of their needs, as decided by the Air Commander in the Far East. The GATACs later stopped these lists of targets to be attacked and changed it frequently to avoid V.M. espionnage.

The interruption of vital routes for the enemy demanded a massive intervention to effectuate one or two of them in sensitive points. Especially over bridges which could easily be reestablished [the enemy utilized many floating bridges,] we looked for a total destruction; and, once the road was destroyed, it was necessary to harrass the enemy to make it impossible for them to repair it.

The tonnage of bombs to be dropped [30 to 40 bombs dropped at low altitudes or while diving were necessary to destroy one point of the road,] the implacement of Vietminh anti-air-attacks guns in important spots, the increase of the number of workers that repaired the damages, made these missions more and more difficult and useless. Certain officers have even estimated that " it would have been better and less expensive to attack one damaged point on each important axis and to prevent its repairs." [Report of the flotillas 3F and 11F of the Naval Airforce.]

This could be accomplished by isolated aircrafts attacking irregularly but frequently and dropping bombs over the work areas along the road.

Our missions forced the enemy to vary its itineraries, to circulate entirely at night, thus, more slowly, and to employ more and more personnel for the repair of roads. We must recognize, however, that we could never interrupt seriously its essential communications, never, at any rate, in such a manner as to influence the development of his offensives.

The attacks of shops and depots meant a very accurate interpretation of aerial photographs, since these targets were always perfectly camouflaged and dispersed, in the woods or in grottoes; furthermore, they were poorly distinguishable. The surface to be bombed was extensive and it was necessary to utilize a lot of materiel (up to 98 tons of bombs over TUAN GIAO.)

The results obtained were very variable, often deceiving, and incomplete, even if we keep in mind the difficulties of the missions.

The destruction of targets that had an economic value (dams, canals for irrigation, etc....) did not present any particular difficulty, but bombs of at least 2000 lbs were needed, and this was impossible for the B.26. The 1000 lbs bombs that were utilized obtained only partial results.

Furthermore, the Vietminh resources were so scarce that it was impossible to obtain an important disruption of their economy.

" We have tried to attack the bazookas or ammunition plants.... Others thought that we had to destroy their coal industry since it was [illegible] considered their most important one; results have always been deceiving. The spots that some agents reported as important ammunition plants, ... never contained more than 4 to 500 grenades..." [Colonel X.... Air Force.]

Fire support - The incertitude which always existed about the exact location where our land troops contacted the enemy made it difficult to prepare a schedule of targets to be bombed and we had to be satisfied with targets of opportunity. The pre-scheduled type of support was, therefore, used very little.

The most important requests for support, in the majority of cases, and especially in the delta of Tonkin, were answered immediately. In fact, some light patrols were airborne within ten minutes after the request. All other combat airplanes coming back from their missions could also be called upon for "straffing" missions whenever the Moraine requested it. [Some B26 bombers also took part in semi-diving attacks.]

Under these conditions it was difficult to adapt the ammunitions to the targets. For indirect and pre-scheduled support, the proper ammunition was prepared, but, when a request for urgent support came through.... we could only hope that the ammunition on the aircraft was good for that type of mission.

The interventions were susceptible to be made in favor of units that were not moving (especially when a post was attacked.) The position of the friendly troops was known and they could furnish valuable information about the implacements of the most important enemy elements [the requests for aerial support, naturally, had to include this information.] In such cases the support could be given more rapidly and where it was needed most. The information furnished by the reconnaissance airplanes was always useful, especially when the attacks by the enemy were renewed in successive waves.

On the other hand, when we had to take care of our mobile forces during an operation, the problem was more delicate. The land forces attacked generally in concentric lines and it was impossible to determine a line of security. The pilots, therefore, had to know the terrain beforehand, and had to be well briefed about the general situation and about the intentions of the friendly troops.

The reconnaissance airplane had to lead the attack practically always, since the information furnished by the observers on land was not sufficient; generally, the observers were too far from the line of fire to judge the positions of the enemy points of resistance.

Most of the time, the Vietminh Infantry that was supposed to be the target, was well covered in the woods or spread out in the rice paddies, and the chances to surprise moving troops in open terrain (and especially attacking troops) were exceptional. Under these circumstances, the

best way to attack was by straffing [the bullets utilized by weapons mounted on airplanes measure the diminishing use made of this tactic. In 1949, three million bullets were shot by the two groups existing at the time, while in 1952, only 5,467,000 were utilized by all formations.] In all other circumstances, the adaptation of the ammunition to the nature of the enemy targets was necessary.

This choice of ammunitions was the object of long studies, the results of which did not bear any fruits until the last months of the campaign. The best ammunitions seemed to have been the napalm and the 260 lbs fragmentation bombs.

The Vietminh quickly found ways to protect themselves from napalm, but this was still used a great deal [in 1950, when napalm was used for the first time, only 16 tons of it were dropped, but in 1951, 1685 were dropped and, during the seven months of fighting in 1954, 3741 tons.] Our Infantry saw in it the means to shorten the distance between them and the objective attacked by the combat planes. In fact, specialized pilots could drop the containers at a distance of approximately 100 meters from our front elements, without any danger for them.

The effect produced by the curtain of fire lasted between one and two minutes, sufficiently for our attack of the objective, before the enemy could react.

When it was necessary to attack the villages and to destroy underground inplacements and country type constructions, bombs between 500 and 1000 pounds were utilized.

Furthermore, " two 500 lbs bombs were better than one 1000 lbs bomb. A few targets could not be blown with rockets."

" Among the rockets, the first place must be given to the short-fuse one, which could be used under all circumstances. But the quality of these left much to be desired." (many missed.)

" The VT rockets were also very irregular." [Report of the Naval Air Force.]

On the other hand, our Infantry regretted that whenever bombs were utilized, a great security distance had to be observed (about 1000 meters.) It was desirable that straffing attacks or dropping of napalm be made after the bombing so as to permit the Infantry to close with the enemy. When this could not be done, artillery fire was needed to neutralize the enemy during the close-in operation.

The lack of precise information about the enemy and the mobility and fluidity of its formations have considerably diminished the efficacity of indirect support which was utilized much less than direct support.

The requests were addressed to GATAC in an urgency sequence and often with a time to respect. The fluidity of operations, however, forced the different centers of aerial support to change their targets at the last minute. Under these conditions, the GATACs have not been able to adapt the ammunitions and the means available to the missions requested because of the short notices.

The fortified villages and the resupply points justified the employment of the B26 and of the Privateers of the Naval Air Force, but delays made it often necessary to utilize combat planes instead, which actually obtained very satisfactory results.

Night interventions, in situations where posts were surrounded, were best with the Dakota Luciole which was really efficient and which had a happy psychological influenece over the combatants.. Its utilization, however, could not have lasted for along time since the Vietminh defense systems were improving. It is better to use some prudence while evaluating its performance and the conclusions to be derived from it.

During the months preceeding the end of the hostilities, the enemy anti-aircraft system improved greatly and the battle of DIEN BIEN PHU marked the impotence of our aerial support, for different reasons, but mainly because of the density of enemy fire in the skies above their bases.

The processes that had been envisaged to counteract against enemy artillery, some of which had been inspired by the war in Korea [and we must mention here the Vietminh's battery groups of 105 mm and 155 mm guns,] proved to be insufficiently powerful, most of all because of the lack of guns.

From this defeat, however, we may derive some teaching points.

First of all, the need for massive and repeated bombings over the entire area where the enemy batteries are inplaced so as to destroy them with certainty, since their exact location is very difficult to find. The dropping of napalm, which was tried, doesn't seem to have given any valuable results, perhaps because areas that weren't large enough were covered.

In regard to combat planes, it seems that we can retain the following :

" The Vietminh air defense guns have only been attacked by light and isolated patrols, as a sacrifice to well trained combat pilots."

" Before attacking a target defended by anti-air-attack guns, it is necessary to find out their number."

- " When the visibility is good, make use of at least 20 airplanes, attacking simultaneously from different azimuths."

- When the visibility is poor, attack in waves with very close intervals."

" The 20 mm cannons gave good results in the straffing of depots and villages, but they were more dangerous than efficacious while attacking anti-air batteries of 12,7 mm guns."

The most important and final point - " the attacking Air Force must be more modern than the enemy anti-air defense system. The jet proved to be essential in Korea and it would have proven essential in Indochina if the hostilities had furthered the development of enemy anti-air defense or the probable creation of enemy combat air capabilities." [Report by the flotillas 3F and 11F of the Naval Air Force.]

Reconnaissance support - The action of light aircraft for the purpose of reconnaissance was treated in a previous chapter.

Photographic reconnaissance, which was the responsibility of two squadrons during the last two years of the war, was a difficult operation because of climate and vegetation. The work of the sections interpreting the photos was extremely delicate and often deceiving.

Furthermore, the aspect of the delta regions was very different during the various periods of the year and aerial photographs had to be taken at least twice, during the dry and the rain seasons (1/25,000.)

In regard to special missions (posts, bridges, crossroads, portions of itineraries,) the requests were in such great number that the availability of means never allowed to satisfy them all. [The number of 16,000 hours of reconnaissance performed in 1951 is enormous as compared to

transport and combat missions. This disproportion depends from the fact that the Vietminh is perfectly camouflaged and a great deal of time is needed to find him. (Colonel of.M .... Air Force.)]

To conclude, it must be said that the mediocrity of the information and the limited number of actions taken, have probably lead us to attack objectives that did not exist any longer. Nevertheless, aerial attacks have been a serious source of trouble for the Vietminh, and in the very opinion of General GIAP " they disorganized the battlefield."

Land units have had a tendency of requesting maximum assist nce from the Air Force and to depend on it at all times and in all places. This situation often lead to a paralysis of the Infantry whenever the support could not be given because of lack of means or because of the metereological conditions.

The pilots have also estimated that the Command should not have dedicated all of its capabilities to the support of the troops and left a negligible part to independent actions. They seem to believe that results would have been better if the percentage of operations had been more even and that the lack of means should not make it impossible to perform certain "strategic" missions.

Finally, the aerial structure conditions completely the utilization of the Air Force in the theatre of operations.

The effort undergone to improve this structure, naturally, depended on problems of budget, and it was too late. For this reason, the Air Force did not possess a coherent net of forces by the end of the hostilities.

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CHAPTER XIII

RIVER FORCES

The river forces of Tonkin and Cochinchina were created at the time of the conquest, but, what we had learned then, had been forgotten by 1945, when the 2nd Armored Division arrived in SAIGON with tanks, and no floating vehicles.

The first combined operation set up to reconquer MYTHO made us aware of this omission, since many of the bridges had been cut off and the Engineers were not with us. When we reached the town, this one had already been occupied for 48 hours by troops that had been taken there by boats.

This first operation and those that followed on the way to VINH-LONG and CANTHO could not have been done without the aide of the Royal Navy, which put at our disposal some L.C.I.s.

Without delay we had to find locally some indigenous or Japanese boats, to cover them with armor and to equip them. At the same time, British authorities gave us some L.C.I.s and a small number of L.C.A.s and L.C.T.s.

The resulting heterogeneous fleet was manned with personnel of the Navy and of the Army recruited in small groups from the different territorial (zone, sector, subsector) and operational (battalions, and even companies) commands.

At the same time, to serve as bases for these elements, Navy river posts were created, which were to be our war ports along the rivers.

To this phase of improvisation, followed a period of organization, and the two problems posed by the daily running of operations were solved:

- The necessity to have boats permanently at our disposal to satisfy the requirements of the troops localized in the deltas.

- The necessity to maintain the principal waterways free and to perform frequent amphibious actions.

The Army progressively assumed the responsibility of a portion of the transportation missions, and created flotillas, manned, at first, by the Foreign Legion, and later by the Transportation Corps. [See the chapters dedicated to the Transportation Corps and the A.B.C.] It participated also in patrol missions and set up formations of P.T. boats, manned by personnel belonging to the Armored Cavalry.

The Navy dedicated its efforts to the creation of a combat tool well adapted to the particular conditions of the war. It created river flotillas since 1946, and, in 1947, the Naval Assault Divisions, or Dinassauts.

The particularly original formula of this unit answered not only to the necessity for a well balanced quantity of boats, but also to the transportation of landing elements in large numbers and insuring fire protection for them.

The necessity for this had appeared from the very first months of the campaign when we had made use of improvised constructions, strongly armed and protected, to transport troops over dangerous waters: the armored calandr. [One of them, transporting a company of the III/43d R.I.C. opened its own way to go to CAMAU, during the offensive against that town.]

The composition of the Dinassauts varied from time to time and according to the territories, but it followed the following principles:

" The Naval Assault Division is a real tactical

group of river vehicles including:

- one L.C.I., as command post and artillery support,

- one L.C.T. for troops and materiel transport,

- landing and support boats: two L.C.M.s and four L.C.V.P.s (grouped in two sections of two,)

- one patrol and liaison boat: a P.T. boat. [Pamphlet by Lieutenant Colonel X... appeared in 1951, about the amphibious operations in Indochina.]

Furthermore, whenever possible, the Dinassaut included a small landing unit (a commando of Marines or an Infantry company.)

Depending upon the circumstances, the Dinassaut is reinforced or lightened, for instance, by taking away its heavy boats, when the operations are in rivers that cannot take them.

With such an organization the Naval Assault Division is ready to:

- insure the transportation and landing of about one battalion and the equipment organic to it,

- support the troops on land with its fire power, and, at the same time, to maintain its position in the river.

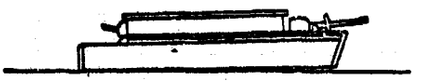
The transportation mission of which the Dinassaut is responsible during an amphibious operation is essential for the landing and the concentration of troops at the offset of the operation. Nevertheless, this mission must not absorb the entire activity of the Dinassaut and the other possibilities of tactical employment suffer from it.

Several transportation movements can be made by the local boat groups, or with the means organic to the sector, while the boats of the Assault Division remain free and can be utilized for tactical missions: patrols, or fire support interventions during the operations."

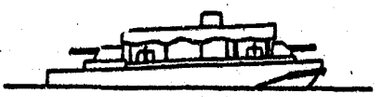
In Central Vietnam, a different formula was utilized because of the conditions of the local river net:

" The formula of the Dinassaut covering a large area and moving from one post to the other was impossible. It was necessary here to place a group of vehicles in one river, to base them on one river post, since it was impossible to communicate from one river to the other except by means of the sea."

L.C.V.P



P.T. F.O.M.
Vedette . F.O.M



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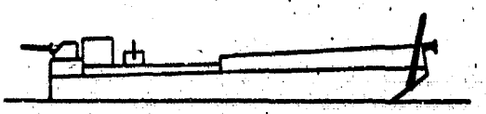
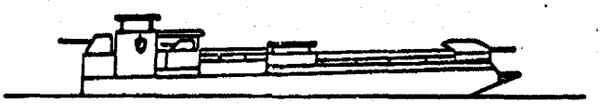
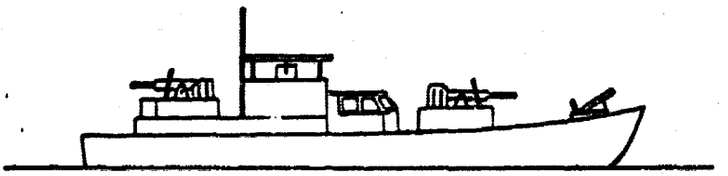


L.C.M. Monitor
L.C.M. Monitor



P.T.
Vedette de Port . V.P



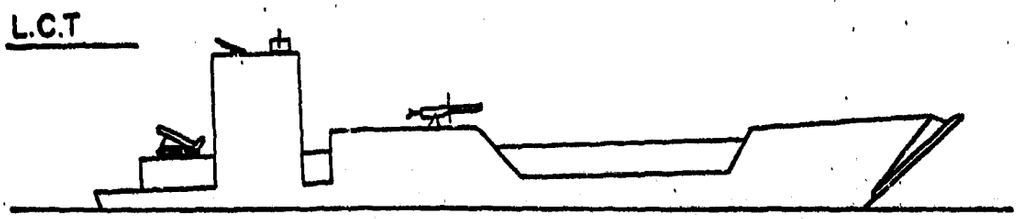
Echelle : 5m

:à l'échelle de ces croquis le L.S.T.aurait 36 centimètres

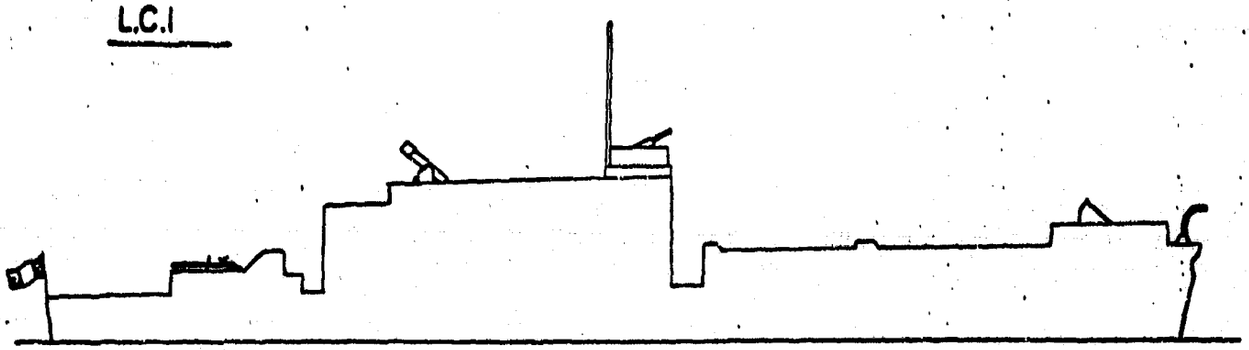
at this scale the L.S.T. would be 36 cm long

307 A

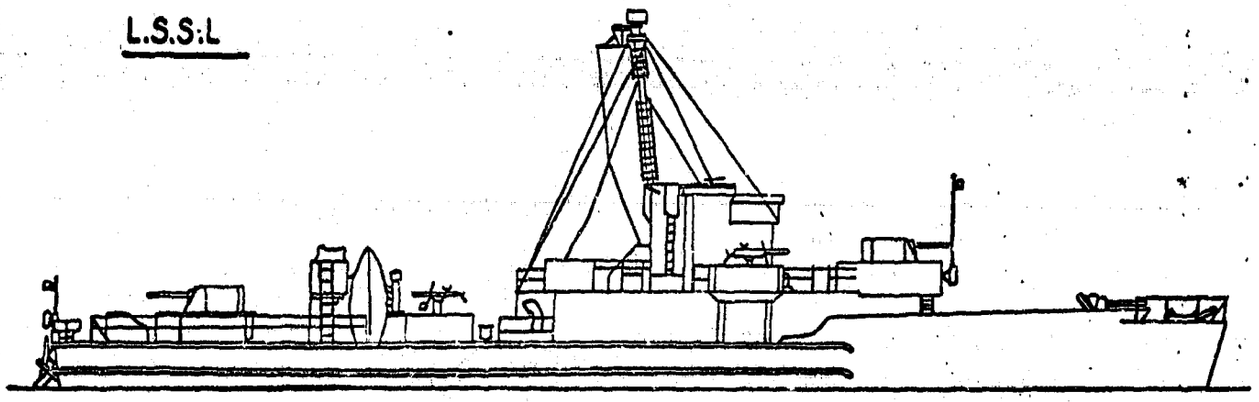
L.C.T



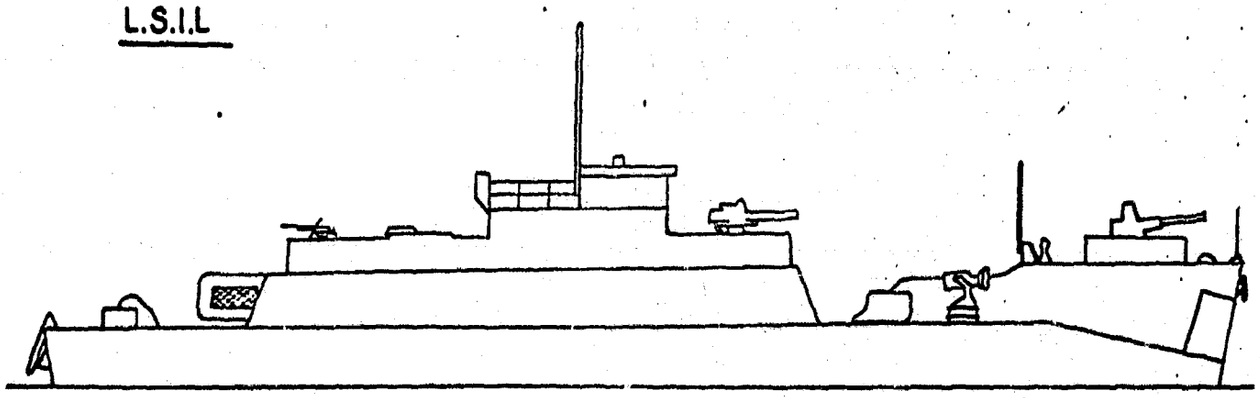
L.C.I



L.S.S.L



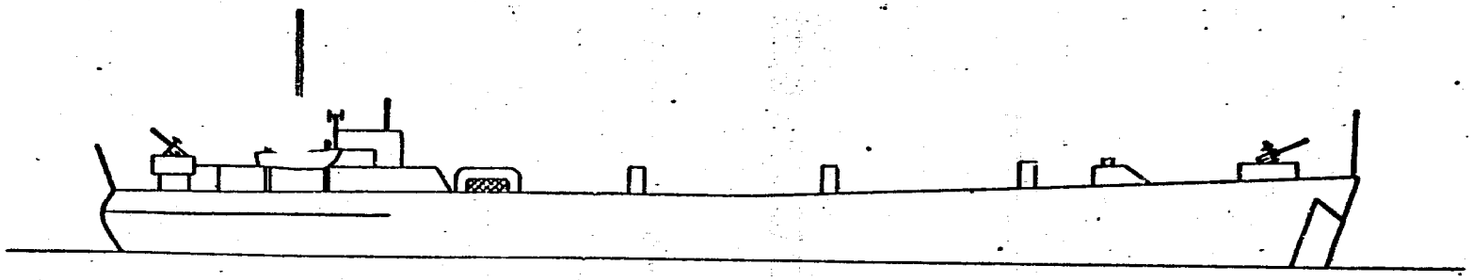
L.S.I.L



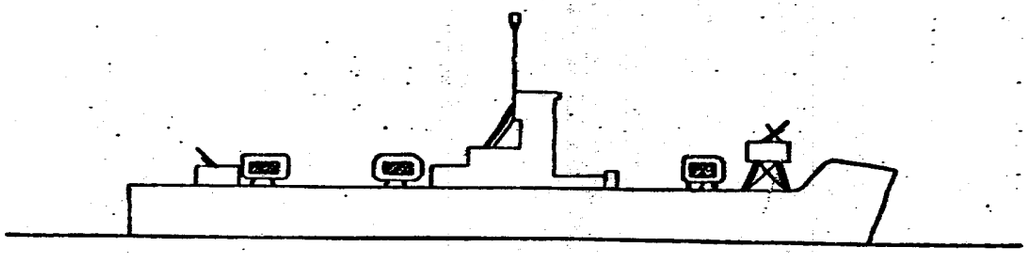
Echelle: 5 m : à l'échelle de ces croquis le L.S.T. aurait 36 centimètres

SCALE 5 m at this scale the L.S.T. would be 36 cm long

L.S.T



L.S.M



Echelle : 10 m

SCALE 10 M

ARMED FORCES MUSEUM

" Further, the low level of the waters in the rivers of this region, made it a necessity to use flat-bottom boats." [Commander X.... Navy Commander of Central Vietnam.]

At the end of the campaign, the Dinassaut appeared to be insufficient in volume and,(especially in North Vietnam,) it was necessary to set up a group of many of them and to reinforce it with transportation units of the Transportation Corps and of the Navy.

CONDITIONS OF UTILIZATION - The river forces were adapted to the Land Command, at a more or less corresponding level, depending on the circumstances.

" In the South, the river Command (abbreviated as COFLUSIC) was attached to the Commanding General of the Land Forces of South VIETNAM, as delegated by the Commanding Admiral of the Navy in Indochina."

" In the North, instead, the Commander of the River Forces keeps a close liaison with the Headquarters of the Land Forces in North Vietnam and four Dinassauts are practically attached to the four Land Commands." [Admiral in command of the Navy in the Far East.]

This organization was satisfactory and the Commander of Dinassaut 3 and of the river post of NAM DINH could write:

" The Southern zone to which I am attached, COFFLU NAM DINH, will remain as the perfect example of the excellent fonctioning and feeling of unity that it is possible to obtain: constant relations with position artillery and aerial support; cohesion and success of our combined operations; all boats and river facilities belonging to the Army (Transportation Corps and A.B.C.) under a Navy command; reciprocal utilization of aerial means available; increased ease of utilization of signal facilities; well defined territorial responsibilities, etc...."

These fortunate results had been obtained because the Navy Command had constant control of all the river forces, independently from the branch they belonged to, and the river posts were " the coordinating medium, the operational command post, and the immediate contact with the Land Command."

The liaisons, however, were often looser, and the land forces did not sufficiently pay attention to the waterways.

For this reason, the Commanding Admiral of the Navy in the Far East (F.N.E.O.) did regret " the insufficient

equipment of certain waterways of vital importance (Red River,- Bamboo Canal) which made convoy escorts necessary, to such an extent and number that they absorbed almost the totality of means available while detracting from the operations proper."

He also remarked " the insufficient fortification of river posts," when each of them should be as well secured and organized " as any Army post." [Commander X.... Navy Commander in Central Vietnam.]

The most serious criticisms, however, were against the lack of landing equipment in the Dinassauts.

Already in Central Vietnam, the experiences of FAI FOO and QUANG KHE showed that " a group of river boats should have an Infantry unit organic to them. It should be charged with the defense of the post and should be trained to land under fire so as to counteract against ambushes." [Commander X.... Navy Commander in Central Vietnam.]

In Cochinchina, and especially in Tonkin, the Dinassauts were given a Commando of Marines (or light companies) but they suffered from not having an Infantry element permanently attached, which would have permitted them to move independently and to contribute to other operations in the region in the interval between two combined operations.

This necessity was felt more and more and this, for instance, is what the Commander of River Forces in Cochinchina wrote:

" It is necessary that every ambush be counter-attacked and the enemy punished for it: this was always possible in South Vietnam."

" At the end of the war, by order of the Commanding General of the Land Forces in South Vietnam, our river forces could not take the initiative in the operations if there weren't present at least two companies (and admitting in this manner an unexpected encounter with a Vietminh company.)"

The same situation existed for a long time in Tonkin and Infantry units, taken from the forces participating in the operations, were normally attached to the Dinassauts.

This solution, however, later caused many errors because of the insufficient training of Army troops even in the most elementary amphibious operations (landing, establishing a beach head, embarking, and departing.) [Commanding Admiral of the F.M.E.O.]

The Navy concluded that it was necessary to set up "a real amphibious corps, that included naval and land units, not just put together, but effectively integrated; for instance, as the combination Dinassaut - tactical group," and to let the Navy in charge of certain Territorial commands (at least, the sub-sectors.)

This suggestion seemed even more justifiable since some territorial commanders had the tendency to consider the river boats only as transportation and underestimated their possibilities in emergency amphibious operations.

Certainly, as the Vietminh potential increased, river operations demanded an always greater employment of means, but their usefulness never decreased.

" The campaign of the Light River, in 1947, and to a lesser degree that of the Black River, in 1951, illustrated this unbalance between the objectives and the means." [Commanding Admiral of the F.M.E.O.]

The river forces, however, were never sufficiently reinforced, and, by the end of the hostilities, they were " limited, at least.... in North Vietnam, because of their lack of power, to defensive operations or to offensive operations of a surreptitious and hasardous character."

" Most of the time, their role was that of support for land forces, although in many cases, the geographical configuration of the battlefield could have given them the opportunity for decisive action." [Commanding Admiral of F.M.E.O.]

A new organization which favored the concentration of all available means in small, powerful flotillas, the creation of units of " Infantry and Marines," the attachment of certain formations and of the L.V.T.s, and the creation of an amphibious corps under a unified command, would have been the logical steps of the evolution of river forces.

THE MATERIEL UTILIZED - After the heroic period when we had to make use of anything that was available, even of pontoons and " river streetcars," our forces utilized entirely British and American surplus material, with the exception of some small boats that had been invented and made in France. [We made use of one assault boat (E. A.) which had been inspired by the L.C.V.P., but was not satisfactory, and also P.T. boats P.C.M. and STCAN. - The boat called MYTHO, built by the Army Materiel Corps, was made of wood and had no armor. The hull was built locally and the engine was that of a JEEP. - It proved to be an excellent rough boat, provided it wasn't exposed to ambushes.]

" British landing boats, conceived for something entirely different from the war in rivers, underwent numerous modifications especially in respect to their weapons and armor, and also their living capability. We can only be astonished that, all in all, they satisfied our needs so well." [Commanding Admiral of F.N.E.O.]

To conclude, we had light and medium-light boats in sufficient quantity and of good quality.

" Their main defect was the inherent weakness of the Gray Marine engines (extremely useful elsewhere) and the insufficient speed of smaller engines for all operations."

Mines soon became the worst enemies of the flotillas and we had several chances to remark their effect on all boats.

" The small, level-bottomed boats proved to be particularly vulnerable to mines, while the FOMs exploded, lost their cover and equipment, but often fell back on the water without sinking." [Commander of the river forces in South Vietnam, COFLUSIC. This is applicable to the boats we have today, but it does not mean that level-bottomed boats of a stronger construction are not desirable.]

Minesweeping was one of our most successful operations and our minesweepers proved to be very efficient against all telecontrolled mines, but they would have been useless against modern sea mines, since a method to destroy them from a distance must still be discovered.

Since we did not have an enemy on the rivers, the Dinassauts still had to fight against an enemy who attacked them from the banks with all kinds of Infantry weapons and sometimes even with cannons.

The necessity to armor the boats on the rivers is self-evident. During the period when all kinds of boats found locally were utilized indiscriminately, our losses were not comparable with the results obtained in Cochinchina.

As expected, experience showed that the thickness of the metal was not all and that its quality played an important role. Some have suggested a double armor, reinforced with rubber or cement. The insufficient experience in this matter does not authorize to make any conclusions.

On the other hand, our weapons were satisfactory. A special mention must be made of the great effectiveness of the automatic, double-barreled, 40 mm guns.

Flame throwers and rockets were not utilized, though the latter were installed on some L.C.M.s at the end of the hostilities.

We lacked, however, more powerful boats.

" The experience of all river campaigns in history (War of Secession, Campaign of Mesopotamie, etc....) confirmed the necessity for flat-bottomed boats armed with heavy weapons and with good armor."

" The L.C.M. Monitor, useful at its echelon, did not correspond to our needs. A boat derived from the L.C.M. or the L.C.T., with weapons of the caliber between 40 and 130 or 150, and an armor between 12 mm and 10 cm would have probably solved the problem of the lack of power from the very beginning, the campaign of the Black River, in 1947."

Proposed in 1952, unfortunately, it was never taken under serious consideration because of several technical and tactical reasons. Especially the priority of transportation missions over combat missions, imposed almost as a dogma, made it impossible to take away some irreplaceable L.C.T.s for offensive tactics only."

" At the other extremity, it is certain that our forces lacked a small engine for liaison missions, surprise, quick landing and take-off, and characterized by:

- discretion,
- speed,
- security over water,
- an acceptable protection.

" The P.T. boats FOH, 11 meters long, were the closest to this, but their speed was insufficient, and the stability in turbolent waters very poor."

" The P.T. boat Wizzard, arrived in Indochina after the cease-fire, has brilliant qualities of speed and maneuverability, but it really is too small a boat and too fragile for war missions (plastic hull and gasoline powered outboard motors) and it has to be limited to liaison missions or, perhaps, short patrols."

" A boat with the following characteristics should, therefore, be studied:

- maximum speed greater than 20 knots,
- fixed mine-sweeping equipment,
- two noiseless engines, at least, at high speeds; strong flat bottom, unexposed propellers, capable to float in one meter of water and to land,

- combustible: diesel oil (and not gasoline); minimum autonomy of action of about 100 nautical kilometers,
- armament: one 20 mm cannon (or: one recoiless 57 mm cannon) and two machine guns,
- protection: shields for the weapons and anti-shock protection for the engines,
- living capacity: for three men,
- Moderate repair cost, easy maintenace, sufficient capacity to withstand turbulent waters."

" While waiting to realize this ambitious program, we will have to be satisfied with the P.T. boats S.T.C.A.N. and the Wizzards." [Commanding Admiral of F.M.E.O.]

C H A P T E R X I V

FEMALE PERSONNEL

The female personnel represented in the Expeditionary Corps since September 1945 was made up of a group of about 20 A.F.A.T., who had accompanied the MASSU contingent. At the same time, the 47th A.F.A.T. unit was created in France and recruited about 100 volunteers who were sent to Indochina during the last days of 1945.

In the following years the female personnel increased at the same rythm as the Expeditionary Corps.

- 1947	= 738	- 1952	= 1,413
- 1950	= 942	- 1953	= 1,864
- 1951	= 1,106	- 1954	= 2,070

At the same time, the Army Air Corps had recruited about 50 female auxiliaries, whose number was brought up to 120 in 1954. The Navy only had a total of about 30.

SPECIALIZATION - Women held numerous jobs in the Signal Corps, ...some jobs as ..... secretaries in some of the permanent Headquarters, and in the Services Administration, but they were also utilized in other positions:

- For the folding and maintenance of parachutes.[During operations they had to put in an extremely heavy work day. For instance, during the battle of DIEN BIEN PHU, each team of two women packed a parachute in seven minutes.]

- Social aides and assistants

- Movie operators.[They drove and set up the movie trucks that went each night to a post or a bivouac to show a film.]

- Nurses and medical auxiliaries (between 300 and 350.)

- Ambulance drivers. [These are especially worthy of praise. they were about 70 to 80. Without even mentioning Aline LEROUGE, numerous were those who should be cited.] Air nurses [who belonged to the Army Air Corps.]

Beginning in 1948, the increase of personnel had made it necessary to dissolve the 47th P.F.A.T. unit and all the problems concerning the distribution of personnel and related problems, were taken care of by a section of the first bureau of the Headquarters for the territories, section that was the responsibility of one A.F.A.T. officer. Nevertheless, the Signal Corps, the Airborne, the Materiel and Health Services groups, sometimes assumed the direct responsibility for their contingents.

In regard to the administration of the P.F.A.T., it was insured by the different companies of the territorial headquarters.

Although female personnel was used to such extents, it is certain that the different services of the hoaduarters for the Expeditionary Corps could have assigned even more positions to the P.F.A.T.s and, thus, relieved the male personnel. The difficulties found in recruiting qualified volunteers, however, proved that on the qualitative and quantitative levels it was impossible to relieve greatly the specialized male personnel. This is one of the observations derived from the campaign.

RECRUITING - Volunteers for Indochina were a few because of the impopularity of the war in certain parts of France and because of the unfavorable criticism against the recruiting of women. On the other hand, the material advantages granted to the P.F.A.T. could have created a much more favorable feeling and more enlistments, if those who were

interested had been given the assurance that, in the future, they would become part of the permanent staff of personnel. [For a long time, the questions in regard to invalidity and life insurance were not straightened out.]

It also appears that, in Indochina, the P.F.A.T.s should have been assured of better living conditions.

Acceptable living quarters were not installed until 1950 and especially after the arrival of Marshal De Lattre. Greater improvements, however, could still be made for the comfort of personnel, which women deserved in a tropical country and for a period of 18 months. [Especially, individual rooms, and not dormitories - Larger and better furnished day rooms - Organization of activities (and particularly courses on home economics, or courses for the improvement of certain specialties leading to the acquisition of diplomas, collective sport activities....)]

The climate appreciably effected female personnel, not because the number of the patients sent back was proportionately higher than that of male personnel, but hospitalizations were numerous and often repeated.

Briefly, the recruiting program was barely sufficient and the qualifications of the personnel enlisted left much to be desired, since there was no chance to choose among numerous candidates.

" There should have been a severe moral and professional selection. Entrance exams, when needed - A longer period at home under good officers - The pitiless elimination of incompetent elements." [Miss X.... Chief of the P.F.A.T. section of the E.M. of the Supreme Commander.]

Once arrived in Indochina, the P.F.A.T.s who did not have sufficient backround actually received further instruction, but their output remained weak for a long time.

To face these difficulties, the Health Service had to hire personnel by means of a special system of contracts, offered both to men and women.

The Auxiliary Corps of The Armed Forces in the Far East (C.A.F.A.E.O.) which followed the C.I.A.L.E.O. in 1947, recruited for 18 months, with the possibility to extend for 6 more months, doctors, pharmacists, dentists, nurses, laboratory aides,and assistants, etc.... with the guarantee of being assimilated in the ranks according to their degree of competence.

With this system, between 300 and 350 women [and their number increased up to 470 in 1954] were enrolled in different health formations of the Expeditionary Corps, where they gave excellent service.

CHAPTER XV

LOGISTICS

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In a physical background that was repulsive for the French fighting man, the Expeditionary Corps, equipped for the European theatre and with supply sources extremely distant and limited, by successive improvisations, had to adapt itself to a fight which evolved from simple guerrilla to the battles of large units.

For this reason, the logistics of the Indochina war were a constant research of remedies to situations which were unfavorable and unstable, and the solutions were much more patch up jobs and even " D systems" than serene planifications.

Furthermore, the characteristics of the theatre of operations and the progressive increase of enemy potentials demanded an evolution of the type and importance of logistical support.

The setting up of the Armies of the Allied States and their rapid growth also heavily increased our responsibilities, because we had to assume their entire support, and to create progressively their service facilities.

The irregular demands of the operations [and especially their seasonal rythm, due to the monsoons] and the frequent modifications of our set up constituted the changing factors of our logistical problems; but these were influenced mainly by three constant points:

- The necessity to base ourselves on the structure that had been created to insure the support of the troops stationed in Indochina before 1945.

- The distance from France, from where the war was actually being directed and which was the source of all the essential supplies.

- The particular geography of Indochina: vast flooded areas, considerable distances, tropical climate.

THE STRUCTURE - A net of territorial establishments that had been located judiciously and that had already been used by the Japanese, were found, more or less intact, in 1945.

This could be well utilized by our troops since the type of war made it necessary to find support in the ancient garrison towns (which we occupied completely) and to protect communications from the lack of security by performing very brief movements between our fixed posts or between the bivouacs of our mobile units.

The preexisting structure, thus, constituted the logical basis for the deployment of our services; and it continued to be of great influence throughout the campaign since it corresponded to the local geography and, in this respect, it allowed us to extend whenever necessary.

The increase of the rebel forces and the simultaneous growth of the Expeditionary Corps together with the creation of the Armies of the Allied States, made it necessary for the logistical support to lose the simple forms of the beginning of the campaign to assume an industrial aspect. The service units had to create new shops, depots, to increase the hospital capacity, etc.... The increase of consumption rates determined greater requirements.

Some examples illustrate this development:

- The number of vehicles to maintain increased from 15,000 in 1947 to 60,000 in 1954.

- The surfaces necessary for the stocking of supplies for the Materiel Service increased from 130,000 square meters in 1947 to 200,000 square meters in 1954. [The covered surfaces were always insufficient, and the different services had to make use of uncovered surfaces.]

- The stocks of the Materiel Service were 45,000 tons in 1947 and 100,000 tons in 1954.

- The number of soldiers treated in the infirmaries or hospitals was 384,000 in 1946 and 714,000 in 1953.

The conduct of the campaign sometimes forced us to create new bases during the last years of the war and to connect them with the ports of arrival for the supplies by means of artificial axes, as air lifts. [For instance, the basis of SENO to support the campaign from Central LAOS and that of QUINHON to allow the resupply of the operation ATLANTE.]

The different services were forced little by little to set up mobile elements to be able to support certain operations. For instance, surgical aerials had to be created that could be transported and parachuted, mobile repair sections, operational exploitation groups, etc....

Briefly, if the logistical deployment remained essentially based on a certain territory, and answered well to the demands of a war without front, nevertheless, it was necessary to imagine new formulas to satisfy demands which were sometimes similar to those in Europe, and yet could not make use of the same solutions applied there.

SOURCES OF SUPPLIES - The 12,000 kilometers from France to SAIGON proved to be an overwhelming handicap.

Even ...if the whole country had backed up the Indochina war, could it have felt what was necessary to give to the Expeditionary Corps, not only to win, but just to keep up the fight?

For this reason the central administration could not maintain an intimate contact with the corresponding services in SAIGON and not always understood the requirements of Indochina. " The exchange of letters, when they are not followed up by personal contacts, often resemble the dialogues of deaf people." [Report of the Quartermaster General, the Director for Quartermaster operations in the Far East.]

On the other hand, in a country where industrialization had been merely sketched before 1939 and had been brutally interrupted by the Second World War, the Expeditionary Corps could only find very limited resources.

Indochina was capable to furnish a certain quantity of foodstuff (rice, cattle, fish,) some coal and building materials.

Small industries, localized essentially around SAIGON and HANOI, transformed some rough or semi-finished materials that had been imported (especially bridges and metallic frames.) Consequently, these could be of help to the Materiel Service and the Engineers.

Finally, specialized laborers were scarce and it was difficult to find apprentices and to train them.

All these factors contributed to make us dependent on....France and the United States for supplies. [Sometimes, supplies coming from Japan and Australia helped us to solve some problems. Yet, the Expeditionary Corps still depended from very distant territories.]

In regard to France, a considerable delay was inevitable between the requisitions and their issue, since just the transportation took two months.

Furthermore, the Indochina war was conducted under peacetime economical and financial conditions; that is, within the rigid frame of a yearly budget. It was the responsibility of the Supreme Commander to evaluate yearly the credits which he believed necessary to fight the war and he had to wait for the vote on the finance budget to know exactly his own possibilities.

Whether for expenditures on materiel, maintenance, or works, the basic data needed for the budget were extrapolated from previous data, based on previous situations and their probable evolution.

The rapid evolution of the events, especially during the last years of the war, made it dangerous to extrapolate even over a short period of time and very unsafe when the delay was greater than one year; these previsions were made in July of the previous year.

For this reason, in July 1950 it was forecast for 1951 a monthly consumption of 5,000 HM2 shells and no works. The evolution of the operations in the Tonkin delta, however, turned out requirements for 1951 that amounted to 30,000 shells of 105 HM2 and the realization of a program of fortifications of several billions..

Therefore, because of the lack of long term data on the political and strategic level, the "campaign plans" and the "resupply plans", which are the projection of the above in the domain of logistics, could only be prepared with the greatest inprecision.

When the American aide was finally granted, its amount was never known outside of the Department of Finance, when it should have been indispensable to figure out the needs that could be covered by it.

Certainly, the Supreme Commander had the possibility to forward exceptional requests to France and, in different occasions, had to do it.

These requests, however, could only be honored with a considerable delay, whether the materiel could be taken from existing stocks and just forwarded to the ports or a new fabrication program had to be started.

Certain materials, indispensable at the time of the request, arrived when they were not any longer in need, and supplies of items of first necessity and current usage were constantly in demand.

By September 1953, the Factories for the General Reserve of Materiel did not have in stock the following repair parts:

- Front end of Jeeps, Dodges 6X6 and G.M.C.
- Rear end of Dodges and G.M.C.
- Gear boxes for Jeeps and G.M.C.

On the other hand, the variety of materials used at the beginning of the campaign, English, Japanese, French, and Australian, complicated considerably the acquisition of repair parts, the requisitions, the stocks, and the distribution.

It is only in 1952 that a certain homogeneity could be obtained by utilizing practically only French and American materiel (with the exception of some armaments.)

The creation in France of a rear operational area, insuring the stocking of materiel and the shipping upon request, would have given us a steady flow of supplies, as in the case of the ammunition depot at MIRAMAS. [It must be underlined that the ECHON of SAINT DENIS, which had the responsibility for obtaining and shipping all materiel requested from Indochina until January 1953, did not have any stock facilities; for this reason, it was impossible to keep any reserve stocks and all materiel procured had to be shipped out, even when it was no longer useful.]

Since there were no such solutions to alleviate the logistics of the Expeditionary Corps in Indochina, the Services had to build up important stocks there to help out the problems caused by the delay in the deliveries. [These stocks also allowed to prevent the differences in consumption due to the intensity of the operations.

In periods of calm and in those regions where there were not normally important fights, the amount of supplies was only 4 kg per man, of which 0,2 for the ammo, while in critical periods and in combat areas, the need was 10 kg, of which 4,260 kg of ammo.

The amounts utilized at DIEN BIEN PHU were:

- 17,750 kg during the original period of supply.
- 7,740 kg during the pre-battle period.
- 10,600 kg (of which 6,650 kg for ammo) during the battle.] It became necessary to find the surfaces necessary for the stocks and numerous personnel to work in these depots. Furthermore, the tropical climate greatly reduced the time of conservation of certain materials and foodstuff.

The aide contributed by the United States was particularly important for the Expeditionary Corps and it permitted to continue the war with greater means while decreasing the French budget.

This, however, did not better the delay in the arrival of materiel. Shipments from France were often made up of old stocks and sometimes even of rotten materials. Some requisitions sent in in 1952, had not arrived in full by 1954.

THE PHYSICAL ASPECT OF THE THEATER OF OPERATIONS -

The Indochina campaign began and was constantly resupplied with materials that been fabricated with a European war in view.

The conditions under which these materials were utilized were completely different in a tropical country and over a terrain frequently flooded. The climate made it necessary to have light clothes (which was not the case of the combat uniform,) and better resistant to humidity. The packing equipment, radioes, electrical circuits, had to be treated for the tropics; hospital rooms had to be air conditioned, the teams inside armored vehicles should have been protected against heat [in 1941-1942, the Afrika Corps had special vehicles for the desert,] etc....

The examples of equipment that was not fit for the temperatures and hygrometry of Indochina could be multiplied.

Without insisting again about the scarcity and poor conditions of the routes of communications, it must be underligned that the difficulties of transportation exercised a slavery over the entire logistical system and, as a consequence, over the decisions of the Command as a whole.

As it is well known, the lack of security, made it impossible to circulate by land overnight. During the day, the convoys could only follow certain itineraries, and proceed slowly since they had to be protected by escorts that were expensive in materiel and personnel.

The braking up of Indochina into zones of operations, isolated one from the other by regions under the control of the Vietminh, made all other inter-territorial contacts impossible, except by air and by sea.

The importance assumed by Tonkin in the course of the operations and its becoming separated from SAIGON, led to the decentralization of the supply system in that territory and to its being resupplied by HAIPHONG. Beginning in 1952, the operational base of Tonkin was created (B.O.T.K.) and it played the same role for that territory that we would have wished to see played by an operational base in France for the entire Expeditionary Corps.

All the waves of supplies originating in SAIGON or HAIPHONG were variable and their total capacity was measured by taking into account the smallest means of transportation. If we could forward important loads of supplies by boat, we encountered the greatest difficulties in advancing with these supplies into the points that were more distant from the coast.

In the deltas, the river net alleviated the problems caused by the scarcity of river roads. The railroads were practically non-existant since it had only a few lines towards the interior and we could only utilize half of them.

Only by air could we go from one point to the other, but the uneven form of the terrain and the small number of places where landing strips could be built reduced our possibilities, which were always limited by the insufficiency of our fleet, too. Three examples illustrate the complexity of the logistical problems posed by the support of certain units.

- the zone of DONG HOI, in Central Vietnam, could not be resupplied except during certain months when the port of that town was accessible. The supplies had to be calculated for a long period of time, without knowing whether certain unplanned operations would throw off our estimates...

- VIENTIANE and Northern Laos had, for the most part, to be resupplied by air from Tonkin, since the access from the South was very difficult. The route between THAKHEK and VIENTIANE was destroyed and the MEKONG cannot be utilized from KRATIE except for six months of the year.

- the garrisons of LANGSON and CAO BANG, until their evacuation at the end of 1950 were the tributaries of the R.C.4 and we know what price we had to pay for the periodical utilization of that jungle route.

With such handicaps, the transports had a yield much inferior to that which could have been obtained in France for the same distances. This weighed even more on the total budget of the Expeditionary Corps. Here are some of the costs only for transportation inside Indochina and for

our land forces:

In 1952 = 9 billions

In 1953 = 12 billions

For the first 6 months of 1964 = 8 billions 300 millions.

At the end of the hostilities certain transportation problems became more and more difficult:

- The opening of routes or of certain waterways demanded full scale operations.

- Air lifts remained as the only way out to support some areas.[Total tonnage carried to DIEN BIEN PHU : 21,600 tons (of which 5,000 parachute-dropped,) that is, an average of 130 tons per day.] Certain posts could only be resupplied by air drops. [Evolution of this operation for all of Indochina:

- Monthly average	in	1953:	1,700	tons.
- December	"	"	2,200	"
- March	"	1954	4,700	"
- April	"	"	7,000	"]

- The consumption of ammunition demanded the shipping of greater and greater tonnages.

From the point of view of logistics, the war of Indochina was conducted as a successive series of improvisations. The services had to change their organizations constantly and, with insufficient means, had to face continually growing duties.

Operations lasted for about 10 years, at a distance of approximately 12, 000 kilometers from France. Consequently, the price had to be considerable. The budget, however, always delimited our possibilites and influenced the demands of the operations, reducing the Commander's capabilities.

The logistical support therefore often gave the impression that, although the considerable effort, it was slow in following the rythm of the campaign instead of preceeding it.

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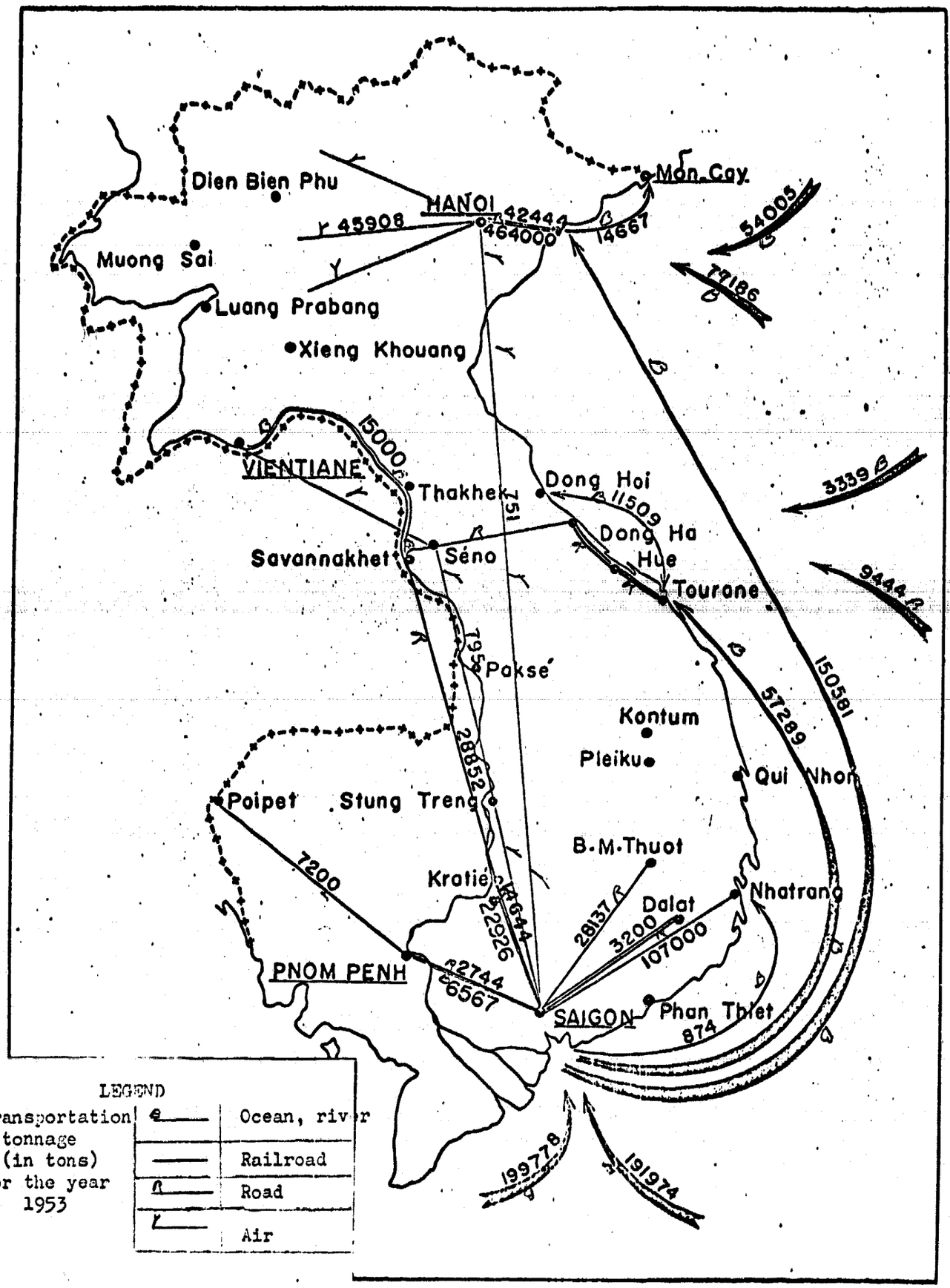

THE QUARTERMASTER

The particular form assumed by the war in Indochina " did not influence greatly the organization and operation of the Quartermaster Corps." [Report on what was learned in the Indochina war by the Quartermaster General, in charge of the Quartermaster in the F.T.E.O., April 1955.]

However, if the same experience acquired in France could be applied in Indochina, the executive sections of the Corps had to be modified to face the growing needs of the Expeditionary Corps.

These adaptations resulted satisfactory in the field of subsistence and clothes, but the administration remained too rigid and the units suffered from an inflexible set up, which was the same as in peacetime.

THE SUPPLY SYSTEM - The deployment of Quartermaster services was based on the territorial organization and on the framework which existed in 1945.

The system, however, was improved by means of " Operational Groups, made up in accordance with the importance of the action to be supported." [These groups took care of an Operational Supply Center, which was normally made up of a subsistence depot, an ammunition depot, and an Engineering materiel depot. - A group supported 15,000 people and was made up of one officer, 12 non-commissioned officers or specialists (of which 9 were warehouse chiefs),and were reinforced by a number of drivers and about 60 laborers (Quartermaster X....) - There were four groups of this type in Tonkin.]

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" The above method has proven to be very economical from the point of view of personnel and it worked out extremely well." [Report of the Quartermaster General in charge of the Quartermaster in the F.T.E.O. - Nevertheless, the Quartermaster General would have liked to attach a Quartermaster Group to each moving division or to any group with personnel between 15,000 and 20,000.]

In the execution of their mission, the supply services had to solve problems that were analogous to those of the other services and depended on the distance from France, local geography, and the increase of personnel.... But the difficulties have been considerable especially in respect to the gathering together of supplies.

In fact, local resources were of little help. The population, in the delta regions where it is dense, is dedicated to a one-crop agriculture (rice); everywhere else the production is too insufficient to be exploited. The only help that the subsistence service derived from the local facilities were small quantities of rice and dry fish.

Another difficulty was caused by the difference of races and ethnical groups that made up our forces.

For instance, to insure " the Moslem troops with a supply of live muttons, these were first obtained in Australia, then in North Africa, and transported at great expense to Indochina, where they were distributed even to the smallest post by all means, even by parachute ....." [Report of the Quartermaster General, F.T.E.O.]

On the other hand, the possibilities to produce clothes were more varied,thanks to shops that were exploited or private enterprises. This, even though " the regulations governing procurement were never adapted to the war situation in the Far East." [Report of the Quartermaster General, F.T.E.O.]

For some services,unfortunately, the materiel to be utilized was very inconvenient (moving ovens of the FOUGA type, for instance....) and.... also of very different makes and models (generators, estinguishers, etc....)

" This lack of standardization resulted in a waste of time and money, and less efficiency. This has been regrettable since, in many cases, it was the strict application of administrative rules which gave these results."

" In fact, the procurement offices must make use of competition and resort to the worst dealers. Undoubtedly, there must exist some dispositions which allow to buy from every vailable market, but the finance and control services oppose this practice most of the time." [Report of the Quartermaster General, F.T.E.O.]

It is a technical and financial fault.

The stocking and maintenance of all supplies was originally done in existing warehouses, but, later, it became necessary to expand.

The important stocks of foodstuff and clothes had to be protected against the heat, the humidity, mold and different mushrooms, rodents and parasites of all kinds.

" General warehouses normally do not offer sufficient protection... For what concerns alternate means of stocking, there were limited to tents and more often to solutions called "of fortune" or more exactly "of poverty". [Report of the Quartermaster General, F.T.E.O.] But the alternating of torrential rains and the tropical sun rapidly destroyed the tents which quickly lost their impermeability, although they had several layers of oil to protect them.

A first remedy would have been the limitation of the stocks; but, to do this, standardization and the creation of a base in France were necessary....

It is useless to remind you of the slowness of transportation and the difficulties encountered in resupplying certain isolated garrisons. This explains why, sometimes, urgent requests had to be forwarded to France when the supply situation was dangerous for the whole territory. In fact, in certain regions, that were not too accessible, there were "frozen" stocks that could not be recovered.

...." Briefly, to maneuver stocks was often impossible." [Report of the Quartermaster General, F.T.E.O.]

Furthermore, the make-up, the conditioning, and the protection of certain items had not been studied sufficiently. It is inconceavable, for instance, that for reasons of economy, some items are made of oxidizing metals (iron), like belt buckles, etc....

The systematic maintenance of clothes could not be accomplished by specialized units (Repair and Maintenance Companies, Laundry Companies....) The individual practically

assumed the responsibility for the laundering and maintenance of his linen. It seems that for a land war, and creating groups of Rear Bases for the units, we should be able to organize maintenance services for personal effects and for the whole camp.

Finally, the distribution of available supplies was not easy, because " to satisfy the demands, one must know these demands,... Now, the mobility of the troops, the fluctuations of personnel, the necessity to maintain secrets,.... the insufficiency of liaisons, the ignorance of certain elementary notions, made the distribution mission extremely difficult."

" On the other hand, it is also very hard to pinpoint exactly what the requirements are. This should be considered an accepted fact, and a more flexible way to requisition should be adopted without complicated regulations."

" In combat, this abnormal consumption can always be explained; these explanations do not fool anyone. They constitute an accepted practice. The stopping of waste does not have anything to do with a careful and bothering contability, but more with the action of the commander and the professional conscience of the cadres at all echelons." [Report of the Quartermaster General, F.T.E.O.]

PARTICULAR PROBLEMS OF CLOTHING - Besides the difficulty to procure all the clothing equipment for the different categories of personnel, it was necessary to supply the troops stationed in Tonkin and in Laos with special bedding equipment for the winter.

Nevertheless, it seems that the use of special cover and equipment could have been avoided, because " the combat suit, with underwear of the American type and one wool sweater, should be sufficient for the soldier." [Second lieutenant X.... Service officer for a battalion.] In addition , the soldier should receive a short poncho made of plastic which, when folded, could be placed in a small bag attached to the combat belt.

" The combat uniform was not criticized [some officers, however, have complained because there were uniforms poorly cut, poorly adjusted, and difficult to adapt to the different sizes of the men,] for its form, but the quality of the material made it practically impossible to be utilized overseas. The material, in fact, was too heavy and too warm.... The "light" type is a clear improvement, but the right one is not yet discovered." [Report of the Sanitary Service.]

The following opinion is also that of the Sanitary Service: " The combat uniform, which is well conceived, is made of a heavy material, almost impermeable, hard to wash, and which makes the body oversweat. The American uniform is better and the parachutist's uniform is lighter, more flexible and easy to wash." [Report of the Sanitary Service.]

" The replacement of the helmet by a hat was an excellent idea, but a more flexible type and with less wide brim should be created".... [Report of the Sanitary Service.]

" The combat boot was replaced by one made of cloth and rubber. In the flooded areas, it was more confortable to wear than a leather boot soaked with water, tough and cutting, but in the dry areas, it caused the heating of the soles and possible blisters. Strong isolating soles or rubber soles over rope soles would have avoided this trouble and maintained the advantages of flexibility and ease of washing." [Report of the Sanitary Service.]

PARTICULAR PROBLEMS WITH FOODSTUFF - The food for stationary troops was always satisfactory, while that for operating units was more irregular.

In spite of the efforts, " moving units complained of the lack of fresh food (vegetables, meats,) and of the monotony of rations." [Report of the Sanitary Service.]

" .... It should be normal that, with a few exception and for brief periods of time, fresh food be added automatically to the rations...."

Further, " many rations of the European type did not contain salt tablets or anti-paludal products. These had to be added, and this caused difficulties of transportation and distribution...."

On the other hand, " in certain regions, a special set-up has allowed the resupply of frozen meats of excellent quality. It works out well." [Report of the Sanitary Service.]

The distribution of ice was indispensable and it caused difficult problems:

" The Quartermaster Service was forced by local dealers to insure the production of ice in small places. The materiel utilized, fabricated locally, was of different types, but it gave excellent services." [Report of the Quartermaster General, General Director of Q., F.T.E.O.]

" In the eventuality of future operations in regions with hot climate, it is indispensable to organize the ice service. [See Volume III.] For this purpose, semi-fixed machines should be installed in garrisons, while moving ice machines should go to posts, camps, or units...." [Report of the Quartermaster General, Director of the QM, F.T.E.O.]

The same difficulties have been encountered to supply the troops with drinks.

As it has already been mentioned in the chapter dedicated to the Sanitary Service " the water, when available, not only is dangerous, but also repulsive..."

" The processes of purification have never been satisfactory:

- the purifying machines are heavy and difficult to move around,

- the chemical products do not free the water from what is in it and give it a bad taste."[See Volume III.]

It would have been desirable to have available down to the level of the company a ton of water that could be treated with physical and chemical means, or by means of a special filtering machine, similar to that of the American Army.

The consumption of tea obviously resolved the problem of drinks, and the Europeans can get used to it quite well, with some perseverance.... but, the tea must be of good quality.

It is useless to underline the inconveniency of wine in a tropical country: its consumption during the day has caused several accidents (heat strokes.) Further, its price, the way it keeps, the difficulties in utilizing it there, make it a "de luxe" product.

Concentrated wine did not have a great success, undoubtedly because the water needed to dilute it had a salty taste, but also because the quality of the product, excellent in the beginning, later became worse.

Beer presents the same problems, though not as bad. It was made locally and could be distributed with ease and everywhere.

THE ADMINISTRATION - " Since the arrival in Indochina of our first elements, the Expeditionary Corps made use of an administrative set up which existed for a long time. At the beginning there were no difficulties. Later, things changed...."

" The lack of personnel and materiel, the wartime utilization of peacetime metropolitan and colonial texts and the administrative methods of the units, became the greatest inconveniences for the Quartermaster Corps, especially considering the ever increasing number of troops in the Land Forces of the Far East." [Report of the Quartermaster General, General Director of the QM, F.T.E.O.]

At the level of the troop corps, some dispositions had to be taken, mainly to facilitate the accounting of receipts and expenditures.

" The mandatory opening of checking accounts for the disbursing officer " and other simple operations " were to change the role of the disbursing officer to that of a cashier with a large account in the Treasury and a small amount of money on hand, for the petty cash." [Report of the Quartermaster General, Director of QM, F.T.E.O.] On the one hand, " it is preferable that the Corps does not transport and keep large funds during operations [Sergeant X....] and " on the other hand " the disbursing operations must not be done any more at the level of the battalion. The disbursing officer must receive from the rear all documents already prepared." [Report of the Quartermaster General, Director of the QM, T.T.E.O.]

...." Without an army of accountants, it is impossible to keep track of each soldier's issues during a campaign. The individual clothing form cannot be kept up to date by the troops during overseas operations." [Report of the Quartermaster General, Director of QM, F.T.E.O.]

The maintenance and proper usage of individual equipment should only be the responsibility of the commander and his should be the duty to take care of waste and inpardonable negligences.

Because of the lack of the above mentioned simplification, the troops had to suffer for all that paperwork that they had to prepare in the middle of burdensome operations.

These duties were even heavier since the accountants " always proved to be inferior to their task because of their incomplete or hasty preparation." [Report of the Quartermaster General, Director of QM, F.T.E.O.]

" The number of personnel working in accounting capacities must be revised and reinforced at the level of battalion or group. At the echelon of the company, there must be a minimum of personnel just for taking care of any changes, the payment of personnel, and eventually the administration of ordinary tasks." [Report of the QM General, Director of QM, F.T.E.O.]

Finally, disbursing officers had increased responsibilities since their units remained isolated from the Rear Bases for long periods, up to many consecutive months. The lack of officers often lead to the delegation of their duties to non-commissioned officers of the higher grades with all the inconveniences that could result from such situations.

Further, it became sometimes difficult to have on hand protected places or safes. Many thefts were accomplished.

After having advocated the placing back of the administrative sections at the level of the regiment (with a Major and a treasurer) and the administrative centralization of small units at the level of battalion, a QM non-commissioned officer concluded:

" The above two changes would allow the State to save money and enable everybody to perform their mission in a practical manner."

Towards the end of the hostilities, the regrouping of the Rear Bases, whenever possible in a Regiment, could have been the beginning of a reorganization as outlined above by placing each disbursing officer " under the direction of a Major charged with their surveillance, to guide them, and to see that QM instructions and directives were observed and applied in the same manner in each corps...." [Report of the Quartermaster General, Director of QM, F.T.E.O.]

To conclude, " its is absolutely indispensable to establish as soon as possible a general set of rules for troops involved in an overseas campaign. The passage from a peacetime operation to a wartime operation must have the least number of modifications."

" Particular instructions would be prepared for each theatre of operations (Far East, French West Africa, Madagascar, etc,..." [Report of the QM general, Director of QM, F.T.E.O.]

THE HEALTH SERVICE

The health service in Indochina fulfilled its mission quite well since it can be affirmed that every wounded soldier who had a chance to survive and reached the operating facilities was saved.

Further, the action of the Medical Corps allowed the Expeditionary Corps to be spared from tropical deseases as it had happened in previous colonial campaigns. [Since this document is to be of a general nature, this chapter covers only information that can be of use for Headquarters and troops, and excluding information concerning technical medical material.]

TACTICS - The tactics of the service had to be adapted to the character of the war without front and to the distance from France. It had also to be based on some elements proper to the theatre of operations:

- The troops were dispersed and more or less important equipment had to be placed almost everywhere.

- Generally speaking, the losses were not many, but the proportion of the seriously wounded was high. [Statistics of the losses according to the nature of the wounding agent could only give a superficial view of the whole, since the weapons used by the enemy were extremely variable according to the time and the place.

For this reason, at the beginning of the campaign, for " every three men hit there was one dead and two wounded. The proportion of the seriously wounded was abnormal and so were the wounds of the chest and of the abdomen (ten times greater than in the 1939-1945 war.) This, because of the snipers, who shot from fairly close, sometimes with stripped bullets...."

Eight years later, if we take as an example the operations between September 1953, included, and March 1954, excluded, in the Northern area of the Tonkin delta, the proportion of losses was different: one dead for every four wounded. The war with mines had begun and we had to attribute to it 75% of the dead and 56% of the wounded.

At DIEN BIEN PHU, instead, the losses were caused mainly by the artillery and the mortars.]

- The scarcity and mediocrity of the itineraries made the evacuations slow and "shocking". Sometimes an entire route had to be opened for this purpose and only by air lift could the Health units operate as coherent units.

- The last step in the evacuation was to France. But, first of all, the wounded and the deceased had to be fit for such a trip and large hospital facilities were needed for this.

- Finally, as the number of indigenous soldiers increased and the National Armies were formed, the number of the sick and the wounded increased. It was impossible to send them to France and they had to be treated locally until they were well again. The hospital facilities had to be increased again and so did the Specialized Services.

For all these reasons, the Health Service had to improve towards decentralization.

THE FORWARD HEALTH SERVICE - This service, whose main function is to pick up the bodies and to give the first aid could not be insured by the units of the classical type, as those attached to the first units that landed in 1945-1946. Units such as the Medical Battalion in the U.S. Army,... the 9th D.I.C., or as the Medical Company of the Armored Division, detachment of the 2nd Armored Division, were too heavy and needed a complex and well organized system of evacuation.

The Service had to change and to face a technical problems which never changes: the seriously wounded must receive the necessary help on time.

All the units that came from France were dissolved and a series of new units, adapted to the local situations, were set up:

- first aid points,
- advanced surgical facilities,
- moving surgical equipment,
- O.R.T. aerials,
- moving medical teams,
- laboratory parts, etc....[The organization of the missions of the principal units are exposed in Volume III, because the greater part of the formulas tried out in Indochina are interesting also for a European theatre of operations.]

Later, the structure of these units was changed several times, to obtain a better working formation (equipment that could be dropped,).... to face new demands, and because some elements rapidly became static and changed into territorial services (medical teams, laboratory equipment, etc....)

THE HEALTH UNITS - " The creation of all formations and of the whole structure of the sanitary service for the territory was based on the mobile elements, which became stationary and were reinforced as needed."

" Garrison infirmaries, hospital infirmaries, secondary infirmaries, were progressively set up. This continuous effort of organization posed great problems of materiel and personnel, but remained within the typical classical framework and did not present any particular problems."

" The larger organizations and the basic ones were made up as follows:

- Infirmary sections,
- healing centers,
- depots for medical supplies,
- hospitals,

The system for evacuating personnel became more uniform in Northern and Southern Vietnam and the patients were sent back to France or to specialized hospitals.

When South Vietnam became the main base, all specialized services were grouped so as to permit the treatment of a patient by specialized personnel rapidly and painlessly, whenever needed. Other formations worked in close liaison with the larger units. These had, therefore, "active" services, with qualified personnel in the amount desired and the materiel required.

As soon as possible the wounded were evacuated to France, and in the course of these operations, the patients were moved from the front units to other formations that guaranteed the continuance of their treatments and, in case of complications, help could be obtained from the central services." [Report of the Direction for the Sanitary Services in the Far East.]

Progressively, a logical and complete system was set up and all the complementary services were united in hospitals that were specialized in the treatment of cases that were very serious, while other hospitals treated patients that were not serious, but needed long hospitalizations.

" This organization greatly helped the wounded. ..... Because of it the maximum utilization of all available beds could be effected, and it did not distribute the personnel theoretically; they were distributed according to the exact demand and their qualifications."

" The Health Service in Indochina became little by little a complete organism and not just another military service." [Report of the Headquarters for Health Services in the Far East.]

EVACUATIONS - The problem of the transport of the wounded up to the point which the medical personnel could reach was the responsibility of the battalion and company medics.

" The evacuation of the wounded from the battlefield was a serious problem and it was never resolved in a satisfactory manner."

" In the region of the delta, the units that were spread out in the rice paddies were often several miles away from any road or waterway. The wounded had to be evacuated from the rice paddies on stretchers."

" Keeping in mind the distances and the difficulties of marching over slippery passageways, a minimum of four men was absolutely necessary for a man who was seriously wounded and could not walk.... Further, the lack of security at night made it impossible to evacuate at night: the man who had been wounded at 1600 hours had many more chances to die than the man wounded at noon."

" With the exception of some favorable cases when the wounded could be evacuated over short routes, the only possible solution was the helicopter."

" Many of them were needed, capable also to pick up the wounded with a minimum of risk...." [Excerpt from the reports of two battalion medics.]

" The problem was even more serious in the mountainous regions. Here is one of many examples:

After the battle of TSA YE PIN, 24 January 1953, the 21st Goum was relieved in its entirety to be able to evacuate its fifty wounded (16 men per stretcher are needed over that terrain,) their weapons and those of the 20 men who had died. It employed 24 hours to cover seven or eight kilometers at the cost of a total exhaustion and the loss of the more seriously wounded."

" Generally speaking, no seriously wounded man was ever saved, since it took two or three days by stretcher to take him to the surgical center of LAICHAU, and we could never get a helicopter."

" These were first used in the area around LICHAU at the time of the operation "CASTOR"." [Captain X.... Commanding Officer of Goum.]

The Viet Minh had the same difficulties and a surgeon of Regiment 46, captured in 1954, declared: " Most of the time, the transport of wounded men is done on foot, seldom by car. The difficulties and the slowness of the evacuations cause the wounds to get infected along the way and many men die or become much worse."

Therefore, there should have been many helicopters, but these arrived only late in the game (1950) and in a number that was always insufficient. Those that were available, however, did a good job and between 1950 and the first of August 1954, they effected 9,640 "primary" evacuations. [The total number was 10,820, as indicated in the chapter dedicated to the helicopters.]

In the interior and in the areas near SAIGON, the evacuations could be effected by car, but hospital aircrafts were used with preference. Nevertheless, the delays were often long. [Report of the Headquarters for the Sanitary Services in the Far East.]

Many difficulties existed also in sending back to France the wounded or the sick since we actually did not have a real hospital ship. " At the end of a nine years old war we still used modified ships. The one that, in 1954, was considered as the hospital ship for INDOCHINA was the OREGON, which was soon to be eliminated, and which went back and forth four times a year with its old engines."

" There is no air conditioning on board: with one engine out it cannot receive the wounded nor the sick. It is not a hospital ship." [Report of the Headquarters for the Sanitary Services in the Far East.]

The airplane was, thus, greatly used to bring the wounded back to France, especially in 1953-1954.

" It is a flight of 12,000 kilometers, that lasts at least 31 hours. This means that the patients must be in the condition to go through this tiring trip. Planes were utilized only for those who could travel; a long period of preparation was needed before departing on such a trip."

" Some airplanes carried men in stretchers. It seems that, for men who must lay down, the evacuation by air should be an exception, especially over such long distances, and this just to save time."

" The ship is the best way: the patients can lay down and find the same conditions of a hospital." [Report of the Headquarters of the Sanitary Services in the Far East.]

HYGIENE AND PROPHYLAXIS - Prophylaxis is at the very root of the keeping up of personnel, but it depends on the Sanitary Service as much as the Commanders at all echelons, and on the soldier. This explains the faults that the doctors often remarked.

In his report on the operations, the Director of the Sanitary Services said:

" The knowledge of the cadre and of the individual in regard to personal and collective hygiene, and the principles of first aid, is almost non-existant."

" The elementary rules of hygiene are explained in all manuals. Unfortunately they are not followed or they are not known. The soldier is inspected for his equipment and weapons, and he is not checked for his physical condition and hygiene, which are equally important...."

" The soldier's instruction should be implemented with classes that cover this subject, which is as important as subjects about combat. In the camps, and especially in those where personnel is assembled and the last medical check ups are made, practical exercises in hygiene should be conducted: individual, collective, camp hygiene, drinking water (how filters work,) etc...."

" Just as the specialized teams of the Sanitary Service cannot insure the cleaning, the maintenance, and the hygiene of each unit or group, so the Sanitary Service will not be able to assist all the wounded on the battlefield when needed."

" It is useless to multiply the number of nurses or strechter bearers. What is needed is that each soldier carries a first aid kit. While waiting for the nurses, the strechter bearers, the doctors, he must be able to give the first aid with the means he has on hand. He must know what to do and what not to do. This is even more important for isolated soldiers, in a hostile jungle."

" First aid is extremely important. A wounded man who has had the leg fractured by a bullet, or with a broken hip, and who has not been taken care of, arrives at the surgical

facilities in a state of advanced shock, and sometimes cannot recover from it. A tourniquet that was not needed or in the wrong place causes a catastrophe....."

" Sometimes, the most elementary rules of cleanliness have not been respected, and not because of the particular situation of the operation: the high number of skin deseases, mainly epidermocycoses, proves that the men had difficulties in practicing the simplest forms of hygiene of the body. It was often reported that soap was distributed with irregularity and so were clothes."

" The danger arising from negligence in disposing of escrements was a serious problem in INDOCHINA. Toilets were often poorly built, too big, installed without any consideration for the nature of the terrain, and poorly maintained. Their utilization was not regular."

" The fight against flies was conducted without vigour, even in the posts. Generally speaking, empty cans, bottles abandoned everywhere, a lack of cleanliness around the kitchens, were the characteristics of all installations, even over prolonged periods of time."

" All this must be corrected, and it is a question of discipline." [Report of the Headquarters of the Sanitary Services in the Far East.]

PROPHYLAXIS OF CERTAIN DESEASES - Naturally, the Expeditionary Corps was spared from fatal epidemics, but it has payed its tribute to tropical deseases.

Malaria was the most notable. " The distribution of instructions from the Service, the punishments that followed inspections, show that the soldiers do not normally take the anti-malaric pills. Negligence and lack of care are always present even when it is proven that these medicines are effective."

" The distribution, the exchange, and the maintenance of nets against mosquitos have not always be done properly. Some units have been sent to areas that were very malaric without any protection."

" Sometimes, malaria was more easily cured than deseases caused by amoebas. Preventive measures against these were not sufficient and what has been said about drinking water and about the hygiene of the posts certainly helped the spreading of deseases."

" The measures to prevent the Scrub-typhus were better. We must remark that the utilization of moth-repellant

in a soap solution is not good since it hardens the clothes and it irritates painfully some parts of the body." [Report of the Headquarters of the Sanitary Services in the Far East.]

Ethylism, which is so common among regular troops, was observed frequently in some units of the Corps.

Alcoholism could be explained by different reasons:

- the isolation of certain posts and the natural consequences of homesickness,

- the lack of work during rest periods that followed the tension of days and even weeks spent in a constant lack of security,

- the high temperature, which leads one to drink,

- the lack of fresh and potable water. [The toxicity of local alcoholic beverages increases the very bad effects of drinking when it is very hot.]

The fight that commanders had to do differed from place to place. In 1953, for instance, it was forbidden to:

Frequent bars, clubs, and other drinking places during duty hours. All alcoholic beverages were forbidden until 13 hours.

To sell alcoholic beverages to all soldiers in all bars, restaurants, and clubs, that were under military jurisdiction, before 13 hours.

The Sanitary Service eliminated from the Service all the alcoholics in an advanced state and took care of all those who could be cured with desintoxication methods.

" Venereal deseases have always had a certain incidence in the Expeditionary Corps, but after a peak in 1946, 1947, 1948, the number of cases gradually decreased until the cease-fire."

" This, too, depends on a certain education of the cadre. Profilactic measures are available to the men but, in the towns where the deseases are worse, these means are often neglected."

" On the other hand, forceful methods, in this instance, are not always the proper methods, and sometimes, they are even negative. An important part of the soldier's instruction should be dedicated to the teaching of the dangers involved in alcoholism and venereal deseases, one of

which is often the result of the other." [Report of the Headquarters of the Sanitary Services in the Far East.]

To conclude this subject about prophylaxis, we must talk about the sterilization of water, which is a daily problem. [The same problem would exist in Europe and the preventive measures in this field should not be forgotten.]

" Drinking water has been filtered, sterilized with chloride tablets, purified with portable machines of the type Degremont and Carbochlore, or with special machines of the type Wallace and Tiernan, and the purified water was treated with chloride."

" Whenever portable machines were utilized, very often, the users did not know how to operate them, and either placed the chloride tablets in water that was not physically clear, or did not leave the tablets in long enough. In other instances, water that had been sterilized and purified was transported without care and made dirty again. The troops must be trained in these matters." [Report of the Headquarters of the Sanitary Services in the Far East.]

FUEL SERVICES

The Expeditionary Corps and the Allied Armies saw the increase of their demand for fuel grow with their development. For this reason, the consumption of all products in 1930 was 131,000 cubic meters. Three years later it had doubled: 260,000 cubic meters; and in 1954 it was up to 356,000 cubic meters.

The Fuel Services' personnel was never higher than 5/1,000th of the Expeditionary Corps and were made up as follows:

At the level of the Commander in Chief there was the Headquarters for Fuel Services in the Far East (D.E.E.O.,) an organism made up of the different branches and which was in charge of the land, air, and sea forces of the C.E,F.E.O. and of the Allied Armies.

At the level of the territories, the absence of a Headquarters for the branches named above had lead to the creation of delegations under the command of the D.E.E.O., but which the territorial commands had a tendency to consider as directly under them. Some difficulties derived from this situation, especially for what concerns the resupply of the Air Force.

Since the war demanded the dispersion of the units on land, it was necessary to open some very large depots, and many smaller depots, and all more or less on a permanent basis. "Operational" depots were the exception and were utilized little (an average of 20 to 30 cubic meters per day.) This cristallization of the structure was also a consequence of the terrain: the lack of dry places in the delta region and the basic importance of roads in the flooded or impraticable areas.

The management of these depots was insured by civilian enterprises (SHELL - SVOC - CALTEX) in the larger centers, as SAIGON, PHNOM-PENH; but all the other distribution points had to be taken care of by military units which did not have the same mobility that similar units have in Europe. They were spread out in a large number of fixed depots. They all had, however, a reserve called "operational depots", ready to insure the refueling of the units during operations.

This adaptation of the Service to the necessities of the theatre of operations has not taught us any important lessons, though useful points have been learned about the transportation of fuel and the protective measures to be taken against sabotage.

THE TRANSPORTATION OF FUEL - All available means have been devised to transport the products to the depots: the railroad, wherever possible [the service had slowly gathered together 32 tank railcars,] the sea or the rivers [four tank boats were built, each capable of carrying 200 tons,] and especially the roads.

A large percentage of the transportation on land was insured by commercial trucks, rented by the Fuel Service. In reference to this problem, we must regret that the Headquarters did not pull together all the available commercial resources, since there was a discrepancy between the demands and the proper utilization of the means on hand (the D.E.E.O., for instance, sometimes was not able to forward fuel to Laos because of the lack of trucks.)

The demands made us also utilize air transportation to Laos and Tonkin, though the cost was high and the yield poor.

We must also keep in mind that all containers are not used again, theoretically, and that it would be interesting to make use of light and cheap materials.

The air drop of containers resulted in very serious losses (about 20%) and, for this reason, a less luxurious, but stronger and cheaper material should be found. [Along the same lines, we can mention the losses suffered because of the poor care exercised by the units: barrels and cans stacked in the mud, with broken or no covers; grease placed in old cans, cases, or just in paper containers.

This negligence caused the continuous need to clean up systematically stacks and containers in the depots.

Since all Class V products are extremely important to modern units, the drivers should be instructed and learn to pay attention and exercise care in handling them.]

PROTECTION OF DEPOTS - Depots seldom suffered from direct attacks.

Only the depot at PHAN THIET was bombed by mortars in 1954 and almost totally destroyed, while the HUE depot was almost completely burned down by incendiary bombs in July 1954.

Almost all attacks were the responsibility of the guerrilla [with the exception of the Tourane depot, which was almost totally destroyed by sabotage in 1952, for which the civilian personnel working there was responsible,] The results of these actions were variable, according to the means of protection employed.

The attack of the VINH-LONG depot was a failure since the military personnel there, alerted by the watch dogs, reacted immediately.

At the DOSON depot, in 1953, only one tanker of 16,000 cubic meters exploded, while the other two were not affected by the plastic charges because they were protected by walls of reinforced concrete.

The commercial depot SHELL and the military depot at THUONG-LY, were partially destroyed in June 1953, while the depots at PHUTO, in 1952, and the one at NHA-TRANG, in January 1954, were totally destroyed.

These destruction did not affect the operations nor the refueling system; the most typical example is that of NHA-TRANG, burned down during the night between the 11th and the 12th of January 1954, without any effect on the starting of the operation "Atlante". (15 January.)

Every time, the enemy was able to enter the depots without being detected [the presence of a large number of civilian personnel and of prisoners made it easier for the rebels; in the depot at Hanoi, for instance, the labor force was made up of one to two hundred prisoners.] The enemy penetrated the barbed wire and other defensive systems.

We began, therefore, to improve the external protection of the depots and that of the tankers.

- A wall, 2.50 meters tall, was built around the depot. It was painted white and clearly illuminated (one floodlight of 300 watts every 15 meters;) it was surmounted by barbed wire and under surveillance. A net of barbed wire placed a few feet from the wall completed the defensive system. [It goes without saying that a guard is needed for all this and also to patrol the outside. The depot personnel insures the

protection of the inside area and, if possible, it makes use of watch dogs.]

- The tankers are surrounded by a wall in reinforced concrete, without opening, at one or 1,50 meters from it, and with a thickness of 0,60 meters. [A wall with a thickness of 0,30 meters can stand the effect of the explosion of a plastic charge with no other damage, but a slight scraping.]

For certain products we had to keep in mind that fire is spread by explosion and a projection of the contents up to 50 meters away; barrels, instead, burn without being thrown up in the air.

The barrels had to be stocked in stone inplacements with a roof of reinforced concrete to avoid being affected by falling materials and mortar shells.

The spreading out of the stacks of jerry cans, and their protection by means of earth inplacements or walls of clay, was a sufficient protection.

The operational depots had to be prepared in relatively secure areas. The fact that there were troops all around made it unnecessary to build walls or to illuminate the place. A protection of barbed wire was sufficient.

Dispersion and lateral earth banks were needed for the protection against artillery or mortar shells.

THE MATERIEL SERVICE

Utilizing since the beginning the preexisting territorial organization [the plants of HANOI, HAIPHONG, HUE, SAIGON, etc.....] and very simple methods of work, the Materiel Service, looking in personnel, had to create rapidly a flexible and powerful system, adapted to the growing needs of the Expeditionary Corps. [The following chart shows this evolution:

	1948	1950	1953
- Plants	10	2	1
- 3d echelon units	7	12	15
- 4th echelon "	0	3	4
- other units	2	5	7
- vehicles to maintain	17,000		60,000
- personnel employed military	3,100	4,497	7,800
- personnel employed civilian	4,750	4,836	8,100]

EVOLUTION - Two important steps in the growth of the system were:

- about 1949, when a unit was created for complete overhauling, one for the repairs of the engines of armored vehicles, and two for the overhaul of Jeeps and G.M.C.

- about 1952-1953, when the Army took over the A.L.O.A. and the need for a pool of motor boats created the need for specialized maintenance units. [A.L.O.A.'s Repair Section (SRALOA), for the repairs of motor boats.]

" New specialized units were created, made up of:

- general reserve units, industrial in character and with important plants at their disposal,

- very light, mobile repair units, in direct support of the fighting troops....

- some units in charge of stocking materiel and in support of third echelon repair units...." [Engineer General X.... Director of Materiel, F.T.E.O.]

PERSONNEL - " The Materiel Service must have a headquarters in every large unit. Those created in every division have rendered excellent services." [Engineer General X.... Director of Materiel, F.T.E.O.]

The division headquarters, however, were created only at the end of the hostilities. Until that time the demand had not been great enough to justify the creation of such a unit at that level.

In every territory the materiel units were under the command of a Director of Materiel for the Territory. At the echelon of the Theatre of Operations, the Director of Materiel, F.T.E.O., was in charge of all materiel operations and was in direct command of some units of general reserve in SAIGON, and of the units of the operational base of Tonkin (in HAIPHONG.)

There existed also a "Technical Inspection for Materiel" which, on the technical level, depended from the I.T.M. in Paris, and one "Technical Materiel Section" whose role was comparable to that of the Army Technical Section in Paris. These two organizations were under the direct command of the Director for Materiel Services, F.T.E.O.

Among the problems of organization, we must mention that created by setting up the Armies of the Allied States. " The receipt of materiel necessary for those Armies, the movement of entire units, increased remarkably the already heavy load of the Materiel Service." [Report of the Materiel Headquarters, F.T.E.O.]

The resupply and repairs of new combat units had also to be insured. The principle of "reciprocal support" allowed one combat unit to depend from the materiel section nearest to it, no matter what its nationality. For a long time, only our services fonctioned properly; we took care of the demands of the Allied Armies until they could take care of themselves.]

ORGANIZATION - The basis of the Indochina war was the Infantry. It is not surprising, therefore, if all other corps and .... services complained for not having sufficient personnel.

" Between 1951 and 1953, the percentage of personnel of the Materiel Service was between 2.9 and 3.4% of the total personnel for the campaign.... compared to that of the American Army which is 9%; as a consequence to this are the difficulties encountered by the Materiel Service in the execution of its missions."

It must be noted, however, that civilian personnel, although of poor quality, increased that percentage to 6 or 7%.

To satisfy the need for qualified personnel, the Service encountered great difficulties. While the proportion of specialists among non-commissioned officers is 80% in France, it was only 40% in Indochina(1954.)

The best qualified personnel was that of the Foreign Legion. " Among them, there are excellent specialists. The possibility of reenlisting them over and over again resulted in the creation of good working units." [Report of the Headquarters for Materiel Services, F.T.-E.O., March 1955. The indigenous personnel had approximately half the yield of specialized French personnel of the same category. The former made up the labor force (coolie, etc...) while the latter made a specialized group: electricians and painters were good, plumbers and blacksmiths were average.]

MISSIONS AND UNITS - Third echelon maintenance. The lack of means prolonged the delays in repairs and often caused 3d and 4th echelon shops to be completely submerged with work. " Two solutions were adapted to relieve this problem:

A classification between 3d and 4th echelon called 3d echelon long-term." [Report of the Headquarters of the Service, F.T.E.O., March 1955.] A vehicle classified in such a manner was lost to its unit and replaced with a maintenance float vehicle as it was done at the 4th echelon level; however, it was not sent forward to a 4th echelon shop. This resulted in less movement of materiel, economy of transportation, and decrease in waiting time when it could substitute the damaged vehicle with a similar one.

" The authorization to perform 3d echelon maintenance locally," which relieved the Materiel Service from an important load of 3d echelon. [Report of

the Headquarters for Materiel Service, F.T.E.O., March 1953. Thus, there were 27 units authorized to perform 3d echelon maintenance, especially the A.B.C. and TC.]

Nevertheless, new units had to be created. The mobile units created on the model of the C.R.D. units in France did not give satisfaction; they were too heavy. Further, " the fact that they were divided in two groups to insure the continuity of work during long maneuvers, did not result convenient to the character that the campaign had assumed. On the contrary, the organization of Repair Companies of the Foreign Legion (C.[illegible].R.L.E.) in North Vietnam, divided into one heavy section and three light ones, each one adaptable to a tactical group, has given good results." [Engineer General X....in charge of Materiel Service, F.T.E.O.]

Forth and fifth echelon maintenance. Until 1951, repairs were performed not too well and not too poorly in Indochina. At that time:

- certain repairs of armored vehicles, 4th and 5th echelon, and the overhaul of US-GP, were done back in France, and the vehicles sent there.

- the first maintenance battalion was created in SAIGON to insure 4th and 5th echelon maintenance.

Beginning at that time, the maintenance units of the General Reserve were organized in Companies and Battalions with a large number of personnel and working with industrial means and according to industrial procedures. The results were good. The captain in charge of the company was also the technician in charge of the works, for which is necessary to have competent personnel.

The beginning of this type of operations was slowed down by the constant lack of supplies; in this respect 1952 was the most critical year, as it is shown in the following chart:

	1948	1949	1950	1951	1952	1953	1954
Vehicles rebuilt:							
- 4th echelon	900	1000	1636	1172	1064	2690	4750
- 5th echelon	1000	2500	12700	13950	6800	12450	13100

The resupply of materiel other than ammunitions. It was insured by the plant of the General Reserve in SAIGON, ... divided in two stock companies which, for the year 1953, received 105,000 tons of materiel and shipped 80,000 tons.

The difficulties were caused by the diversity of materials and the sources of supply [French, American,

German materials, coming from different places, sometimes from Japan, Australia, India.... with delays that were often unpredictable. This situation, however, was much better by the end of the conflict.] The delays were long, the stocks large, there were no covered surfaces and no means for repairs.

"In practice, we..... waited for the cease-fire to give the E.R.G. sufficient means for the operations, both in personnel and materiel."

In regard to the delays, " the plan of 1953, submitted to the Department in October of 1952, was realized..... 35% before October 1953, 30% between October and December 1953, and 35% in 1954. This means that almost all the requisitions submitted, were delivered within one year after the date of submission. Some important assemblies (engines and parts for American vehicles) were received two years after the request was sent in." [Report of the Headquarters of Materiel Service, F.T.E.O.]

Two were the consequences resulting from this: the importance of the stocks to build up [in 1954, 96,000 tons distributed over 206,000 square meters]; and the fact that the supplies, when they arrived, did not correspond any longer to the demands.

" The system that operated until 1954 was as follows: the Army operated without central stocks to supply the theatre of operations, which was depending entirely on the commercial sources and was within the limitations of the annual supply plan." [Report of the Headquarters for Materiel Service, F.T.E.O.]

Resupply of ammunitions - " The theoretical level of the stocks of ammunitions of the General Reserve was decided upon by the command; it varied in time and according to the sources of supply or the type of ammo between 6 and 12 months of consumption." [Report of the Headquarters for Materiel Service, F.T.E.O.]

For this reason, the tonnage of ammunition stocked in the General Reserve changed from 15,000 tons in 1951 to 37,000 tons in 1952 and 83,000 tons in 1953. This changed the aspect of the operations. In the same period of time, the monthly consumption changed from 1,500 to 6,000 tons.

The difficulties with the distribution of ammo were due especially to the vastness of Indochina, the problems of transportation, and the necessity to protect the convoys. The distribution point had to be spread out and, for this reason, principal and secondary depots were

created to reduce at a minimum the number of trips necessary to supply the units.

Certain ..... ammunitions were criticized almost constantly:
- 7.65mm bullets,
- grenades: OF, D.37, tear gas, MK II,
- number 60 and 81 flares,
- signal grenades, flares.

Finally, it proved to be essential throughout the campaign to have special packing equipment and depots for the ammunition.

" The very bad influence of the tropical climate over the conservation of ammo is well known; it is due especially to the high de. of humidity and to the important variations in tempe. re which make the powders age rapidly." [Report of the Headquarters of the Materiel Service, F.T.E.O.]

PROBLEMS REGARDING THE UPKEEP OF MATERIEL -

a) Armored vehicles - Increasing betwen 15,000 and 60,000 vehicles in the period 1947-1954, the pool of armored vehicles became more homogeneous. [English and German vehicles .... disappeared little by little. In 1954, 85% of the vehicles were American, 15% French.] On the other hand, " from the point of view of the age, the vehicles are not any younger.... only a few models have evolved."

" The terrain, the climate, the routes, the intensive utilization of mines, have greatly affected the materiel. Armored and regular vehicles had such a high rate of wear and tear of the transmission and suspension assemblies that all formulas for the resupply of these parts had to be changed, and parts had to be requisitioned that normally are not replaced." [Report of the Headquarters of the Materiel Service, F.T.E.O. - This report gives an explanation of the weak points remarked about each type of material during the course of the campaign.]

The rate of replacement for some parts was exceptional, for instance, the rear springs for the Renault truck: 4,220 (monthly consumption, 3d echelon, 115 left and 80 right springs for 700 vehicles.)

b) Boats - The pool was originally made up of boats of different types, but, in 1950, it became more homogeneous [in 1949 there were 110 river boats of different types, 463 in 1952, and 1561 in 1954, to include the MYTHO.] The pool had boats for every type of mission:

- very light river boats of different types; junks and sampans, pinasses, "mytho" built by the Materiel Service (skull in wood and a Jeep engine,)

- transport boats utilized by TC: L.C.M.s carrying 60 men or two 15-ton tanks,

- combat river boats used by the A.B.C.; armored P.T. boats,

- boats to be utilized in ports, tug boats, ferry-boats, L.C.T.s.

With the exception of the Mytho, the other boats were built to be used in Europe, and had to be modified before being utilized (armor, weapons....)

The maintenance of this pool was difficult because of the great dispersion of the boats and the great rapidity of wear and tear of the parts under-water in the delta region. The maintenance was done by:

- sections created within the C.M.R.M.

- a company for the repairs of river boats in the South

- an Army-Navy motor pool for certain materials

- a local civilian company for the biggest boats.

c) Light aircrafts for artillery observation - [See the chapter of the 4th part: A.L.O.A.] - The Piper Cubs, not very powerful, and the Morane 500, too heavy and too slow, were replaced in 1954 by the CESSNA L 19, perfectly good for its missions. [See Volume III.]

Until the first of January 1953 the logistical support was insured entirely by the Air Force. The Army progressively assumed this responsibility; it took over completely when the L 19s arrived. For this purpose it employed the repair section of the A.L.O.A. [There was a SRLAOA in CAT BI (HAIPHONG), one in TOURANE, one in SAIGON.]

d) Armament and optical equipment - The diversity of instruments and weapons was extreme. For instance, there were:

- 36 types of automatic pistols for a total of 28,000
- 33 types of rifles or carabines for a total of 400,000
- 17 types of light machine guns for a total of 14,000
- 16 types of mortars f r a total of 3,800.

This difference made it necessary to make use of methods of repair without machines. " It is necessary to organize the work in an automatic way, as it is done with the construction of cars." A certain standardization also demands " a routine type of work from officers and the enlisted men who work in this field." [Report of the Headquarters for Materiel Service, F.T.E.O.]

Further, " the system of a yearly supply plan which demands a supply forecast of 16 months, has created dead stocks.... With a rational organization and with the rapid means of transportation of today the period of delay should have been much shorter." [Report of the Headquarters of the Materiel Service, F.T.E.O.]

Many of these situations arose from the lack of our means. This also caused the irrational utilization of certain equipment:

" The most typical case is that of the rocket thrower 2"36; it is an antitank weapon, but it was utilized by the Infantry as an anti-personnel weapon (the monthly consumption reached 10,000 shells)..... This weapon was utilized just because it was light." [Report of the Headquarters of Materiel Service, F.T.E.O.] It should have been feasable to study the possibility of an anti-personnel shell for this weapon, instead of the antitank; but, " generally speaking, it can be said that no study was ever begun to discover what was best fit for operations in the Indochina theatre." [Report of the Materiel Service's Headquarters, F.T.E.O.]

THE ADAPTATION OF EQUIPMENT - The equipment and the armament, in spite of great efforts, could not always be adapted to the particular type of combat and terrain because " certain factors, like the nature and the volume of the incoming supplies, made it impossible."

Further, " between the time when the particular need for the troops was concretized and the request submitted and the equipment needed was either modified or fabricated, there was often a long delay, even up to two years. When the equipment was ready for issue, the combat situations had probably changed so greatly, that the equipment received was not what was needed at the time." [Report of the Headquarters of the Materiel Service, F.T.E.O.]

The above reasons explain why so many officers complained in their reports that our equipment in Indochina was not appropriate and that there were too many adaptations or modifications of the equipment done at all levels. [Specially of commanders' cars and half-tracks,

radios....]

In spite of great difficulties, the Materiel Service tried to relieve this situation by fabricating locally or by modifying the existing equipment.

Local fabrication: Not very common and only of simple objects. It proved to be very useful. The most important results were:

- Grenade throwers, double or quadruple. It was of great help and was made of " several parts of a rifle model 1936 and arranged appropriately." [Report of the Materiel Service's Headquarters, F.F.E.O.] This weapon was utilized in posts or on armored carriers.

- Floating equipment (B.I.B. 54) which allowed the soldier to float with his equipment. 3000 pieces were built.

- The boat MYTHO, made of a woodden skull propelled by an engine and a transmission from a jeep. Several hundreds of them were built, and the users found them very practical.

Modification of existing equipment: Very numerous and fulfilling various needs: protection of personnel in vehicles, rapid set up of defense mechanisms, adaptation of certain arms for the defense of inplacements, etc....

For the protection of personnel, several modifications were tried out for trucks [the weight was too much, with the exception of the G.M.C. protected with a 40 A.A.,] and amphibious vehicles [only the boat "alligator" can be armored, and even in this case at the cost of speed reduction]; the floors of vehicles were reinforced [but this method became ineffective towards the end of the campaign,] and anti-mines and anti-grenades protective measures were taken.

Modifications were created for rapid defensive methods and all kinds of vehicles and boats were so armed .... " several combinations were realized; they were the fruit of long and detailed studies..... Seen in retrospective, they seem too involved. There should have been a program embracing the totality of these problems and sponsored by the higher command...." [Report of the Headquarters of the Materiel Service, F.F.E.O.]

Finally, the armament of fortified inplacements, the modifications of certain vehicles, trailers, tow trucks,

railcars, and other numerous pieces of equipment, prove that a great effort was done in this direction. However, though the effort was great, " it was more in the nature of a patch up job, and what we must learn from this quick revue of the campaign is that it should have been studied and planned carefully. Only then, all the equipment necessary for the fulfillment of the combat missions would have been built properly and according to industrial methods." [Report of the Headquarters of the Materiel Service, F.T.E.O.]

There were two problems, one of lack of means, the other of lack of organization.

A special problem:

THE TECHNICAL ORGANIZATION

To adapt the materials, the weapons, and the equipment to each particular campaign [terrain, climate, enemy, type of operations, decisions of the Command.... are the main factors involved,] becomes more and more difficult as the quantity and diversity of the equipment increases and is put to use.

In France, some stable organizations, with means, are oriented towards studies and projects over long periods of time. [For the Army, they are:

- A command center: E.M.A. (ARMÉE).
- A center for studies and construction: the Headquarters for the Studies and Construction of Armaments (D.E.F.A.).
- A center for experimentation, charged also with the responsibility for technical regulations: the Army Technical Section (S.T.A.).

Similar organizations exist in the other branches of the service.] It seems that they should be able to resolve the problems presented by a limited campaign as that of Indochina.

Nevertheless, the users, the services, and the headquarters complained about the poor adaptability of our equipment to the combat conditions. It would be interesting to find out the cause for this.

However, before looking for what could have been improved in the field of technical organization, and in its fonctioning, it is necessary to emphasize again an important idea: that of the delay that is necessary to study, test, and build.... new equipment. [From the moment when the need for a piece of equipment is expressed in terms of actual demands, it takes several

years to produce a fairly good prototype. Then, it takes at least two years to test it and produce it. These delays cannot possibly be shortened, and when it was tried to "do it quickly", the results were always terrible.]

This fact gives military techniques an inertia which makes prudence necessary. The consequences of a mistake may be very serious and long lasting.

Undoubtedly, this is the reason why certain pieces of equipment were never created since the intensity and the length of the war were for us desagreable surprises.

While keeping all this in mind, however, it must be recognized that we tried constantly to set up a technical organization and never succeeded. Perhaps, there is something to be learned from all this.... even though it is something negative.

The need for a technical organization was felt very early in Indochina. The variety and importance of the missions that it should have assumed, however, demanded very important means (which was impossible) or a very good liaison and coordination with the central organization in Paris.

In 1948, the "Technical Bureau" was created, and placed within the headquarters of Materiel Service, in SAIGON. It was charged with:

- a) " the study of projects concerning new materiel...
- b) follow up of testing and production processes...
- c) testing of new materiel....
- d) maintaining the liaison with the specialized organizations in France...."

and it had a personnel force of 12 officers, non-commissioned officers, and enlisted men.

In 1949, the "Technical Bureau" became the "Technical Section for Materiel" [there were also mixed organizations (Engineers, Signal, T.A.P., Psychological Warfare) which conducted their own studies and experimentations. The results were not centralized nor coordinated (Study made in February of 1954.)] The mission was changed: it was not any longer a question of following the processes of production of equipment, but " to study and prepare technical documentation...."

Later (1950) the missions a) and c) described above were changed as follows.

" To study, test, and begin the construction of new equipment (to include major modifications of old equipment) that would be convenient for the Indochina theatre, whenever this could be done with local means."

The inconveniences of this organization, however, were soon discovered.

The Technical Section was under the direct command of the Commanding General of the Materiel Service in the Far East. It was only indirectly influenced by the highest headquarters, which was the only organism that could help." [Study made in October 1951.] Its functions " are much greater than those of the Technical Section of the Army; they also include those of the ARIET and of the E.M.A., and those of the Headquarters for the Study and Construction of Armaments...."

To sum up: lack of command push, too great variety of functions, lack of coordination with the central organizations, control of the Materiel Service, which made other Corps create their own sections for study and development.

In May 1952, an improvement was brough about by a note that said: " all requests for technical works must be processed through the Third Bureau, which will determine what will be experimented, what modifications will be brought about in the equipment, and, eventually, will take care of other studies.... will decide on the priority of works to be done.... It is through it that the study of the equipment which will be needed for the future will be forwarded to France...." [Note of the Service specifying the technical function of the Third Bureau.] The structure of the existing organization was not changed.

Further, the distance from France has made impossible frequent contacts. In PARIS and SAIGON, the lack of coordination was regretted. The Letter of the Secretary of State for War (E.M.A./ARIET,) 20 March 1952, proposed :

1st - Coordination of the works of the S.T.A. and of the Technical Section, Headquarters of Materiel Service, F.T.E.O., to include distribution of duties....

2nd - At a more general level, contact.....

of the Secretary of State for War with the development organizations so as to work out together the study, the testing and construction of new equipment.] Different

proposals have been studied. What separated the "Overseas France" and the "War" made their realization impossible.

A great improvement came about on the first of January 1954, when the Indochina war became the responsibility of the French Department of Defense and not any longer of the Allied States. Unfortunately, the beficial effects were felt too late.

At the same time, the efforts of liaison down the line became successful around 1954. Noticing that " new and simple ideas, that can give good results, are not proposed, nor would they be accepted if they were proposed," the Commanding General decided to create a "Technical Organization".

In the territorial headquarters, and in all commands, an officer is selected, called the "Technical Officer" ("T" officer,) in contact with the Technical Section of the Third Bureau of the E.M.I.F.T. [Interallied Headquarters for Land Forces.] For this job, it is not necessary that the officer has a technical diploma, but he must be able to produce new ideas and to believe in them." [In reference to the Army problems.]

The end of the war, however, arrived before these efforts could result in a coherent organization, all along the line.

In the studies done about these problems, there seem to be good points, which indicate a desirable solution, a solution that was never obtained until the Expeditionary Corps began to withdraw:

- In each headquarters there is an officer "T" (who may have other fonctions) and who is in contact with a section of the Headquarters for the Supreme Commander (Section"T".)

- This section should be connected with the office for " General Studies and Plans," preferably the 4th and 5th offices [Army] the activities of which are oriented towards the solution of urgent problems and which have also different points of view on the subject. This Section "T", in contact with the ARMET and E.T.A. offices, [Army] should work within the framework of the National Defense office for Studies, Testing, and Construction.

- A technical section of the F.T.E.O. " would become the executive organism, under the direct command of the E.M. (Section "T"). It should include all the military

specialties (Engineers, Transportation, Airborne, etc...) [and no other branch would have a similar and separate organization.] It should have the responsibility to study and propose the adaptation of equipment to the local situation, to determine exactly all new requirements, to procure all equipment that does not come from France, to prepare all manuals (friendly and enemy weapons,) so as to help the command with studies and testing of technical material (new utilizations of known technical processes, or new processes.) Finally, it would be the overseas branch of the S.T.A. in Paris, which would be the one to conduct all important experimentations and with which there would always be contact.

- A technical counselor, to work closely with the Supreme Commander, would be very useful, especially considering the growing importance of staffs as organisms of command.

This role could also be played by an Adjutant of the Chief of Staff.

This new set up should not require more personnel because the technical fonctions would often be gathered together. What is important is that, at every level, there is somebody responsible who " takes an interest in these problems and believes in them."

Finally, it is not possible to do overseas anything too important, with the exception of tactical experiments and particular studies, and especially to study the requirements of the fighting men so as to orient the development of new material in that direction. Only powerful organizations can have the equipment and the qualified personnel to study new items, to test them, and to make them. The liaison with the central organizations (especially the offices ARMEE and S.T.A.) must always be close and frequent contacts must make the relationship live.

It seems useless to emphasize to such an extent a problem of organization that will certainly never come up in the same way.

Nevertheless:

- it focuses several problems covered superficially in other chapters and especially the bad influence of: the distance of the theatre of operations and the lack of liaison resulting from this; the lack of interest in the war, of which the soldiers accused France, and the lack of means granted to Indochina; the lack of communications between certain Departments; the annual budgets;

the particularities of each branch of the Service; the dispersion of efforts, etc....

- it focuses the attention on one aspect of modern operations: the technical aspect. Our organization is still not adapted to the problems that exist and our efforts are not conclusive. They can even be totally ineffective because of the lack of cooperation of one echelon.

Therefore, it has seemed interesting to sum up, for the sake of giving an example, what the efforts were to set up in the Far East a technical organization that was still not perfect by the end of the war, but, by then, it was probably improving.

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