



Armour Bulletin



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Recce Thoughts

Assault Troop, The Royal Canadian Dragoons, in Somalia

Transfer of Western Technology to Former Soviet Union
Armour Fighting Vehicles

Battle Fatigue

The Corps' Magazine

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The Armour Bulletin

The Armour Bulletin is published under the authority of the Vice Chief of Defence Staff. It is published twice a year to provide information of professional interest and as a forum for the exchange of ideas and opinions. Views and opinions expressed are those of the authors and do not necessarily reflect official DND policy. Contributions, suggestions, and comments on articles in the form of letters to the editor are most welcome. In this regard, the editor reserves the right to edit or reject any submission. Unless previously arranged all submissions will be considered copyright of her majesty. Correspondence should be addressed to:

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Armour Bulletin Writer's Guide

Subjects

We are interested in all subjects relating to Armour affairs that would be of interest to Armour personnel. This would include articles on R & D, personnel, equipment, training, tactics, and history.

Style

In that a readable article is preferred, authors are requested to fit the style of writing to the subject matter. Articles should be double spaced, typed on one side of the paper. Articles should normally not exceed 2,000 words. Only material of an unclassified nature should be submitted. Articles will be published in both official languages.

Illustrations

Artwork, sketches, black and white or colour photographs, maps, line drawings, etc. enhance the attractiveness and understanding of an article. Illustrations must be sharp and of high contrast. Washed out, grey, fuzzy or greatly enlarged photos reproduce poorly. Do not submit photocopies.

Next issue submission deadline

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Armour Bulletin

CANADA

Colonel Commandant's Foreword

GENERAL

As I write this foreword, we are awaiting the results and recommendations of the Joint Senate, House of Commons Committee reviewing our defence policy and the publication of a White Paper on defence. The Army has done well in presenting its case for a general purpose combat capability defined as the capacity of applying combat power effectively in sustained operations across the continuum of operations by integrating all Combat functions.

I am reasonably confident that the recommendations of the Joint Committee will be favourable to the Army and recognize the necessity for additional personnel to meet current and future commitments and for the modernization of its equipment. Notwithstanding this optimistic viewpoint, we should remember that other factors will influence the Government's decisions. The financial situation of the country, more specifically the demands for deficit and debt control, for a restructured social security system and the recommendations of the Joint Parliamentary Committee on Foreign Affairs will all weigh in the balance with the resources allocated for defence. Remembering that the defence budget is a large part of the Government's 'discretionary' spending, and taking note of the budget



reductions already announced and pending, the result of the current exercise may turn out to be less than our current expectations.

Hopefully, I am wrong, but if I am not what does it all mean to us? It means that we will have to continue to fight for what we believe our country needs to ensure its security and defend

its foreign policy interests in this uncertain world and the part our Corps performs as part of the combat team. Since ours is a profession at the service of the country it also means that we must individually maintain the highest standards and not allow adversity to discourage us but rather consider it as a challenge.

In the year in which Canada remembers the 50th anniversary of the end of the Second World War it is appropriate for us to recall and draw inspiration from the determination and dedication with which our countrymen faced adversity and difficulty and met the ultimate challenge of our profession.

A handwritten signature in cursive script, reading "J.A.R. Gutknecht".

Lieutenant-General J.A.R. Gutknecht,
CMM, OSTJ, CD
Colonel-Commandant

Director's Foreword for Armour Bulletin



As the turbulence within the Army that Col Peter Leentjes alluded to in the foreword to the last Bulletin continues, I find myself in the Director's chair. It is a privilege to assume the position and I do so with full knowledge of the challenges that lie ahead. Let me, on your behalf, thank Colonel Peter for his dedication and leadership. His prodigious intellect will be used to head the Army team in the review of Officer Professional Development. Along with my arrival is that of CWO Charest, the new Corps RSM. We will need your ideas and feedback to be effective.

There are three themes that will guide me initially: Stability, Teamwork, and Protection of our Corps Values.

Although even the Directorship has been rocked by frequent changes, it is my intention to continue to build on the policies of my predecessors; the Corps needs time to adjust to the ongoing and upcoming changes. The Corps Team must be enhanced especially now as our strength decreases. In our promotion of Regimental spirit, let us not disregard the greater good of the Corps. Total Force worked in 1990 in operations in Cyprus, it is working in 1994, but we must now look at the "next step" in the process. The representation of our Corps' values is not only the job of our Association; it is a job for all of us. We must not miss the opportunity to get the message across. The Armour Guide is our "songsheet" and we must all use it to sing. Incidentally, we will review it annually. Provide your comments.

Brigadier General Radley-Walters often states that an organizations's capability is tied to the level of its leadership, equipment and training. The Corps leadership is alive

and well, and very strong compared to the other Corps and Services. Our equipment is lacking in certain areas, but we do have new equipment coming in the form of the LAV Recce, and we also have the right officers in the right jobs to influence future decisions. Training is our biggest challenge, and is tied to our leadership. I challenge all leaders, from the CO to the Crew Commander, to make our soldiers' training interesting and relevant. We have new individual training management practices to deal with, but these are designed to save scant resources and will work eventually. Collective training is difficult with the level of operational missions we are assigned. But there is good training being done, and it is our duty to maximize its quality and level of retention.

While I am on the subject of training, let me mention the official opening of the Armour Battle School as a significant event in the life of the Corps. In addition to adding a unit to the ORBAT, we now will be in a position to better serve the training needs of our soldiers. LCol Hirschfeld and CWO Brown are building a first-class organization.

The Armour Bulletin continues its role as a platform for the debate of important Corps issues. The articles in this edition will fuel that debate as well as inform all members of the Corps and our friends of our history, recent and otherwise. Let us keep it a vibrant publication.

I look forward to meeting with you the challenges of the future. Worthy.

A handwritten signature in black ink, appearing to read 'J.O. Michel Maisonneuve'.

Colonel J.O. Michel Maisonneuve, CD
Director of Armour

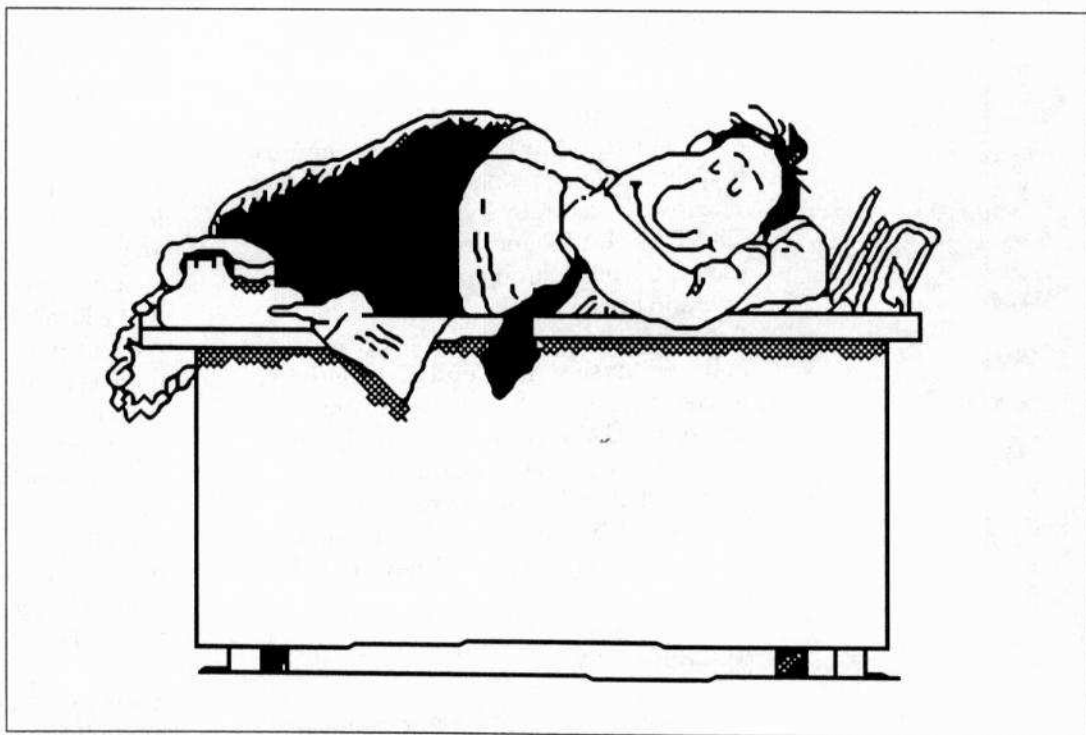
E ditor's Corner

Once again it is time for another edition of the Armour Bulletin. As in the past, the Armour Bulletin continues to provide an effective medium for members of the Corps to share professional knowledge and pass on experience. This has become particularly important as more and more units return from operational tours with invaluable lessons learned. This can clearly be seen in several of this issue's articles.

In addition, the Armour Bulletin should also provide the Corps with an open forum for debate. Currently the Corps faces a

number of critical issues which will shape our future into the 21st Century and beyond; Leopard upgrade, ACV, LAV RECCE employment and Manoeuver Warfare are but a few. The Armour Bulletin is an ideal platform on which these issues can be **debated** through articles, counter-articles and letters to the editor.

The floor is open.



Bosnia, a Troop Leader's Perspective

By Lt P.F. Gulovics

FEATURE ARTICLES

INTRODUCTION

The departure of the last troops of the Groupement Régimentaire (GR) 12^e Régiment Blindé du Canada from Camp Visoko on 11 May 1994 ended an 18 month tour of continuous duty in ex-Yugoslavia for elements of the 12^e RBC. On 3 November 1993, command of CANBAT II was transferred from the 2 R22eR to the 12^e RBC as a result of the new operational requirement for a more mobile formation in Bosnia to handle the expanding task of escorting humanitarian aid convoys. The CANBAT II force was restructured, doubling the number of Cougars and creating a second squadron. This brought the total number of Cougar escort vehicles to 47 and made mobile armoured support the strength and basis of the force.

The GR 12^e RBC was based in Visoko, a small town in Muslim held Bosnia approximately 20 kilometres northwest of Sarajevo. The town is centrally located in the CANBAT II AOR and from here convoy escorts travelled throughout central Bosnia, operating primarily in the Muslim and Croat territories. The line of confrontation between Muslim (BiH) and Serbian (BSA) forces was approximately two kilometres east of the CANBAT II camp. To the south was the Croat (HVO) pocket of Kiseljak surrounded by BiH forces to the north, to the south and west was the Serb-held territory that surrounds Sarajevo to the east.

ROLES

After the arrival of GR 12^e RBC in Bosnia the role of CANBAT II changed several times. However, the initial responsibilities were vital area security and vehicle escorts.

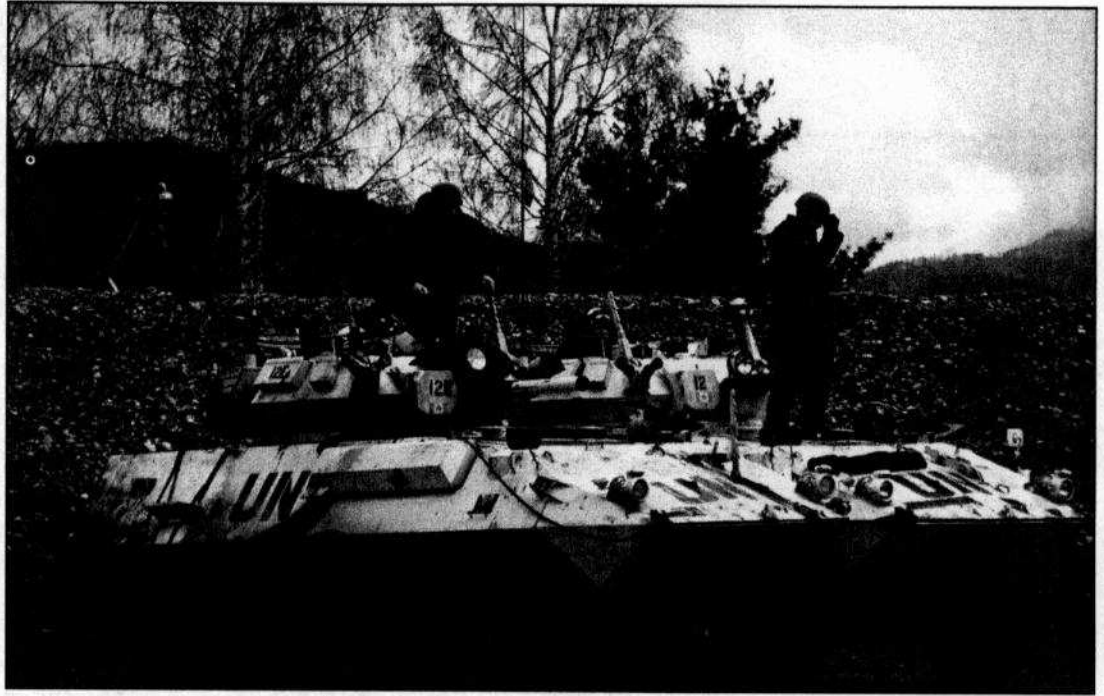
Tasks of vital area security included our well known work at the hospitals in Fojnica as well as the much publicized work of the A Coy 1 R22eR company in Srebrenica and humanitarian aid convoy, resupply, and VIP escorts.

CONVOY ESCORTS

Escorts consisted of any number of Cougars, APCs, medical and support vehicles. The largest convoys were in the area of 30 to 40 vehicles stretching several kms and including up to 15 escort vehicles.

Convoys varied in distance and time from as short as two hours, up to as long as seven days. This was not always simply a relation of their distance. Several factors affected their duration and success. For example, because confrontation lines did not always respect the lines of a road map, convoy escort commanders often found it necessary to traverse several confrontation lines during a single mission. With each crossing, the convoy was subjected to extended interrogation and inspection by the local checkpoint commanders as to the origin, destination and composition of the convoy. Even with direct, written clearance for passage from the region commander, local commanders often took matters into their own hands. Even convoys destined for the commander's own village were always challenged by charges that they were aiding the enemy. I called it the troll under the bridge syndrome. In other words, you must pay a toll to cross.

In this case, the toll was our forced witnessing of the local commander's power to single-handedly halt the mighty UN and drag us through negotiations. Lasting several hours, or even days, the final result



A 12^o RBC patrol arriving from a task in the Visoko area.

was often being denied passage. Armour training urged me to fire a HESH round into the roadblock and send a contact report; however, better judgement always prevailed. We were all very well aware that our 76mm gun was impotent and that patience was our only weapon under the circumstances. Equally important was a good sense of humour; it was often the only saviour from complete and utter frustration. Although we technically had the right to freedom of movement, our passive nature as UN representatives denied us the ability to force our passage. Any force on our part would have worked against us in the long run.

From experience we knew that the routes we travelled were well targeted by the belligerents. Passing a checkpoint by force would only guarantee directed fire to halt our movement. The end result could be UN casualties, or at the very least our next attempt at passage in that area would surely be denied. Ultimately, those who would suffer the most would be the hungry who would never receive the aid. Therefore, we

had no choice but to follow the directives of the belligerents, no matter how frustrating, in the hope that eventually a settlement would be reached and the convoy would get through.

Closure of the main roads by belligerents often forced us to travel dangerous mountain routes to reach our destinations. We learned through the death of two 12^o RBC members on 29 Nov 93, that even the best of roads can turn deadly under winter conditions. Travelling in convoys composed of 12-ton Cougar armoured vehicles and 20-ton aid trucks stretching as long as 20 meters, the dangers are obvious. Put these convoys onto snow covered mountain roads made for horse carts and accidents are almost unavoidable. Again, we learned through experience that these large trucks often could not climb steep icy hills. Even worse, they could not turn around when the roads become impassable. We were forced to abandon many trucks to the Bosnian winter. Added to these problems was the ever present danger of coming under fire from belligerents who did not like the idea

that we had bypassed their checkpoint. We were constantly aware that we were under observation and probably in the cross-hairs of a belligerent's sights as soon as we left our camp; yet another painful lesson we learned through experience.

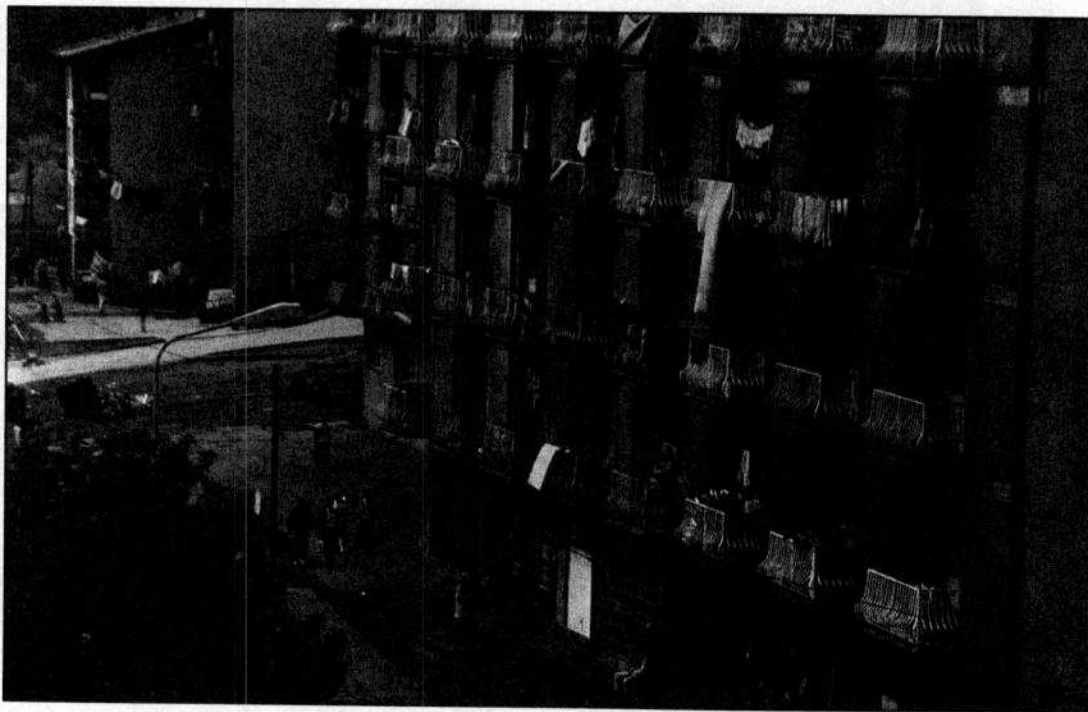
In the end, most convoys reached their destinations no matter how far behind schedule. Our main concern was always finding a balance between the necessity of the aid and the danger delivering it involved. As UN soldiers, it was a given that the welfare of those we were there to help took priority over our own. No mission is without risk, however we tried to minimize it as much as possible.

WEAPONS COLLECTION AND MONITORING

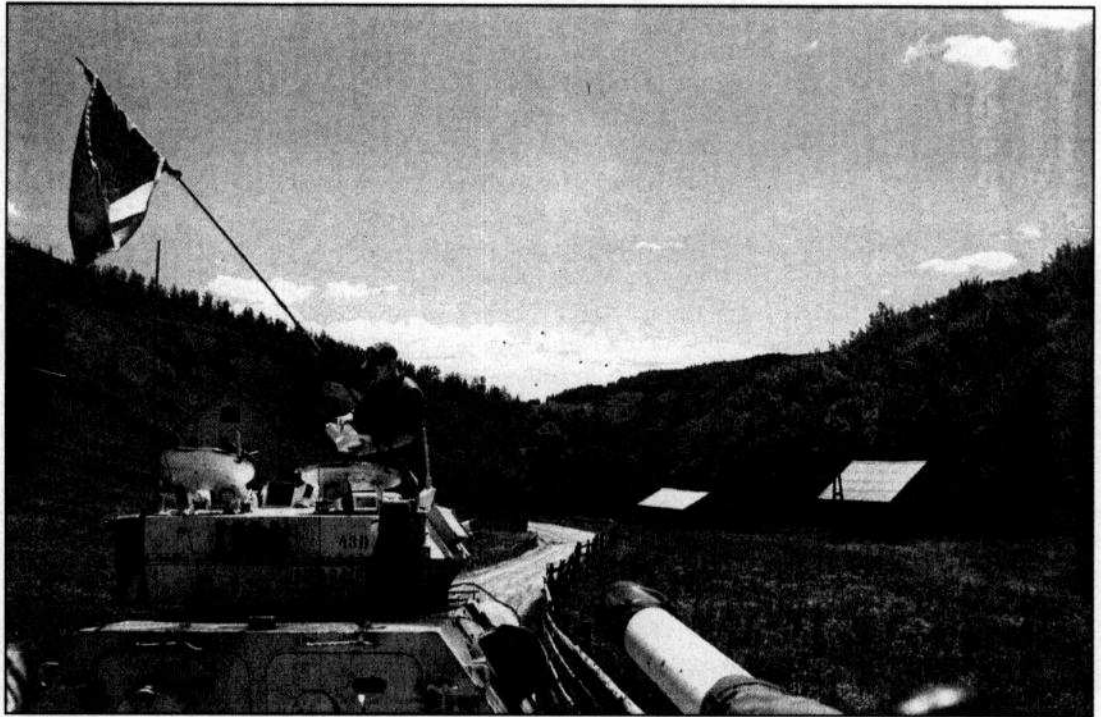
At approximately the four month point of the tour, the role of GR 12^e RBC began to change as a result of two important political developments in the war. The first was the establishment of the 20 kilometres

exclusion zone around Sarajevo. The second was the negotiation of a cease fire and exclusion zone between the HVO and BIH in Bosnia. The result of both peace initiatives was a shifting of the GR 12^e RBC role toward weapons collection and monitoring in the Sarajevo 20 kilometre zone, as well as, direct responsibility for the establishment of an exclusion between the HVO and BIH forces in the Kiseljak pocket.

These new roles called for the manning of several static positions including UN checkpoints to facilitate the movement of vehicles and personnel, overwatch positions to enforce cease fire agreements as well as protect vital points from fire, permanent OPs to monitor the movement of weapons, and enforce weapons free zones. These new taskings resulted in a dramatic increase in movement and the stationing of Canadian troops within the front lines of all three warring factions. The result was a dramatic increase in direct contact with the belligerents.



Picture of a street in Srebrenica. Hundreds of people live in these types of buildings.



A patrol pauses for lunch during a task in the Bosnian countryside.

DANGERS

These static positions proved to be one of the most dangerous tasks during the tour. On two separate occasions members were taken hostage by Serbian forces. The first incident involved the death of a Serbian soldier by a Muslim sniper at a joint Canadian/Serb occupied checkpoint on 22 December 1993. This checkpoint was originally established by GR 12^e RBC to facilitate movement along Route Finch between CANBAT II AOR and Sarajevo. In response to the death of their comrade, drunken Serbian soldiers at the checkpoint took several Canadian peacekeepers hostage. The resulting harassment and beatings of the Canadians is well documented. While in operation, Route Finch reduced by half the travel time from Visoko to Sarajevo. Following the hostage incident, the checkpoint was abandoned and all Canadian soldiers moved to the BIH side of the confrontation line.

The second incident revolved around the NATO air strikes on Gorazde. Following the NATO action, approximately 200 UN personnel serving within BSA lines were detained, 15 of whom were Canadians. The Canadian soldiers were held for 5 days in a village deep behind BSA front lines. Luckily, all the captives were unharmed. This incident, along with the one on 22 December, underlined the vulnerability of UN soldiers to unpredictable belligerent aggression.

UN Soldiers were often confronted by belligerents who were not professional soldiers and had little if any discipline or respect for their own command structure. When faced with hostile belligerents, a soldier's instinctive reaction is to face aggression with aggression. When confronting belligerents as a peacekeeper, however, these instinctive reactions are handcuffed. UN commanders at the lowest levels must consider the result of their individual actions and reactions on the future success of the

UN mission as a whole. Each party in a war will use without hesitation, the smallest incident to draw attention to their cause or as an excuse for aggression. The resulting frustration of inaction and feelings of vulnerability experienced by all levels of command are an unavoidable by-product when working with unpredictable parties under completely unpredictable circumstances. Only by facing the new reality of the Bosnian situation were we able to deal with these emotions.

NEW REALITY OF THE UN IN BOSNIA

We arrived in Bosnia believing that as UN peacekeeping forces, a thin blue silk flag would be our shield, as it had been in the past. We quickly learned that in Bosnia this was not to be the case and that Canadian personnel and vehicles would frequently be the targets of aggressive fire. As UN policy demanded that we could not fire until fired upon, our only remaining deterrent against aggressive action was our ability to intimidate the belligerents by demonstrating our superior and effective firepower. What became very clear to us, as well as to those firing upon us, was that we did not have this capability. The belligerents soon

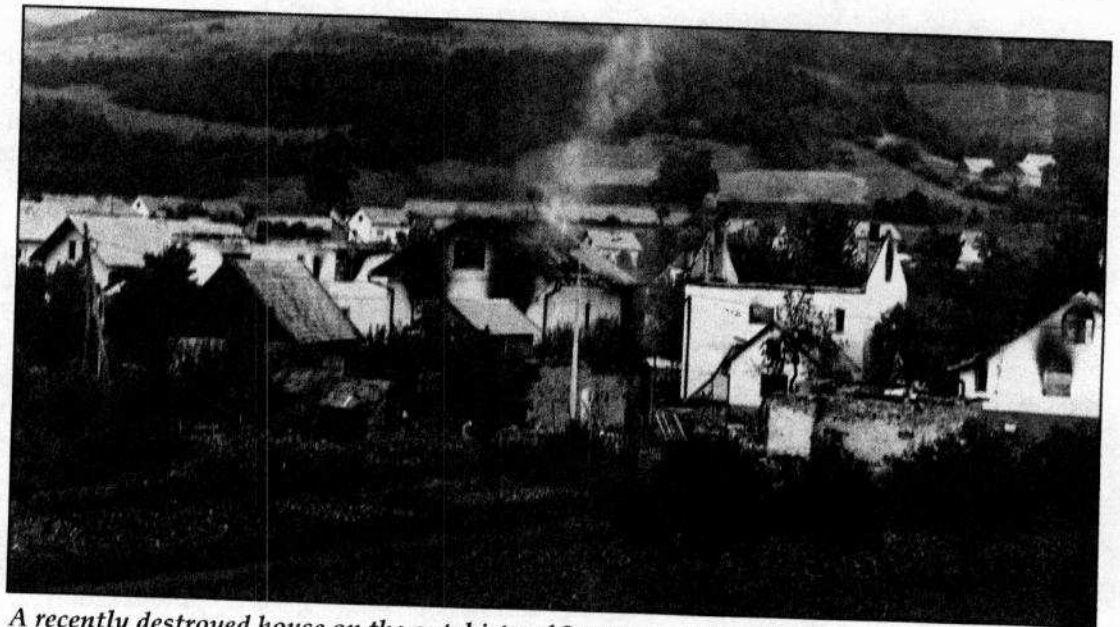
learned to exploit our vulnerability, often forcing us to abandon convoy taskings due to our lack of ability to properly protect them.

FACING THE NEW REALITY

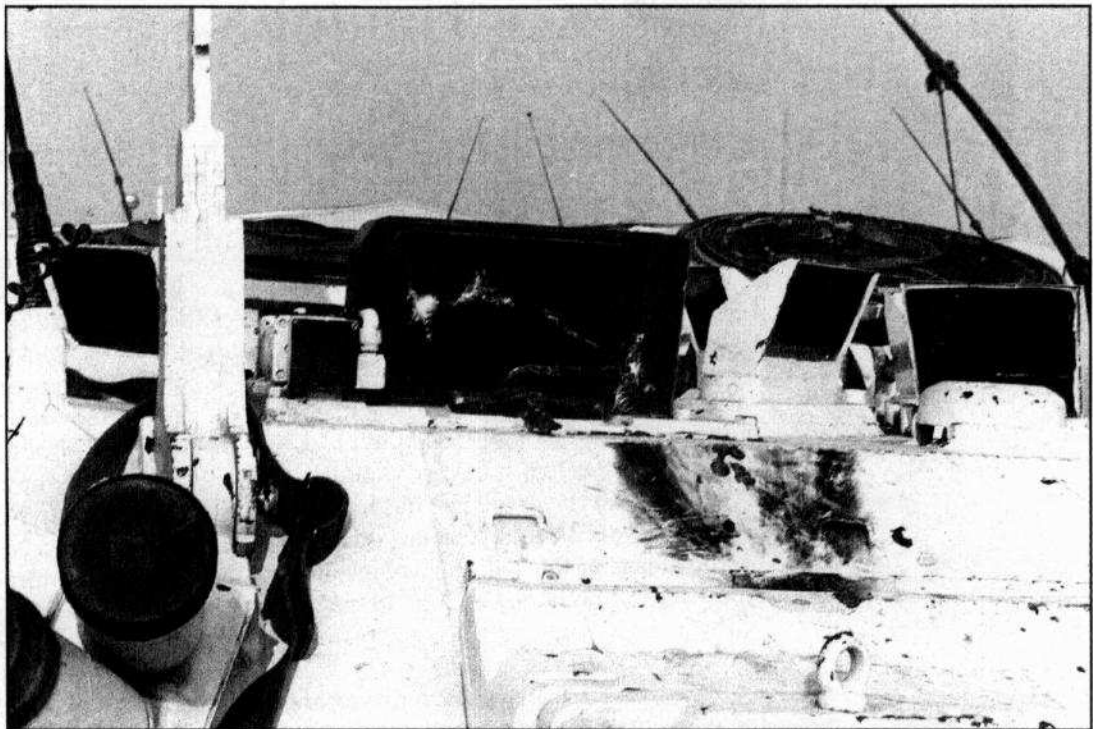
Our tasks in Bosnia were both mobile and static. The Cougar was the primary vehicle for convoy escort, while the M113 assumed the majority of the static taskings. While mobility during convoys offered us protection from fire, a fire control system and weaponry that would enable us to return fire on the move was something the Cougar could not offer. In static roles, the mobility problem was resolved, however, we then become easy targets. With only the right to return fire once fired upon, the lack of armour on the M113 made this a losing scenario as well.

SUGGESTIONS

The LAV-Recce project offers great hope in the area of convoy escorts. The weaknesses of the Cougar gunnery system are all overcome by the technology offered by the LAV-Recce's stabilized fire control system. With a laser range finder and stab capability, the LAV offers on-the-move target ranging



A recently destroyed house on the outskirts of Sarajevo still on fire.



Evidence of just how lucky Canadian Troops have been. Unfortunately, the radnis that stopped the shrapnel, was not replaced because of a lack of spare parts.


and accurate rapid fire with its 25mm chain gun. Although armour on the hull is not improved it still offers a significant improvement in performance over the Cougar.

From our experiences with the other participating UN countries, we were acquainted with a variety of modification packages for the M113. Most involved simple add-on armour that provided protection against the primary weapon threat; the RPG. A better suggestion might be to exchange the M113 for the Grizzly AVGP. The Grizzly offers the flexibility of a choice of 7.62mm and 12.7mm machine guns under armour, sloped armour, better mine protection, as well as its compatibility with the Cougar AVGP for convoy escorts and maintenance.

CONCLUSION

As with any professional soldier, our only demands were to be given clear missions, clear orders, and the tools to accomplish

them. As proud Canadian soldiers we would carry out whatever task is demanded of us by our leadership to the highest standard. I can speak for those men under my charge when I say that we were proud to have aided and protected the innocent victims of war in the name of our country. We only asked that we be given the tools to do that job and the ability to protect ourselves.

The legendary thick skin of a Canadian soldier can protect him against fatigue, the elements, the loneliness and the frustration of the trolls under every bridge, but don't be fooled – it cannot stop a bullet! 

Lt P.F. Gulovics is presently 2 Troop Leader in A Sqn at the 12 RBC, CFB Valcartier. Previously, he was Troop Leader in the former Yugoslavia.

Recce Thoughts

By Captain C. Branchaud

The appearance of the LAV-Recce on the Canadian reconnaissance scene is undoubtedly a leap forward from the Lynx. While the new vehicle is going to give our units capabilities previously inaccessible to them, questions arise as to how to exploit these new capabilities to our best advantage. Now that the type of vehicle has been chosen, it would be unnecessary to dwell on the merits or flaws of this vehicle in comparison to others. We have to live with it, like it or not.

I will discuss some areas which may change the way we conduct reconnaissance and the way we organize our reconnaissance units as a result of the introduction of the LAV-Recce system, more specifically; Crew manning and Regimental organization.

The LAV-Recce is due to be employed by the Armour and Infantry Corps in brigade (bde) and battlegroup (BG) reconnaissance roles. The Infantry propose to have a four man crew for BG recce, we plan to keep a three man crew for bde recce. This seems to be due to the fact that the Lynx had a three man crew, and staff logic applied, the army expects to have the same number on LAV-Recce even though the vehicle and its system are more complex. (It is fortunate that we did not go from Ferret to LAV-Recce or we would be missing a gunner!) Any bde recce soldier would admit that three men per vehicle (six per patrol) is not enough to do the job properly for extended periods of time. Patrols from the bde recce squadron often have to deploy a fair distance from friendly forces compared to their BG counterparts and may find themselves isolated from any sort of relief force or resupply. They have to rely on their integral resources and may have to continue on a given mission for days.

In the defence, deployed in a screen of OPs forward or on a flank, the patrols of the recce squadron must stay isolated and alert. This is very difficult to achieve for any length of time with only six men. A good OP should have two men on observation duty at the OP itself, one on radio watch and two on security/guard at the OP base on a 24/7 basis. Therefore, five men are required at all times to fill the mission. If those men have to rest at all, five more will be required to take their place. Some of the readers may argue that they achieved their mission with their Lynx patrol (six men) or even their Ferret patrol (four men). While they may have survived their tasks, one can question for how long were their OPs really effective before fatigue settled in and just how secure were they?

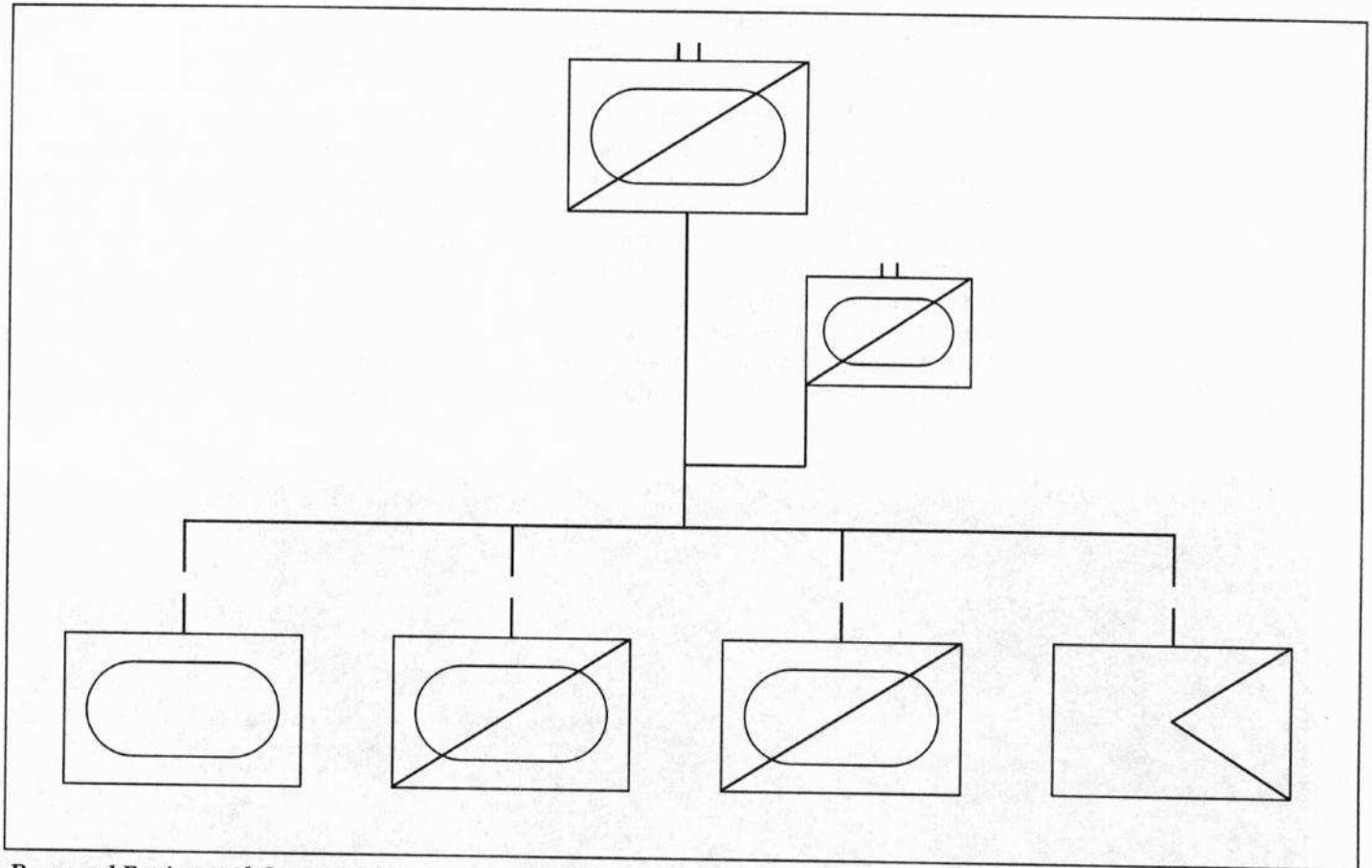
In the offence the squadron patrols may often have to dismount personnel in order to verify the state of a bridge, a ford or other points of interest. This has traditionally been done by putting patrol vehicles in positions of observation while a crew member from each vehicle dismounted, teamed up, and investigated. This left the patrol vehicle without a complete crew in the event it would have to fight while personnel were on the ground. It also provided for only two dismounted scouts on the ground to investigate and cover each other. NOT ENOUGH! A "brick" of at least four scouts is required to physically investigate a given point and to provide itself with mutual close support. If the dismounted scouts get in trouble, the crew positions required to fight their vehicle (crew commander, gunner, and driver) must be fully manned to respond to the threat and to assist in the extrication of the dismounted personnel from their

precarious position. Some may argue that dismounted tasks should be left to the support/assault troop. But they should know that all too often the support troop has its own agenda of tasks, independent of the forward recce troops. The same logic may be applied to convoy escorts during U.N. type deployments. Two scouts per car, mounted in the rear of the vehicle and observing at angles that the rest of the crew can't see (rear angles), capable of using their personal weapons on close threats (ie RPG gunners) could be invaluable and life saving.

While it is understood that restrictions and budgetary constraints may prevent the augmentation of crews from three to five per vehicle in peace time, the official operational establishment for a recce squadron should reflect the necessity to have five man crews (crew commander, gunner, driver, and two scouts) in the recce troops. In the event of deployment for specific reasons (operational emergency, U.N. duty, or large exercises), the additional personnel could be augmentees from the area armour reserves. Our new recce vehicle



US LAV-25 (the basis for LAV-Recce).



Proposed Regimental Organization.

has the capacity to carry two scouts in the back. The recce squadron establishment must provide for five men per LAV-Recce vehicle.

Another point for debate is the value of distributing LAV-Recce to the infantry. While the battalion recce platoons undoubtedly need a replacement for their Iltis, one could argue that the LAV-Recce may be overkill (this argument can also apply to the armour RHQ recce troop). BG recce troops fill a different role compared to bde recce, and their range of operation is not the same. The gadgetry of the LAV-Recce surveillance suite may be unnecessary to fulfil their mission while they may require the reduced size and increased agility of a vehicle such as the French VBL to lead assaulting combat

teams to the right assembly areas, to secure lines of departure, or to picket withdrawal routes, etc. The VBL could be just the vehicle to fill this role and it would also relieve the infantry of the need to rely on the Armoured Corps to train its recce patrols, especially in regard to gunnery. For example, the VBL is presently used extensively by the French Army in the former Yugoslavia for liaison, as well as close recce tasks and has been found to be perfectly suitable for its mission. It is a simple, effective and inexpensive armoured vehicle.


With the infantry recce in a vehicle such as a VBL, the Armour Corps could fully employ the allocation of LAV-Recce. The organization of our Brigade Groups pseudo Armoured Regiments have been for too

long just that... pseudo! Even in Germany we never had a full four tank squadron Regiment.

While in the past the Armoured Corps has put the tank function first and reconnaissance function second, thought should now be given to reversing this priority. Let's face reality: our regiments now just have one tank squadron and they are not about to receive any more. On the other hand we have a fleet of obsolete Cougars on which we are planning to spend more money to keep turrets in place while we are introducing the technology of LAV-Recce. The Corps is too small to maintain and train with a three vehicle type fleet. With our involvement in U.N. regional conflicts, recce type tasks have increased and the Cougar is only a "make do" vehicle for the job. With current U.N. missions and the rotation cycle that the Armour Regiments are facing, it is not one but at least two LAV-Recce squadrons that are required per regiment.

This organization could be achieved by getting rid of the Cougar fleet and taking over the infantry LAV-Recce vehicle to form a second recce squadron per regiment.

With such a configuration, our regiments could provide a recce squadron to a U.N. BG while the follow-on squadron could train on their LAVs at home, as well as, continue to provide the bde commander with both recce squadron and MBT capabilities. If an entire regiment is ordered to deploy and form (with attachments) a Recce BG, its two LAV-Recce squadrons and MBT squadron (if deployed) would prove to be an important asset to the local U.N. force commander.

It is time that we face reality and that we stop lingering on impractical solutions. Our recce troops and patrols must have the personnel to carry out their missions efficiently and our regiments should be organized in order to provide the commanders with the best structure the few resources at their disposition can provide. 

Capt C. Branchaud is presently and has been for the past few months 2i/c Recce Sqn at the 12 RBC in CFB Valcartier. Previously, he was 2i/c Tac Sqn in CFB Gagetown.

Assault Troop, The Royal Canadian Dragoons, in Somalia

By Capt R. Moreau and Lt D.J. Adams

On 7 March 1993 Assault Troop, Recce Squadron, The Royal Canadian Dragoons touched down on the tarmac of Mogadishu Airport in the Somali capital. It marked the beginning of a four month tour in a tormented city. Our mission, as outlined by Joint Task Force Headquarters (JTFHQ) Somalia, was to provide a 44 man Defence and Security Platoon (D&S PI) to guard all Canadian facilities in Mogadishu as part of Operation Deliverance. We replaced a 20 man group from the Mortar Platoon of the First Battallion, the Royal Canadian Regiment.

Special Service Force HQ was made aware of the request for an additional 44 man platoon for security duties in late January 1993. In the first week of February, The Royal Canadian Dragoons were selected to provide the D&S PI. Following a detailed staff check, Assault Troop was selected to form the basis of the platoon. Augmentation would come from other troops within Recce Squadron and from RHQ Recce Troop. A training plan was drafted, but it was impossible to begin training until the official tasking message from LFCA HQ had been received. With a proposed deployment date of 6 March 1993, to coincide with the airlift to move 93 RCAF (the helicopter flight for Somalia), time was running short. When the message finally arrived, we had just under four weeks to complete training, prepare our personnel and equipment and, if time permitted, take embarkation leave.

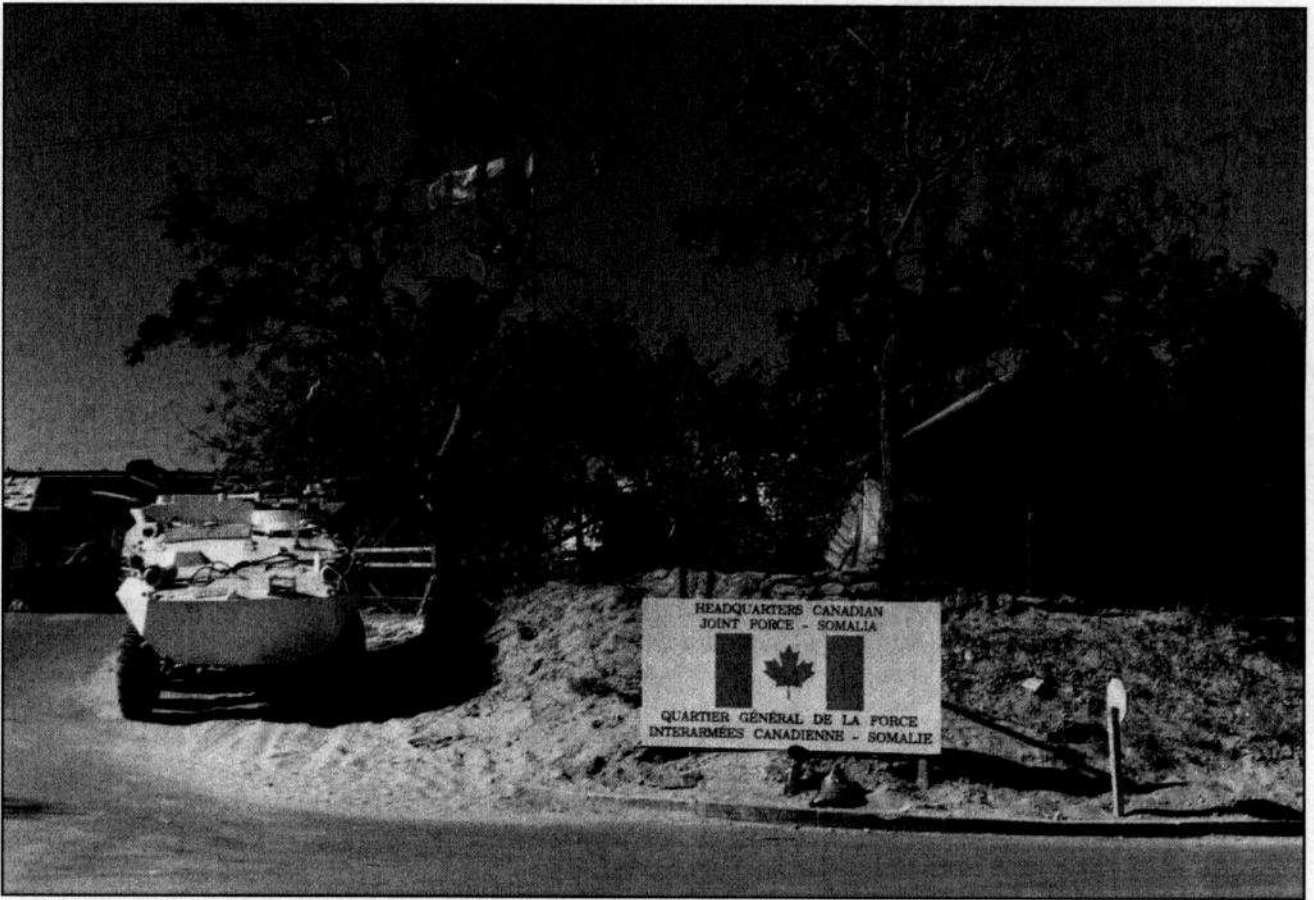
This article will discuss the training, deployment, operations and lessons learned from our participation in Operation Deliverance.

TRAINING

Despite the limited time available to train, several factors played in our favour. First of all, 55% of the soldiers and 70% of all leaders came from Assault Troop. Secondly, 65% of the augmentees came from the same squadron while the others came to us as a formed section from RHQ Recce Troop. Thirdly, all soldiers had been involved in EX STALWART PROVIDENCE in preparation for the Airborne Regiment's deployment to Somalia. Finally, the annual cycle of refresher training was almost complete. These factors combined to ensure rapid integration of all elements and a high level of cohesion. Commonality of training proved to be a key factor in making it possible to train for a short notice deployment. Since the troop would perform mainly infantry tasks, we reviewed section level tactics and SOPs. It was also decided to focus most of our training on individual and theatre related skills. We set aside a three day period for a troop level exercise which was set-up and controlled by the Squadron Commander.

Overall, the training was good and I felt that the troop was well prepared for its mission. However, the following lessons were learned:

- a. troops must be exposed to live fire prior to deployment. This can take two forms: section/platoon level live fire operations and exposing soldiers to the effect of small arms fire up to mortars (artillery might be required based on the threat);



Main entrance to the HQ of the Canadian Joint Force Somalia. Located in the former US Embassy Compound.

- b. more information on the area of operations must be made available to unit leadership before deployment. Better informed leaders make better decisions. This information must cover the following topics: politics, history, economics, geography, demography and a detailed background of the present crisis;
- c. a minimum of two weeks is required to fully retrain a crewman to become an infantryman. This can be quickly achieved using the instructors available in the local Battle Schools and by focusing on basic infantry skills. This is only required if crewman are to perform infantry tasks only;
- d. depending on the mission and threat, consideration must be given to train snipers. The snipers would be employed for close protection and counter sniper operations;
- e. a special effort must be made to train under conditions similar to those existing in the theatre of operation. It is hard to focus on the mission in sub-zero temperature when you know you will be operating in a very warm climate. Using training facilities in the US during the winter months should be considered. This option is not valid for short notice deployments because of the amount of liaison required to organize such training; and

f. operations in built up areas must be rehearsed in detail, depending on the situation existing in theatre.

OPERATIONS

Our primary task was to perform perimeter and vital point security at the Joint Task Force Headquarters (JTFHQ) located in the U.S. Embassy compound in Mogadishu and at the Canadian Airhead and National Support Element (NSE) which were both located at the Mogadishu airport. This was done initially in cooperation with US Marines. Following the departure of the Marines, we worked with Turkish forces at the embassy and with the 7th Frontier Force of the Pakistani Army at the airfield. Our task quickly expanded to include the following:

a. access control at Gate Three to the U.S. Embassy compound with Turkish forces;

b. mounted and dismounted patrols with U.S. Marines and Turkish troops through the streets of Mogadishu. These consisted mainly of recce patrols and security patrols around the U.S. Embassy and airport;

c. setting up roadblocks to confiscate illegal weapons;

d. searching houses to confiscate illegal weapons;

e. providing security elements for the U.S. EOD team in the Mogadishu area;



Lt Adams assisting a US EOD Team.

- f. convoy and VIP escorts throughout Mogadishu;
 - g. route recce and traffic control; and
 - h. provision of a section size quick reaction force for the Australians and Turks manning the main gate of the U.S. Embassy.
- Several other tasks also performed when required were:
- a. providing security on CC-130 aircraft when they were tasked to transport Somali delegations to attend peace talks in Mogadishu;
 - b. providing a security detachment to elements of 93 RAAF involved in operations in the area of Kismayu in Southern Somalia;
 - c. providing a security detachment for a CC-130 relief flight into Gaalayo in central Somalia;
 - d. patrols in cooperation with the J2 branch to collect information in the city of Mogadishu; and
 - e. reinforcing the security perimeter at the New Port in Mogadishu during the fighting in June 93 in cooperation with U.S. MPs.



Bombed out luxury hotel on the Green Line.

The first obstacle we had to overcome was the acclimatization to heat. Soldiers must be closely supervised during this phase. The risks of dehydration and severe sunburn were real. For the first three weeks soldiers drank an average of up to eleven 1.5 litre bottles of water per day. This gradually came down to about three bottles per day. Exposed, unprotected skin can burn to second or even third degree in less than 20 minutes. Exposure must be gradual and it goes without saying that protective lotions must be employed at all times. Part of the acclimatization process is the gradual increase of workload. This becomes a problem when attempting to organize duty and sentry lists. We found that after two hours on guard duty in the sun, with full light order and flak jacket on, most soldiers were no longer effective. Tours of duty were made shorter, but the frequency was greatly increased. This situation had an impact on the soldiers' quantity of sleep. When leave and injuries were factored in, the problem became exacerbated.

During this phase, one must pay close attention to soldiers experiencing greater difficulties than their peers in adapting to the local climate. If they are unable to complete the transition successfully they must be repatriated. If not dealt with rapidly they can have a negative impact on moral and operations. The other soldiers will have to pick up their workload. Their peers will be reluctant to work with them and will rapidly cease to trust them. It would also be advantageous to deploy to a neighbouring country which offers similar weather to complete the training and start the acclimatization process.

During operations, we quickly learned that Somalis respected firmness and aggressive behaviour. If troops were alert, covering their arcs, holding their ground and handled the locals in a firm and friendly

manner, we were rapidly able to gain their respect. Although we represented a small contingent within Mogadishu (Pakistan and Italy each had a Brigade in that area) the local population knew who we were.

One very frustrating aspect of our work was our total lack of judicial powers against thieves, bandits and looters. Once a Somali was arrested, he was normally handed over to the UN MPs or to the Somali Police Force once it was reconstituted. However there was no judicial system to try and sentence them for their crimes, so it was not uncommon to arrest the same person several times in the same week.

Over 20 countries formed the coalition force. Working with other NATO armies or professional armies was relatively easy. When operating with most non-NATO or non-Western countries, conventions and battle procedure, which we take for granted when working with NATO and Western armies, did not work and a great deal of coordination was required. Several obstacles had to be overcome, such as religious differences, the lack of experienced Senior NCOs in some armies and working with conscripts. The behaviour of some soldiers from other countries towards the local population was unacceptable to our soldiers but was perfectly normal for others. We learned the following lessons:

- a. not to wait for others to establish liaison with us. We had to make the first step and contact all surrounding contingents;
- b. to avoid misunderstanding we briefed them on our mission, our capabilities and how we could assist them if required;
- c. we worked out plans and procedures for emergencies. We elected not to wait for an incident to arise. We conducted limited rehearsals and training with the other contingents;

- d. we compared SOPs, drills and procedures;
- e. we found that it was very important to establish simple but effective ways to communicate, especially for armies that did not operate in English or French;
- f. we quickly learned to avoid adopting other contingent's SOPs, weapon policy, Rules of Engagement (ROE) and Levels of Force (LOFs), especially if it was likely to confuse our troops;
- g. when our troops were detached to operate with another contingent, we maintained communication with them if possible. We prepared contingency plans to reinforce or evacuate our soldiers. (Do not assume that your soldiers will be looked after in case of emergencies, especially if the other contingent has its hands full);
- h. we conducted regular liaison visits with the various contingent HQs. This assisted us in solving problems or misunderstandings as they arose; and
- i. our soldiers must expect to have to take control of the situation when working with conscripts since they have very little experience and virtually no initiative. They will normally wait for one of their NCOs to show up before taking action. They looked up to our soldiers for guidance. The senior Cpls in the troop always took charge of the situation until a Turkish NCO or Officer showed up at Gate Three. It is important to mentally prepare your soldiers to deal with conscripts.

We found that once in theatre you must regularly review your ROEs and question your soldiers about them constantly. ROE and LOFs must become second nature to all personnel to avoid hesitation in critical

situations. The ROE and LOFs must be clear and simple. This is extremely important in order to avoid grey areas and hesitation.

We also learned that any incident which results in excessive force being used by your troops must be dealt with quickly and all soldiers must be debriefed on the incident and be made aware of the lessons learned. The same practice should be applied for any significant incident or operation. Following tense periods or events, look closely for signs of fatigue caused by excessive stress. Soldiers who have suffered emotional trauma after an incident should be seen by competent medical authorities as soon as possible. If medical resources are not available the padre can assist. A discussion with all soldiers involved in a particular incident also proved to be helpful.

During our tour, we attempted to remain up to date with the tactics and capabilities of the belligerents involved in the conflict. We placed a great deal of emphasis on remaining alert at all times. It was too easy to become over confident and to underestimate local forces. It was important to avoid becoming complacent. Before operations, we conducted rehearsals and followed battle procedure. This was well done at section level but could have been improved at troop level by issuing orders on a more regular basis. Finally, we attempted to review our procedures and SOPs continuously and to tailor them to new situations and threats. We encouraged input from all levels of the chain of command.

CONCLUSION

Despite the short notice we received to mount such an operation, we were able to successfully accomplish our mission. As mentioned, several factors played in our favour. For instance, short notice

deployment would have been impossible if the D&S Pl would have been comprised of personnel from different units. One plan considered forming a section from four different units with one of these units providing the platoon HQ. This option would have required more training in Canada in order to develop the level of cohesiveness required for the mission. The time required to achieve cohesion within a unit is directly proportional to the number of soldiers and leaders coming from outside the unit tasked to mount the mission.

Many of the lessons learned might not be applicable to other UN missions. One must remember that OP DELIVERANCE was an armed intervention under the auspices of the United Nations and commanded by the United States, much like the Korean Conflict and the and Gulf War. Canadian troops never wore the blue beret, even after UNITAF handed over command to UNOSOM II on May 4th, 1993. Some of the lessons learned are, however, likely to be applicable in future peace restoring and /or peacekeeping missions.

Our experiences in Somalia have given my soldiers and I great faith in the general purpose training received in Canada. Canadian soldiers ranked among the best,

if not the best of the coalition forces during Operation Restore Hope. Despite our good reputation, we must continue to strive to improve our training methods. In particular, we must improve our ability to pass on lessons learned throughout the army.

Without enumerating the hardships of operating in Somalia, and despite our feeling of hopelessness for an entire country, Assault Troop, Recce Squadron, The Royal Canadian Dragoons, performed in a professional manner. Although happy to leave Somalia at 1647 hours, 17 June 1993, the experience and memories will stay with us all forever.

Capt R. Moreau is presently the Ops O of the RCD Btl Group in Visoko, former Yugoslavia. Previously, he was BC Recce Sqn of the RCD in CFB Petewawa.

Capt D.J. Adams is presently one of the duty officers with the RCD Btl Group HQ in Visoko, former Yugoslavia. Before his promotion to captain and at the time of the article, he was 2i/c of the Defence & Security Pl in Somalia.

T ransfer of Western Technology to Former Soviet Union Armoured Fighting Vehicles

By Capt James Bradley

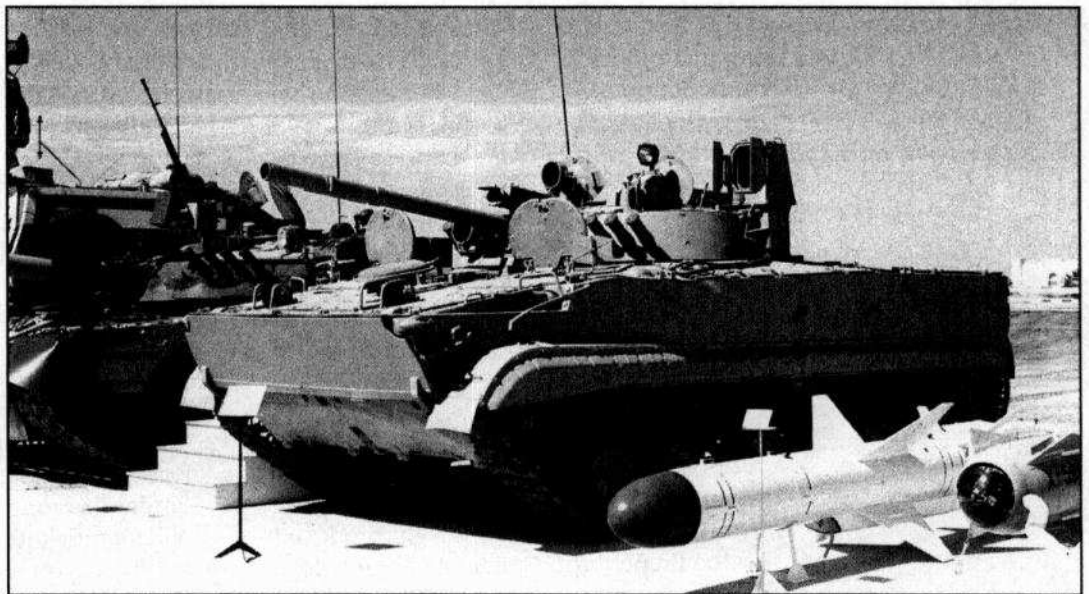
One conclusion drawn from the Gulf War was that the Coalition Forces enjoyed a definite technological advantage over the Iraqi Forces in regard to the capabilities of their AFVs. Analyses conducted by both the US Army and US Marine Corps clearly indicated that Coalition Forces were able to engage targets at greater ranges with higher accuracy, in all weather and visibility conditions, than the Iraqi Forces. The thermal imaging (TI) sights and digital fire control systems found in such tanks as the M1 Abrams and Challenger were clearly superior to the image intensification (II) sights and analogue fire control systems found in the Iraqi T-72s.

These lessons may provide a false sense of security for those who believe that the West can win any future conflict of this nature because of our superiority in technology. This article will discuss the transfer of western technology to Former Soviet Union (FSU) armoured fighting

vehicles (AFV) and the impact this transfer may have on future Canadian operations, be they peacekeeping or peacemaking.

Producers and owners of FSU AFVs have recognized the technological shortcomings in their equipment and are now engaged in efforts to correct them. They realize that to compete on the battlefield or in the marketplace their equipment must be comparable to that available in the West. They are also aware that the obvious sources of the required technologies are those western countries who produce, or have the knowledge and capabilities to produce, the required high technology fire control systems.

Russia, Poland, the Czech Republic, Ukraine, India, Pakistan, and the United Arab Emirates are known to be initiating active AFV product improvement (PI) programs incorporating western technology. The first four countries are both producers



BMP-3 with French SAT TI (same as on the Leclerc MBT).



Polish PT 91 with the Israeli TI.

and users, while the last three are users only. All are employing both western and FSU technicians to develop and incorporate this new technology.

To date, France, Belgium, Israel and South Africa are known to be contributing or offering western technology TI sights and/or fire control systems for use in FSU AFVs. Several are advertising their wares at international arms exhibitions and in various international publications devoted to military equipment and technology. Sales of these improved AFVs to third world countries will continue to increase. One example of an FSU AFV which has received Western technology is the BMP-3 recently purchased by the UAE which incorporated the ATHOS TI sight produced by the French firm Soci t  Anonyme de T l communications (SAT). The sight is

mounted externally on the rear of the turret. Additionally, displayed or advertised at various foreign arms exhibitions are T-72 tanks, or their variants, being offered with such improvements as a TI sight from Belgium and/or a stabilization system from a French company. Other companies such as El-Op of Israel have developed a TI sight elbow for the T-72 tank which will be tested later this year in cooperation with PEO of Poland. The Poles have also incorporated a Bofors 40mm turret on a BMP.

The sale of improved AFVs to unstable countries may have far reaching consequences for the CF. Western technology TI sights and digital fire control systems in FSU AFVs will significantly improve their capabilities in target acquisition and engagement, and concurrently reduce the technological



BOFORS 40mm Turret on a Polish BMP.

advantage enjoyed by modern western-produced AFVs. If the Canadian Army is to be involved in situations like the Gulf War or low to mid-level conflicts (peacemaking operations) we may be up against weapons of equal or better capability than our own or our allies.

With current bargain basement prices for used T-72s between US \$300,000 and \$400,000, many third world countries can now afford to purchase them. For an additional US \$300,000 they can install the improvements discussed above. Since the cost of an M1 Abrams is about US \$4M or a Russian T-80U is US \$2.2M, third world countries could have almost the equal tank at about one fifth the cost. This situation may lead to the proliferation of inexpensive high technology AFVs in many countries which previously could not afford this capability. The result could lead to a further exacerbation of the political and social instability in many regions as well as an increase in the threat to current and future peacekeeping/peacemaking operations.

As an active participant in many of these operations, Canada must continue to closely monitor this transfer of technology. We cannot become complacent and continue to believe that the West will continue to have technological superiority over any future adversaries. If Canada does become involved in peacemaking operations we must be prepared to defeat and defend against AFVs that are comparable to those in the West.

Captain Bradley works at Director Attaches in NDHQ. Input for this article came from Director Scientific and Technical Intelligence.

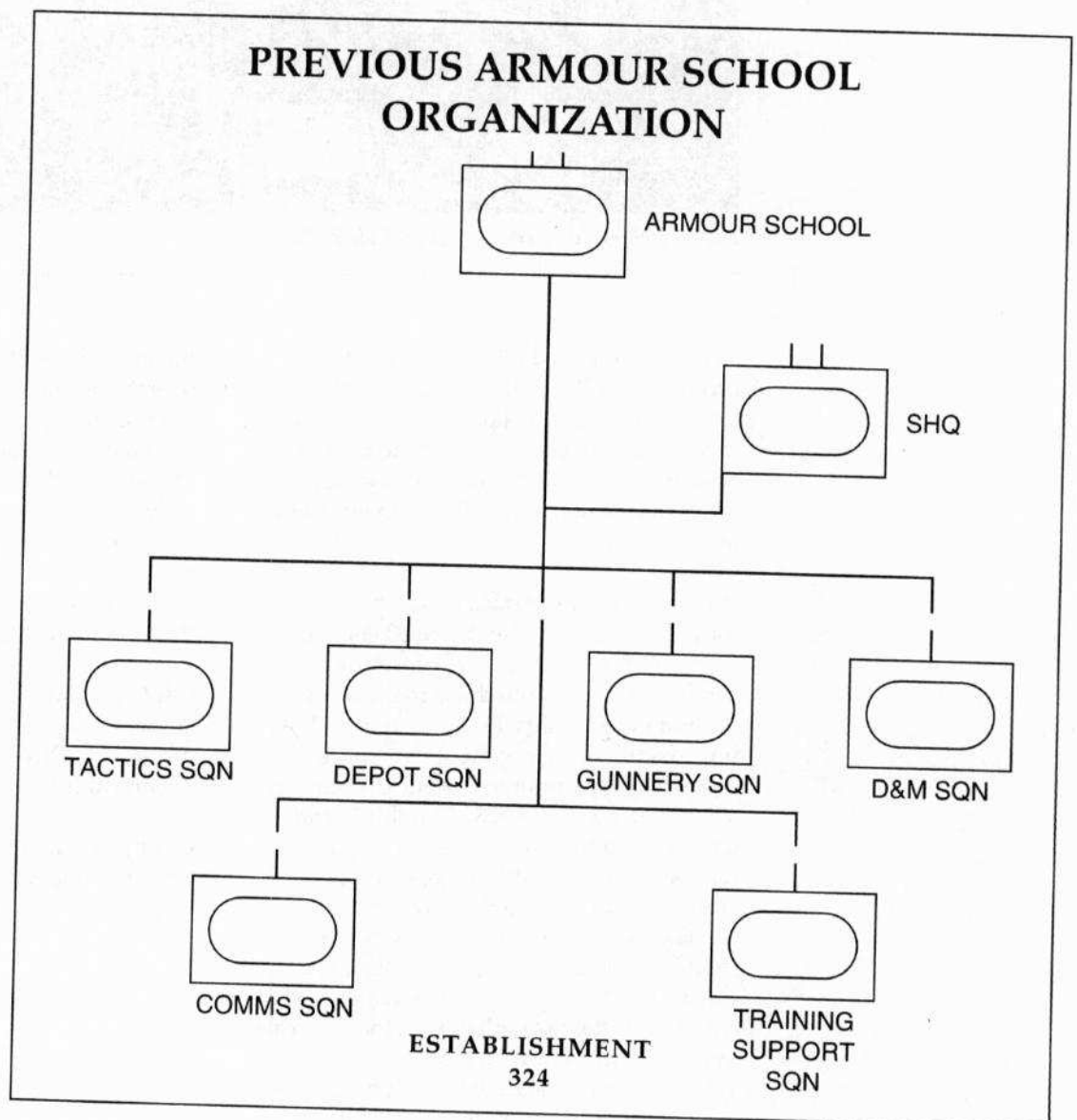
Capt J. Bradley is presently a Liaison Officer for the RCD Btl Group in the former Yugoslavia. Previously, he was in Ottawa.

Armour School – Re-organized

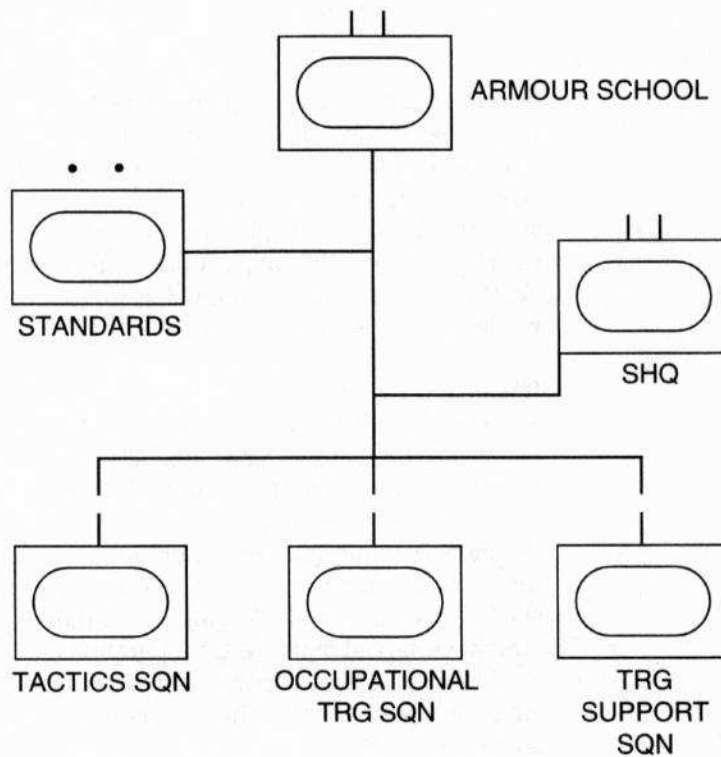
By Captain M.R. Mitchell

The reductions throughout the Canadian Forces have not left the Armour School untouched. Over the last two years, the School has had its establishment reduced from 324 to 250 personnel. At the same time, as a result of expanded National

Course (NC) responsibilities, the number of course serials conducted has doubled. Given the problem of reduced forces and increased tasks, the School has moved to balance its organization to improve flexibility and concentrate force.



CURRENT ARMOUR SCHOOL ORGANIZATION



ESTABLISHMENT
250

As indicated in the diagram above, the School has been reorganized from six squadrons to three. Gunnery Squadron, Driving and Maintenance Squadron, and Communications Squadron have been amalgamated into Occupational Training Squadron (OTS). OTS consists of Driving and Maintenance Troop, Cougar Gunnery Troop, Leopard Gunnery Troop, and Communications Section. Depot Squadron no longer exists since QL3 training responsibilities have been transferred to the new Armour Battle School. Both Tactics Squadron and Training Support Squadron remain intact and unchanged.

With the School reorganization complete the principles of concentration of force and flexibility have manifested themselves by improving methods of tasking personnel, synergizing training, improved utilization of resources and reduction of waste. The Armour School is doing more with less.

Capt M.R. Mitchell is presently and has been for the past year the Ops O at the Armour School. Previously, he was 2ilc OTS.

Battle Fatigue

By BGen (Ret'd) Edward A.C. Amy

Several years ago I wrote a brief article on a subject of my choice for inclusion in a proposed publication intended to offer advice to young officers on a number of subjects. Although the publication was never published, the subject of my article "battle fatigue", may be of interest to readers of the *Armour Bulletin*.

It was first written 37 years after the Korean War when our soldiers had not experienced the stresses of a battlefield. However, more recently, some have been under fire in Yugoslavia, Somalia and Rwanda. Although these are not war in the normal sense, when a soldier is being shot at it is war to him. Among the soldiers who have served on these UN operations, no doubt some have experienced extreme stress and possibly some have become stress casualties.

Notwithstanding the importance of advanced weapon technology and new equipment, the soldier unquestionably is still the army's most valuable asset. In war he is vulnerable to a wide range of hostile acts and influences, "battle fatigue" being one of the latter. This was frequently misunderstood during WW 2 and as a result some fine fighting soldiers were lost unnecessarily.

This phenomenon, referred to as "shell shock" in WW 1 and in medical terms "neuropsychiatric casualty" during WW 2, was seldom considered in training. This was a result of our inability to simulate the stress of battle and its attendant fear of violent death, both of which are common elements in the onset of battle fatigue. Possibly this training void no longer exists but I doubt it.

Seldom do veterans of the combat arms relate battle fatigue to cowardice or malingering and rightly so. Nevertheless malingers and cowards may feign it and thus cause problems with recognition. The term "Lack of Moral Fibre" (LMF), the Air Force is equivalent classification, does not sit well with army veterans, many of whom watched brave comrades eventually succumb to battle fatigue. Much has been written about it by military historians and the medical profession. Curiously and unfortunately not a great deal has been written by those veterans who either witnessed the phenomenon or were its victims.

W.J. McAndrew gives an example of the magnitude of the problem in his article "Stress Casualties: Canadians in Italy 1943-45". Such casualties accounted for 507 infantry soldiers in the 1st Canadian Division between 28 Nov 1943 and 12 February 1944 and another 370 between 25 March 1944 and 17 June 1944. Casualties in other arms were not shown.

Without benefit of prior knowledge, my first encounter with battle fatigue was as a squadron commander in Italy in 1943. I had a most conscientious wireless operator in my tank who refused to share the onerous task of maintaining wireless watch at night when atmospheric conditions made communications difficult. This was especially stressful when in close contact with the enemy. It was under the latter circumstances that he became a stress casualty. Had I been aware of the nature of the problem I might have recognized the symptoms before it was too late.

To understand the phenomenon one must realize that each soldier, under the stress of battle, has a limit to his psychological endurance. When it is reached, the stress is either eased off or he is permitted to cross his threshold and become a casualty.

For any number of reasons, one soldier may be under greater stress than another leading up to H hour. These stress levels have a bearing on the additional stress each individual can safely withstand during the battle. Paradoxically, it is possible for the soldier with the lesser stress level at H hour to reach his threshold first and, it is also possible for the macho to succumb before the meek. Battle fatigue has no favourites and all ranks in combat units are vulnerable from trooper to the commanding officer.

To minimize such casualties it is important to be alert to the symptoms and also to be aware of the factors which can lead a soldier to his threshold. Farley Mowat's book "And No Birds Sang" provides an excellent example of the factors at play when the author crossed his threshold and became a stress casualty during the Italian Campaign.

As veterans know, any number of factors may be involved. These are a few which, as a squadron commander, I was able to identify in Italy, Normandy, and northwest Europe:

- A series of close encounters with death.
- Fear of death in a burning tank.
- Lack of sleep over a prolonged period.
- Duration and intensity of enemy shelling.
- A continuing operation with no relief from stress.
- Lack or loss of confidence in the leadership.
- Responsibility for the safety of others.

The trauma of losing a relative or close buddy.

Inability to relax between periods of extreme stress.

Stress level at H hour.

Concern for and worry about the family;

Symptoms are not too difficult to recognize when the officer-soldier relationship is a happy one. The key is recognizing the soldier who may be approaching his limit and get him into a less stressful situation. This is not always possible and the decision is sometimes difficult to make, especially if the victim is a crew commander.

In my experience, when circumstances permitted, it was helpful to have the medical officer (MO) confirm the need to take a soldier out of the battle. It seemed to ease the anxiety of the soldier when I explained that we would see the MO to consider whether rest was in order but should the individual consider otherwise, then he could rejoin his tank crew.

In the few cases when this happened, the soldier's conversation with the MO was private and over a tot of medicinal rum if the MO considered it appropriate. When I rejoined them the MO advised me whether a rest was in order or whether he could rejoin his crew. Never did I have a soldier complain about the MO's findings. Fortunately they trusted his judgement and seemed reassured by whatever his decision. Unfortunately, not all medical officers had this rare talent and the decision remained solely with the squadron commander.

As we became more familiar with the problem and more soldiers were getting battle weary, we found it wise to isolate survivors of knocked out tanks for a period.

This was especially important for those from brewed tanks where crew mates failed to escape. This programme helped combat the tendency of pals in the echelon convincing them to seek safer employment out of a tank. An NCO, with a reputation within the regiment as an outstanding leader and fighter, was designated to receive these survivors and attempt to restore their confidence and fighting spirit by example and sensitive persuasion. A quiet area was selected in the echelon and when the survivors arrived, frequently in a state of shock, they were given a generous tot of rum, a hot meal, and a dry bed. No timetable was involved. They were encouraged to relax and only when the NCO felt they were ready did he start the rehabilitation process. While not always successful some fighting soldiers did return to fight again. Some of the others not able to face the prospect may have been spared the fate of becoming stress casualties for life.

IN SUMMARY:

- a. The stress of battle, if not caught before soldiers cross their threshold, can destroy even the toughest and bravest of soldiers regardless of rank. Leaders at all levels must be alert to this possibility and understand the potential consequences.
- b. The phenomenon is difficult if not impossible to simulate in training. Nevertheless, regiments can establish and practice procedures designed to minimize the risk of losing their soldiers from battle fatigue.

*Bgen Edward A.C. Amy DSO MC (Retired)
was Commandant of the Armour School from
1949 to 1951 and Colonel Commandant of the
RCAC from 1977 to 1981.*



Loss of or injury to a crew mate can have a profound impact on the remainder of the crew/TP.

The Corps' Magazine

By Major M.R. McNorgan

HISTORICAL

The Canadian Armoured Corps (CAC) was created on 13 August 1940. In November of that same year, the CAC acquired its voice in the form of a monthly magazine with the title "The Tank Canada". The word Canada in the name was used to distinguish it from the Royal Tank Regiment publication of the same name.

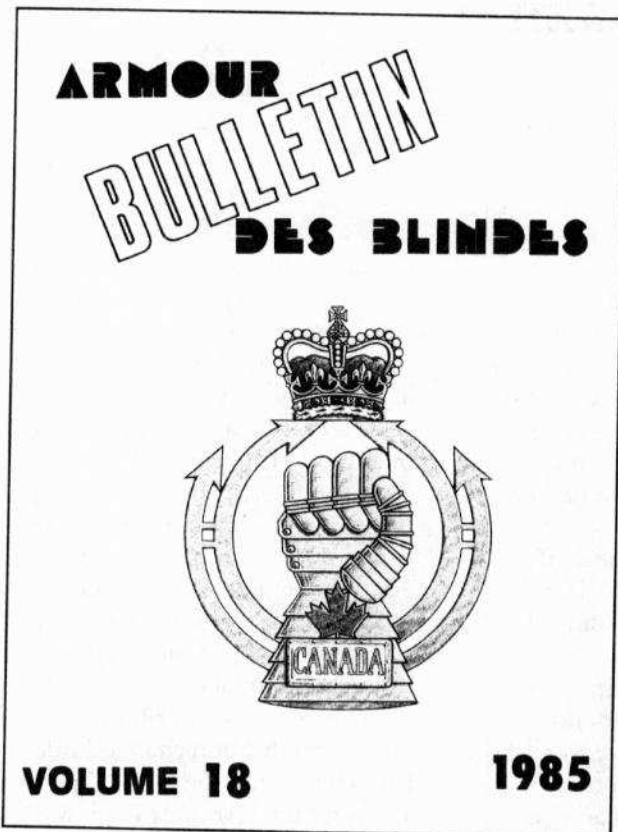
Produced in Camp Borden by the staff of the CAC Training Centre (CACTC), printed by the Barrie Examiner, and sold for 10 cents a copy or \$1 per year, "The Tank" was designed to keep members of all units in touch with each other and with the swiftly evolving Corps. There were the usual social notes; promotions, posting, decorations, casualties, marriages and births, as well as the latest sports scores. Officers contributed articles on the progress of the war, items of historical interest and the latest technical developments. The CACTC staff were not novices in the publishing business, they had previously produced a mimeographed in-house paper called "The Tank Broadcaster". "The Tank Canada" was altogether different though, having a very professional finish, including cover designs which progressed from a depiction of the Corps Badge during 1940 and 1941 to topical photographs from 1942 to 1945.

With the end of the war, "The Tank Canada" ceased production, the last issue being Volume 5, Number 7 published in July 1945.

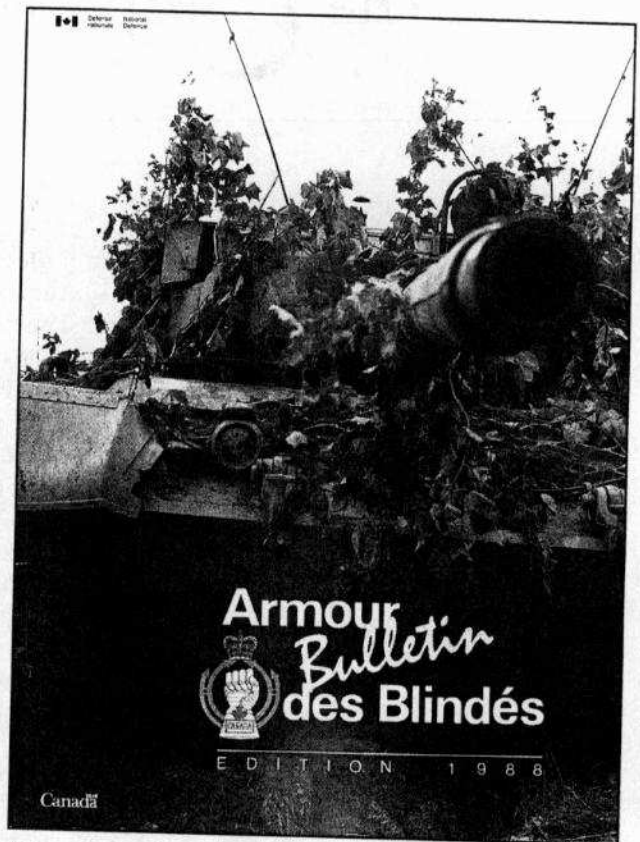
There now ensued a 20 year gap until June 1965, when the RCAC (School), under the command of Colonel SV Radley-Walters, published "RCAC Bulletin Number 1", edited by Major KR Black. In most respects it carried on the traditions of "The Tank

Canada" although, thankfully, it was unnecessary to publish a casualty list. The School and the four regular regiments each contributed a column commenting on unit activities over the past year. Also included were technical articles such as evaluations of current armoured vehicles. Rad's introduction noted: "The scope of the Bulletin is flexible. It is intended to cover all aspects of training, organizations, responsibilities, equipment, dress, etc. It is not restricted to the Militia or the Regulars. It is designed so that all ranks of the Corps will benefit from the information and they also bear the responsibility of contributing to it." The annual publication changed titles a few times becoming the "RCAC Review" in 1966 and the "Armour Review" in 1972. The cover featured the Corps badge for most editions, the exceptions being Number 5, 1969 which listed all 110 RCAC Battle Honours, and Number 6., 1970 which displayed all of the Corps cap badges. The final issue, Number 8, edited by CWO RJ Slaney, was produced at NDHQ in April 1973.

May 1973 saw a re-birth of the Corps magazine concept with the appearance of "Semi-Annual Bulletin Number 1". This product, like most of its' predecessors, was produced at the School, although that institution was now part of the Combat Arms School (CAS). The first editor was Captain DW Prosser. The description "semi-annual" was lived up to, the next issue appearing seven months later, in January 1974. By the time Volume 3 arrived in July 1974 it was carrying a new name "The Armour Newsletter". The covers of the first three numbers bore a mounted rider carrying a lance, with the CAS crest



This was the cover design for the Bulletin for 12 years.



The cover of the 1988 Armour Bulletin Edition.

superimposed. With issue Number 4 the cover design changed to a coloured rendition of the Corps badge. This same design would be in use for the next 12 years! Volume 8, produced in July 1977, saw the third change to the name of the publication when the title became "Armour Bulletin/Bulletin des blindés", a reversion to the name used in 1965. With the Autumn 1992 issue the title was re-translated as "Armour Bulletin/Journal de l'Arme blindée".

The size of the Bulletin has varied from a slim 38 pages, (Volume 11, January 1979) to a hefty 103 pages, (volume 19, 1986). This latter issue was a special one devoted to the 50th anniversary of the School and featured a reproduction of the original CAC badge on the cover, the same badge that graced the first editions of "The Tank Canada".

When Captain JLM Richard took over the duties of editor in 1988 he obtained permission to attend an editor's conference in Ottawa. The ideas he brought back from that conference transformed the look of the Bulletin. Starting with Issue 21 the cover featured a topical photograph. Inside the layout more closely resembled that of a contemporary magazine. Much of the layout and design work was now done in Ottawa by DDDS with the result being a very pleasant presentation. In the past bundles of the magazine were packaged in Gagetown and mailed out to NDHQ, LFCHQ and the regular and reserve units of the Corps. Now, in addition to these, arrangements were made to have the Bulletin distributed to life members of the RCAC Association. All distribution is now done directly from the Canadian Force

Publications Distribution Depot in Ottawa. Up until the Spring 1992 edition, articles appearing in the Bulletin were printed in their language of origin. Starting with Issue 26 everything in the Bulletin was translated. This ensured that all items in the publication would reach a wider audience.

The past numbers of the magazine represent a significant source of information on the Corps, and its development over the years. One may therefore ask where these back issues are to be found. Unfortunately, they are getting very rare. The School holds a complete set dating from 1973, likely the only complete set in existence. Partial sets are held by the CFB Gagetown and the NDHQ libraries. NDHQ also has a partial collection of the "The Tank Canada". Some issues of the "RCAC Review" may be found at the School and in the files of the Director of Armour. In all likelihood there are many back issues in the Corps Museum in CFB Borden. The Museum does have an extensive archive of Corps records, all housed, unfortunately, in an old and brittle building that is very susceptible to fire.

And so we come to the number you are reading today. This issue is not only the product of the hard working staff at the School, but it also represents the heritage of all those who have laboured to produce our Corps magazine since 1940. You may note the masthead states that the Bulletin is the official organ of the RCAC. These words also appeared on the masthead of "The Tank Canada" half a century ago. The editorial of the first edition of "The Tank Canada", written by Lieutenant WS Thompson, is still relevant.

"With this issue, a magazine devoted exclusively to the Canadian Armoured Corps makes its debut. The value of such a publication should be readily apparent. To keep each battalion in touch with the others, create a better understanding, and foster what the French have called esprit de corps, this is the ideal to which we dedicate its pages."

Maj M.R. McNorgan is presently working for the Director of History in NDHQ. Previously, he was in CFB Gagetown.