ARMOUR
NEWSLETTER

VOLUME 5 SEPTEMBER 75

This Newsletter is published by authority of Colonel D.A. Nicholson, CD, Commandant Combat Arms School. Views expressed are those of the writers and do not necessarily reflect official opinion or policy unless expressly stated.

INTRODUCTION

Due to internal and external production crisis, this volume will hit the subscribers a little late. This allows me the opportunity to update on the summer activities. A total of 122 officers successfully underwent training in the Department, 41 officers of the Militia and 81 Regulars. Twenty-seven young men are now with their Regiments eager to take up the ultimate challenge - troop leading. The willingness and dedication shown by the Militia Officers is truly heartening. Armour Department did score one noticeable first and that was no tanker succumbed to the rigors of the CAS Battle School. I would also like to thank the NCOs who spent their summer helping out the School staff, without them the training would have been impossible.

In the last issue I said that 1975 would be a year of decisions. As this volume is handed to the printers all "Black Hats" are now aware of the decision to buy a new tank. Now that we know the tank is to continue in the Canadian Forces, the Corps is faced with two main problems. Firstly, a smooth conversion to the new tank and, secondly, training in Canada.

Conversion of trained crews should not be difficult and the mastering of new techniques will not cause problems. New courses will be developed as soon as technical information is made available. Training on the other hand will be more difficult. The Standard Brigade Group calls up three Armoured squadrons per regiment. Units in Canada must re-establish our role of direct fire support to the combat arms team and refresh the tank infantry skills which are so necessary for success. It is unlikely units in Canada will have tanks and Col Nicholson's remarks on AVGP deserve in-depth consideration.

The next issue will hopefully give the latest technical information on our new tank and address some of the training problems.

Please feel free to comment.

C.A.J. Conway
Lieutenant-Colonel
Officer Commanding Armour Department

FOREWORD

Once again, it is a pleasure to be asked to provide a few introductory remarks for the Newsletter. I have decided to use this opportunity to get some thoughts "off my chest" regarding two tentative equipment projects which are in the mill at the moment and which are discussed in more detail elsewhere in the Newsletter.

First, the Armoured Vehicle General Purpose (AVGP). I am deeply concerned by a lot of thoughtless loose talk, among our armour officers who should know better, about the wisdom of acquiring this vehicle. The burden of much of this muttering is that none of the proposed AVGP candidates is a tank and, therefore, none of them should even be considered for use as a training vehicle for armoured regiments in Canada.

Let us be clear what we are talking about. We are considering a wheeled vehicle with a turret-mounted 76mm gun. I would like honest answers from everyone in Canada-based armoured regiments to the following two questions:

a. How does such an AVGP compare with what you have now for training armoured FIGHTING vehicle crews? and

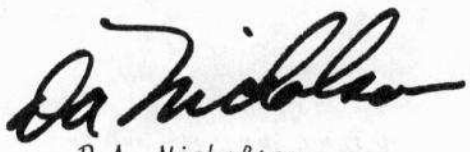
b. How does it compare with what you have now as a means of re-asserting your credibility as a FIGHTING partner in the combat arms team?

I suspect the honest answer to those two questions may cause you to look at the AVGP in a different, more favourable light.

So, brothers, let us stop whimpering and quibbling and accept the AVGP if and when it appears. If you will, hang a large sign on each one which says, "I am a training expedient. No one in his right mind expects you to fight a fully modern, mechanized enemy in me, but you can use me to learn the fundamentals of your trade". Having done this, crank up your AVGPs and get on with it!.

The second bit of gear I would like to recommend to you is SIMFIRE. We have only begun to play around with this system at the School. However, it is already evident that SIMFIRE offers the prospect of a tremendous leap forward in the effectiveness of crew, crew commander and troop leader tactical training. Not only does SIMFIRE keep everyone involved, all the time, during tactical training, but it adds impressively to realism, generates intense competition and enthusiasm and, perhaps most important, it makes training FUN.

I'm sure you will all agree that I've done enough lecturing for one issue. Good luck to all black hats everywhere. Let us, here at YOUR school, hear from you.



D.A. Nicholson
Colonel
Commandant Combat Arms School

ARMOUR NEWSLETTER

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CORRESPONDENCE

All contributions will be considered for inclusion in future editions. All correspondence should be addressed to the editor, C/O ARMOUR DEPT Combat Arms School, CFB Gagetown, Oromocto, N.B.

CAPT P. Leentjes - Editor

Officer NCO Training Wing

CAPT J.A. DALTON, CD

Since the last bulletin ONCOT has conducted the following courses:

AOCT PH II - Students - 32
Top Student - Lt W.R. Allen

AOCT PH III - Students - 33
Top Student - Lt W.R. Allen

Crew Commander TL 6A 7501 - Students - 20
Top Student - MCpl Zwicker C.S. LdSH (RC)

Troop WO TL 6B 7501 - Students - 17
Top Student - Sgt Lynk R.J. CAS

Crewman TL 3 7403 - Students - 14
Top Student - Tpr O'Brien A.G.

7404 - Students - 15
Top Student - Tpr Drevniuk T.J.

LOFT II Armd 7501 - Students - 7

Snr NCO (Militia) - Students - 13

At the time of writing there are 136 students undergoing training in ONCOT Wing. Once again ONCOT has been extremely busy and, as you will read later in the article, is going to get much busier.

Prior to going on with this article I must point out an error in the last ONCOT report. The top ROUTP Phase II 7401 student was Lt P.R. Sinnott of the Prince Edward Island Regiment not Lt McKee as reported. The reason I know this is Lt Sinnott is presently undergoing ROUTP Ph III contact training and is occupying the next office. I seldom am allowed to forget this oversight.

As was mentioned in the last article all ONCOT courses have been rewritten in accordance with the Standards Writing Board Reports. With the exception of Phase V all have or are in the process of being conducted. Some problems have emerged and they are being solved and revised in the next courses. In general I am convinced that the new courses will produce the

The Latest in Bog Training

leaders that are required in the Royal Canadian Armoured Corps.

The immediate future looks bright for the Corps and extremely active for the school. The manning figures as of this date are 600 TL3 troopers and 110 officers. Naturally these figures mean that Regiments will become involved with trade level three training and the school will be conducting Officer Training virtually year round.

The other obvious result of these large numbers of students is an increased increment requirement. This increment problem is being addressed at Departmental level with a view to an increased establishment in the whole Department. Until such time as that is fact, the wing will continue to rely on increment instructors to get the job done. The debt the school owes to increment instructors and to units who send their best is very great indeed.

Some of the training highlights since the last report are:

- With the exception of ten days of communications and five days of D&M, Armour Officer Classification Phase II is now devoted completely to Infantry section tactics. For the summer Phase II serial, this is augmented by a grueling ten day period at the Infantry Battle School culminating in a thirty mile route march.

- Along with tank and reconnaissance tactics, drill and duties have reappeared on the Crew Commander course.

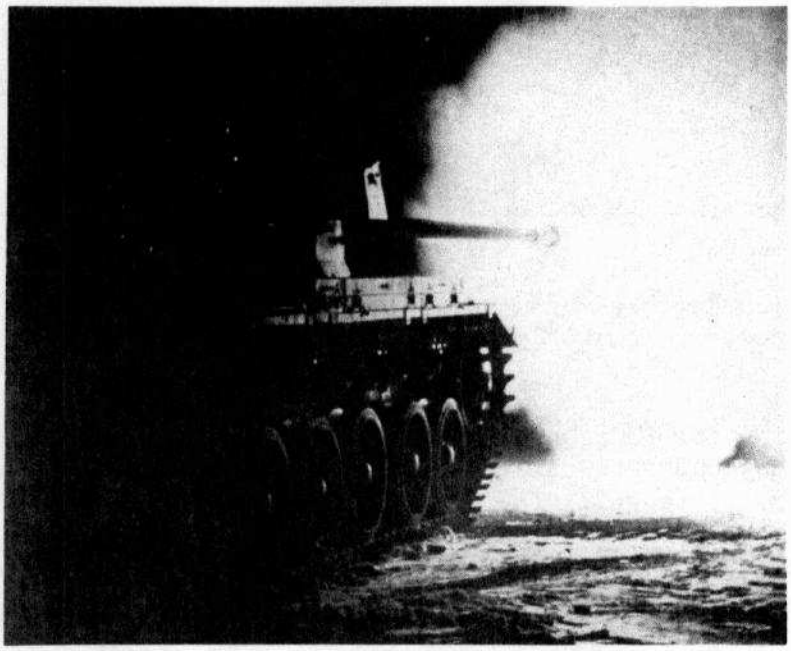
- Phase IV Armour Officer Classification is now completely on tanks with all but two weeks spent in the field. This is to be followed by a completely reconnaissance Phase V.

- The troop Warrant Officer course benefitted considerably from two weeks with the Squadron Commander's course. Thus they were able to crew command and troop lead within a squadron and combat team. This practice will continue with future courses.

I am certain that many of you reading these highlights are amazed and delighted at the rediscovery of the wheel. We seem to be returning to training which is very similar to what was done in the past. I believe we are realizing that even with the diverse roles facing the Armoured Corps, training must emphasize the roles and tasks of armour in general war.

Prior to concluding I would like to thank WO E. Engyel for presenting Armour Department with the Engyel trophy pictured here. This trophy is awarded to the top student of the Crew Commander Trade Level 6A course.

In conclusion, since I am leaving ONCOT and Armour Department, I would like to thank all those who have worked with me throughout the past year. Certainly the greatest satisfaction in this job is watching the students progress toward a very high standard. In the course of one full training year every successful student from Pay Level III to Phase IV has demonstrated the professionalism we need in the forces today. This standard would not have been possible without the hardwork, skill and dedication of the instructors, both officer and senior NCO, ONCOT Wing. Thank you, I am most grateful.



gunnery wing

CAPT J.K. MOYER

As with all wings of Armour Department, Gunnery Wing has been extremely active during the last six months. A total of seven different courses have been presented by the instructors and in addition various administrative chores have been accomplished.

From a purely gunnery point of view our two major periods were during the Regimental Gun Camps and the Tank Gunner course. Once again, the Canadian - based units were well represented during the Regimental Gun Camps. One bright aspect of these annual camps is that one gets the opportunity to see the wealth of experience in tank gunnery that comes forth. Hopefully, the decision on the Centurion will be taken in our favour and we can gainfully use this 'hidden' experience again.

The Tank Gunner course proved to be interesting on a number of points. As previously reported in this Newsletter, this course is the old Crewman Gunner package, redesigned to accommodate 105mm techniques. Few problems were encountered in the changeover that could not be rectified by a revamped timetable. It is interesting to note that seven unilingual francophones were among the students and this provided us with some enlightening moments. All fire orders and technical terms were taught in English however, to facilitate assimilation into the RCD. Now our only problem is the words in between the technical jargon and as soon as the updated CAS Precis 112 returns from the Queen's Printer, translation into French will begin. Lt 'Red' Grossinger is the editor of this new CAS 112 and has spent long hours assuring its accuracy.

In addition to the gunnery courses run out of K-19, several 'input' gunnery courses were given as part of the ONCOT activities. These included a TL 3 machine gun course, a TL 6A Crew Commander's Course, and the AOCT run successfully despite a lack of HE ammunition which forced us to delete the HESH practices for the AOCT Phase III candidates.

With regard to the administrative activities, the CTP for the Advanced Armoured Gunner has been re-written by Capt Griffin and WO Cady and should provide a balanced course this year. Lt Grossinger has also been at work compiling an up-to-date AFV Recognition package. As if often the case, armoured units are looked upon as AFV experts and since we have

required a current AFV package for sometime, it is hoped that Lt Grossinger's package, once compiled, can be disseminated to all the armoured units.

In another light, some confusion has been created in the area of TSQ designations of the gunnery courses. To enable the units to review their UER's the following summary is presented.

The Crewman Gunner qualification for 20 pounder techniques has been allocated the TSQ 011.03. The new Tank Gunner qualification is 011.05 indicating that only 105mm techniques are taught. The Advanced Armoured Gunner TSQ is 011.25 and is not to be confused with the old TSQ 011.06 which indicates simply Advanced Tank Gunner. The current AAG course qualifies personnel in both machine gun and tank gunnery subjects.

Still talking about the AAG, it has been recommended to NDHQ that officers qualifying on this course be given the qualification 21A5. This qualification would also be given to graduates of the old ATG and will hopefully be redesignated Advanced Armoured Gunnery Officer. Nothing is confirmed as yet but we are hopeful it will be approved.

Another activity of the past six months has been the Instructor Gunnery Assistance visits paid to the RCD and LDSH (RC). Gunnery Wing instructors also had the opportunity to observe 12e RBC when they travelled to Gagetown for their spring MG Gun Camp. All visits were profitable to both units and IG's and the host units must be thanked for the cooperation and hospitality extended to us. More visits are planned for the future and it is hoped that the exchange of information will continue to be fruitful.

Closer to K-19, the summer months will see old faces leaving and new faces arriving in Gagetown. MWO Jack Downey is retiring from the CF and is planning to reside in Calgary. WO Don Murrin will spend the month of June masquerading as an MWO and then officially be promoted on 1 Jul. Good luck with the Trg Sqn, Sergeant-Major! Also leaving the Wing is WO Jake Baldwin who is returning to Petawawa. To these three capable Snr NCO's go thanks for jobs well done and the best wishes of everyone for success in the future.

Among the drivers' troop, we are losing MCpl Mike Shute and Cpl George McLeod to the RCD. Along with the other drivers, these NCO's have made it possible for us to respond to our commitments even when they've been heavy. A job well done by all and good luck in Germany.

Intra-departmental moves are also in the offing but as flexibility is an Armour characteristic, all will be ready in Gunnery Wing for the fall slate of courses.

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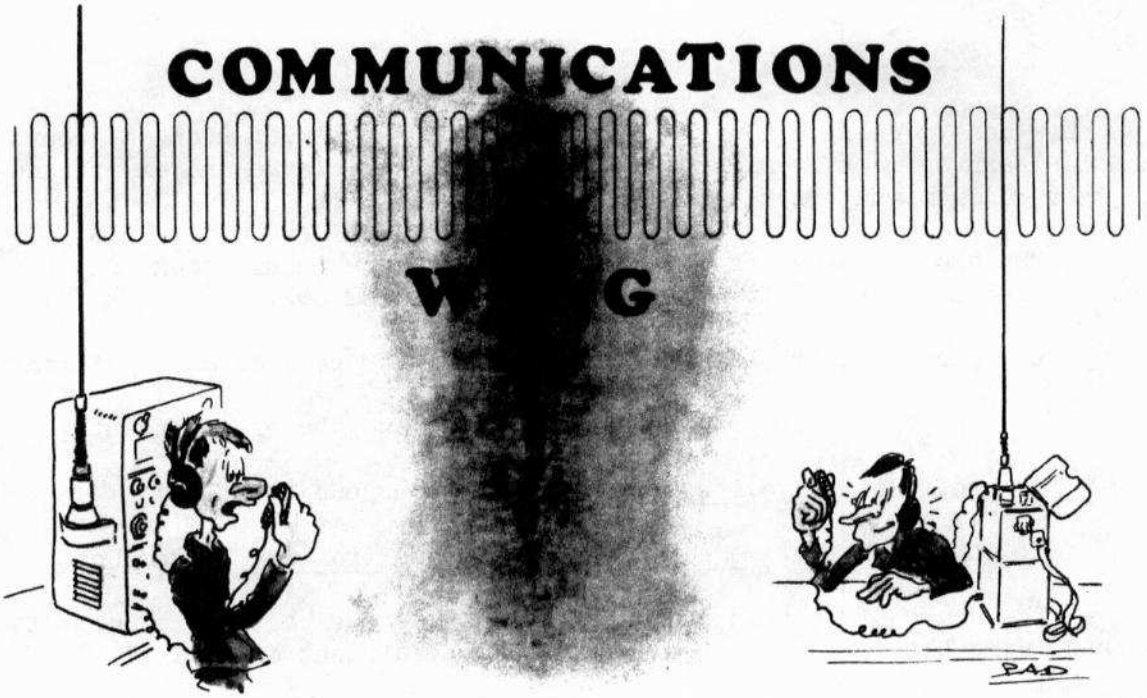

CAPT M.A. KRYZANOWSKI, CD

Since the last Newsletter in January, the ether surrounding Communications Wing has been filled with the radio transmission of great numbers of students. In January, 32 Armoured Officer Classification trainees went through their intensive ten-day package which culminated in a navigation/communications exercise. As is almost always the case with winter field exercises run by the wing, this one took place in a blizzard and had its exciting moments when communications broke down and people got lost. The Gunner OCT students followed their Armoured counterparts for a short course. We then had a short lull before the Combat Arms Advanced Communicator Course, which normally ties up all the Communications instructors. During this Advanced Communicator Course, however, we also had inputs to the Squadron Commanders Course, the Artillery Master Gunner Course and various LOFT courses. Needless to say, there was a bit of scrambling to try to satisfy everyone with our limited number of instructors.

All these activities during the winter and spring, however, were merely the preliminaries to get us ready for the main bout. Summer is now upon us and every room is filled with Officer Cadets - so many that it is even becoming a problem to sort out which course is which. The question that the instructors keep asking every morning is: "Who am I instructing today? .... ROUTP? AOCT? ROTP? Phase 1? Phase 2? Phase 3? Armour? Artillery? Infantry?" If we survive, you'll hear from us again in January.

COMBAT ARMS ADVANCED COMMUNICATORS COURSE

I would now like to discuss the Combat Arms Advanced Communicator Course, our major semi-annual task. Course 7501 has been completed, this time with more than satisfactory results. This was due as much to the attitude and cooperation of the students as to anything the instructors

may have done. We have always maintained that the students on the course should learn as much from each other by sharing knowledge and experience as they do from what is taught in the classroom.

The aim of the course is to produce a unit communications supervisor. The student is expected to learn and perform as follows:

a. comprehensive, detailed knowledge of procedures and equipment;

b. the ability to supervise men, nets, and use of equipment;

c. the ability to instruct communications subjects; and

d. the ability to conduct communications training in the Unit.

The course is not an operator's course. We expect the student to be knowledgeable in voice procedure and unit equipment on arrival.

The course spans 37 training days (39 for Artillery) - 9 days of theoretical training, 17 days practical, 8 days on field exercises, and 3 days of course administration. Subject areas are as follows:

a. radio and antenna theory;

b. voice procedure (a standardization review by staff followed by 12 periods of student mutual instruction);

c. voice procedure exercises (written and conducted by students);

d. installation, operation and maintenance of radio equipment and generators;

e. expedient antennas (how to increase the range of the AN/PRC 25 set to 20 miles);

f. line-laying duties as NCO IC Line Crews;

g. command post procedures (organize and supervise a command post shift and employ RRBs);

h. writing a course training plan from an On-Job-Training specification, and writing a sub-unit communications refresher; and

j. participating as a command post supervisor, NCO IC line crew, radio operator and a long-range communications exercise with AN/GRC 106 Sets.

We are starting a programme on voice secure equipment for those who are security cleared. Also to create awareness of how much information can be given away by poor communications security, we conduct an exercise whereby the student plays enemy intercept, listening to radio net, map in hand, to build up an intelligence picture from seemingly minor breaches of security.

Overall, we think that the course content has been greatly improved. But we know we're not perfect and we appreciate and encourage constructive criticism of the course in the student critique - which is seen by the Department OC, the Standards Staff, the Chief Instructor and the Commandant.

In closing, just a reminder of our motto: WE AIM TO PLEASE

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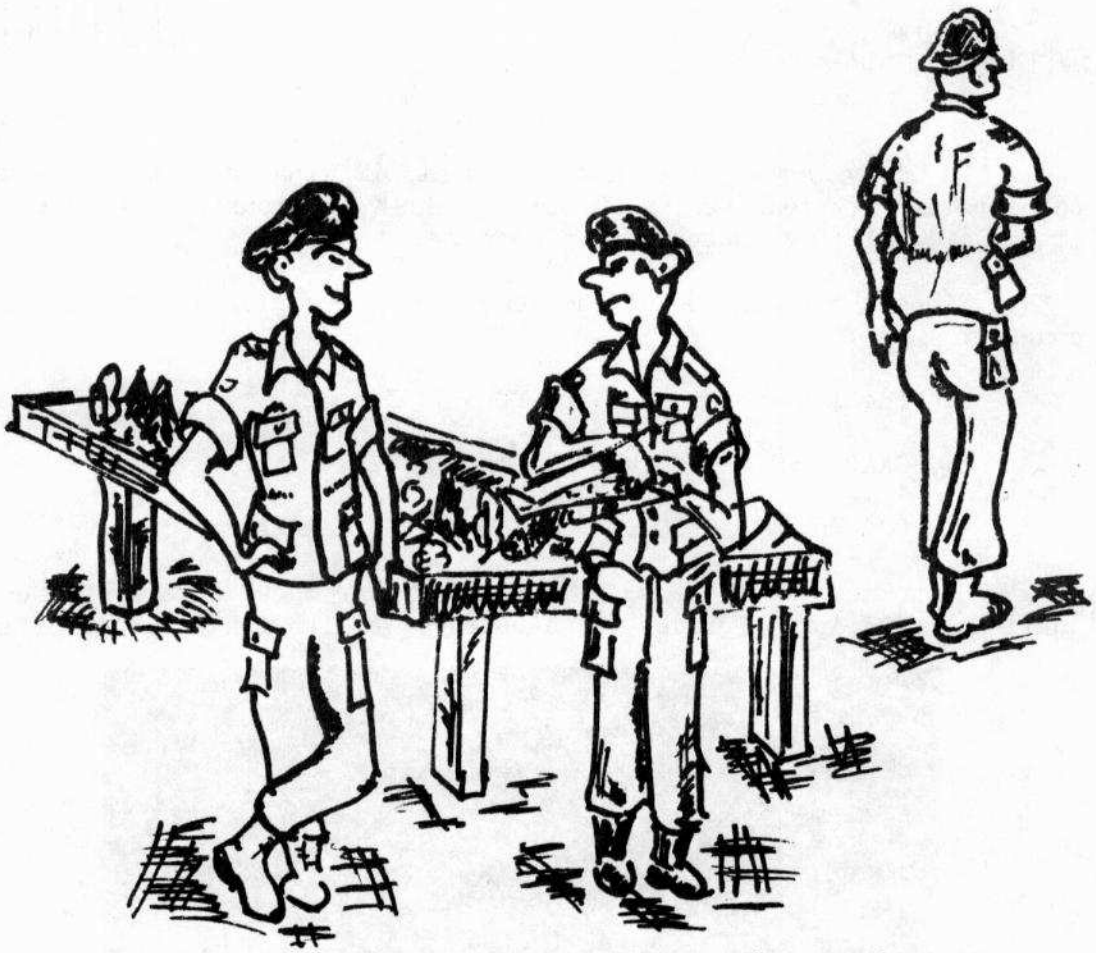
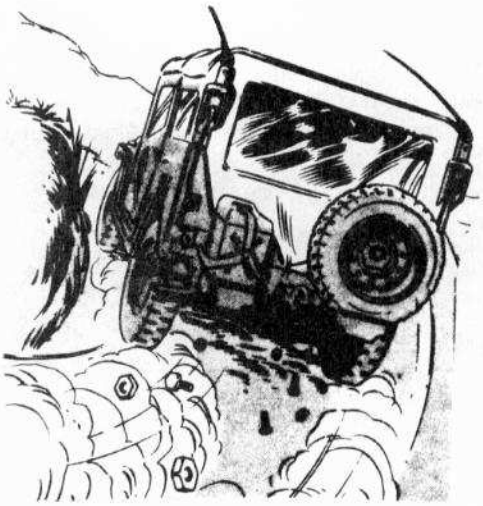


DISCOSSING TACTICS WITH HIM IS JUST LIKE TRYING TO DISCUSS HAIRCUTS WITH A COLONEL.



DRIVING & MAINTENANCE WING

SGT J.C. WALLACE

In early January the instructors at D&M Wing once more took up their pointers and started passing on some of the vast amounts of knowledge that, it is said, all D&M instructors possess.

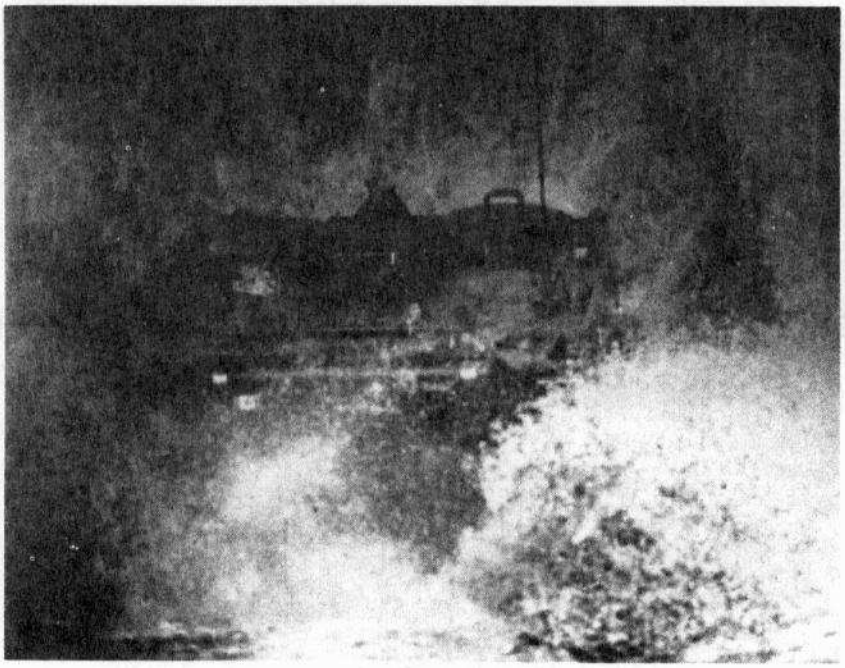
Since the beginning of the year D&M has completed the following courses:

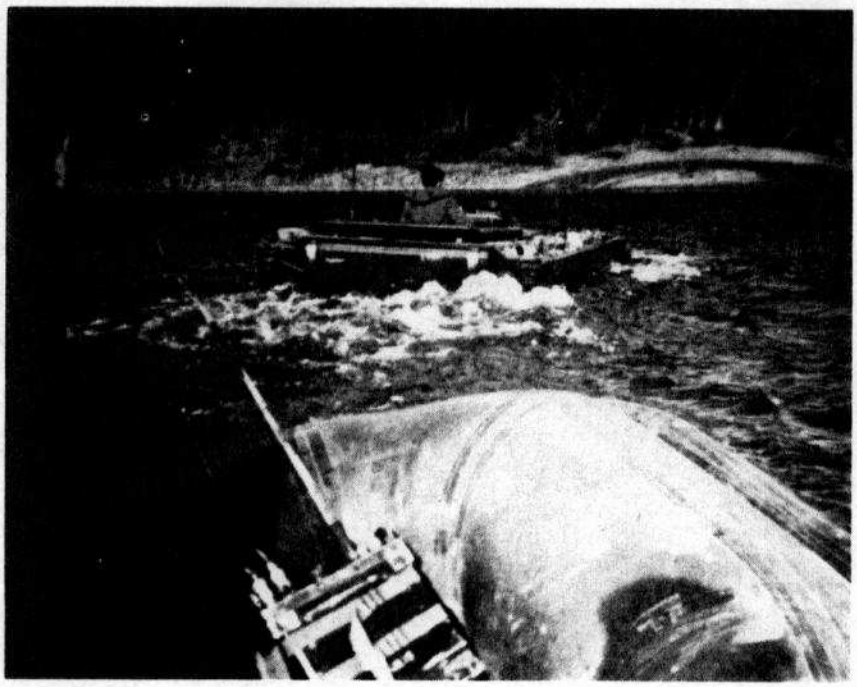
a. The last portion of the PL 3 7403;

b. CAAD 7501 which ran from Jan to Mar;

c. OCT Ph II and OCT Ph III during Mar and Apr;

We also supplied facilities and instructors for the Tank Drivers Course 7501 during Mar and Apr. Besides these courses we also ran a number of short





courses such as Militia Arty Offr's Ph II, and a three day course on Combat Readiness checks for our future Combat Team Commanders.

As you can see, it has been a busy but satisfying winter for everyone here. We have not only passed on our knowledge, but have gained a lot from our contact with those students who have attended courses here from across Canada and Europe.

Besides instructing on the various courses, the staff has been busy rewriting course packages and updating lesson guides to include new equipments and knowledge that is now available to the Combat Arms.

In the past there has been a lot of comment on the viability of the Combat Arms Advanced Drivers Course. Considerable work has gone into this course package since the completion of CAAD 7501. I'm sure that students selected to attend this Fall will gain a great deal that they can pass on to their units.

Some of the changes will be the addition of a larger package on diesel engines, the expansion of the Basic Mechanics portion, and a reduction in such things as, how to complete a work ticket.

During the summer we will be losing Sgt Matheson V.H. on posting to the RCD. While "Mattie" was not a "full time" member of CAS, he was a welcome addition and helped ease the load a great deal. Lots of Luck in Europe, Mattie.

I'm sure that before the Summer ends we will lose old faces and gain new ones. We will have to leave those Hello's and Good-Byes until the next issue, because the man with the name board and darts is still smiling.

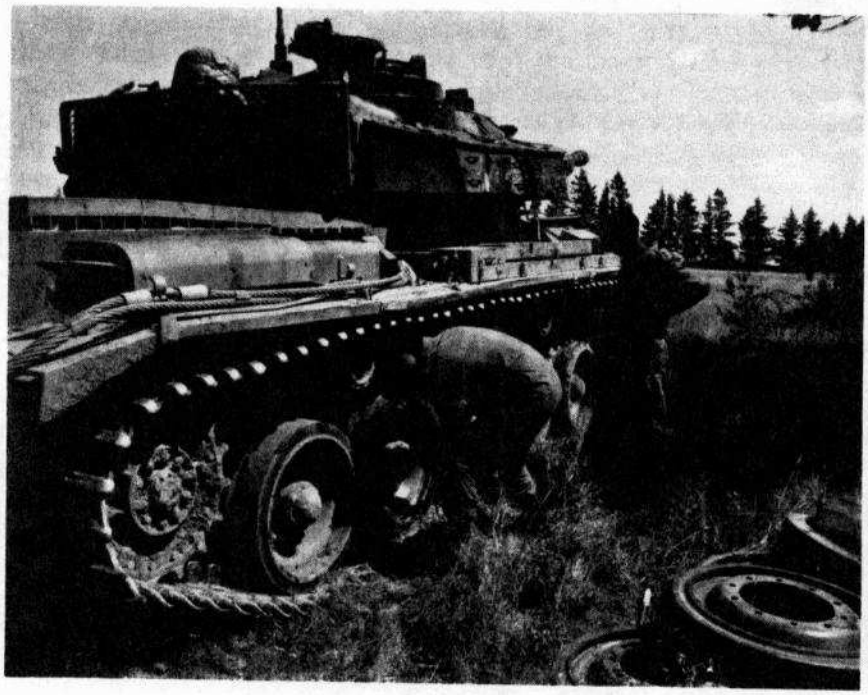
I know that you all want to see your names mentioned, so here you are Claude, Knobby, Harold, Jerry, Bobby, Mattie, Murrey, Ted, Ken, Bob and Jack.

In keeping with D&M's policy of ensuring that our knowledge is given the widest possible distribution, D&M Wing will be asking a question at the end of our articles in hope of stimulating everyone to think D&M.

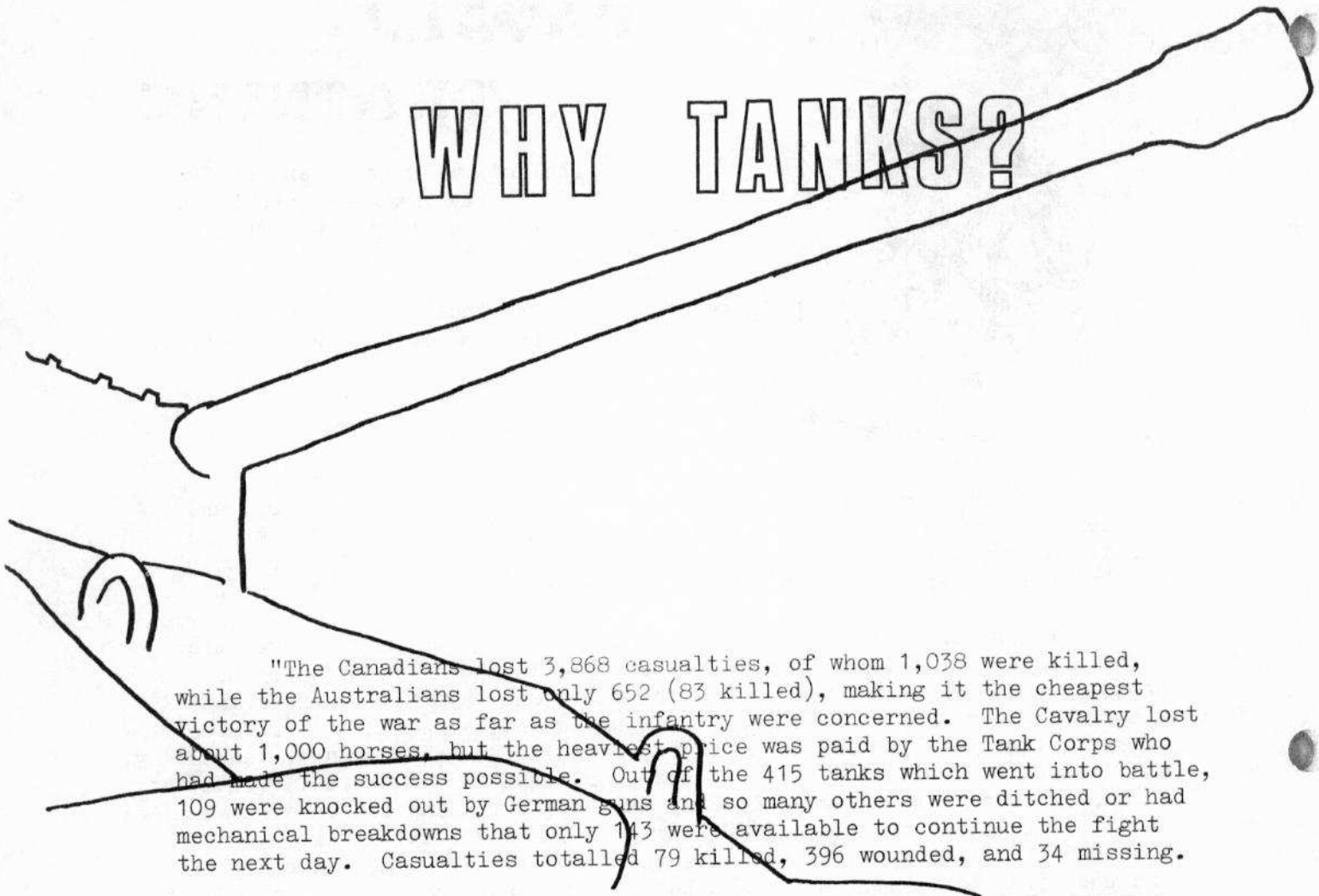
This issues Brain Teaser is:

"If one side of a vehicle is called the Right Side, what side would you find on the other side?"

When writing please include a stamped, self-addressed envelope for your 'DS' solution.



WHY TANKS?



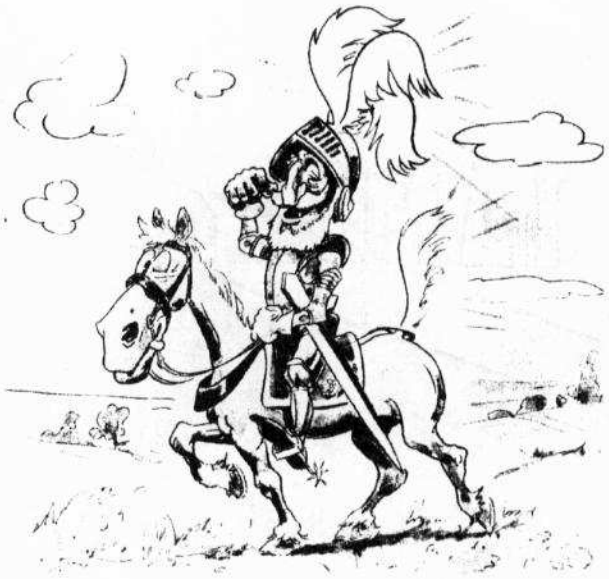
"The Canadians lost 3,868 casualties, of whom 1,038 were killed, while the Australians lost only 652 (83 killed), making it the cheapest victory of the war as far as the infantry were concerned. The Cavalry lost about 1,000 horses, but the heaviest price was paid by the Tank Corps who had made the success possible. Out of the 415 tanks which went into battle, 109 were knocked out by German guns and so many others were ditched or had mechanical breakdowns that only 143 were available to continue the fight the next day. Casualties totalled 79 killed, 396 wounded, and 34 missing.

Tanks had led the advance on almost every sector and had captured, single handed sometimes, large numbers of prisoners. But their greatest achievement was in sharply reducing the number of Allied infantry casualties. A graphic illustration of this was provided in the battle report of an anonymous officer.

Three days after the opening of the attack there was to be seen on the slopes of the valley of the Luce a notice board stating that a certain field was reserved as a British cemetery. This was the usual practice and necessary to good organization. A cemetery was selected in each sector before a battle was to begin, in the same way as water pipes were provided and other administrative arrangements made. This particular cemetery was one of the finest ever seen. It was also empty. Not a single grave. Across it were the tracks made by tanks three days previously when this patch of ground had been in the forefront of the battle.

The relationship between those tracks and the emptiness of the cemetery was very close. The tank is a saviour of flesh and blood, which lets the enemy spend his fury in destroying metal instead of human life. In one action at Loupart Wood, sufficient machine gun fire was directed against a tank which would have wiped out an entire infantry division had it been directed against men instead of steel."

The above quotation is an exerpt from BRYAN COOPER'S book:
TANK BATTLES OF WORLD WAR I.



CAVALRY TRAINING

The following is an exerpt from a 1904 Cavalry Training (Provisional) Pamphlet issued by the War Office. How little things change!

We are indebted to the RCD Museum for the use of this material.

"Cavalry must now be considered not only the eyes of an army, and the arm by which a demoralised enemy can best be destroyed, but equipped (as it shortly will be) with the new short rifle, it will take a part in war which it never has been able, or indeed expected to take, in the past.

"It is hardly too much to say that the change which has taken place in cavalry is as great as that which occurred to the infantry when the cross-bow and pike were replaced by the rifle and bayonet. When cavalry was first organized lancer regiments depended entirely - and other corps almost entirely on the lance and sword, owing to the short range, inaccuracy, and difficulty in loading of the smooth-bore musket and carbine. Tentative changes were made when muzzle-loading and breech-loading rifles were adopted; but it is only within the last quarter of a century that lancer regiments have had any firearm given to them save a pistol. With such an equipment and such traditions it was perhaps but natural that the training of cavalry should have been almost exclusively devoted to shock tactics and the use of L'arme blanche, in spite of the recognized fact that for many years past it has not been possible for cavalry to act effectively against unbroken infantry.

"But what does the development of rifle fire consequent on the introduction of the long range, low trajectory, magazine rifle mean? It means that instead of the firearm being an adjunct to the sword, the sword must hence forth be an adjunct to the rifle; and that cavalry soldiers must become expert rifle shots and be constantly trained to act dismounted.

"Cavalry officers need have no fear that teaching their men to fight on foot as well as on horseback will in any way interfere with that clan which is so essential for cavalry soldiers to possess. It will, I am satisfied, only serve to increase their confidence in themselves and in their branch of the service.

"All NCOs of and above the rank of sergeant, besides being able to give individual instruction as laid down for section commanders, must be qualified to impart instruction in troop drill, so as to be able to replace the troop leader when necessity arises.

"They should also be able to compile a concise report with an explanatory sketch of simple operations.

"The practical and theoretical training of the non-commissioned officers in his squadron, in all duties which are likely to fall to their lot in war, and also to act as instructors, is one of the most important duties of a squadron commander. The instruction will include exercises in the field in which the men of the squadron will not take part.

"He will frequently set problems to be solved out of doors dealing with some military situation. He will ride out with his officers, non-commissioned officers, and section leaders, consider the circumstances of the exercise on the actual ground, and make his leaders work out the scheme practically, and call on them at different stages of the operation to state what action they would take. These instructional exercises will deal with subjects of the following nature:

a. Outposts.

b. Advanced, rear, and flank guards.

c. Reconnaissance, scouting, and patrol leading.

d. Attack and defence of small posts and localities.

e. Map reading; writing brief reports of information gained, or of some simple military operation.

ANNUAL TRAINING

"The annual training will be arranged as follows, commencing at home stations on November 1st:

1. Individual instruction, November to January inclusive, gives practical instruction, in the subjects given below, of every man and horse by the troop commander for at least 3 weeks, one or two troops being struck of all duties for the purpose:
   Riding
   Skill-at-arms
   Horse management
   Judging distance
   Miniature range shooting
   Distant patrols
   Scouting

2. Troop training, February, March and April, includes theoretical and practical instruction of each troop by its troop commander in:

   Drill and evolution
   Dismounted action
   Outposts

Reconnaissance
Field engineering
Musketry
Night work, &c

3. Squadron training, May and June, under the squadron commander in all duties.

4. Regimental training, June to July.

5. Brigade training, July to September.

6. Manoeuvres, September to October.

"The above dates are merely approximate, but serve as an indication of what is desirable, as a guide to commanding officers in preparing their programme."

~ ~ ~

Pearls

Always listen to experts. They'll tell you what can't be done, and why. Then do it.

The truth of a proposition has nothing to do with its credibility. And vice versa.

An elephant: a mouse built to government specifications.

Writing is not necessarily something to be ashamed of - but do it in private and wash your hands afterwards.

Everything in excess! To enjoy the flavor of life take big bites. Moderation is for monks.

Cheops' Law: Nothing ever gets built on schedule or within budget.

If you don't like yourself, you can't like other people.

Date: 9 Jan 75

FROM THE COMMANDANT

TO: OC Armd Dept
SUBJECT:
REF: Introductory Remarks - Offr Candidates

1. Herewith slight expansion on my notes for the introductory talk to Cbt Arms Offr Candidates.

2. For disposal as editor of Armd newsletter sees fit.

Future Cadets

Take Note

Welcome, gentlemen, to gay, romantic old Gagetown and to the Combat Arms School.

You are about to begin the training which will fit you to be officers in the Combat Arms. Those of you who have elected to become armour or artillery officers will perhaps be somewhat surprised to find that, like your infantry comrades-in-arms, you will spend a great deal of time in the early stages training in infantry section tactics. This emphasis on section tactics, including the two-week section battle school, which you will all attend, arises out of my firm belief in two fundamental points:

1. The manoeuvres in infantry section tactics are the basis of all battlefield tactics at all levels. Furthermore, the end result of all operations of war, however large-scale and complicated those operations may be, is a lot of infantry sections closing with the enemy.

2. The infantry section provides the best available training vehicle for rigorous individual training and assessment of leadership ability. Training in this framework gives us, and you, a chance to determine whether or not you are capable of the self-discipline required to lead Canadian soldiers in battle.

You will notice also that you will be required to practice and develop your tactical and leadership skills using each other as "followers" This is because our regular Canadian soldiers are much too valuable to be entrusted to amateurs.

At this point I notice all the instructors in the back row nodding wisely and saying to themselves "Here comes the old man's customary 'commercial' for Canadian soldiers". I make no apology for the fact that my next few comments may indeed sound like a commercial, for two reasons. First, because the regular soldier today receives little enough credit from the society he serves so well, and second because I am convinced that, properly trained and properly led, there is simply nothing that Canadian soldiers cannot do.

One hears a great deal these days about "commitment" and "concern for one's fellow man". I have observed more genuine mutual commitment and concern for one's fellow man among the Canadian soldiers with whom I have been privileged to serve than among any other group of Canadians, however vocal.

What I am trying to say is that the men who are referred to as ordinary soldiers are in fact the most EXTRAordinary individuals. I maintain that it is a distinct privilege to serve with these men and to observe the awe-inspiring courage and endurance of which they are capable. To be cheerfully acknowledged as a leader by such men is the highest accolade to which anyone can aspire. Such acknowledgement is not easily acquired, however. It requires from you a total commitment to their welfare and well-being. Only after they are comfortably housed are you permitted to look to your own comfort. Only after they have been fed are you allowed to eat. Show me an army in the field whose officers are at the head of the meal lineup, and I will show you an army which is going to lose, eventually.

Perhaps the most important things you will learn in the next few weeks will be about yourselves. You will be given an opportunity, available to very few Canadians these days, to really test yourself and to determine, to at least some degree, the nature of your own moral fibre. I guarantee that those of you who are still with us at the end of this summer will realize, in retrospect, that you have accomplished things you never realized you could accomplish, and endured far beyond what you believed to be your physical limits. This personal testing is an essential part of acquiring the self-confidence needed to be a leader in battle.

This word "battle" brings me to what I find is sometimes the most difficult mental adjustment which must be made by aspiring combat arms officers. We train for war. Fighting is the raison d'etre of the combat arms and all of your training and conditioning must be directed towards the ultimate aim of fighting, and killing, any enemy who threatens Canada. I should remind you here that the primary requirement for every soldier, regardless of his rank, is not to die for his country, although that may well be a coincidental result of his service, but it is rather to so prepare himself that he is able to offer every possible assistance to any enemy who wishes to die for HIS country.

I will refer again now to one of my favorite borrowed philosophies.

The more erudite among you will no doubt have heard of Edward Gibbon. For those of you who have not, Gibbon's claim to fame is that he chronicled, at great length and in exquisite detail, the fall of the Roman Empire. He maintained that the Roman Empire collapsed, not because Romans were unwilling to die in the service of Rome (in fact, heroic deaths in the service of the empire were quite the "in" thing), but because so few Romans were willing to LIVE in the service of Rome. In other words, to die in the service of your country is a relatively simple, short-term thing to do. To LIVE in the service of your country is immeasurably more difficult and demanding.

What we hope to do in the next few weeks and months is to help you to develop the fundamental skills and values required to enable you to live in the service of Canada.

Good luck, gentlemen.

Courage is the compliment of fear. A man who is fearless cannot be courageous.

STRATHCONA'S 75th

In a four day reunion that began on Thursday, April 3rd, Lord Strathcona's Horse (Royal Canadians) celebrated the 75th anniversary of the raising of the Regiment for service in South Africa, and saluted the city that has been its home for 55 years. Sponsored by the Alberta Branch of the LdSH (RC) Association, the 2nd National Reunion brought together over 700 retired and serving members of the Regiment from all parts of Canada and beyond.

Thursday evening old friendships and bonds with the Regiment were reaffirmed, new friendships were formed, and tales of long forgotten incidents were swapped. Here one met such people as Tubby Wright, aged 81, who joined in 1912 and was with the Regiment for the entire First World War and who has been speaking of this reunion for six months; one saw Frank Richmond, Horace Payne, and Dick Cunniffe, representatives of the many stalwarts who held the Regiment together in the difficult days between the two world wars; one listened to a modest Chum Macey, troop sergeant of the gallant recce troop at Melfa, and to soft-spoken Doug

Eveleigh, veteran of the Second World War and Korea and a towering figure of an RSM in the early 1960's. The list of names is almost endless, as were the stories that ranged in locale from the trenches in France to the sand dunes of Egypt. The party ended officially at 10 p.m. but the war stories went on far into the night.

FREEDOM OF THE CITY

Friday, April 4th began as a cold, grey day with the threat of a snow storm - scarcely auspicious for the Regiment's exercising their freedom of the city. The move from Sarcee Barracks chilled the vehicle crews to the bone. Members of the 17th/21st Lancers recce troop taking part in the parade expressed the suspicion that they had been spirited away to an Arctic training exercise.

At 10 a.m. the Commanding Officer moved forward in his Lynx, escorted by the mounted troop, to the Calgary Tower, where he was challenged by the City Marshall, M Gen W. A. Howard. He was led into the mayor's ceremonial office in the tower to request permission to exercise the right and privilege of the ancient custom of freedom of the city. After addressing the Regiment and the Association, Mayor Sykes then gave the Regiment permission to take advantage of the privilege granted in 1965 of making a warlike appearance in the City of Calgary with drums beating, bayonets fixed and guidon flying.

As the Regiment moved past the saluting base in its vehicles, Mayor Sykes took the salute. The scarlet tunics and brass helmets of the mounted troop provided a sharp contrast to the modern equipment and dress of the remainder of the parade. Adding colour to the ceremony were the blue uniforms and the guidon of the 17th/21st Lancers.

SARCEE OPEN HOUSE

Cold weather plagued the display prepared by C Squadron on Friday afternoon. The PPCLI Band found it impossible to play for the mounted troop's display and for the demonstration of precision driving and tent pegging in Ferret scout cars. However, the show went on and the messes were close at hand to provide warming facilities.

Arranged around the edge of the field in a static display were samples of the Regiment's hardware: Lynx, APC, Ferret, commandpost, wheeled vehicles, and the Regiment's only remaining Centurion tank. The interest of the veterans in these modern mounts cemented the bonds between the old and the new.

The Sarcee drill hall was the scene of a "get-together" on Friday evening, giving veterans the opportunity to meet with serving Strathcona's. At many tables there were discussions and comparisons of the difficulties of soldiering under circumstances that differed more in time than in degree.

BANQUET AND BALL

Saturday evening was designated Strathcona Night by the LdSH (RC) Association, and was marked by a magnificent dinner provided by the government of Alberta in the Four Seasons Hotel.

The keynote address of the reunion was delivered by the guest of honour, Lord Strathcona. He delighted the audience not only with his inimitable speaking style, but also with numerous anecdotes about his great grandfather, who raised the Regiment in 1900 and gave it his name. He reminded the audience of the tough, resourceful men who were recruited to serve in South Africa and that the Regiment today is the successor to the traditions they established. He presented to the Regiment an album of press clippings of Strathcona's Horse during their visit to England that was presented to the first Lord Strathcona in 1901.

MEMORIAL CHURCH SERVICE

The Regiment and members of the Association gathered at 9:30 a.m. Sunday April 6th for an interdenominational memorial service at St. Stephen's Anglican Church. The service commemorated not only those Strathcona's who fell at Moreuil Wood, but all departed comrades. The church has a special significance for the Regiment that originated with its one-time rector, Archdeacon Swanson, who was the unofficial padre of the Strathcona's for a number of years prior to the Second World War. The guidon carried by the Regiment from 1932 to 1968 was laid up in St. Stephen's in 1970. The Regiment's padres, Father Rose and Father Roy, assisted the rector with Sunday's memorial service, as did Father Bob Greene, a Second World War Strathcona and former Clagary alderman.

Following the church service, the Regiment and old comrades paraded along 11th ave. SW to Mewata Armoury, where Lord Strathcona took the salute. The guidons of the Strathcona's and 17th/21st Lancers were carried by mounted men in full dress, and a contingent of Lancers in blue patrol uniform marched in the parade. The old comrades were commanded by Horace Payne, who admitted that his parade square voice was a little rusty at the outset, adding that he was in good form when the saluting base was reached.

17TH/21ST LANCERS

The alliance between Lord Strathcona's Horse (Royal Canadians) and the 17th/21st Lancers is 50 years old in 1975. By fortuitous circumstance, the Lancers are training at CFB Suffield this spring, and an advance party under Lt A.J.M. Blackshaw arrived in time to participate in the reunion, equipped with a troop of Ferret scout cars. The immediate past Commanding Officer, Lt. Col A.R. Douglas-Nugent, the former exchange officer, Capt. J.G. Groves, and the RSM, WOI P.W. Finch, were also present.

The 17th/21st Lancers added a good measure of colour and glamour to to the parades and other reunion activities. More than one Strathcona was envious of the appeal created by the Lancers' blue patrol uniform, and the young British soldiers not unexpectedly played their moment of stardom for

all it was worth. They were a welcome addition to the reunion celebrations, and their presence helped to strengthen the bonds that have been forged since 1925.

It is significant that the reunion marked the first occasion since the alliance was effected that the guidons of the two regiments have flown together on parade and rested side by side in the Strathcona's officers' mess. While the Lancers' guidon carries a number of earlier battle honours, including such famous ones as Balaclava and Omdurman, many of their later ones are also carried on the Strathcona's guidon. The common battle experience that began in the trenches at Festubert in 1915 is the foundation of the alliance.

NOTABLE VISITORS

While it would not be practical to list all those who attended the reunion, and although it is difficult to mention some and not others, several individuals cannot be left unmentioned.

Lord Strathcona will long be remembered for his urbane wit and for the dignity that he lent to the proceedings. He arrived at the meet and greet session on Thursday evening and joined in the spirit of the festivities without hesitation. For the next three days he followed a hectic schedule that included not only Strathcona activities but also a visit to Strathcona - Tweedsmuir School in Okotoks and a ceremony to drive the last spike on the street railway at Heritage Park.

Brigadier and Mrs. Harvey were present for all of the activities in spite of their advanced age. As one of the oldest Strathcona's at the reunion, and the Regiment's only surviving holder of the Victoria Cross, Brigadier Harvey occupied a place of honour during the various functions. On the two occasions when he was introduced from the head table, he was given a standing ovation.

In spite of a delay in his arrival, L. Gen Milroy, Colonel of the Regiment, was a central figure during the reunion. He once again showed how well suited he is to serve the Regiment in his capacity as Colonel, and how fortunate the Regiment is to have him as the senior member. Although his B Squadron cronies from the Second World War tried to monopolize his time, he did manage to speak to others as well.

REUNION COMMITTEE

The success of the reunion is largely due to the tremendous amount of effort and time given by the Alberta Branch of the LdSH (RC) Association. Under the chairman of the reunion task force, Dave Cathcart, a myriad of small details and large decisions were dealt with and co-ordinated. He along with Fred Jefferson, Larry Jones, Roy Jardine, Bob Bartlett, WO Al and Mrs. Dee Langan, MCpl Fred Daunais and many others burned the midnight oil for many months to ensure the success of the reunion. Credit is also due to the officers and men of the Strathcona's who provided some of the resources, the bulk of the manpower and their share of the spirit for the various activities.

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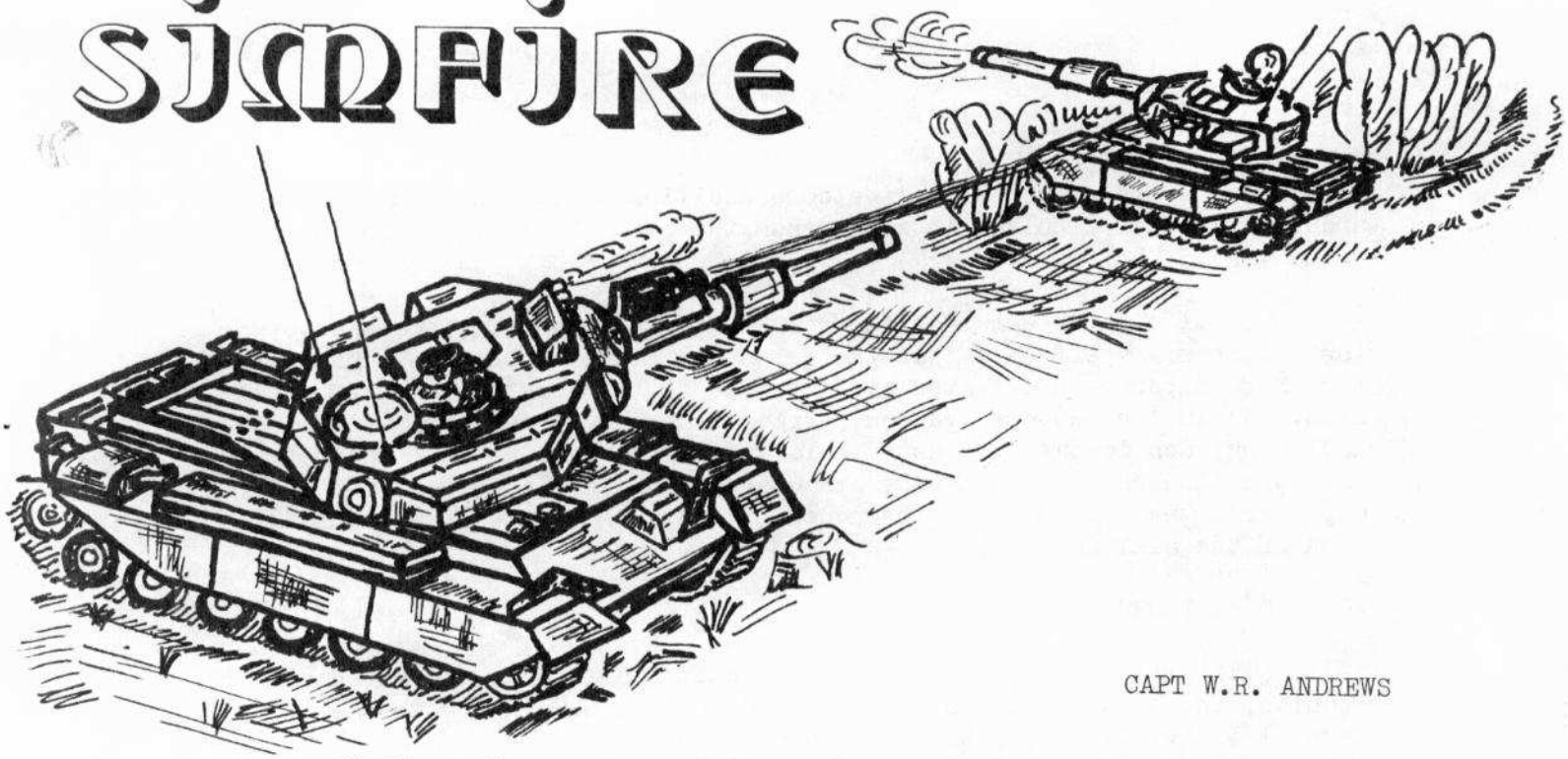
SIMFIRE



CAPT W.R. ANDREWS

Simfire, the new British tactics and gunnery training device has arrived at CAS. It is to undergo a user evaluation for a one-year period to examine its effectiveness in teaching gunnery and tactics to tank crews and its reliability, especially in cold weather. Seven Simfire Centurion kits were received with two Simray umpire guns. The latter are to be assessed as possible training aids for HAW(TOW) crews.

The Simfire kits were modified to fit the MK5 Centurions at the school. They were designed for the 105 gunnery system however and thus have integral foot pedals for RMG techniques and require the No. 30 sight. The system is composed of:

a. four detectors, mounted on the turret lifting eyes;

b. a laser projector mounted on the gun;

c. a flash generator;

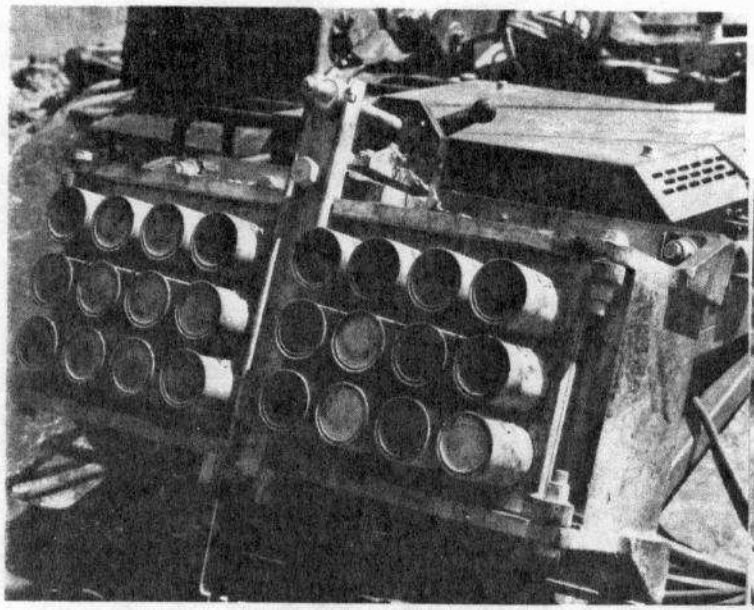
d. a radio receiver/transmitter (Rx/Tx) mounted with c. on the turret above the mantlet;

e. a smoke generator mounted behind the commander's cupola;

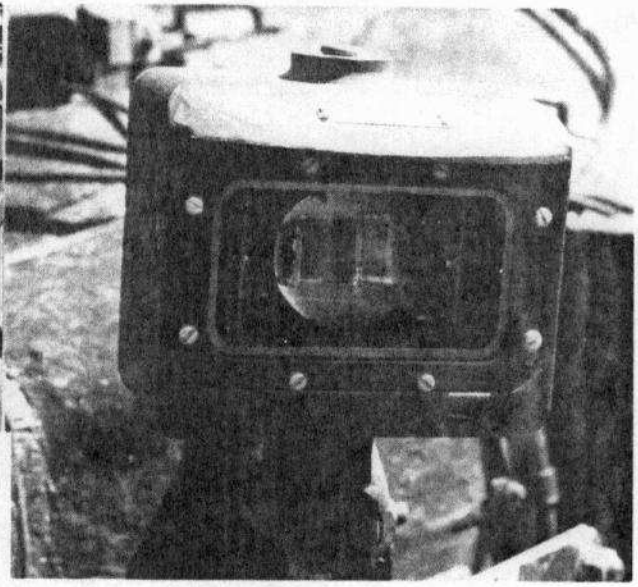
f. eyepieces for the No. 30 sight and either the RCP sight or the X10 periscopic binoculars;

g. RMG foot pedal; and

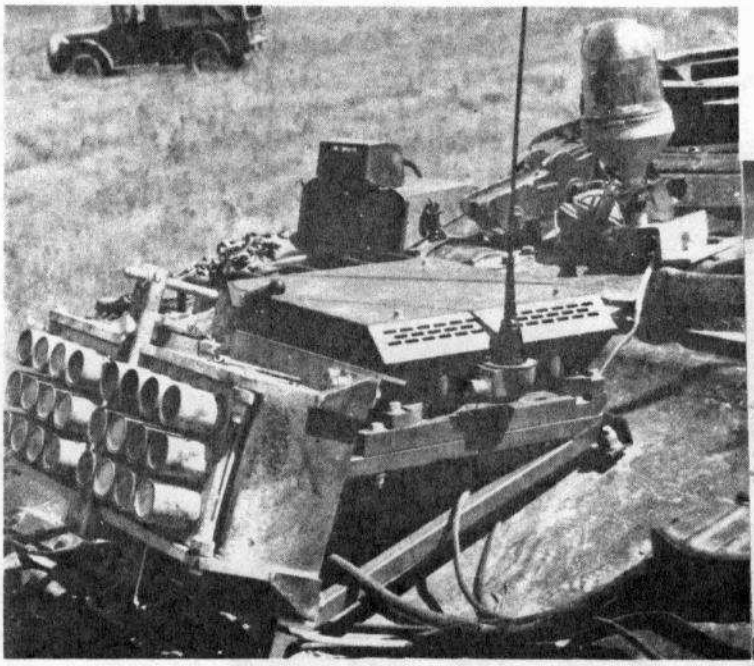
h. control box mounted in the bustle beside the radios.



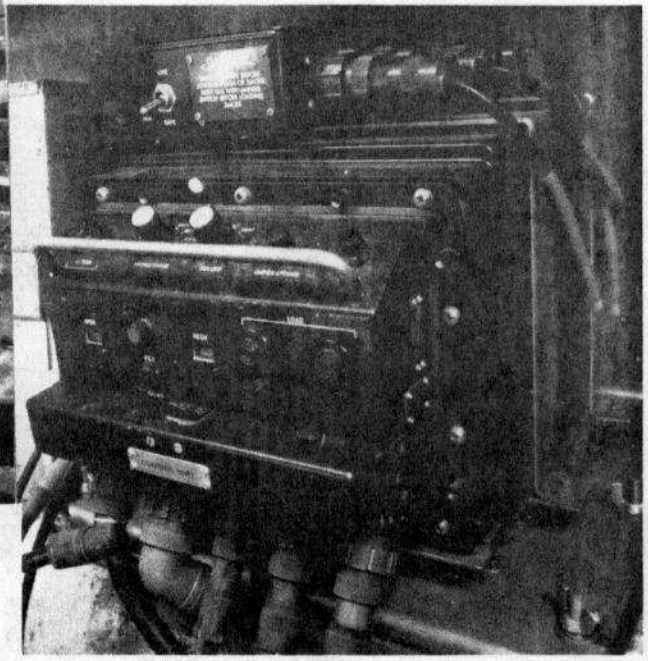
THE FLASH GENERATOR



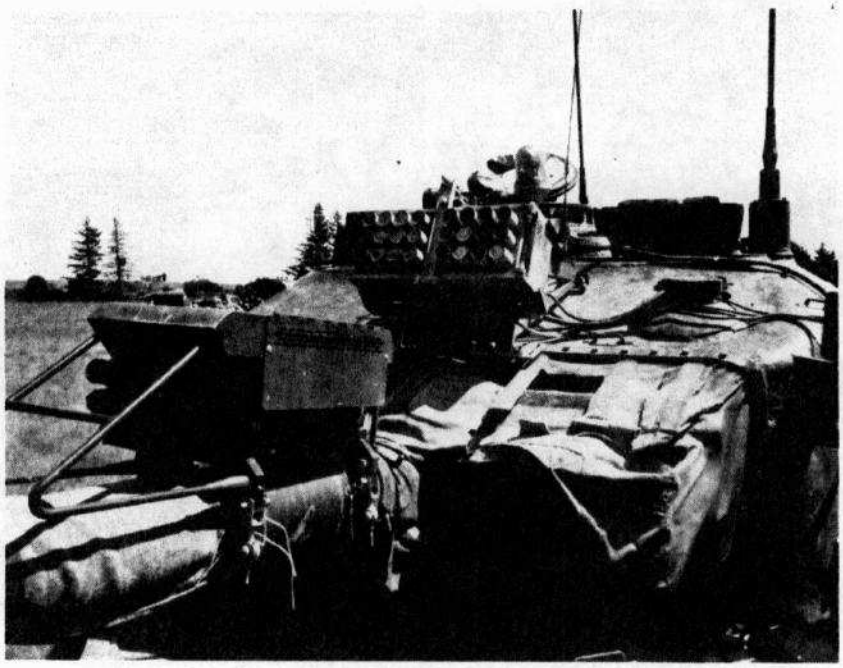
ONE OF THE FOUR DETECTORS ON THE TURRET



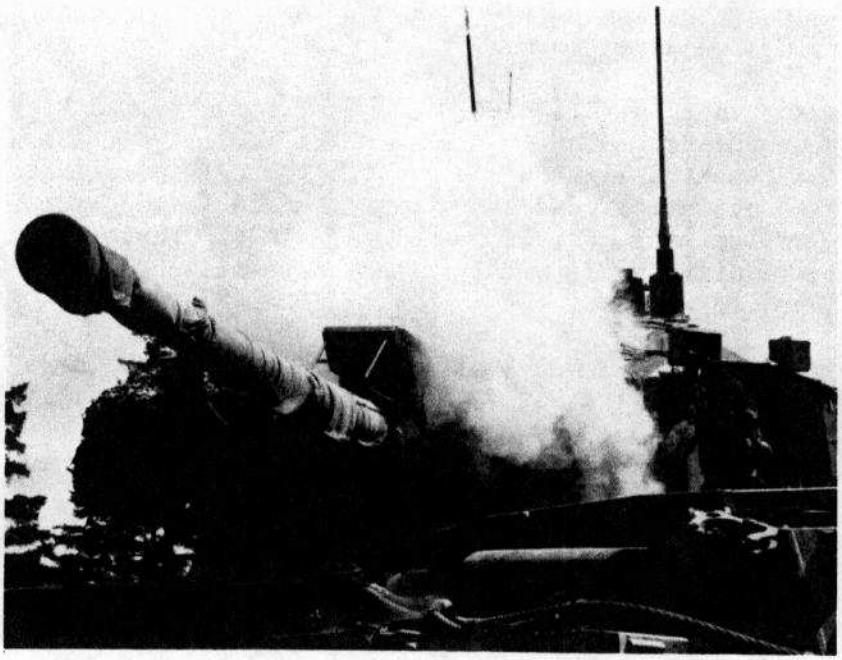
THE RADIO RECEIVER/TRANSMITTER MOUNTED ON THE TURRET



THE CONTROL BOX



THE LAZER PROJECTOR MOUNTED ON THE GUN AND
THE FLASH GENERATOR ON THE TURRET



THE REALISTIC OBSCURATION ACHIEVED BY THE
FLASH GENERATOR

The system is activated by the tank firing switches. The commander gives the fire order and presses his action button. Techniques available to him are:

a. ranging Sabot;

b. ranging HESH;

c. Sabot known/estimated range to 2000m; and

d. HESH known/estimated range to 2000m.

The loader pushes the appropriate ammo button (APDS or HESH). He yells "Loaded" when he has made the loaders safety switch and the control box indicates loaded. There is a built-in delay after pressing the button to simulate the time it would take to load a live round and pick up the next one. Each time the main armament is "fired" the number of rounds available decreases by one. When no further ammo remains, the gun cannot "kill". If desired, the system can only be "bombed up" by the umpire ie on resupply.

The RMG will give the gunner a kill indication in his eyepiece but this really only indicates that he has the correct range. The target will not be "destroyed". Only by using one of the two main armament firing switches and the correct point of aim can the target be "destroyed" by setting off its smoke and flashing light. If the point of aim is within the acquisition zone but not the kill zone an indication of the direction of miss is given ie high right, low, etc. This acquisition zone is within 1/2 target in width and 200m in elevation of the kill zone. Also, the smoke from the flash generator, activated by the main armament firing switches, provides realistic obscuration.

The target vehicle will have the "under attack" light flash on the control box when engaged. The control box "killed" light, the smoke grenade and the flashing light are activated when killed. There is the facility to also cut electrical circuitry on kills ie the ignition or radios. When killed, the vehicle cannot use its own gun. A killed vehicle can be reactivated by simply resetting a switch, access to which can be restricted to umpires.

The Rx/Tx relays fall-of-shot information from the target tank to the firer. It operates at about 79 MHz frequency. During initial installation blanket interference was encountered from several sources. Fall-of-shot indications were quite random. This was finally corrected by desensitizing the antennas. This did not seem to effect the maximum range (200m)

It is hoped to use at least a troop of Simfire tanks against one or two "enemy" M113Als with detectors, smoke generators and umpire guns. This should be for Phase IV Basic Officer Training and for TL 6A, TL 6B and Advanced Gunnery courses. Simfire should make tactical and dry gunnery training much more interesting and exciting. The gunner will be fully employed at last!

RADIO-WIRE INTEGRATION

Radio Wire Intregration (RWI) is the ability of a caller on a TA-43 PT or a Radio to transmit to each other without being directly linked to one another, i.e., the Squadron Commander has a telephone in his quarters, his LO is at Regt'l HQ and wishes to speak to him, rather than use a runner to have him come to a radio or deliver a msg. The radio call can be easily transfered by RWI to his telephone and radio telephone procedure used.

The employment of RWI can be from a single telephone to a net or a multiple listing switchboard (SB-22 PT) to a net. The uses of RWI is left up to the imagination of the commander.

The use of RWI in Harbour areas allows for the minimum usage of radios and manpower with greater flexibility of communications.

Equipment required:

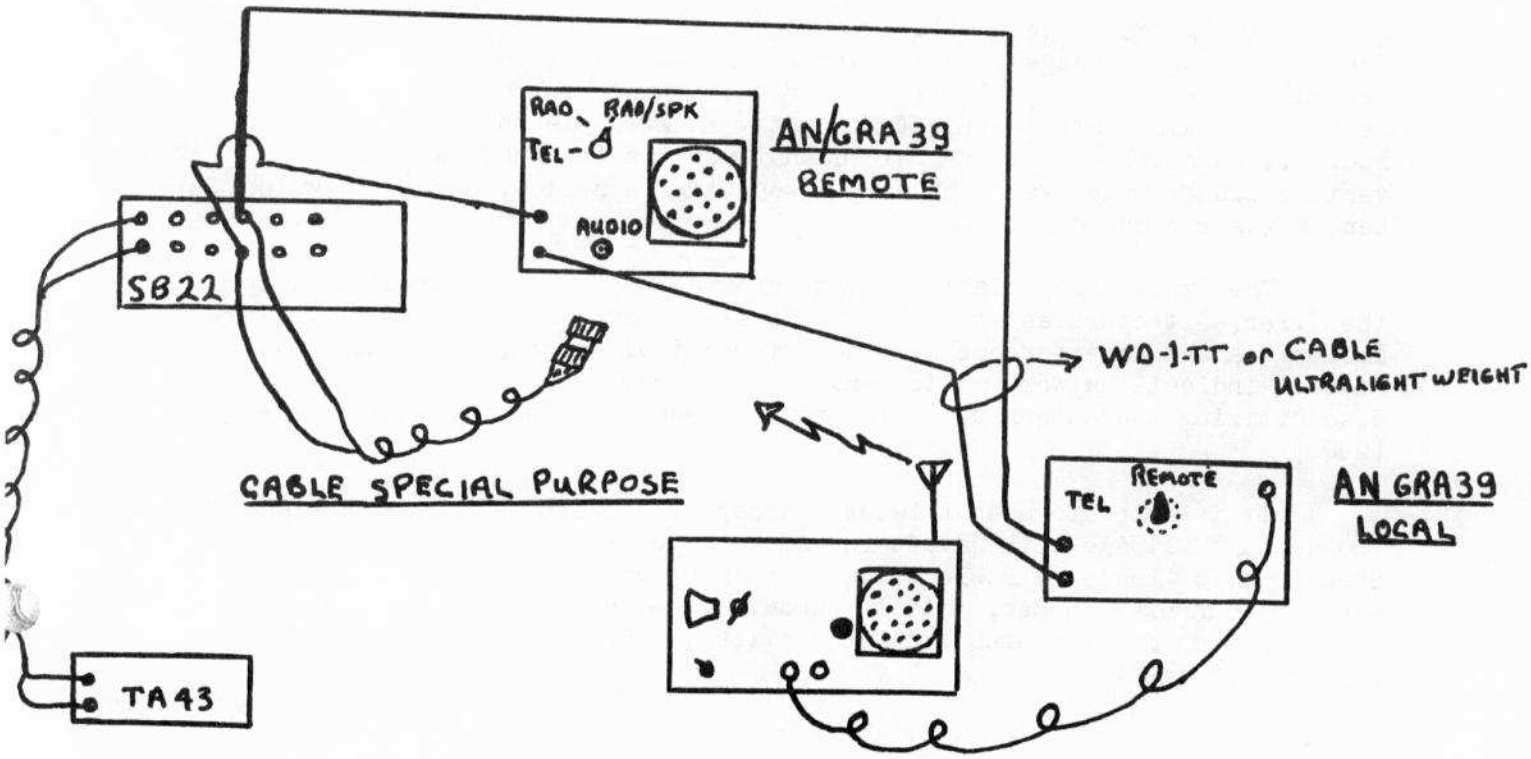
(a) AN/GRA 39;

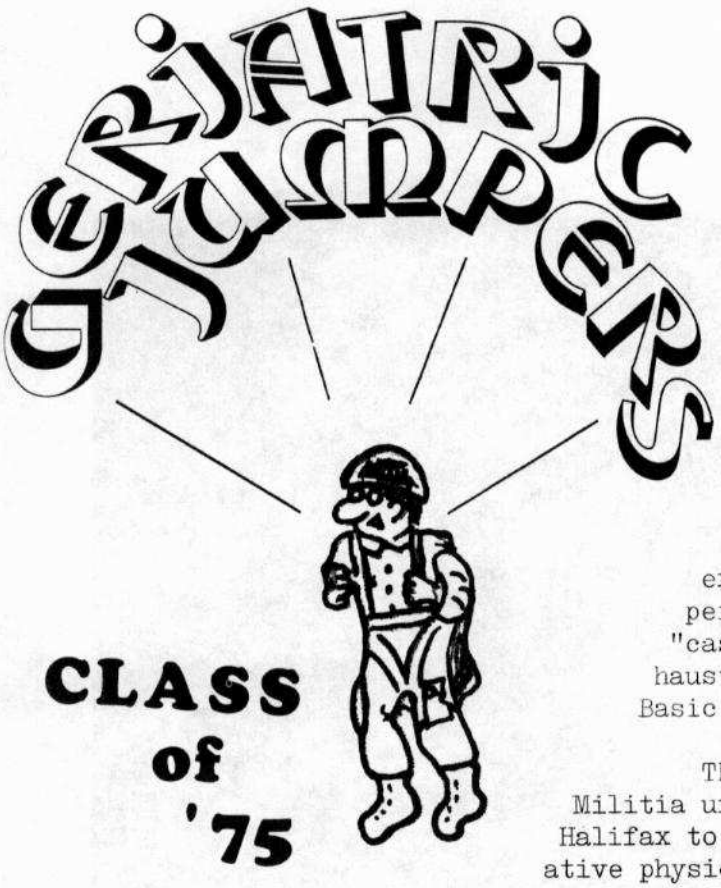
(b) SB-22/PT or SB-993;

(c) TA-43/PT;

(d) Cable special purpose. A short piece of WD-1/TT soldered to "A" and "C" pins of an audio connector.

Equipment arrangement (for the purpose of this diagram a SB-22/PT will be shown for the switchboard facilities).





CWO GELDART

Bright and early on the morning of 4 Mar 75, a "Distinguished group of aging Gentlemen" found themselves assembled at the Canadian Airborne Centre (CABC) Edmonton Alberta. The next nine days were to be remembered by most as a conglomerate of mixed emotions, apprehension, exaltation, team spirit, coursemanship, personal accomplishment, sheer terror, "castrating" agony and utter physical exhaustion. This was the first day of a Basic Parachute course.

The players had come from Regular and Militia units, formations and bases from Halifax to Vancouver, leaving behind the comparative physically undemanding desk jobs in businesses, staff and administrative positions.

The tempo was soon to quicken. Under the "conductorship" of Sgt Peskett and his lead players, Sgts Holland, Smith and Franc our group took flight amid arias of "Jab", Slip to your right" and "Are you gonna jump Sir," and choruses of "Airborne". (It is a little known fact that the term "Armour" was substituted for "Airborne" by a few throughout, albeit at a slightly lower volume).

The rank mixture, (3 Cols, 12 LCols, 1 Maj and 9 CWOs) and in particular the age span (38-48) fostered some advance local discussion. An assortment of descriptive phases were overheard. Included were "Over-the-hill-gang," "Twilights," "Golden Age Gang" and "Geritol Jumpers." Not to be outdone we, as a group through democratic selection, favoured a term of our own, and thenceforth became known as the "Geriatric Jumpers - class of "75".

Like any good CF course, the first item on the agenda was a TKT with a CABC twist. The word "knowledge" does not enjoy status at CABC where the emphasis is placed on "doing with vigour". The PT entrance exam should, more appropriately be termed TTT (Threshold Torture Test). Most were able to struggle through the seven chip-ups, 31 sit ups and the 600 yard shuttle-run to the satisfaction of the instructors and the surprise of the students. Only a few retakes were required later in the week.

The course is laid out in two major stages. The ground or "G" Stage and the jump or "J" Stage. Proficiency must be achieved at "G" stage before progressing to "J" Stage.

"THE GERIATRIC JUMPERS"

IN ALL THEIR GLORY

During "G" Stage, instant reaction to the necessary drills are achieved through an arsenal of ingenious torture devices. Each of us was issued a training harness (regular parachute harness but having expired the safety life span for operational parachuting) helmet, snowshoes, a rucksack and bed roll facsimile, and a rifle that no longer "rifles". In addition a spider's nest of straps, snaps, lines and clips that are peculiar to the occupation. Finally we were given a small canvas bundle called a reserve, and when worn on the front of the harness was conveniently handy as a hugable teddy bear for comfort during weaker moments. Across the front of the pack on a red strip, some thoughtful soul had printed our names. I frequently found it difficult to identify mine as they all seemed to have the same name - "DUMMY"

The harness, helmet and "DUMMY" became our constant companions during G Stage and the remaining items were added whenever the "Inquisition" decided we were too preoccupied with hugging our teddy-bear packs. This was usually during our training for equipment jumps.

Flight training, another phase during G Stage was designed to cover that period of the jump between exiting the aircraft and reaching the ground. During this period the parachutist descends under the support of his own canopy and can influence to some degree the rate and direction of drift in preparation for landing. His own safety as well as others in proximity to him depends largely on the rigid safety standards of his equipment and in his ability to react to any in-flight emergency.

The device used to teach these drills is suitably called "the rack" and must have rivaled its namesake for discomfort. The trainee is suspended in his harness in such a way that various flight drill contortions can be applied to simulate the drills that are required during the actual parachute descent. The discomfort arises not from the drills but from the state of the training harness leg straps, that through prolonged use give the effect of riding a charged high-tension wire. Time spent in the rack was most productive; the ability to do it correctly the first time, had decided advantages over trial and error - an error meant more time in the rack - for all of us.

Landings were taught on the "Swings", another suspension device but with an added twist. The participant on leaving the platform imparts a pendulation to simulate a lateral movement on landing. The instant of landing was at the discretion of the instructor who released the suspension line when the correct landing profile was achieved. Proficiency was achieved when the landings were correct from all directions - time, after time, after time...

The afternoon of the third day found us at the mock tower and another psychological hurdle. The tower is a three story structure designed with an optimum exit elevation to give the greatest sensation of height. A number of cables had been strung passing across the exit and were inclined toward a large mound some distance away. The harness of each participant in turn was attached to a trolly on the cable. He then went through the exit drill and apprehensively flung himself into space. It is suggested that a notice be displayed near the exit "Watch the first step - its a dandy" but perhaps that would be considered "Un-airborne".

Sufficient slack is left in the suspension harness to make the short seconds delay needed to arrest the descent seem much longer. The apprehension of equipment failure is suddenly jolted out of existance and the deployment count of "one second - two second - three second - four second" is seldom completed. The rest of the deployment drill is completed along a roller-coaster ride to the mound near the end of the cable.

The initial ragged drills are corrected to perfection until the required number of perfect descents are logged by each, both with and without the full equipment load.

It would appear that an afternoon on the mock tower was to coincide with "Visitors day at the Zoo" however the gallery slowly thinned as it became apparent that all the old fellows were going all the way. Some even went so far as to give the appearance of enjoying it. One would suspect coursemanship and mellowed perseverence is still a worthy ploy of the "salt and pepper" generation.

Day six was to be our first jump. The early morning bus ride to Namaio could not be considered effervescent but a noticeable atmosphere of expectation was not disguised by the good natured chatter that skirted the forthcoming activities of the day.

Once we arrived at the hangar it became noticeable that the course programming had been arranged to maintain activity with minimum time left to our own devices. Our training harness and teddy bear-"dummy"-reserve had been left behind. Each was issued a service parachute pack and a reserve 'chute'-this one, according to the stencil on the front no longer considered us a "dummy". Instead we were now reduced to a number and when correctly attached this tested our new found intelligence by being readable up-side down. It should be added here that those who found the cryptics too easy to decipher were still referred to as dummies as the reserve had been attached incorrectly.

Working in pairs our harness was rigged, interspaced by safety checks at each stage by the rigger, and a final check by the jumpmaster. The Otter jump-load was a stick of five plus the jumpmaster. The No. 1's on these jumps were seasoned jumpers from CABC and Cdn Airborne Bde who, participating as continuation jumpers did much to ease the butterflies that I'm sure accompanied all of us. Once arranged on the floor (seats having been removed) and buckled in we were soon airborne and another in flight check by the jumpmaster preceeded our arrival over the jump zone. The previous days' drills had by now become second nature and a much appreciated distraction. Concentration left little time to concern ourselves with the open door. Before we knew it one by one our feet went over the sill and we pushed away.

During G Stage it was only natural to inquire of the "Cherry Beret Set" as to their personal reflection concerning the sensation of the jump. In retrospect I can only agree that perhaps uppermost is the utter silence; followed closely by the reassuring tug indicating deployment of the parachute canopy. Unlike the rack, the harness becomes a comfortable, snug fitting bucket seat and the anticipated jar of the mock tower fails to materialize. Our later comments when reviewing the uncomfortable cramping position of the aircraft were unanimous. Exiting the aircraft was assured, if only to relieve

the discomfort of remaining aboard.

Each of us had our own variation of a common theme, but a general recollection was a series of split second image stills of the open canopy, the form of one of the following numbers of the stick as he deployed, the unnatural miniturization of the buildings and vehicles below or the fleeting glimpse of the departing aircraft. Many jokingly described all their jumps as night jumps (a self-inflicted phenomenon of closed eyelids) I suspect there were a few but the urge for survival and that of candid curiosity was great enough to ensure that nothing of the surroundings was overlooked.

The deployment tug of the canopy and a drill inspired visual check strengthens an increasing feel of accomplishment. A few checks to ensure that you and your neighbours are at a respectable distance permits a few seconds to "test your wings" and enjoy the ride. On one of the later jumps, one of my colleagues saw this as an opportunity to produce a hidden camera. His third photo it is told was a beautiful picture of a blade of grass under the snow of the drop zone.

For myself, at 225 lbs the heaviest on the course I found my "trips" of relatively short duration. On one jump my "powered" descent was to result in a temporary nickname as the "phantom slipper". As I sailed through the lightweights, my sudden appearance near Col Mitchell resulted in us both taking evasive action like the repelling effect of opposing magnets. A near miss of a sizable laundry bill was visible proof that our drills really worked.

Perhaps the first thoughts as you release your harness and stagger errect is the realization that it wasn't as traumatic as expected. A cursory check of your limb functions and the absence of any noticeable hurts contributes to a general feeling of well being. The next step and certainly the most physical part of the jump is packing up and straggling back to the pick-up point.

The second bus trip of the day is much more relaxed than the early morning journey from CABS. That first jump was relieved several times, (your own as well as all the others) before we reached the hangar.

On day ten we had our wings parade. The stern faces of the graduates as we formed up for the presentation only partially disguised the inner sense of personal satisfaction. Few of our group would ever jump again and even fewer would continue parachuting as a professional occupation. What it did, however, was to give us a first hand appreciation of this phase of a paratroopers training. It must be realized that reaching the ground safely is only one of the many skills that must be perfected in the training of a successful paratrooper "Getting there is only half the fun". One has to be impressed with the character traits of those who choose this as a profession and in particular with those who continue to follow it even after the lapse of the initial aggression of youth.

It is most difficult to answer the prevailing question, "why would any one of his own accord jump out of a perfectly serviceable aircraft". Perhaps "as a lark"; perhaps to flirt with danger; perhaps to test inner courage. Whatever the personal reason none is without some degree of hesitation or anticipation. Our group of Geriatric Jumpers had perhaps a sharper honed realization that parachuting is a young man's game. The bounce-back is a little slower and the survival instinct a little stronger through mellowing.

I feel it can safely be said that we all learned something from it and about ourselves and are better for it.

Would I jump again? Let's not talk in possibilities --------

RECOGNITION QUIZ

Test your skill. Put names on these silhouettes. To prevent frustration the answers appear on page 48.

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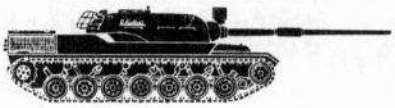
b 

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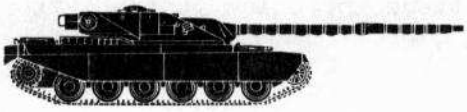
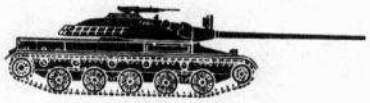
e 

f 

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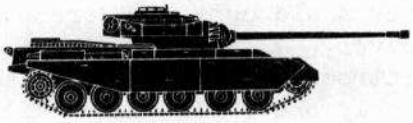
j 

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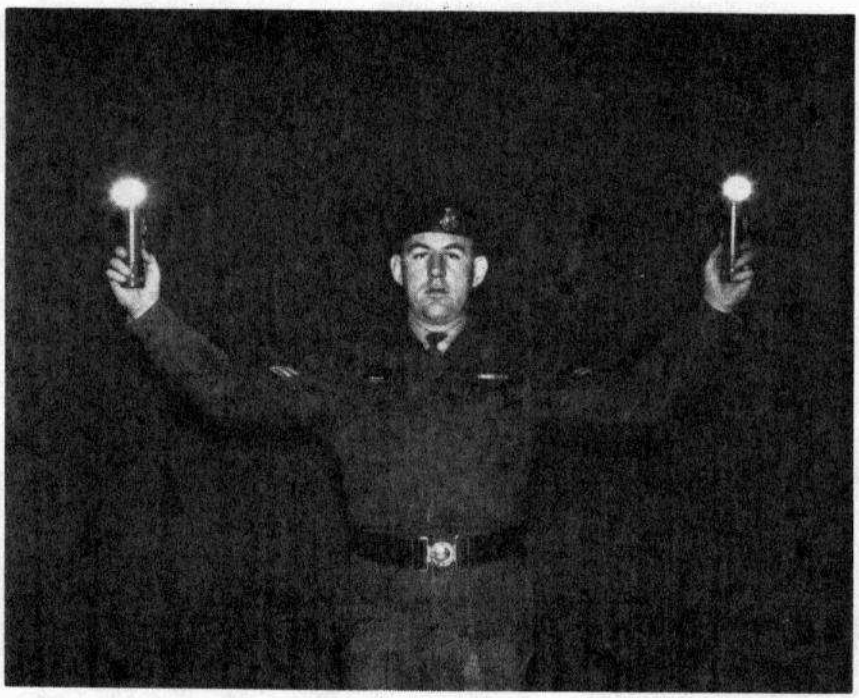
Crewman Trades Progression

CWO R.G. MESSER

Communication with the Regiments indicate that there remains some confusion about the crewmans trade progression. CAS has sent numerous line diagrams and correspondence out to units in an attempt to outline the present authorized progression and courses being conducted within CAS, however the authorative manuals and directives such as CFP 123 have not been corrected. The required amendments have gone forward for staffing at FMC and finally to NDHQ for translation to the bilingual format. This staffing and translation all takes time (too much we think). The Course Training Standards (CTS) that are presently held by units for the crewman trades are all outdated and are useless documents. To compound the problem, new CTSs are being published with recent effective dates, and on the surface appear to be a current document, however, in some cases the draft was submitted for staffing and translation as much as 4 years ago, therefore these also are obsolete in content. These recent official publications coupled with the unofficial correspondence when content is compared has really confused the issue and has posed the question in the units "who do we believe"? I am attempting by this media to provide the readers with another unofficial communication in an attempt to tell how it really is and hope that eventually the necessary official amendments catch up to the real world we are living in.

In Nov 73 a Crewman Standards Trade Writing Board convened in CFB Gagetown to write draft specifications and make recommendations for crewman trade progression. All armoured units were given this report dated 20 Dec 73. The Commander FMC held a conference on 15 May 74 and a final decision



HAVE YOU SEEN THE LIGHT YET?

was made on the crewman trade/career progression. A copy of the minutes of this conference was sent to all FMC bases. In addition the Chief Instructor at CAS sent a further SITREP on 24 May 74 to all Armd units amplifying the conference results.

The initial step here at CAS was to write Course Training Plans, plan, resource and conduct the necessary training to meet the new trades requirements.

The following is an amplified description of the crewman trades progression and states how it is, regardless of the absence of official CTSs or amendments. The authorative documents for the conduct of this training are the Crewman Trades Writing Board Report and the minutes of the Commanders Conference 15 May 74 on Implementation of Combat Arms Training Standards.

Trade Level 3. All crewman for this qualification receive training in additional GMT subjects, Lynx gunner (7.62 MG and .50 HMG), and one of the following TSQs (or Primary Combat Functions as they are sometimes called).

a. 011.07 Basic Communications;

b. 011.11 Wheeled Recce Driver;

c. 011.12 Track Recce Driver;

d. 011.05 Tank Gunner; or

e. 011.09 Tank Driver.

For advancement to trade level 4, the crewman must obtain qualification on a second TSQ and meet minimum time in rank requirements which have not changed.

Trade Level 4. Qualified in two TSQs. For advancement to trade level 5A must obtain qualification on a third TSQ and meet time in rank requirement.

Trade Level 5A. Qualified in three TSQs. For advancement to trade level 5B must be qualified in Combat Leaders Course or the old Junior NCO Course and meet time in rank requirements.

Trade Level 5B. Combat Leader/Jnr NCO qualified. For progression to Trade Level 6A Sgt must be qualified in one of the following Advanced Specialties:

a. Advanced Armoured Gunner TSQ 011.25 or prior to 1967 Advanced Tank Gunner TSQ 011.06;

b. Combat Arms Advanced Communications TSQ 9004-CT; or

c. Combat Arms Advanced Driver TSQ 9004-AP

In addition, must obtain a pass standard on a Crew Commanders Trade Level 6A course. Point to note here is the prerequisite for this course is qualified Tank Gunner TSQ 011.05 or Crewman Gunner TSQ 011.03.

Trade Level 6A. Qualified Crew Commander 6A and one advanced specialty. For advancement to trade level 6B WO must be qualified in the following:

a. A second advanced specialty;

b. Warrant Officers Qualifying Course; and

c. Troop Warrant/2IC Trade Level 6B.

Trade Level 6B. Qualified in two advanced specialties, WOQC and Troop WO/2IC 6B course. For advancement to trade level 7 requires qualification in the Master Crewman Trade Level 7 course.

Trade Level 7. Qualified Master Crewman Trade Level 7. No further qualifications are necessary, however, crewman are encouraged to obtain qualification on the third advanced specialty any time after level 6B.

The initial effort at CAS was to train the recruit from CFRS to the new standard, Armour Dept is responsible for qualifying the recruit to trade level 3 standard and his unit is responsible for his qualification to trade level 4 and trade level 5A. CAS Armour Dept is aware that units are generally committed to the maximum, so whenever CAS training resources permit, Armour Dept is qualifying the recruit in as many TSQs as they can. These TSQ qualifications are identified on the individual's course report and the individual's UER sheet, which are sent to his gaining unit on posting.

Finally, the Writing Board recommended the removal of On-Job-Training-Standards for crewman progression and received the approval of FMC so, to erase all doubts, Crewman OJT is no longer a requirement for crewman progression.

I sincerely hope that this preamble is adequate in outlining the crewman progression and the application of training at the Combat Arms School and in the armoured units. If in doubt, call CAS Armd Standards, CFB Gagetown, Local 646.

* * * * * * *

A committee is a life form with six or more legs and no brain.

FIRST IMPRESSIONS of a CANADIAN OFFICER in FRANCE

An officer exchange program between the 12e Régiment Blinde du Canada and the 12e Régiment de chasseurs has been in existance since 1972. CAPT DENIS MERCIER of 12eRBC, currently serving in France, has forwarded some of his first impressions on his work and the soldiers he serves with.

I arrived in Sedan on January 17th, 1974. I barely had time to identify the grounds and the people, when I found myself leaving for a two week training camp at Bitche in Alsace. I immediately took command of my platoon composed of 3 enlisted NCOs, 2 drafted NCOs, 21 draftees, 3 EBR, 3 jeeps and one Marmon. (Described later.)

On return, at the beginning of March, I discharged those who had done their military service and I met new gunners and drivers. In April the squadron went to Mailly for a two week camp. In June an army corps exercise took place in which I participated with my platoon. In July I organized an escape raid followed by a descent on the river in Zodiacs for three days. At the end of September, we drove 700 kilometres in combat vehicles to the camp of Lacourtine. The training lasted 3 weeks and was very fruitful in the way of contact between the army and the local people.

The draftees of the platoon I led from beginning to end were discharged at the end of November and immediately the training of the coming contingent began.

The year was positive especially from the human point of view. Working with draftees is exacting for the platoon commander and the hours are long. From 0800 to 1730 including an hour and a half at noon; further problems are solved after working hours. The draftee must constantly be "officered" and the limits imposed by the program do not allow much leisure time. Until lately, the week-end started at Saturday noon. The draftee in general wants to work and learn something positive. Left to himself, he is bored and loses all interest.

The draftees of the regiment come mostly from the North of France, that is to say from Brittany to Pas-de-Calais through Normandy and the Parisian region. There are people of every walk in life and of every social class. Everyone sees the compulsory military service according to his personality and, as a whole accepts it favourably contrary to what one may say. Of course they see in it one year lost financially or from school, but they are sufficiently open minded to understand the "why" of

military service. They must be looked after, understood, and above all, one must be available to them. Once you have won their confidence you can practically do anything with them and they ask nothing.

The draftee's barracks life is not always a bed of roses! The evenings are tedious, the leaves always too short. Discipline is not excessive for, doing only one year of service, the military has little time to change his civilian attitudes.

Squadrons are personalized. Thus servicemen do not become identified with squadron A or with the first platoon, rather the unit commander gives it his name: we have Squadron Eudeline or Platoon Mercier and the men feel proud of this.

A platoon is generally composed of 8 drivers out of which 1 will eventually drive a jeep and another the Marmon. There are 4 gunners out of which one will be a jeep driver or an assault trooper. The other five draftees will work as assault troopers for the screening section. One of them will eventually drive a jeep.

For the draftee the all arms basic training lasts 2 months. Then the assault troopers rejoin their future platoons, while the drivers and gunners leave for a month's training period at the Carpiagne Armoured Cavalry School. Therefore they will be part of the platoon for only 9 months. Then there will be two more months of training with the platoon at the individual and crew levels before going to platoon drill. During the next 4 months they will learn the fundamentals of reconnaissance at the platoon level. The last three months will be devoted to polishing and catching up.

Having been obliged to carry out only one function during 10 months, the draftee knows it well by the end of his service. However they will lack the professional soldier's reaction. The reaction which results from experience and repetition and which makes the basic actions of a soldier's life automatic. The draftee knows them but he must be reminded to apply them and when to do so. This is why a control of work is always necessary, except maybe during the last two months.

The most interesting and instructive moments are those passed on exercise. The draftee feels important and useful. He always works well during these periods, be they close to or very far from the garrison. This way he has the opportunity of visiting his country a little. While bivouacing or billeting the opportunity to establish human contacts and to have frank discussions on the French army, the exercise, or military service is rapidly seized.

The draftee is a French citizen who gives, whether he likes it or not, one year of his life to serve his country. He becomes aware of the problems of defence and depending whether he occupied a more or less good job he will have a more or less favourable attitude towards the military service at the end of his duty.

This is the context in which the draftee works. The regiment does

not waste time during the year for every two months a new contigent arrives. One contingent is discharged, soon the next one arrives and we start all over again.

ON PARADE

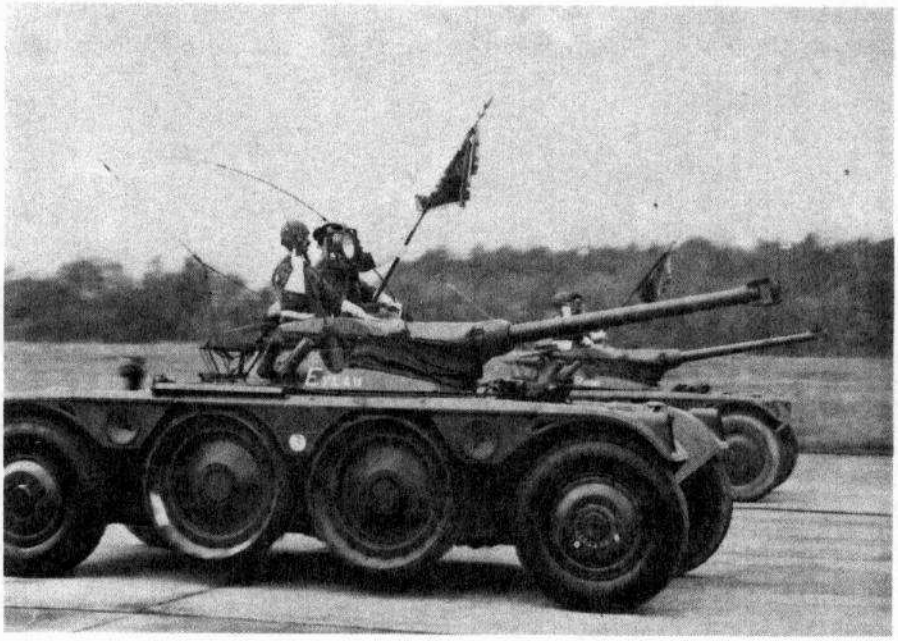
The EBR Platoon

Where does the Armoured Recce Troop fit in? There are three Reconnaissance Regiments which form the Advance Guard of the 1st Army Corps. The 12e Régiment de Chasseurs is one of them. In wartime, it would operate with four combat squadrons and one of command and services. In peacetime one of the combat squadrons operates as training squadron. The combat squadron is composed of four combat platoons.

An EBR Platoon is composed of 3 EBRs (Armoured Recce Vehicles), three jeeps and one Marmon. As the advance-guard the platoons operate far forward and can hardly count on engineer or artillery support. On the other hand the helicopters support the squadrons and do not hesitate to thrust forward to get observation.

Considering its three armoured vehicles can provide precise fire to 1200 metres, the reconnaissance platoon advances at a fair rate until contact is made. The jeeps are used as scouts on the left and right, coming and going continually; ready to seek outflanking routes in case contacts are too strong. The reconnaissance is active and the information can be obtained through combat if necessary. Likewise the squadron can (with its twelve guns) stop or slow down an enemy depending on its strength. While reconnoitering, the regiment can inflict important losses on the enemy, and cause delays in his advance.

This concept of active reconnaissance meets that of the Russians with their PT76s, of the British with the Saladin, and of the Americans with the Sheridan. The new six-wheeled, amphibious AMX 10, equipped with a 105mm long gun, will strengthen this concept of active reconnaissance.



THE ARMOURED RECCE VEHICLE - PANHARD FL11

THE ARMOURED RECCE VEHICLE - PANHARD FL11

The EBR is a vehicle of 13 tons equipped with a 90mm gun, which fires all conventional shells.

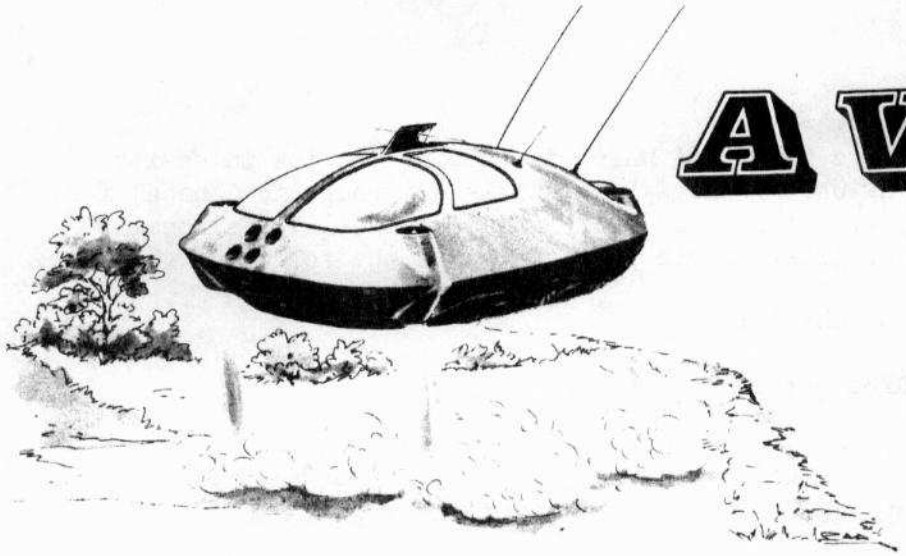
The crew is composed of four men: the car commander, the gunner and the drivers. The ability to reverse the controls gives the vehicle a chance to escape very quickly if necessary. The EBR can do sixty miles an hour in both directions. Its four intermediate wheels give it an all route capability. Being well streamlined, relatively low, and quick moving, the EBR presents a reduced target to an enemy. It demonstrated in Algeria that despite its noise level and its tendency to get caught in the sand it was a deadly and difficult adversary to destroy. Several EBR, after losing their intermediate wheels to enemy shells or mines still came back to the bivouac on their remaining wheels.

THE JEEP

The jeep of the EBR platoon is the improved version of the Second World War American jeep. It is a dependable, quick moving and relatively noiseless vehicle. One of the three has a machine-gun mount fixed to the frame close to the crew commander. The machine-gun is a 7.62 calibre AA52. Thus, with the windshield lowered and the machine-gun in front, the jeep is very adapted to its work.

THE SIMCA-MARMON

The Marmon is a one ton and a half support vehicle. It is used to carry the platoon packs and camp equipment as the space on the EBRs and jeeps is too restricted. In combat it usually follows the squadron echelon.



AVGP WINTER TESTS

CAPT W.R. ANDREWS

INTRODUCTION

From 15 Jan to 15 Mar 75 at Wainwright Alta NDHQ conducted cold weather engineering and user tests on several vehicles and turrets. The tests were to determine the most suitable Armoured Vehicle General Purpose (AVGP) for LES 15/74. The user evaluation was conducted by Capt H. Decoste RCD from HQ FMC. Two observers were sent by the Combat Arms School, WO Cady from Gunnery Wing, Armour Dept and Capt W.S. Andrews from Trials and Evaluation.

BACKGROUND

On 18 Apr 72 OER L1/70 (amended) was issued for a Wheeled Armoured Reconnaissance Vehicle. This resulted in trials conducted at Petawawa involving the Cadillac-Gage Commando and the British Fox.

In 1974 the requirement was altered slightly to include a wheeled APC for IS Ops. Thus Land Equipment Specification (LES) 15/74 was issued on 24 Jun 74 for an AVGP. Consequently a team of experts from NDHQ was assembled to tour the world to assess the extent to which various vehicles met this LES. Of these vehicles, three were ultimately evaluated at Wainwright.

As these vehicles were already considered to meet the LES, it was decided that full user and engineering trials were not necessary for the ultimate selection. Cold weather engineering trials were to be conducted to determine:

a. vehicle reaction to the recoil of the British 76mm L23A1 gun; and

b. vehicle durability and mobility under Canadian cold weather conditions.

LES

The LES calls for a family of wheeled vehicles for low intensity operational and training use by the Standard Brigade groups in Canada, for Defence of North America, internal security and possible international peacekeeping operations. The vehicle is required in the following variants:

a. Fire Support Vehicle;

b. Basic Armoured Personnel Carrier; and

c. APC variants;

(1) TOW vehicle,

(2) recovery/maintenance vehicle.

The Fire Support vehicle would be required for recce missions, IS and peace-keeping operations and providing direct fire support for the wheeled APC-mounted infantry.

The APC would carry a section of nine men including a driver and a crew commander/gunner. It is to have a one-man turret, mounting the .50 cal Browning M2 and the 7.62mm Browning GPMG.

The vehicles tested at Wainwright were:

a. the Cadillac-Gage Commando V150 with a gasoline engine;

b. the Mowag Piranha 6 x 6; and

c. the Engesa Urutu EE-11.

The turrets tested were:

a. the Alvis Scorpion turret;

b. the Cadillac-Gage Low Profile 76mm gun turret;

c. the FMC LVTP7 turret; and

d. the Cadillac-Gage one-man, one metre machine gun turret.

Various vehicle/turret combinations were tried.

DESCRIPTIONS

URUTU EE-11

The Urutu EE-11 is manufactured by Engesa Engenheiros Especializados SA of Sao Paulo, Brazil. It is a 6 x 6 wheeled armoured vehicle powered

Cadillac-Gage Commando with 76mm Gun Turret.

Sgt. D. Verge LdSH (RC) is in the foreground.

Commando with One-Man One-Meter Turret. .50 cal HMG and 7.62mm Browning GPMG are both mounted.

Mowag Piranha 6x6 with Scorpion Turret.

by the same 215 hp Detroit Diesel engine and Allison automatic gear box as the M113A1.

The two front wheels are independantly sprung on dual wishbones. The rear wheels on each side have walking-beam or boomerang suspension. This means that on each side both wheels are attached to a beam which is pivoted midway between them. Propellers are used for swimming.

Entry and exit for passengers is through a large door at the rear and a smaller one on the left side, behind the driver. The seats in the rear face each other.

COMMANDO V150

The Commando V150 is manufactured by the Cadillac Gage Co. of Warren Michigan. It is a 4 x 4 wheeled vehicle powered by a Crysler 361 cu. in. V8 gasoline engine developing 200 hp at 4000 rpm. The automatic transmission is the Allison TX100 with three forward gears and one reverse. The engine and transmission are mounted in the left rear of the hull. A second vehicle appeared later in the trials, equipped with a 200 hp Cummins diesel.

The APC version can carry a driver, co-driver, commander and five others. It can thus dismount seven men. Three doors and three hatches can be used for dismounting. The doors are split, the bottom half dropping down and the top half side-hinged to swing to the rear. Crew vision blocks and firing ports are provided.

Commando is propelled in water by its wheels.

PIRANHA

The Mowag Piranha 6 x 6 is manufactured by Mowag Motorwagenfabrik Ltd of Kreuzlingen, Switzerland. It is powered by the Crysler HT 413 V8 gasoline engine which develops 185 DIN hp. The gearbox is the Allison MT40 automatic transmission. It has six forward gears in ranges 3-6, 3-5, 3-4 and 1-2. Both the engine and the transmission are mounted in the front, to the right of the driver.

As an APC the Piranha can carry eight passengers, a crew commander and a driver. The passengers sit back to back down the centre of the vehicle. This gives easy access to the two vision blocks and firing ports on each side and the two on the rear doors. The gasoline tank is under the seat.

The steel trim vane is in two pieces which are held in position by a rod down the glacis plate. The driver must dismount to erect the vane but may release it from his seat. When released, the two halves swing down and clamp to the hull. Propulsion in water is by propellers.

A Comparison

1/4 Ton,

Mowag/Scorpion

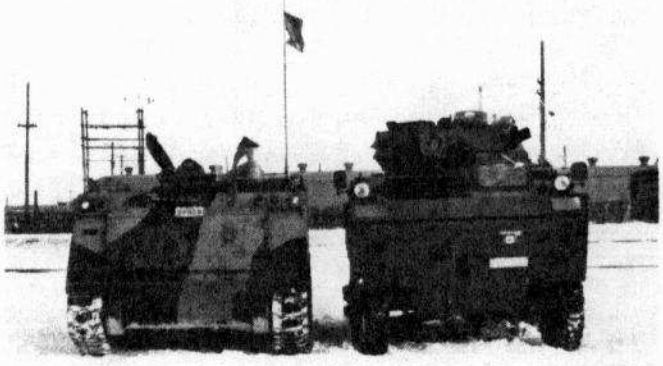
and M113A1.

Engesa Urutu EE-11

with the Scorpion Turret.

A Comparison

M113A1 and Engesa/Scorpion.



The vehicle has an air compressor which can be used to inflate its own tires. This is quite useful when switching from cross-country air pressure of 40 psi to road pressure of 64 psi.

For cold weather, there is an engine preheater fitted. This pumps fuel through an atomizer into a combustion chamber. In effect the chamber is a heat exchanger which heats the engine coolant. Warm coolant is pumped continuously through the engine block until the engine is started.

76MM GUN

The British 76mm L23A1 gun is an improved version of the barrel first introduced on Saladin. It has the same bore but is constructed of different materials and is thus lighter and stronger. The breech still opens vertically. The ammunition is unchanged - HESH, HE and base-ejecting screening smoke. The British plan to drop the HE round and only carry HESH.

The quadrant elevation scale (range drum) is small and compact. The scales and clinometer bubble are illuminated by Trilux beta lights which last indefinitely. The range drum scales are:

a. elevation to 320 mils (615m HESH);

b. depression to 120 mils;

c. HESH/HE to 5000m; and

d. smoke to 3700m.

CADILLAC-GAGE FIRE SUPPORT TURRET

Cadillac-Gage designed a steel turret mounting the 76mm gun and a 7.62mm MG coaxially. Elevation and traverse can be done hydraulically or by hand.

The power controls consist of two-handed grips for the crew commander and gunner. Firing switches are located on the grips. The gunner also has controls for hand elevation and traverse.

Consequences of hydraulics are the fluid reservoir on the turret basket floor beneath the breech and the array of tubing throughout the turret. If a line were punctured this pressurized inflammable fluid would shoot into the turret.

SCORPION TURRET

The Scorpion turret is constructed of aluminum. Its design is consistent with the British philosophy of living closed down for extended periods. As a result it contains a water tank in the bustle, a removable insert in the commander's seat to permit defecation and a rotating commander's sight which can be used as binoculars from within the turret.

The interior is also well padded with foam.

The turret tested had electrically powered traverse as well as hand traverse and elevation. The power traverse control was thumb actuated for both the commander and gunner. The commander had no elevation, hand traverse or firing control.

CONTRACTS

At the time of writing (mid May) formal presentations had not been completed at NDHQ and no contracts had been signed.

Answers

a. FR: EBR75/10 75mm 15g AC

b. GE: "Leopard" 105mm 39t

c. FR: AMX 13 75mm 15t

d. SW: Stridsvagn "S" 105mm 37t

e. UK: "Chieftain" 120mm 50t

f. FR: AMX 30 105mm 33t

g. US: M60 105mm 51t

h. SU: PT76 76mm 16t Amph. Rct

j. UK: "Centurion" Mk.5 83.4mm 50t

k. SU: T54 100mm 36t

Never appeal to a man's"better nature". He may not have one. Invoking his self-interest gives you more leverage.

THOUGHTS FROM '46'

DO WE STUDY ENOUGH TO PLAN OUR FUTURE DEVELOPMENT?

HAS HISTORY TAUGHT US LESSONS?

DID HISTORY SHAPE OUR CURRENT STRUCTURE AND THINKING?

DID WE LEARN FROM MISTAKES?

These questions are all too often ignored in our hectic everyday work.

The school recently received a copy of the minutes of a RCAC conference; and in looking through it saw interesting thoughts on some of these questions.

Quoting directly from the introduction will best indicate to you the content.

"During the first week of January, 1946, there was on the strength of CRU twenty-eight Royal Canadian Armoured Corps officers of the rank of Lt-Col and above who had commanded either Field Units or Armoured Corps Training Units.

The Senior Adviser, realizing that probably never again would so many senior Canadian Officers experienced in armour be available in one place at one time, decided to call a conference where the views of these Officers could be obtained for the future use of those charged with the re-organization of the Royal Canadian Armoured Corps."

The Senior Adviser at this time was Brigadier T.J. Rutherford, CBE, ED.

Many aspects concerning the corps, its future design, equipments, the nature of war, and the nature of peace were discussed.

I would like to present here several of the questions considered and the comments made. In the interest of brevity, I have summarised or excluded some comments.

The display of foresight, and studied consideration is of merit even today.

The Future Aspect of War

Question 28:

a. While it is most necessary as a background for recommendations as to future policy to consider the lessons learned in the last war and in the previous wars, we must also draw on our imagination as to the effect of recent developments and possible future developments. This particularly applies to the atomic bomb, the ultimate potentiality of which is NOT yet known and which can be carried NOT only in airplanes, motor cars, speedboats, and suitcases, but which may eventually also be fired from a gun or rocket.

b. As a premise for the consideration of future requirements in the event of a major war, do the following ten points contain a fair statement of the major changes that the advent of the atomic bomb would indicate to be worthy of consideration? If NOT, what are they in your opinion?

(1) In spite of the effectiveness of atomic bombs, a decision will NOT likely be gained without the occupation of the enemy's country by a field force and the destruction of the enemy's army and war potential.

(2) Bases and lines of communication as now known will be impractical as large concentrations of troops and material will be vulnerable.

(3) Dispersion rather than concentration will be in order.

(4) Offensive land fighting must be in the enemy's country, mixing closely with his armies and his people.

(5) Men, equipment and supplies will be moved by air from widely dispersed points to similarly dispersed forces.

(6) The principle arms will be -- tanks including SP guns, infantry carried in Armoured tracked vehicles and Engineers similarly carried -- all capable of being airborne.

(7) To permit maximum dispersal and mobility, track pressures must be considerably reduced; direction finding and intercommunication equipment must have maximum efficiency and the large majority (if NOT all) vehicles should be amphibious.

(8) The field army should concentrate on aimed fire and light

weapons; that is to say, rifle, machine gun, mortar, land mine, rocket and guns only of sufficient calibre and power to break tank armour. Air should provide the rest.

(9) The enemy, too, will be dispersed which will make aimed fire and high concentration of small projectiles more effective than shock weapons other than those depending on atomic energy for their effect.

(10) As an early decision will be likely in such a war, a high degree of preparation and readiness will be required.

c. What are your views?

Answers 28:

LCol Back - "In general I agree. With regard to:

(2) Large mechanized armies will always be vulnerable.
(5) Airborne troops are too risky to be successful, as shown in this war.
(8) Do NOT depend too much on air.
(10) Why? They taught this theory in 1932 at Military Staff College, remember, industry has to be mobilized. I agree to all or on part of the above principles but as we become more mechanized so does equipment become obsolete and heavier demands on industry results. Industry after all will decide how soon you can make an early decision. Train the youth of the country through the schools and the elementary army training and you will really accomplish the largest requirements for a future major war. Educate the voting public to this necessity."

LCol Greenleaf - "I am in agreement with the points listed under para (b), however, it must be borne in mind that the value of the Infantry cannot be overemphasised and it is felt that this tendency, which was shown at the start of this war, and will probably be shown in any future war, to become too specialized or mechanized should be very carefully considered and checked."

LCol McAvity - "The ten points noted certainly indicate much thought on the part of the author. I think it is a fairly concise picture. Yet I cannot agree on some points:

(1) Artillery. I consider there will always be need for Field and Medium Artillery to furnish counter-preparational, counter-this and counter - that, in close support of ground troops. And furthermore supposing that at some time in a future war we temporarily lose air superiority. Is it considered that there would be NO DEF and our ground troops would have to withdraw?
(2) Airborne. I do NOT agree that all equipment should be designed to be capable of air transportation. I agree to a large extent with the idea that future wars will see more dispersion. It will be noted that this last war was more spread out than World

War I. But there is always the production problems. To me it seems likely that we will witness a mad scramble with heavy plant turned over to production of bomb carrying planes. For the close final fighting in the enemy country, after we have overcome his Air Forces, surely heavy tanks will be required at times. I personally consider that the atomic bomb will find itself up against an anti-atomic bomb defence by the time it is used again. The scientist, who worked on the bomb itself, will I feel, be able to produce instruments capable of exploding such bombs in flight."

LCol Nash - "I concur but believe more emphasis should be placed in indirect fire."

Col Morton - "The effect upon war of the future of the atomic bomb is really unpredictable. Its probable effect must, of course, be taken into account but any undue over or under estimate should be guarded against. Like gas, it may well never be used or an efficient antidote appear; on the contrary, its vast destructive potential is inclined to paralyse or hypnotize all sensible Military thought. I criticize the suggested premises as follows:

(1) I do NOT accept the unqualified effectiveness of the atomic bomb but agree with the remainder.
(2) I think bases and L of C -- modified by air and ground transport developments -- will still have to be used.
(3) This has always been true but it will still be necessary to 'concentrate to fight' in the future.
(4) This is a proper object, of course, but so far in history never attainable by the non-agressor early in a war.
(5) Air transport will undoubtedly play a more important part but do NOT let us assume too much here. The control of the air - even locally - must be secured. I accept considerable strategic dispersion but varying tactical dispersion.
(6) I agree in general. The capacity of a tank to be airborne is certainly an important attribute but I do NOT agree with tank design, for the general purpose AFV placing undue importance on this. After all it has to fight on the ground and NO doubt air construction can be made to comply.
(7) I agree. I refer to my suggested Prototype, previously submitted.
(8) I agree in general but think Artillery of medium calibre is still necessary. Air is NOT always effective - bad weather, etc.
(9) I find this a little confusing. Reference (3) above, "Shock Weapons", can be defined as those involving contact or near contact - with the enemy. E.G. the tank, dismounted Infantry, etc.
(10) I agree profoundly with this but we must, as ever, be prepared to hold off or withstand the enemy while completing our preparations. This may NOT be sound in theory but is practical politics.

If we plan entirely for what we think the future will disclose, I contend we may end far off the beam. Studying military history of

the past (this is important), we should organize and train in the light of the practical lessons of the latest war with our eyes wide open for future likely developments. This is a platitude but nevertheless true I think.
I am afraid any views for the future organization of the Canadian Army are somewhat of a pipe dream, as I understand it is already decided -- though I do NOT know what it is. In any event it is sure to be hamstrung by insufficient funds."

Post War Organization

Question 127: How many training tanks, Armoured Cars, Scout cars and Carriers of present types should be retained for use by each Permanent and each Non-permanent?

Answers 127: Most favoured a fixed org - i.e. Permanent - full strength, Non-permanent - RHQ and 1 Sqn.

LCol McAvity: "Rather than answer each question separately, I propose to reply generally. I do NOT feel that we can expect further tank production in Canada during peace time, nor do I think that we would recommend it other than experimentally. I have been informed by people on Staff Duties that NO tanks are being taken back to Canada; the tanks which will be available to our peace time army are, therefore, those now in Canada - Shermans and Rams at Borden plus any Shermans that may have happened to be in Canada for overseas shipment when the cease fire came.

Unless the Reserve (NPAM) Army training ideas are different to these of pre-war years, I cannot see any purpose in giving any tanks to units; there is NO way they could get in any driving or schemes during the fall, winter and spring. Especially in the case of units whose armouries are in the centre of a town as a great many are. I do NOT see the tanks ever getting moved.

I feel that all RC Armd C equipment should be held in Borden - IF that is to be the permanent home of the tow PF units, which I think should be the case. Here, the machines could be moved and maintained as required, and kept in shape, with all spares etc there, for the summer camps for many years to come. Any attempt to disperse them amongst the NPAM units will, I am sure, result in NOT sufficient tanks to train with only a few summers hence.

I feel that running engines, wireless tank training equipment, RYPAs for Pellet and 30 yard range wherever possible to get them - These and sand - tables and charts and training films should be the extent of the equipment for the NPAM. After a few years, the new recruits will require a lot of basic training and will have almost all RC Armd C training in their very limited winter training. There simply will

NOT be time for everything.

I consider that RC Armd C Schools should be got under way as soon as possible at Borden where officers and NCOs from NPAM units would get a thorough all-round course including latest technical developments, a chance to see the latest equipment in use, etc. There are advantages and disadvantages in having the Experimental Department right at the Schools. I feel they should be separate but NOT too far apart geographically and with very close "User liaison".

As regards training with Infantry and Artillery in summers, if the attendance of NPAM Officers and NCOs at the Schools throughout the year is high enough, it should be possible for NPAM Units to get some benefit out of schemes with the other arms in summer camps. It certainly should be the policy to endeavour to get these as often as possible."

Tactical Employment

Question 156: Put down what you consider the principle tactical lessons of the war, having to do with the employment of armour under the following headings, or such other headings as you may desire:

(i) Recce role
(ii) In support of Infantry
(iii) Independent of Infantry
(iv) Tank-Artillery co-operation

Answers 156: Comments were as follows:

LCol Baylay: "(ii) Require better liaison. (iii) Requires mass tactics. (iv) Useful, easy and successful."

LCol Brooks: "(i) Tanks used in a Recce role should be equipped with the latest types of smoke dischargers and crews trained to appreciate the value of smoke. (ii) Infantry and Armour should know more of each others capabilities and tactics as in the past misunderstandings have taken place and many lives lost due to the lack of this knowledge. (iii) Tanks can hold ground during the day-light but must be relieved or reinforced by Infantry towards darkeness. Tanks alone can break through any defence if weight of numbers are available and the situation warrants the casualties that are bound to be suffered. (iv) Toward the latter part of the war there was far too much talk about indirect shoots. Many of the Artillery were figuring they were going to be relieved of some of their tasks and responsibilities."

Maj Gautier: "(ia) Disorganizing and breaking down the enemies morale after a breakthrough, has been obtained, e.g. the breakthrough in Friesland. (ib) Catching up and harassing a retiring enemy. (ic) Flank protection. (id) Liaison between two advancing

formations."

LCol Greenleaf: "(i) In a straight Recce role I consider carriers just as good as they are faster, more manoeuvrable, smaller track pressure, can see more, are lower and personnel are NOT so likely to forget that they can dismount from the vehicle. However, as Recce was employed on flanks and for fire support a tank of Chaffee type is NOT only desirable but necessary. (ii) In support of Infantry must be the normal employment of tanks. (iii) Used independent of Infantry only if on a mass attack by tanks on a breakthrough such as operation Tractable. (iv) Tanks have excellent indirect fire weapon."

Maj Hill: "(ii) Tanks definitely give a great morale support to the Infantry."

LCol Jordan: "(ia) Tank personnel must be prepared to dismount and do Recce on foot. (ib) They must also be prepared to fight on foot. It took a great deal of training and actual fighting experience to achieve the above."

LCol Leggett: "(i) Must be well in front to allow manoeuvrability of main force. (ii) Too broad a subject to be discussed here. (iii) Must attack in strength with large proportion of tanks going in together. (iv) All tank Commanders must be qualified forward observation Officers."

LCol Marks: "(i) Recce personnel must be highly trained in the use of smoke. (ii) A close understanding between Infantry and Armour is necessary. Each should know the others capabilities and limitations. (iii) It is possible for tanks to hold ground in daylight but it should be understood that they must be reinforced or relieved by Infantry after dark. The exercises of August 8th and August 14th proved that tanks alone are capable of breaking through almost any defence. Although casualties were high this must be expected in operations of this type. (iv) Tanks must NOT be expected to answer the role of Artillery as happened in the latter stages of the war."

LCol Nash: "(i) Any Armoured Regiment with training can do the Recce role for a Division. (ii) A Battalion of Infantry working with a squadron of tanks is the ideal combination. (iii) Fire and movement principles is still the prime tactical factor. (iv) Every crew commander should be trained as a FOO."

Col Morton: "This is properly the fit subject for an essay in itself. Generalities only can be mentioned.
(i) Armoured Corps and Infantry Division Recce proved generally valuable. Training in Recce for all Armoured personnel is very important.
(ii) This is the general basis of employment for tanks which proved their value time and again. The training of Infantry with tanks is

vital.
(iii) Tanks are never really independent. In some roles tanks are properly the predominent partner but Infantry support is always necessary. Thus the Armoured Division was either too short of Infantry to do a proper job or did NOT have enough tanks for a purely Armoured role. The first and second Canadian Armoured Brigades were more useful throughout.
(iv) Artillery support is as valuable to tanks as it is to Infantry. On occasions tanks can thicken (NOT replace) proper Artillery tasks. Consider that Artillery should introduce heavy calibre tracked vehicles, 'Assault Artillery', to relieve tanks of some of their static tasks."

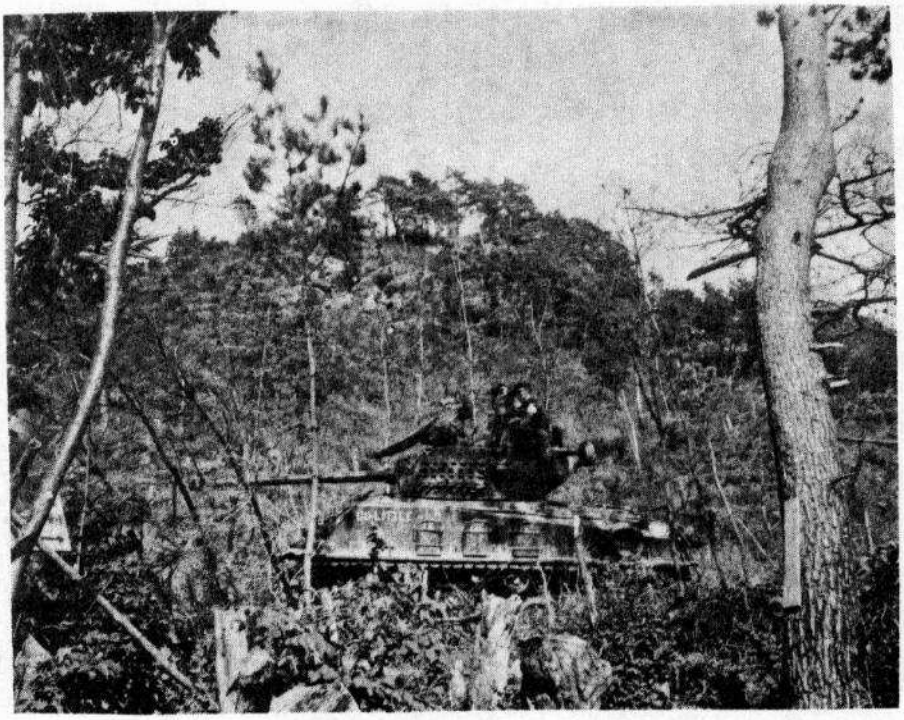
LCol Powell: "(i) Fire and movement communications. (iia) Close liaison and advanced training by both arms. (iib) Fire and movement. (iic) Avoid silhouetteing and open positions. (iid) Simple plan. (iii) As above with the exception of 'd'. (iv) Liaison."

LCol Ross: "(i) Information usually too slow in reaching following units, (ia) Detailed Recce with Armour impossible. (ii) Close liaison in and out of battle is essential to create an efficient smooth working team. Each gets to know what the other requires and the response is almost automatic. Squadrons should always work with same Battalions if at all possible. (iii) Close liaison with and support from air and S/P Artillery is essential. Infantry should follow up Armoured advance as closely as possible in Armoured Personnel Carriers; otherwise much time is lost if Armour becomes stymied. (iv) Close liaison in and out of action is essential. During action a representative and FOO's from Artillery always with unit. All crew commanders to be trained as FOO's (they can frequently correct fire and bring it down when FOO's cannot get observation). In spite of tank success in Artillery roles, Artillery is still indispensible in the team. Quick follow-up and deployment of SP Artillery necessary in support of Armour. A leap frogging of batteries with one always on the ground ready to fire was found to be very successful.

Climate is what we expect, weather is what we get.

Anything free is worth what you pay for it.

FLASHBACK NO. 4



Maj M.L. Gordon (Retired) provided us with the following information concerning Flash Back Number 4.

The photo is one of the tanks of D Sqn of the RCD taken somewhere in the FDLS in Korea in 1954. Although unable to give the troop to which "DOLITTLE" belonged Major Gordon was able to give the officer slate of the squadron at the time.

OC	MAJ A. LAIRD MACDONALD
2IC	CAPT ADM MATHESON
BC	CAPT GR KELLY (LATE)
TP LDRS	LT ML GORDON
	LT WARREN ROSA
	LT MURRY BECKETT
	LT JOHN LAFLEUR
RMC CADETS ATTACHED	
	JERRY MARTIN (LATE)
	GEORGE GLENDENNING (LATE)
	CHICK FERGUSON

WHAT YOU SEE is WHAT YOU GET

(The Use of Optics)

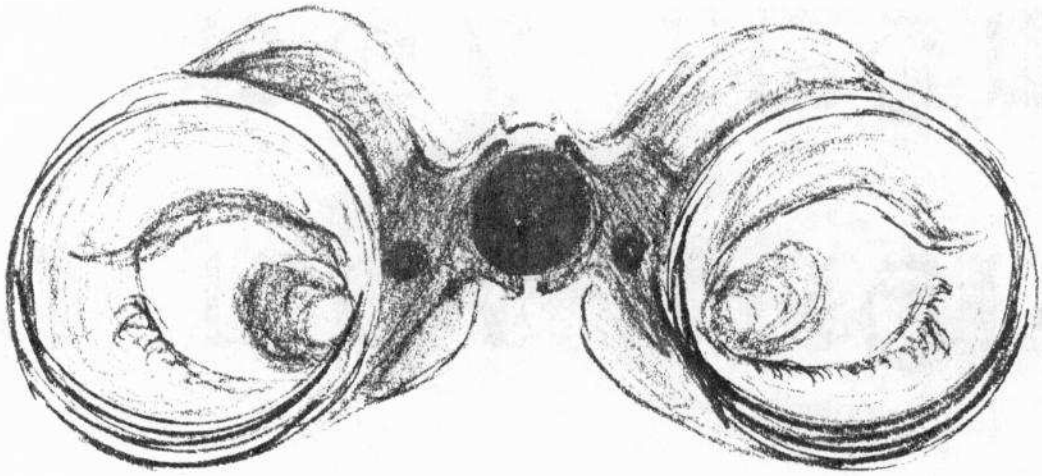
BACKGROUND

1. At present, there is no form of policy outlining the type or types of optics a Tank Crew Commander should use in any given situation. Due to this lack of policy, present day teachers and training tend to overstress the use of some types of optics, while neglecting others. The current stress is on the use of RCP sight and hand-held binoculars. The use of X10 binoculars, firing while closed down and from other than prepared positions has been neglected.

2. The effects of the nuclear weapon and the requirement of having to endure artillery fire and fight in built up areas means that a crew will have to operate while closed down. As should be appreciated the problems of observation, scanning ground, concerted action to lay the gun, observation and correction of fire become much more difficult. The current stress on the use of the RCP sight does not alleviate this problem, but enhances it.

3. A further fact that is not always appreciated is that there are times that not all of the optics with which the tank is equipped will be available. Should certain optics become non-serviceable while on the battlefield, the commander must still be able to carry on, with a negligable loss of efficiency. If the commander's training and practice have stressed the use of only one type of optic, he will be at a loss should he be required to carry on using others. The crew then becomes a liability rather than an asset.

4. Finally, it is not the usefulness of any particular optic that dictates which is the best to use but rather it is the tactical situation that will dictate which optic is available for use. Should a commander find himself in a situation where he cannot use his much covetted optic, unless he has been trained on the use of the remainder, the crew's performance will definitely suffer.



AIM

5. The aim of this paper is to:

a. Suggest that there is a need for a policy, outlining what type or types of optics that should be used in given situations.

b. Recommend the type or types of optics that could be used in given situations.

TYPES OF OPTICS

6. The Crew Commander of a Mk XI Centurion Tank has three types of magnified optics available. If the commander is to use each to advantage, he must understand the advantages and disadvantages of each. The ensueing sub-paragraphs deal with each of the three types, showing only those characteristics, advantages and disadvantages that are peculiar to each type of optic. Further characteristics can be found in reference A, and relevant technical manuals. The advantages and disadvantages are a matter of how and when the specific optic is used.

a. Hand-held binoculars. Each crew commander is entitled to a pair of hand-held binoculars. Currently, there are two types in service. One is of X7 magnification with a field of view of 137 mils, the other is of X6 magnification having a field of view of 142 mils. Hand-held binoculars have the following advantages and disadvantages, when being used from the turret of a tank:

(1) Advantages

(a) The X7 binoculars have the same magnification as the gunner's X7 eyepiece in the Sight

Periscopic, AFV No 30, thus both have equal powers of observation. This is significant when considering that the gunner must make corrections in certain types of engagements, under the commander's supervision.

(b) As the binoculars are not fixed, they can be moved quickly from one point to another.

(c) They have the widest field of view of the three types of optics.

(2) Disadvantages

(a) Not being fixed to the tank, line of sight is easily disturbed when the gun is fired.

(b) They cannot be used when closed down.

(c) Their use on the move is limited.

(d) They cannot be used to lay the gun.

(e) When used, they must be used above the level of the cupola, exposing the commander and not allowing him to adequately supervise his crew.

(3) Note: They are considered to be adequate in facilitating correction of fire up to 2000 m.

b. RCP Sight. Each Mk XI Centurion is equipped with an RCP (Reflector come Periscope) sight. Basically the sight consists of two parts, the collimator and the commander's periscope. The collimator projects a graticule onto the object prism which can be seen through the commander's periscope viewing window. Through a mechanical linkage system, the graticule is moved in relation to the gunner's sight. The graticule pattern can be zeroed to the gunner's sight but only at two relative points, "SABOT DOT 2" or "HESH DOT 1". The commander can accurately lay the gun, but only at the two points shown above. The large viewing window provides the same field of view as a normal No 7 periscope, but no magnification. A moveable monocular of X7 magnification is attached and can be used, or clipped to the rear of the periscope. The advantages and disadvantages of the sight are:

(1) Advantages

(a) The commander can accurately lay the gun but only on two points, "SABOT DOT 2" or "HESH DOT 1".

(b) The commander is able to check the gunner's lay, only if the two points of aim shown in (a) above are taken. Otherwise he can only check that the gunner is ending his lay in depression.

(c) The sight can be used when closed down.

(d) The viewing window provides a wide field of view.

(e) The monocular provides X7 magnification, the same as does the gunner's episcope on the No 30 sight.

(f) The sight does not move when the gun is fired.

(g) When used, the commander is not exposed and is able to supervise his crew.

(2) Disadvantages

(a) When using the monocular, the commander does not have stereo vision, a must if range is to be estimated. If used, the commander cannot make an elevation correction.

(b) The sight does not have a horizontal graticule pattern, therefore lateral corrections cannot be made.

(c) The viewing window does not provide magnification.

(d) The monocular when used, seriously restricts the field of view.

(e) Neither the viewing window nor the monocular can be focussed.

(f) It is felt that because the graticule must be illuminated a certain amount of definition is lost at the target end.

(3) Note: It is felt that due to the large field of view of the viewing window and the graticule connected to the gunner's sight, laying the gun with the RCP sight is generally simplest and quickest, under normal circumstances.

c. X10 Periscopic Binoculars. Each Mk XI Centurion is equipped with a pair of X10 periscopic binoculars. They are mounted in the cupola and can be moved through 5400 mils in either free or manual traverse. A positioning plunger ensures automatic alignment to the front, in place of the RCP sight. The binocular mount is equipped with an elevation damper, when correctly tightened, remains at a given elevation. A horiztonal and vertical graticule pattern are incorporated.

(1) Advantages

(a) They provide X10 magnification.

(b) The commander can lay the gun for line,

(c) They can be used when closed down.

(d) Line corrections are easily made using the horizontal graticule.

(e) They provide stero vision, enabling the commander to make elevation corrections.

(f) They can be traversed independent of the turret.

(g) The binoculars have been so constructed as to provide maximum light gathering ability. A definite asset for observing under conditions of first and last light.

(h) When used, the commander is not exposed and is able to supervise his crew.

(2) Disadvantages

(a) The field of view is limited to 98 mils,

(b) The commander cannot lay the gun for elevation.

7. As should now be apparent, no individual optic is without its limitations. Only by using them together in a workable systematic manner can one be assured of speedy reaction, good observation and correction of fire in all circumstances.

DISTRIBUTION

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Armoured Branch	- 1
Artillery Branch	- 1
CELE Branch	- 1
Military Engineering Br	- 1
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Canadian Forces Dental Svcs	- 1
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Cols of Regts

LdSH(RC)	- 1
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8CH	- 1
12e RBC	- 1

Association Presidents

Armoured Branch	- 1

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CDS	- 1
CLO	- 1
D Armd	- 10
D Arty	- 1
D Inf	- 1
DPCO Armd	- 1
DPCOR Armd	- 1
DRS	- 26
DCdts	- 1
DGLO	- 1
DLO	- 1
DIS	- 1
ULO'S	- 15
DGPCO	- 1
DPC Col	- 1
DPCO	- 1
DGPCOR	- 1
DPCOR (OT)	- 1

FMC HQ

Comd	- 1
DComd	- 1
COS Ops	- 10
COS Adm	- 8

Colleges/Centres

CABC	- 3
CTC	- 20

Colleges/Centres

CFC	- 10
CFSS	- 2
CLFCSC	- 10
NDC	- 5
CMR	- 10
RMC	- 10
RRMC	- 10

Groups

HQ 4 CMBG	- 5
HQ 1 Cbt Gp	- 5
HQ 2 Cbt Gp	- 5
5e G de C	- 5
10 TAG	- 3

LOs

CDLS London	- 5
CDLS Washington	- 5

Regiments

CAR	- 1
3 Mech Cdo	- 1
8CH	- 10
LdSH(RC)	- 10
12e RBC	- 10
RCD	- 10
1 RCHA	- 1
2 RCHA	- 1
3 RCHA	- 1
5eRALC	- 1
1 PPCLI	- 1
2 PPCLI	- 1
3 PPCLI	- 1
1 RCR	- 1
2 RCR	- 1
3 RCR	- 1
1 R22eR	- 1
2 R22eR	- 1
3 R22eR	- 1

Schools

CFOCS	- 10
CFRS	- 5
CFWOS	- 5
CAS	- 30
DET EAC 1	- 5

Hel Sqns

403 (Hel) OTS	- 3
408 Sqn	- 3
422 Sqn	- 3
427 Sqn	- 3
430 ETAH	- 3
438 ETAC	- 3
444 Sqn	- 3
450 Sqn	- 2
450 Sqn Det	- 2

RSS

RSS Atlantic	- 2
RSS Toronto	- 2
RSS Montreal	- 2
RSS Esquimalt	- 2
RSS Winnipeg	- 2

UN

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CANMILCON ISMALIA	- 5

SP Estb

CANSUPPORT SECKENHEIM	- 2

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Comd	- 5

Militia

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Milarea Esquimalt	- 5
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Mildistwo Montreal	- 2
Mildist Quebec	- 2
Mildist Moncton	- 2
Mildist Edmonton	- 2
Mildist Hamilton	- 2
Mildist London	- 2
Mildist St Johns Nfld	- 2
Mildist Ottawa	- 2
Mildist Charlottetown	- 2
Mildist Regina	- 2
Mildist Calgary	- 2
Mildist Toronto	- 2
Mildist Vancouver	- 2

Militia Continued

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Mildist Saint John	- 2
Mildist Halifax	- 2
Mildist Windsor	- 2
Mildist Winnipeg	- 2

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BCR Vancouver	- 5
8CH Sussex	- 5
Elgin R St Thomas	- 5
FGH Winnipeg	- 5
GGHG Downsview	- 5
1 H London	- 5
KO Calg R Calgary	- 5
R de Hull Hull	- 5
Ont R Oshawa	- 5
12e RBC (M)	- 5
PEIR Charlottetown	- 5
QY Rang Toronto	- 5
RCH Montreal	- 5
Sask D Moose Jaw	- 5
Sher H Sherbrooke	- 5
SALH Medicine Hat	- 5
Windsor R Windsor	- 5

Miscellaneous

CFLO Forth Benning	- 2
CFLO Fort Knox	- 2
CFLO Fort Bliss	- 2
CFLO Quantico	- 2
CFLO Warminster	- 2
CFLO Larkhill	- 2
CFLO Bovington	- 2