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THE QUEST FOR OPERATIONAL MANEUVER IN THE NORMANDY CAMPAIGN
Simonds and Montgomery Attempt the Armoured Breakout

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ABSTRACT

THE QUEST FOR OPERATIONAL MANEUVER IN THE NORMANDY CAMPAIGN

Mechanization signaled the end of the cavalry but the renaissance of heavy cavalry doctrine. The tank heralded the return of breakthrough operations and maneuver warfare. Initially, the western cavalries refused doctrinal revision and chose instead to fight bitter rear guard actions against Fullerist zealots.

The Canadian Cavalry, prompted by Blitzkrieg's triumphs, effortlessly evolved into a tank force -- virtually overnight. Canadian doctrine, however, was ersatz. Denied its own vast training areas, the RCAC was sandwiched into southern England and saddled with British warfighting techniques developed in the Western Desert. In Normandy, Canadian operational art was driven by Generals Simonds and Crerar, both gunners, who had neither the skill nor experience to conduct armoured warfare. Hampered by General Montgomery's inability to reproduce a strategic offensive comparable to that demonstrated on the Russian front, Allied armoured forces were squandered in mismanaged frontal attacks.

In the United States, the attempts to protect the horse forced a praetorian's revolt that ended with General Chaffee garroting the US Cavalry, eliminating it from future battlefields. The doctrinal dominance of the American Armored Force was subsequently threatened by a cabal under artillery General Leslie McNair who imposed the Tank Destroyer philosophy. Internecine squabbles and economic nationalism prevented America from producing a tank capable of meeting German panzers on even terms. Though failing technically, the US Armored force succeeded doctrinally via the Louisiana maneuvers and produced a balanced Armored Division. General Bradley's 12th Army Group arrived in France with a purposeful dogma that had been further refined at the Combat Command, Divisional, and Corps level in North Africa and Sicily.

American armour maneuvered during Operation *Cobra* but it did not fight massed panzers; this was soon redressed in Lorraine where American armoured doctrine reached tactical maturity. Canadian armour fought tank battles throughout Operations *Spring*, *Totalize* and *Tractable*, but it did not maneuver. American and Canadian armour's best opportunity for strategic victory occurred in Normandy. The Canadians, despite better tanks and favourable terrain, failed operationally and received no second chance.

ABSTRAIT

En quête de manoeuvres opérationnelles lors de la Campagne de Normandie

La mécanisation marque la fin de la cavalerie – mais la renaissance des principes de la cavalerie lourde. L'utilisation des chars de combat marque le retour aux opérations en profondeur et à la guerre par des manoeuvres. Dans un premier temps, les cavaleries de l'ouest repoussent l'adoption de cette nouvelle doctrine et choisissent plutôt de s'opposer farouchement aux fanatiques de Fuller.

Voyant les succès énormes remportés par le Blitzkrieg allemand, le Canada passe, presque du jour au lendemain, de la cavalerie à la force blindée. Malheureusement, la nouvelle philosophie du Canada est inapplicable sur le terrain. Habitué aux grands espaces pour les manoeuvres, le F.R.B.C est cantonné au sud de l'Angleterre et soumis à des stratégies de combat britanniques élaborées pour le desert. De plus, en Normandie, les opérations militaires canadiennes sont sous le commandement des généraux Simonds et Crerar, tous deux artilleurs et sans aucune expérience dans le commandement des divisions blindées. Handicapées par l'incapacité du général Montgomery à élaborer une stratégie offensive comparable à celle démontrée sur le front russe, les forces blindées alliées sont victimes de mauvaises stratégies militaires.

Aux Etats Unis, les tentatives de maintenir la cavalerie débouchent sur la révolte d'une bande de hauts gradés, révolte toutefois étouffée par le général Chaffee qui, du même coup, met fin à la cavalerie américaine, ainsi l'éliminant des futurs champs de bataille. La doctrine de la prépondérance au recours à l'infanterie dans l'armée américaine fait ensuite l'objet d'une cabale de la part du général de l'artillerie Leslie McNair qui impose plutôt la philosophie de la destruction de la force blindée par les canons antichars mobiles. Ces disputes internes et le nationalisme économique des américains les empêchent de produire un véhicule blindé apte à tenir tête aux panzers allemands. Cependant, en dépit de cette infériorité technique, la force blindée américaine réussit à élaborer une stratégie lors de manoeuvres en Louisiane: cela lui permet de former une division blindée équilibrée. Le 12^e groupe d'armée, sous les ordres du général Bradley, débarque en France avec une stratégie bien arrêtée ayant fait ses preuves en Afrique du Nord et en Sicile.

A l'occasion de L'Opération *Cobra*, la force blindée américaine réussit à manoeuvrer mais, lors de ces manoeuvres n'affronte pas une force organisée de panzers allemands. Elle

aura à le fire à faire en Lorraine – moment où la doctrine équilibrée de la force blindée américaine atteint sa maturité tactique. La force blindée canadienne affronte l'ennemi lors des opérations *Spring*, *Totalize* et *Tractable* mais la manoeuvre stratégique n'y est pas. La plus belle occasion pour les forces blindées canadienne et américaine de remporter une victoire stratégique a lieu en Normandie. Les canadiens, en dépit d'une supériorité technique et malgré un terrain de débarquement favorable, échouent par manque de stratégie offensive efficace et n'ont pas de seconde chance.

PROLOGUE

THE QUEST FOR OPERATIONAL MANEUVER IN THE NORMANDY CAMPAIGN Simonds and Montgomery Attempt the Armoured Breakout Battle

"There is no teacher like a bullet." Stacey's terse summation of doctrinal reality contains the nut of the tactical evolution. Whether in the execution of battle drills or the conduct of a strategic offensive, experience bred success. The evolution of North American armoured doctrine featured a steady repetition of the Allied-Axis ballet: apprenticeship under the unforgiving scowl of the veteran. German and Soviet skills were honed in Manchuria, Spain, Poland, France, and the Russian steppes. American and Canadian doctrine survived the Mediterranean only to discover the bitter reality of the Tiger and the Panther in the vexatious quest for operational maneuver.

It may be argued that there is little new to be said about Allied arms in the Western European Theatre. In Canada, the dean of military history, Professor C. P. Stacey, has touched on most aspects. The more research conducted, the greater Stacey's stature. In the Staff College Battle Field Studies, military historians walk the ridges and orchards, well-thumbed book in hand, quoting passages to each other – "Stacey 174, verse 9: 'Well may the fields grow green and lush upon its gentle slopes...'" In the end, Stacey is not overly protective of Canadian arms; his critical analysis of Normandy is about as good as it gets in military history. He is, nevertheless, well disposed towards Simonds and Crerar.

The Allied record in Normandy is irritating simply because we know we could have done better. The extensive casualty rates to infantry and armour nearly exhausted American arms and created a political crisis in Canada. The dazzling success of American armour during *Cobra's* pursuit eclipsed the Canadian armoured battles of August, despite the fact that the vast majority of Allied tank casualties from direct gunfire engagements occurred in 2nd Canadian Corps. The exultation of Operational Maneuver, the closing of the Falaise Gap, and the liberation of Paris obfuscated the reality of tactical

deficiency. It required three bloody months and seven major Operations to drive the Germans out of Normandy. This occurred despite total air supremacy and a strategical numerical advantage. The reasons for tactical frustration are technical, geographical, and primarily, doctrinal.

Western experience with armour lagged behind central and eastern Europe. By the time the King and Roosevelt governments were elected, Hitler had already formed his fifth panzer division and Stalin had an entire Mechanized Corps in his tank park. When France fell there were only fourteen light tanks in Canada and the American Army had less than thirty modern armoured fighting vehicles.¹ The United States Cavalry drove horses into battle *en portée* and disguised its few tanks as “combat cars” to avoid genealogical feuding.

Colonel F. F. Worthington formed a Canadian armoured corps in 1940 with ancient Renaults but no doctrine; conversely, General Adna Chaffee was dispatched to Washington as the stiletto of a doctrinal revolt spawned in Louisiana. Both produced superb armored forces that were social and material mirrors of each other but differed sharply in dogma. The Canadians were totally shaped by the British; the Americans, notwithstanding flirtation with French and German doctrine, were in the end, products of their own philosophes.

England, despite Fuller, had considerable mechanical and tactical difficulty with the tank. No sooner had the Western Desert Army adopted the massed armoured attack as doctrine, than Rommel began to decimate their desert tank brigades by employing a more sophisticated form of all arms cooperation in the maneuver battle. By the end of the North African war, Allied numbers and air superiority defeated the Deutsches Afrika Korps, but it would require more than shaking desert sand out of map cases to prepare for the Tigers and Panthers prowling western France. The British, and subsequently the Canadians, failed to appreciate what a panzer division was and the constant

¹ C.P. Stacey, The Military Problems of Canada (Toronto: Ryerson, 1940), 125, and Larry Worthington, Worthy (Toronto: MacMillan, 1961), 138. See, Brereton Greenhous, Dragoon – The Centennial History of The Royal Canadian Dragoons, 1883-1983 (Ottawa: Campbell, 1983), 284 and, John F Wallace MC, Dragons of Steel (Burnstown: General Store Publishing, 1995), 115. Harry C. Thomson and Lida Mayo, The United States Army in World War II The Ordnance Department: Procurement and Supply (Washington, D. C.: U. S. Government Printing Office, 1960), 201-202. “By the time Germany invaded France in May 1940, the US Army possessed only 28 new tanks (10 medium and 18 light tanks) and 900 obsolete models scattered among the infantry, mechanized cavalry, and ordnance depots.”

reorganization of the "empire" armoured division suggests near desperation. The American approach, inspired by Chaffee and the Louisiana maneuvers, was nearer the mark. Despite considerable German example and abundant reports from the European theatres, there is little evidence that Canadian armour was used correctly by its generals. This has not really been appreciated in Canadian military history. The disappointing Allied tactical record in Normandy has been attributed to many causes: the primary one is German military skill, but engineering failures are equally significant. The Allies built the wrong tanks and found themselves outgunned and outarmoured.

The Canadian Army developed its panzergrenadier doctrine far too late to enable the armoured units to fight effectively. Its key generals were primarily artillery officers whose views regarding armoured warfare were established before the war and only marginally evolved by the limited battle experience they were permitted. Although the American army was committed toward the flexible operational groupings prescribed by Chaffee, it soon handicapped itself by creating a semi-permanent tactical bureaucracy that began with the Combat Command and often extended down to the Task Force. The Allied offensive was built around the conservative set piece attack, rather than the fluid battle.

Although North American armoured formations fought in North Africa and Italy, it was only in France that classical armoured doctrine could be tested at the tactical, operational, and strategical level. For Canadians, the proper study of Armour rests exclusively in the Normandy campaign; for Americans, the lessons begin with the pursuit towards the Seine and end with Patton's operational counter stroke in the Battle of the Bulge.

There is cumulative excellence in North American military history. The accomplishments of C. P. Stacey, Terry Copp, John English, J. L. Granatstein, Desmond Morton, and Reginald Roy are impressive and well buttressed by American counterparts like Martin Blumenson, R. F. Weigley and Carlo D'Este. Their review of archival documents suggests there is cause for some dissatisfaction with Allied generalship. D'Este has made a convincing case against Montgomery; while Professors Granatstein and Morton have noted at least one chink in Simonds's facade. English carefully records both the casting of the Normandy Army and the shortcomings of its divisional

commanders while Copp has examined technical difficulties (what Simonds called “failure of minor tactics”) and, with Bill McAndrew, the psychological effects of Normandy on the fighting man. Copp, who has written the greatest number of tactical and operational studies of the 2nd Canadian Corps, considers Colonel English’s efforts deconstructionist, and may regard this effort as particularly harsh. On the other hand, he acknowledges there is room for “technical analysis”² on the armoured battlefield.

If there is criticism to be made against Allied commanders, and it is in their interpretation of the Operational Art. One hesitates to include Simonds, a Corps Commander, in any discussion that centers around – as any doctrinal discussion of Normandy must – the technical application of the Strategic Offensive and the use of armoured forces as an instrumental part of that aim. It was perhaps more Crerar’s hesitation to command rather than Simonds’s tactical dominance that elevates the latter to the status of Army Commander.

Conversely, it is Montgomery’s inability to achieve a strategic decision that reduces him to the level of a senior army commander in whose shadow Crerar, but especially Dempsey, could not flower. The American army’s failure to secure a total triumph in Normandy by slamming the door shut at Chambois does not lessen Bradley’s stature as an Army Group Commander. For it was Hodges’s bulldog tenacity coupled with Bradley’s determination to claw through the bocage into “the green fields beyond” that set the stage for Patton to mirror Tukhachevsky. However, it was also Montgomery and Bradley’s inability to cope with Deep Battle that permitted the bulk of the Wehrmacht to escape to fight again in Lorraine, Arnhem and the Ardennes.

The Normandy-Lorraine historians – Weigley, Belfeld and Essame, Ellis, Wilmot, Blumenson and D’Este – placed beside their Canadian counterparts, present a phalanx of knowledge that is inspiring, intimidating and, in some cases, downright cruel. Belfeld and Essame lament: “It was unfortunate that the better trained British 2nd Army could not have been employed to close the Falaise Gap.”³ Blumenson and D’Este are equally curt: “The First Canadian Army, by failing to achieve its objectives quickly along the road to

² Terry Copp, unpublished manuscript on Operation Totalize, delivered at the Military History Seminar at Wilfrid Laurier University, 3 May 1997.

³ Eversley Belfeld and H. Essame, The Battle for Normandy (London: Pan, 1983), 233.

Falaise, provoked profound disappointment and helped to prolong the existence of the Falaise gap, the German escape route.”⁴; “... the slowness in closing the two gaps, the most important of which was the inability of the Canadians to develop their operations more quickly.”⁵ By far the most critical assessments were made by Stacey himself:

It is not difficult to put one’s finger upon occasions in the Normandy campaign when Canadian formations failed to make the most of their opportunities. In particular, the capture of Falaise was long delayed, and it was necessary to mount not one but two set-piece operations for the purpose at a time when an early closing of the Falaise Gap would have inflicted most grievous harm upon the enemy and might even, conceivably, have enabled us to end the war some months sooner than actually was the case. A German force far smaller than our own, taking advantage of strong ground and prepared positions, was able to slow our advance to the point where considerable German forces made their escape. That this was also due in part to errors of judgment south of the Gap should not blind us to our own shortcomings.⁶

Stacey’s reflections invite closer inspection of both Army Groups. While the terms “operational maneuver” and “*glubokii boi*” (deep battle) may not have penetrated into Camberley, Kingston and Leavenworth by 1939, their essential elements, debate between “attrition” and “maneuver,” were established. Although “Maneuver Warfare” is a relatively new term, its sum and substance are not. Allied (and this certainly includes American) “errors of judgment” begin well before Normandy and Africa. The fact that Bradley broke out and maneuvered with five armoured divisions rather than seven or nine invites careful investigation of General L. J. McNair’s Tank Destroyer doctrine.

Canadian General Charles Foulkes, a veteran of the Normandy battles, candidly noted: “When we bumped into battle-experienced German troops we were no match for them. We would not have been successful had it not been for our air and artillery support.”⁷ This is seconded by Major General Harry Foster, a cavalry officer, who commanded infantry formations in Normandy:

⁴ Martin Blumenson, The Battle of the Generals (New York: William Morrow and Company, 1993), 269.

⁵ Carlo D’Este, Decision in Normandy (New York: Harper Perennial 1983), 457.

⁶ Colonel C. P. Stacey, Official History of the Canadian Army in the Second World War. Volume III, The Victory Campaign: The Operations in North-West Europe, 1944-1945 (Ottawa: Queen’s Printer, 1966), 275-276.

⁷ Stacey, Victory Campaign, 276.

We were no match for Germans once they were dug in. It could be argued that everything being equal, defenders always hold an advantage over attackers. But in Normandy everything wasn't equal. We held the advantage; in the air; at sea and on the ground. Yet every time our troops got beyond the range of supporting artillery or sour weather grounded our fighter bomber cover, the Germans stopped us cold.⁸

The two are often quoted together and serve primarily to extend phantasm to the Norman battlefield. Military history has innocently perpetuated or given approval en passant to a mix of myths. These include overstated German tactical and technical excellence, the overstated effects of tactical and strategical air superiority, and alleged existence of overwhelming Allied numerical dominance.

Our military history is both too critical and too forgiving. It bestows exaggerated virtues to Teutonic warriors yet denies kudos to the German operational commanders who frustrated Bradley, bested Dempsey and stymied Crerar. Our history exculpates too readily the sins and errors made by operational chiefs. Indeed, Montgomery and Simonds have become virtual sacred cows. But this is more a Canadian vice. Weigley is not afraid to say: "Montgomery not only erred but persisted in error for days on end in his judgement of the Canadians' pace toward Argentan."⁹ The Canadian historian must risk re-examination of the Normandy pillars. Any investigation of Simonds leads to Crerar, a middleman and a compliant sign post pointing towards Montgomery. Here historians have left some room for maneuver. A critical analysis, particularly an armoured doctrinal study of Normandy, may not plow totally virgin ground, but will uncover a few new stones and buried icons.

For if the Canadian Army has few champions, the Canadian Armoured Corps has even fewer. Our best historians did not write from the back of a sabretache. This is not to suggest that the Service Corps or the Queen of Battle cannot be sympathetic to the arme blanche or familiar with its doctrinal raison d'être. Professors Granatstein and Morton took the gloves off in "Bloody Victory" when they wrote of Simonds's armoured plan for *Tractable*: "The result was a scheme few coffee-table strategists would use – even in

⁸ Tony Foster, Meeting of Generals (Toronto: Methuen, 1986), 366.

⁹ Russell F. Weigley, Eisenhower's Lieutenants (Bloomington: Indiana University Press, 1990), 216.

desperation.”¹⁰ Professor English has initiated some censure of divisional commanders, but in the end he saved his strongest criticism for Canadian armour: “Without question the tank arm remained the weakest link in the Anglo-Canadian order of battle.”¹¹ Both statements deserve careful scrutiny – it remains to extend the Granatstein and Morton thesis and include Operations *Spring*, *Atlantic* and *Cobra* in the investigation.

There are no operational studies of American and Canadian armour in Normandy. Fuller, Liddell Hart, Macksey and the authors¹² of a handful of unit histories include passing reference to American and Canadian tanks. Kitching certainly gives it a serious try, but in the end there is no analysis that traces the resurrection of cavalry as a breakthrough weapon, or offers a sympathetic shoulder for both the RCAC and the Armored Force. The terms “grand tactical,” “operational” and “strategical” are sometimes raised, often incorrectly, but critical examination is rare.

The employment of massed tanks as an operational weapon that is capable of strategic result is not well understood by Canadian military historians. In fact while lip service is given to tank attack, the majority of North American historians have little or no armoured experience. Worse, they fail to recognize the passion and the technical acumen required to effect a Blitzkrieg or an effective pursuit. The final success, or near strategic victory attained in Normandy, can only be properly understood in terms of Deep Battle

¹⁰ J. L. Granatstein and Desmond Morton, Bloody Victory (Toronto: Lester & Orpen Dennys, 1984), 173. British historian Richard Lamb presents a balanced attack on Montgomery which, though it runs some friendly interference, makes it clear the commander of 21st Army Group was neither decisive nor tactically perspicacious. See: R. Lamb, Montgomery in Europe 1943 - 1945 - Success or Failure? (London: Buchan & Enright, 1960).

¹¹ John A English, The Canadian Army and the Normandy Campaign (New York: Praeger, 1994), 312.

¹² British technical and doctrinal evolution is well covered by Lieutenant-General Sir Gifford le Q Martel, Our Armoured Forces (London: Faber and Faber, 1945), Lord Carver, The Apostles of Mobility (New York: Lees Knowles Lectures, Holmes and Meier Pub, 1979), Robert H Larson, The British Army and the Theory of Armoured Warfare 1918 - 1940 (Newark: University of Delaware Press, 1984), Kenneth Macksey, The Tank Pioneers (New York: Janes, 1981).

A. J. Smithers' two first rate efforts: A New Excalibur - The Development of the Tank 1909-1939 (London: Grafton, 1986) and, Rude Mechanicals - An Account Of Tank Maturity During The Second World War (London: Leo Cooper, 1987). In addition, H. W. Winton, To Change an Army - General Sir John Burnett-Stuart and British Armoured Doctrine, 1927-1938 (Lawrence: University Press of Kansas, 1988). American unit histories include: Donald E. Huston Hell on Wheels (San Martin: Presidio, 1977), Robert S. Allen, Lucky Forward. The History of Patton's Third US Army (New York: Vanguard, 1947), George F. Hoffman, The Super Sixth: History of the 6th Armored Division in World War II (Kent: Kent State University Press, 1979); see also: General E. L. M. Burns Mud (Toronto: Clarke Irwin, 1970). There are no Canadian divisional studies.

and Operational Maneuver. The West's unpreparedness, particularly Canadian, ought to be reviewed from a mechanized cavalry point of view because, despite the cacophony of claims for either of the two other combat arms, it is armour and only armour that was and is the arm of decision.

There exists a venerable host of European armour aficionados who trace the social, political, technical and, to an extent, tactical history of the tank. The ranks of armour historians diminish as one crosses the ocean west. Despite the many fine American and Canadian efforts to describe armour as a symbiotic energy, the interested historian is left considerable room for maneuver. For the military analyst prepared to examine the historical record with one eye on the existent doctrinal curriculum, the tactical battlefield begs to be tilled. It should be understood that, save for Normandy, Lorraine and the Third Army counter stroke in the Ardennes, there are no other occasions for grand tactical and operational study of armour on the western front.

The effect of European development in the thirties is clearer when examined through the reports of Military Liaison Officers and the personal papers of American staff officers, many of who become Yankee "apostles of mobility" and future captains of armour. War Diaries and manuscripts, particularly the collections at the National Archives in both Ottawa and the United States Army Military History Institute, form the foundation of any armoured study. The ETHINT collection at Carlisle includes the vast body of ETO interviews and unit tactical accounts – many of which are translated. It is the radio logs, in supplement to War Diaries, that are the most informative, particularly if the historian is fortunate enough to discover battle entries recorded in pencil – far more interesting than the detoxified typed versions signed off by a commanding officer months later.

Canadian National Film Archives and the cinematic archives at both The Library of Congress and the British War Museum, are equally important sources of historical record. Allied and Axis cinema teams often shot combat footage on the day of key actions. Weather, visibility, ground conditions, even orders of battle, can often be confirmed. The reports of 2nd Operational Study Group at first seem to unfairly contradict established Air Force accounts until the historian reviews a hundred gun camera reels of Typhoons and P47s assaulting German armour and realizes the plight of

the pilot pressing home an attack deep behind enemy lines. Only a fraction dared to go low enough or close enough before releasing their rockets. The majority let fly well outside lethal ranges for small arms or light flak. It is a wonder that any tanks were hit at all, and in fact, few were.

University studies ordered by the AGF to supplement the technical studies conducted by the Aberdeen Proving Grounds are invaluable complements to Lullworth, Bovington, Schrievinhams and BRAC/ASG studies serving to better illustrate the technical limitations of armoured warfare and the real effects of the engineering failure. These appear to be passed over by historians – this may be due to a certain unfamiliarity with tank combat or a hesitation to review technical data. But this is appropriate for a study of armoured doctrine and the accumulated data (now far easier to study via the computer), presents a clearer illustration of the brutal consequences of technical inferiority, poor planning, and the dangers of internecine competition.

Operational investigations are best supplemented by a look at the other side of the hill. German archives in Freiburg are vital aides to any comprehensive understanding of Normandy. Often, battles which figure prominently in American and Canadian histories, are tactical asides to Dietrich's Corps or von Kluge's Army Group. Conversely, seemingly secondary actions, virtually ignored by western official histories, turn out to be important efforts determinedly conducted by a panzer corps, or, in one case, the effort of an entire Army. It is engaging to review Leibstandarte documents and discover that Tilly-la-Campagne, more a Canadian embarrassment than final triumph ("Congratulations, you've been kicked out of Tilly again"¹³), is the stuff of legends in Schutzstaffel history. Imagine hardened 1st SS Panzergrenadiers, veterans of Russia, Italy and France, relaxing in a Kneipe, singing "Der Schlacht bei Tilly – Montecassino der Leibstandarte Adolf Hitler." There are effusive articles, songs, even poems¹⁴ written about the Leibstandarte's struggle with Canadians over Verrières Ridge, which consisted of a series of small unit actions almost forgotten by the Canadian Military.

¹³ DHist. 86/544 Crerar Papers. Montgomery to Crerar, 9 August 1944.

¹⁴ Correspondance Professor Gerhard Stiller; unpublished manuscript "7 Pz. 1 SS LAH Normandie 1944", Stuttgart, 1990, 1991; unpublished manuscript "Normandie 1944 - Beitrag Heinz Wolfel (Kompanietrupp 7. Pz. Rgt. 1)"; unpublished manuscript: "Tilly – Montecassino der 7. Kompanie : gef. von Rolf Ehrhardt" and, Rudolf Lehmann und Ralf Tiemann Die Leibstandarte Band IV/1 (Osnabrück: Munin Verlag, 1986).

Schutzstaffel histories were initially dismissed, unfairly, as propaganda but several are excellent. Lehmann and Tiemann's efforts on behalf of the Leibstandarte and Herbert Fürbringer for the 9th SS Höhenstauffen are particularly instructive. A disappointingly small number of German histories are available in English; Hubert Meyer's long awaited Kriegsgeschichte der 12.SS-Panzerdivision Hitlerjugend was finally translated in 1994; Lehmann was not available until 1996. The remainder are left to the determined historian armed with basic German and a good dictionary. Examination of the expedient Morgend and Abendmeldungs submitted to Heeresgruppe B headquarters offer a better appreciation of a squadron's defence of St. André in the death throes of *Spring* or the practice of the operational art via the Auftragstaktik doctrine used against Simonds during *Totalize* and *Tractable*.

Although the armoured corps is chastised for alleged tactical shortcomings, it is operational failure which constitutes the real problem. Tactical collapse at this level begs serious finger pointing at Simonds, Crerar, and their bosses. This should, in fairness, include General Eisenhower for he relinquished his tactical burden to a bibelot from the desert.

2nd Canadian Corps has long been deprived of critical operational analysis. This is perhaps because the technical complexities of armoured warfare at the tactical and operational level are generally not well understood. The existence of a "Great Tank Scandal" and its effect on American and Canadian armour is grasped in general but not translated in terms of tactical and operational consequences. Gunnery, flotation, mechanical reliability, and protective armour demand comparative study. Daily tank states often offer a clearer picture of combat than War Diaries. Comprehensive tactical evaluations serve to answer basic questions. What killed tanks? How did tactical maneuver figure in actual combat scenarios? A pure tank battle, whether in Normandy or Lorraine, deserves close, indeed, sympathetic study.

American success during *Cobra* overshadows the fact that Patton, when faced with a decision between maneuver and attrition, chose a most uncavalier option at Metz. The fact that Canadian armour finally does break out is overlooked or diminished. American armour maneuvered during Operation *Cobra*, but it did not fight massed panzers. This was soon redressed in Lorraine where American armoured doctrine reached

tactical maturity. Canadian armour fought tank battles throughout Operations *Spring*, *Totalize* and *Tractable*, but it did not maneuver. Canadian armour's greatest opportunity for strategic victory occurred in Normandy. It is appropriate that an armoured officer review these matters, pick up the thrown gauntlet, and attempt to explain the armoured battlefield.

CHAPTER ONE

CANADIAN MECHANIZATION AND WESTERN ARMoured DOCTRINE Getting Ready for Normandy

The horses seemed to realize that something unusual was afoot, as soon they were moving along very steadily with ears pricking and nostrils sniffing the new territory with great interest

"A" Sqn RCD: route march from St. John to Petawawa, July 1937¹

The Canadian Cavalry passed effortlessly from horse to tank. Unlike their confrères in America, there were no bitter doctrinal battles or opposing philosophies to be vanquished. This happened largely because the Canadian Cavalry missed the interim step of initiatory mechanization and its accompanying baggage: the struggle for doctrinal control. By the end of the Great War, the Cavalry was a professional force with creditable battle experience perfected over four years of combat. With little fanfare, Canada had developed the components of a rather sophisticated mechanized force which included cavalry, tanks, and armoured cars. The first modern Allied mechanized formation on the Western Front was the Canadian Motor Machine Brigade² whose armoured cars distinguished themselves in several battles throughout 1916 - 1917. It was raised in Montreal by private funds and permitted to take part in operations in France as an experiment. Commanded by the eccentric Brigadier General R. Brutinel, the "composite brigade" performed particularly well as a mobile rearguard during the last German offensive.³ However, while effective in favourable terrain, the brigade was not capable of

¹ Military Gazette Vol. XV Oct. 37. The March of "A" Sqn RCD from St. John PQ to Petawawa Military Camp, Ontario, 13 Jul.-25 Jul, 1937.

² "Brigade" in the artillery sense, actually a battalion. The unit was initially organized as squadrons (8 cars, 16 Vickers HMGs, two per car). Designated Automobile Machine-Gun Brigade No. 1 CEF on 15 Sept 1914, the unit comprised 230 men and 20 armoured cars. Commercial chassis by the Autocar Company of Ardmore, Pa., armoured with 10mm Bethlehem Steel plate and armed with two Vickers HMG.

³ LtCol W. K. Walker, "The Great German Offensive, March 1918, With Some Accounts of the Canadian Motor Machine Gun Brigade", CDQ, Vol IX. "The tactical armoured car unit is four cars and so must not be split up.", 412. See also, G. W. L. Nicholson, Canadian Expeditionary Force 1914-1919, (Ottawa: Queen's Printer, 1962), 432. Redesignated 1st Canadian Motor Machine-Gun Brigade, CEF on 16 May 1915. In 1919 it became 1st Motor Machine Gun Brigade, Canadian Machine Gun Corps. On 1 Oct

accompanying attacking infantry. With a foot in the door of a future doctrine, the Canadian Corps went on to order modern armoured fighting vehicles. The 1st Canadian Tank Battalion⁴ was authorized in May 1918, arrived in the UK on 21 June and began training. A second battalion was formed in the fall, before the Armistice. By May 1919, both units were disbanded as indeed was the veteran army – Ottawa was anxious to rid itself of a too large and expensive machine that was really only good for killing Germans. The post war Canadian military abandoned its Corps structure, dismissed its divisions, and even declined to field brigades. With the disbanding of the Motor Machine Gun Brigade and the Tank Battalions, there was no force left to argue on behalf of armour. Without tanks or an ersatz Royal Tank Corps (RTC) in its midst, the Cavalry resurfaced as a better model of the force that participated in the Boer War.

The decade after the war offered minimal opportunity to train, although some trials were conducted.⁵ The arrival of two Vickers light tanks in 1927 encouraged tank advocates but did not advance Tank Doctrine.⁶ The Canadian Cavalry remained on the periphery of tactical evolution.⁷ The two remaining active regiments, The Lord Strathcona's Horse and The Royal Canadian Dragoons, were divided into independent squadrons stationed hundreds of miles apart and conducted training better suited to garrison duty in Palestine or India.⁸ Cavalry officers followed the mechanization debates

35 it was converted to 1st Armoured Car Regiment and finally, on 15 Dec 35 amalgamated with the 6th Duke of Connaught's Royal Canadian Hussars, a Montreal Cavalry regiment designated for mechanization: Duncan Crow, British and Commonwealth Armoured Formations (1919-46) (Windsor: Profile, 1971), 54.

⁴ LtCol. Bovey, "Canadian Educational Institutions in the Great War" Canadian Defence Quarterly Vol. V (hereafter cited as CDQ), (Ottawa: Runge Press, 1924), 85. Subalterns were raised from university student cadres from McGill and University of Toronto. Laval University officer cadres were recruited for the second battalion. The commanding officer was R. L. Denison. After training at Bovington the unit (806 all ranks) was sent to France.

⁵ See: Lt. N. G. Duckett, "Mechanized Transport Vehicles at Petawawa Camp", "Recent Mechanized Trials Carried out in Canada" and Maj. L. C. Goodeve, "Mechanization" CDQ Vol V.

⁶ It must be borne in mind that the Royal Tank Corps is always experimenting; no drill or tactics are definitely laid down; all is still in process of organization and discussion." Maj T. V. Scudmore, "The Vickers Light Tank" CDQ Vol V, 321.

⁷ Greenhous, Dragoon, 272-280. Also, W. B. Fraser, Always a Strathcona (Calgary: Comprint Publishing, 1976), 123-126.

⁸ Major R. S. Timmis, "The Problems of the Post-War Yeomanry in Their Application to the Canadian Mounted Troops" Canadian Defence Quarterly (Vol II, 1924-25): "The double rank trains them for war. So does the sword.... The C. O. must insist that all his officers are horsemen. A Sports Day should be held at the end of Camp ... can anyone say that the Militia Cavalry is now as efficient as it was in 1914?"

with avid interest⁹ but, denied mechanization, concentrated on mounted skills. The hard won lessons of World War I, if not forgotten, were certainly not being used. Tactics in training still involved the sword, and often enough, only the sword. Summer exercises more resembled Boer war problems.¹⁰ Still, the charger carried its own mystique and, slow or not, a mounted trooper drew far more interest from the gals than a lorry driver.

By the mid thirties, although the requirements of Empire service remained paramount, there was, nevertheless, a nationalist urging for a Canadian approach to war. "We are no longer tied to the apron strings of the Motherland."¹¹ Modern thinkers wrote on behalf of their respective branches urging mechanization throughout the twenties and thirties: "We have too much infantry, too little artillery. Too much cavalry."¹² Canadian military thought was influenced predominantly by the British, although foreign armies' doctrinal thinking, particularly the French, carried considerable influence: "To the infantry mind there will never be enough artillery and never enough tanks ... attacking tanks will soon be rendered powerless by the surviving anti-tank weapons."¹³ After 1929 all Permanent Force training was stopped. The absence of combined-arms training ensured that senior commanders were to have no experience when large formations were raised for war. The termination of large scale maneuvers guaranteed that both the militia

The Yeomanry claim they could be ready for active service in 8 weeks. Could our units? They could not.", 238.

⁹ Generally, the pro horse faction dominated: "we read absurd ideas about cavalry from the pen of people who evidently know nothing about the branch of the service and not very much about the other branches We do not want our leading patrols to gallop blindly into ambush as the French cavalry so often did in 1914 – but we want them to go straight for their enemy mounted whenever they have a reasonable chance of doing so and establish a moral ascendancy." LtCol H. V. S. Charrington MC, "The Employment of Cavalry" Military Gazette (Vol. 6. 1927-28), 367.

¹⁰ Cavalry charges continued to end summer training camps and the Balaclava M  lee was still standard for gymkannas: Harwood Steele, The Long Ride – A Short History of the 17th Duke of York's Royal Canadian Hussars (Montreal: Gazette Printing, 1934), 42-43. "as late as 1936 the unit had only four automatic weapons to train with, yet had double that number of cavalry swords." R. H. Roy, Sinews of Steel – The History of the British Columbia Dragoons (Kelowna: Charters Publishing, 1965), 90. Horsed formations could maneuver with ease in areas where tanks could only advance at infantry pace. Major C. W. Devy, LSH(RC), "A Cavalry Trek Through Alberta" CDQ (March 1934), 216. An RCD squadron marched from St Jean Quebec to Petawawa Ontario covering 320 miles in 13 days.

¹¹ Capt A. W. Boulter, "What Price Mechanization" CDQ (July 1934), 401. Boulter referred to the large number of NPAM cavalry units which, on paper, suggested a strong mounted reserve.

¹² Boulter, 402.

¹³ Chef de Battalion, Baures, "The Attack Problem from an Infantry Point of View" CDQ (Vol XXIII, Oct. 1933), 88.

and regulars "were unable to derive even the marginal benefits that came from supervising its summer camps."¹⁴ As a weak compromise, the Militia Staff Course continued until the summer of 1938. The imminence of war cancelled the Eastern course in its first week. The Advanced Course (MSC) was cancelled in 1939 "owing to the lack of qualified candidates."¹⁵

Incredibly, the catalyst that should have stirred an interest in staff training, i.e. "the war," was the reason given to terminate the training. This act was either inconceivably short-sighted or an acceptance of the limited value of the Militia Staff course in the first place.¹⁶

Events in Austria and Czechoslovakia prompted the resurrection of Field Maneuvers in the summer of 1938. The lack of modern equipment was to retard meaningful training and a bureaucratic *Catch 22* delayed modernization further: "MacBrien argued that it was unwise to alter organization and tactical doctrines in anticipation of technical change."¹⁷ More important to future battlefield operations was the domination of Canadian arms by the Artillery.¹⁸ Only two Cavalry Officers, C. C. Mann and H. W. Foster, were given advanced staff training between 1921 and 1939,¹⁹ both in the year hostilities began.

¹⁴ Stephen J. Harris, Canadian Brass: The Making of a Professional Army, 1860-1939 (Toronto: University of Toronto Press, 1988), 197.

¹⁵ Report of the DND, fiscal year ending 31 March 1940, CAN, 38.

¹⁶ "The Canadian Militia had conducted staff training throughout forty lean years and in the same time had participated in two wars as part of an imperial army.... By 1939, four hundred militia officers had qualified for m.s.c.(Militia Staff Course) and twenty nine had qualified M.S.C. (Advanced Course). Of this total many returned to war staff courses at Camberley or the Royal Military College." LCol John A. MacDonald, In Search of Veritable : Training The Canadian Army Staff Officer, 1899 to 1945 (MA Thesis, Kingston: Royal Military College, 1992), 86-87, also see, English, 98. By 1940 the year long staff courses at Camberley and Quetta were terminated. Shorter (10-17 week) courses were given to Empire officers at Camberley. Canadian vacancies were limited to five, which triggered an angry protest from McNaughton. DND began a Staff course in the summer of 1941, based at RMC with a 16 week curriculum. By March 1944 the Junior War Staff Course and the War Staff Course had graduated 534 officers.

¹⁷ MacDonald, 199.

¹⁸ Between 1905 and 1939 seventy-five Canadian officers had been awarded a PSC as graduates of Camberley or Quetta. Two were from the Service Corps, eleven were RC Signals, and twelve were engineers. The Infantry Corps was allotted twenty-one vacancies while the Cavalry, over thirty-four years, was permitted seven officers. Meanwhile the Artillery was awarded twenty-one positions, equal to the Infantry and three times that of the Cavalry. MacDonald, 199.

¹⁹ RG24 National Defence 1870-1981. NAC, Ottawa. See also, Annual Reports of the Department of Militia and Defence and the Department of National Defence, 1896-1946, King's Printer, Ottawa.

McNaughton "ignored infantry and cavalry officers in the 1930s The simple fact that infantry and cavalry officers were bypassed in the selection for staff college meant that they were ineligible and unready for senior commands in 1939."²⁰

McNaughton was a Canadian version of American General Leslie McNair. Both were the makers of their national army, both had extensive control over development and both were artillery officers. The gunner cabal that dominated the development of both the AGF and Canadian Army deserves examination. The professional results achieved by McNaughton speak for themselves.²¹

Equipping the Army

The Canadian mechanization remained theoretical. When the decision to abandon the horse was made, it was received without much grumbling. Canada, like the US, was rapidly becoming motorized. The problem centered around acquiring a military budget that would allow some modernization and effective training.

... the maximum force which Canada could raise and maintain in a war of approximately two year's duration would not exceed 11 divisions and 4 cavalry divisions This project ... has since remained the basis of the Canadian Militia organizations The future defence requirements of Canada would be adequately met by a reduction ... of the Land Forces to a total of 6 Infantry divisions and 1 cavalry division.²²

The Canadian military obsolescence was illustrated by a secret report prepared for the Prime Minister by the Chief of the Defence Staff in 1935.²³ General McNaughton's

²⁰ MacDonald, 207.

²¹ "It is hardly surprising, therefore, that eight of the twenty-two major generals and above who commanded divisions, corps, or the army overseas were fired for incompetence before they saw action; that two more were relieved after their first battle; and another survived only nine months. Nor is it shocking that the record of regular officers who commanded brigades early in the war was, if anything, worse." MacDonald, 211. When the "Junior Staff Course" was begun in Camberley in Oct 1942, Canada sent 6-10 majors/LtCols to attend the six week tutorials. The results were disappointing: "The Canadian officers attending the Senior Officers' School are not a good selection; that out of 10 students 50% are definitely below what is wanted and that three of them should never have been sent at all. General Montgomery expresses doubt as to whether sufficient care was taken when choosing them." RG24 9872. Folio 2/SOS/1-2, NAC 15 June 1943.

²² D Hist 112.3M2009 (D7) Secret The Defence of Canada. Précis and Memorandum 28 May 1935.

²³ "(I) There is not a single modern anti-aircraft gun of any sort in Canada.(II) The stocks of field gun ammunition on hand represents 90 minutes fire at normal rates for the field guns inherited from the Great War and which are now obsolescent....(IV) About the only article of which stocks are held is harness, and this is practically useless....(V) There are only 25 aircraft of service type in Canada, all of

comments should have further noted that there was not a single modern tank in Canada. Further, although the artillery had experimented with self-propelled guns (the "Birch" Gun) and caterpillar tractors ("Dragons"), there was no armoured school. Still, the Army attempted to remain academically au courant. The Canadian Staff Course reviewed modern arms and tactics and included armour theory as early as 1925. The Canadian Militia Staff Course hammered home "the principles laid down in FSR"²⁴ and conducted "Staff Rides" or "Tactical Exercises Without Troops" (TEWTs)²⁵ on horseback. The well known Canadian eye for ground was now tempered to include "Tank Problems."

However TEWTs were no substitute for armoured field training.

... what responsible military opinion recognizes as the potentially most powerful arm of the service – and what is even more serious, no officer trained in the command of that arm.²⁶

The Canadian Staff seems to have spent as much energy planning an invasion of the United States²⁷ as it did in producing a Canadian template for a European expeditionary force. The professional military in Ottawa ignored mechanization partly because of a suffocating sycophantic vassalship to British arms. Despite often important insights by regular and militia officers, the Canadian army was content to await British

which are obsolescent except for training purposes... (VI) Not one service air bomb is held in Canada." Defence expenditures from 1931 to 1935 were the lowest since before the Great War. 1934 Expenditure appropriation totaled 8,473,126 for all three services. D Hist 112.3M2009 (D7) Secret. The Defence of Canada - Précis and Memorandum. 28 May 1935, 18. A step back for the most innovative, the most successful, and the most feared Allied Corps in the Great War, was Sir Arthur Currie's First Canadian Corps – "The most powerful self contained striking force on any battle front." C. P. Stacey, Introduction to the Study of Military History (Ottawa: Queen's Printer, 1953), 147.

²⁴ Lt Col H. Wyatt Johnson 17 DYRCH, "From Civilians to Colonels" CDQ (1935). By the 30s, modern Militia senior officer's training was based on "Memorandum of Training of the Canadian Militia 1934" which produced "qualified" Commanding Officers for the militia regiments.

²⁵ As early as 1929 Militia Staff Course tactical problems and précis included the tank: "Useful for counter-attacks and to deal with other tanks." See Précis No. 13, 14, 15, 19, 24, 25 Militia Staff Course "Problems in Defence and Withdrawal; Tactics; Advance Guard. "Tanks now the chief menace to defence and greatly weaken it. Most careful consideration must therefore be given to anti-tank defence." 1929-1931. Major F. R. Henshaw had written in 1930: "For tactical reconnaissance the lightly equipped cavalryman, mounted on a good horse, is still unrivalled." "The Employment of Tanks" CDQ (Vol VII 1929-30), 355.

²⁶ Maj E. L. M. Burns, "A Step Towards Modernization" CDQ (Vol. XII, Oct. 34-Jul 35), 298.

²⁷ R. A. Preston, The Defence of the Undefined Border: Planning for War in North America 1867-1939 (Montreal: McGill-Queens University Press, 1977), 217. "In the early 1920's, a single officer, Col. J. ("Buster") Sutherland Brown, director of military operations and intelligence was solely responsible for the formulation of strategic plans in Canada.... Between Dec 1920 and April 1921, working with a small staff of NCO clerks, Brown prepared the Defence Scheme Number 1, a 200 page plan for war with the United States."

requirements rather than define Canadian future needs. It was finally Prime Minister Mackenzie King²⁸ who reacted to European mobilization by ordering an eleventh hour revamping of Canadian Arms. It was dangerously late but then Canada was not within a Luftflotte's or Panzer Corp's striking distance.

Burns vs. Simonds – A Place for Armour in the Corps

Lieutenant Colonel E. L. M. Burns, perhaps by default, appears as the only person close to a Canadian military philosophe before the '39-'45 war.²⁹ If there was a Canadian mechanization debate, it was the low key, largely philosophical contest between Burns and Captain G. G. Simonds. The subject appeared to be mechanization, but it was really centered on the organization of an Empire Infantry division. It was, in its way, a spirited debate. For military intellectuals – a dangerous term to use with any army – it was the only game in town. Burns ("A Division That Can Attack"³⁰) proposed a triangular division with two infantry brigades and one armoured brigade with four tank battalions. "The essence of the new offensive doctrine should be that, normally, the assault must be carried out by tanks, not by infantry, or even by infantry with tank assistance."³¹ Captain Simonds's rebuttal ("An Army that can Attack – a Division that can Defend")³² drew a prompt reply³³ from Burns who argued, correctly, that Simonds did not understand rapidly-moving warfare wherein divisions had to perform a multiplicity of tasks in various directions and it would be "extremely difficult for a higher commander to

²⁸ King's programmes mainly helped the RCAF. See: J. L. Granatstein, Canada's War (Toronto: Oxford University press, 1975), 55-56; Blair Neatby, William Lyon Mackenzie King Vol 3 (Toronto: U of Toronto Press, 1976), 279-286. Also, James Eayrs, In Defence of Canada - Appeasement and Rearmament, (Toronto: U of Toronto Press, 1965), 45, 197, 226. James Eayrs, A Low Dishonest Decade: Canadian External Policy 1931-1939; (Toronto: Toronto University Press, 1965), 148-52, and, Brian Nolan, King's War (Toronto: Random House, 1988), 133.

²⁹ Burns published more than any other serving officer - over forty-five articles and reviews in The Canadian Defence Quarterly and The Military Gazette. Amongst the more interesting mechanization-armoured articles are: "The Mechanization of Cavalry" CDQ, 3; "A Step Towards Modernization" CDQ December, 1934, 298, and, "Infantry and Tanks in the Spanish Civil War" The Military Gazette, August, 1939, 3.

³⁰ E. L. M. Burns, "A Division That Can Attack" CDQ, April, 1938, 282.

³¹ CDQ, April, 1938, 297.

³² CDQ, July, 1938, 414.

³³ E. L. M. Burns, "Where Do Tanks Belong?", CDQ, March, 1939, 416.

distribute and redistribute his 'offensive' weapons in time to meet the needs of the changing situations."³⁴ Burns neatly predicted Simonds's weaknesses as corps commander in Normandy.

Simonds's final article was a disengagement that attempted to summarize his understanding of war: "The Attack." His thesis, "No book of doctrine can be a substitute for common sense and good judgment"³⁵ attempted to sort out the tank-infantry battle. He began to preach: "... the tank has been rendered valueless by modern anti-tank defence ... no matter what the maximum speed of which a given tank may be capable, the pace at which it can advance will be slow."³⁶ The real issue, how to use tanks in mass, was ignored. Here Simonds gave an indication how he would fight as the future commander of the only Canadian armoured force capable of operational maneuver. His conviction that any advance by armour would be slow became a self fulfilling prophecy.

Distinct from their American and British counterparts, the Canadian mechanization debate was not a bun fight within the Cavalry but an argument between an engineer and a gunner over the best type of infantry division. Burns and Simonds were, of course, both wrong. Both stopped short of outlining the Kampfgruppe or a groupement tactique. Burns's tanks-alone theories were somewhat alarming as he was to eventually command the 5th Canadian Armoured Division. This occurred in the rough terrain of Italy, under a very critical B. L. M. Montgomery and Burns did no serious damage.

Simonds, however, was by far the more dangerous. He neither understood armour nor wanted to understand armour. Worse, his mind was made up. The Simonds-Burns debate could be dismissed as an amusing footnote to Canadian Mechanization if it were not for the narrow tactical conclusions both future generals exhibited and were to carry into battle.

³⁴ CDQ, March, 1939, 417.

³⁵ CDQ, July, 1939, 379.

³⁶ CDQ, July, 1939, 381, 382.

The Origins of Canadian Armour: Worthy in Camp Borden

The Tank is nothing more than the latest expression of protected mobility from which
offensive power can be developed.

J. F. C. Fuller

As Germany re-armed, Western concern was reflected in the press. In February 1936, the *Military Gazette* examined "Our Bows and Arrows Army": "Mechanization has advanced apace in all the great armies of the world while we limp along with all the equipment of the days of the Great War, which really means bows and arrows compared to rifles and the old artillery."³⁷ By 1935, the Mackenzie King government was planning economic recovery. Canadian foreign policy toyed with appeasement and, perhaps, abandonment of Great Britain in the case of an eastern European war. Mackenzie King was the only western war leader to have met Hitler before hostilities, and when he did, in 1938, he was the only leader to make it clear his nation was prepared to fight. He thereafter set about trying to make the Dominion ready.³⁸ By 1939, the tank had progressed from an attempt to find one's way through a machine gun swept battlefield to an aggressive arm capable of strategic decision. Some officers understood the issues clearly and dispassionately: "The problem of armour which is a practical problem and depends for its successful solution upon a mass of mechanical detail is being largely obscured by violent propaganda and emotional appeals about 'losses'."³⁹ By the Munich

³⁷ *Canadian Military Gazette* (February 1936), Editorial, 1.

³⁸ See: J. L. Granatstein *Canada's War*; Desmond Morton, *A Military History of Canada*, (Edmonton: Hurtig Publishers, 1985). A re-armament programme had been adopted in 1936. The first priority was to be the Royal Canadian Air Force, the second, the Navy and last, the Army. "In the summer of 1938, for the first time in many years, a large portion of the Permanent Force was assembled at Camp Borden for combined maneuvers.... In the Spring of 1939, Mr. King told Parliament that 200 18 pounder field guns had been equipped with pneumatic tires and the process was continuing." C.P. Stacey, *The Military Problems of Canada* (Toronto: Ryerson, 1940), 125. See also: NAC RG 24 "Abridged Report on Permanent Force Collective Training Camp Borden, 1938. "Three exercises were held but not in accordance with FSR II" however, the last act featured "an immediate counter attack ... supported by artillery and tanks." 15, 16, 17.

³⁹ V. W. Germains, "Armoured Warfare, A Plea for Common Sense" *Army Quarterly* (Vol. XVI April-July 1928), 369.

Crisis, the Canadian militia had been reorganized and was training for modern war, but it was attempting this without modern equipment.⁴⁰

Finally, in 1938, a Canadian Armoured Fighting Vehicles School was formed at Camp Borden, Ontario.⁴¹ There still were no modern tanks in Canada, save a dozen Carden Lloyds and Vickers, which were defended with hopeful enthusiasm rather than sober analysis of armoured status quo.⁴² The School Commandant was Brevet LtCol F. F. Worthington, a former Machine Gun Corps officer who had distinguished himself in the Great War. Worthington was a skilled instructor and a great motivator of men. He bristled with ideas and energy; he was Canada's answer to Van Voorhis and Chaffee. Worthington was tireless, a "soldier's soldier," who understood men, tactics, and war.⁴³ Although an infantry officer, he instinctively understood maneuver warfare: "Cavalry is not simply an arm – it is a state of mind."⁴⁴ Unfortunately, he was no Patton. He had little idea how to train a tank division or a tank force. The Canadian Armoured Force was to grow at an amazing pace but it would not reach maturity.

In 1936, six NPAM units had been designated "Tank."⁴⁵ By August 1939, the Ontario Regiment and the Three Rivers Regiment were mobilized but had still received no tank training. That fall, after the collapse of Poland and the introduction of Blitzkrieg to the military world, the Canadian Government decided to abolish the Tank School.

⁴⁰ See: Stacey, The Military Problems of Canada, Harris, Canadian Brass, and, Larry Worthington, Worthy (Toronto: MacMillan, 1961), 135, 138, 141-143. In 1930, a mechanized course was run in Kingston Ontario. It used 12 Carden Lloyd Machine Gun Carriers ("tankettes") and lasted eight months. These same carriers formed the nucleus of the Armoured school in Borden. The School was a "Mechanized Force" in the French and American style: armour and a squadron of cavalry (RCD).

⁴¹ Worthington, 138, and, Greenhous, 284.

⁴² "It is by far the best general purpose tank in existence but it can only be considered as a stop gap and an experimental weapon." Major T. V. Scudmore "The Vickers Light Tank" CDQ (Vol V), 321.

⁴³ Frederick Franklin Worthington was born in Scotland but graduated from the University of California. He volunteered for General Pershing's expedition in Mexico. He fought as a mercenary in Nicaragua and Chile. He enlisted in the Canadian Black Watch at the beginning of the Great War and won both the MM and the MC twice. By 1944 (at 54 years old) he was already a legend in the Armoured Corps: "As stern a believer in the striking power of an armoured division as Martel of England, deGaulle of France, Gen Worthington is known throughout the land as the 'Father' of the Cdn Armd Corps." RG 24 17446. Camp Borden, Canadian Armoured School Journal, The Tank, May, 1944.

⁴⁴ Major General R. W. Grow, "Black Lines on a Map" 31 Oct 1952. The Robert W. Grow Papers, Hofmann Collection. MHI, 5.

⁴⁵ The Essex Regiment, the Ontario Regiment, Argyll Light Infantry, the New Brunswick Regiment, the Three Rivers Regiment and the Calgary Regiment.

NDHQ's Memorandum on Training clearly stated the opinion of the Canadian General Staff regarding armour: "Under modern conditions, the infantry soldier still being the only agency which can take or hold ground."⁴⁶

Continued spectacular success by Germany's panzer force brought the government to its senses. On 13 August 1940, the Minister of National Defence ordered the creation of an Armoured Corps.⁴⁷ Unlike its southern neighbour, the Canadian Army entered the tank business without a power struggle or the castration of a traditional arm. Regiments with lineages begun in the eighteenth century maintained their traditions and readied for mechanized war. Unfortunately, there was no pause for a doctrinal shake-out, a creation of a home grown doctrine as conducted by the American Army in Louisiana and Carolina.⁴⁸ Canadian tactics would be imposed by the British Empire.

Worthington, mirroring Adna Chaffee's rise, was promoted and became Commandant of the Canadian Armoured Fighting Vehicle Training Center. Like Chaffee, Worthington successfully argued for the conversion of the Cavalry to armoured regiments to form an Armoured Corps. Unlike Chaffee, Worthington did this with NDHQ support; there was no Chief of Cavalry blocking his way.

The first Canadian tank formation was the 1st Armoured Brigade, commanded by Worthington and composed of the Fort Garry Horse, the Three Rivers, and Ontario Regiments. The horsed cavalry was quickly dispatched.⁴⁹ That fall, Worthington visited the United States and bought out obsolete American Renaults to be used as training tanks.⁵⁰ Because of wartime trade restrictions, he formally signed for a load of scrap iron,

⁴⁶ "The attack is based on man power (the rifleman) supported by firepower (artillery and the machine gun) ... any slender tank resources could be made use of by this method, either to lead the attacking (infantry) columns or the mopping up battalions." "Memorandum on Training" *CDQ* Vol XIV, October 1936.

⁴⁷ Worthington had convinced Rogers but the Minister was tragically killed in a plane crash. Ralston waited until panzer divisions had chased McNaughton's Expeditionary force out of France before approving Worthington's memo for the creation of an armoured force.

⁴⁸ See: Jean R. Moenk, *A History of Large-Scale Army Maneuvers in the United States, 1935-1964* (Virginia: Headquarters United States Continental Army Command, Fort Monroe, 1969), 2-4.

⁴⁹ The Royal Canadian Dragoons were redesignated as The RCD ACR (Armoured Car Regiment). The Regiment "concentrated at St. Jean, held a final mounted parade, and saw with heavy hearts their mounts sold or destroyed." Greenhous, 296. See: Larry Worthington, *The Spur and the Sprocket* (Kitchener: Reeve Press, 1968).

⁵⁰ "I then ... purchased 236 last war six ton Renaults." Canada bought the obsolescent FT 17s from the US Army at \$120 a ton as scrap iron and 45 tons of spare parts plus 13 new engines. "During the

destined to be shipped to the "Camp Borden Iron Foundry."⁵¹ By the winter of 1940, a Canadian infantry division was converted to armour, and three units were selected for incorporation to the 1st Army Tank Brigade.

Doctrinal confusion soon became evident. Torn between the requirement to build a panzer division and Canadian affection for the regimental system, the Canadian Armoured Corps chose the latter – not the right solution, but understandable. However, military bureaucracy then decided to abandon the most important of all principles in the regimental system – tribal identity – and each unit assigned to the Armoured Corps adopted a numerical designation. The number allotted respected regimental seniority, but nevertheless, the units in the Armoured Corps were to be represented by numbers, not names. Maj. General Samson, who was to command the Armoured Division, preferred the original titles but accepted Worthington's policy:

Within the corps there must be a uniformity of training ... a uniformity of purpose and doctrine ... a uniformity and interchangeability of personnel, and general organization to follow that of the British.⁵²

Samson agreed to build a formation wherein "free use of officers and other ranks capable of performing duties required irrespective of the individual units to which they belong."⁵³ Nevertheless, compromise crept in.⁵⁴ Although General Worthington attempted to create an RTC mentality,⁵⁵ in practice, regiments maintained their old ways.

tour of the States (1940) I saw the American Medium M.3 latterly known as the Grant and Lee." RG 24 Vol. 10455. Letter from MajGen F. F. Worthington to CMHQ, 22 Mar 45.

⁵¹ Canadian attempts to get early training in Britain met with failure. Crerar tried to get 50 men to England but the British declined: "The supply of equipment for the Canadian battalion is so doubtful that no good purpose can be served by dispatch of even a cadre." CMHQ File "Policy re Armoured Troops. War office letter to Brig H. D. G. Crerar, CMHQ.

⁵² Roy, 134.

⁵³ NAC RG24 "Formation of Armoured Corps"; Memorandum from Samson to Worthington; "Organization, Training and Employment of a Canadian Armoured Corps", 19 July 1940.

⁵⁴ For example, the reconnaissance regiment of the 3rd Infantry Division was "7th Recce Regiment (17th Duke of York's Royal Canadian Hussars)." MajGen Sansom, commander of the armoured division, "would have preferred to keep original unit titles, but he bowed to the opinion of others." Roy, 134.

⁵⁵ Basically, the Fuller-Liddel Hart "tanks alone" school that proposed massed armour (not combined arms) as the doctrinal solution to future war. See: J. F. C. Fuller, The Conduct of War (London: Sifton Praed 1972), 240, and, Lectures on FSR II (London: Sifton Praed, 1931); Lectures on FSR III (Operations between Mechanized Forces) (London: Sifton Praed, 1932), Towards Armageddon: The Defence Problem and Its Solution (London: Lovat Dickson, 1937). Also, Jay Luvaas, The Education of an Army - British Military Thought, 1815-1940 "The Discordant Trumpet - Major General J. F. C. Fuller",

The Canadian Armoured Corps⁵⁶ was a melange of traditions. The only unit to perpetuate the all-Canadian Motor Machine Gun Brigade, the 6th Duke of Connaught's Royal Canadian Hussars, was reduced to a Headquarters Defence Squadron.

Like the British, the Canadians succumbed to General Martel's influence and pressed their Guards regiments into armoured roles.⁵⁷ However, since there was no regular Brigade of Guards in the Canadian forces, the designation carried no particular elite status nor special entrance requirements for recruits. For an army about to raise a modern tank force, regimental elitism and preferential groupings made little sense. Eventually most units had become a pretty homogenous mix of regulars, militia, and civilians sharing inexperience and tactical ignorance.

Of the six original tank regiments formed in 1936, only two remained by 1941.⁵⁸ On the surface they appeared to be the units that could boast a relatively pure tank lineage, but in fact, there was no clear doctrinal distinction. The Canadians adopted the current British Army doctrine which was itself in a state of confusion and about to go through the Golgotha of desert warfare. By then, the Canadian Armoured Corps had grown to include the 5th Armoured Division (originally "1st Cdn Armd Division") with two armoured brigades (1st and 2nd Canadian Armoured Brigades), a reconnaissance

355, 380. See: B. H. Liddell Hart Paris: or the Future of War (New York: E. P. Dutton, 1925), The British Way in Warfare (London: Faber & Faber, 1932), The Future of Infantry (London: Faber & Faber, 1933).

⁵⁶ At the end of the war (August 1945) King George VI awarded the prefix "Royal" to the CAC in recognition of its outstanding war record. It comprised thirty armoured units, each of which, except two, had a second regiment in Canada. The 19th Alberta Dragoons served only in the Reserve Army.

⁵⁷ Martel convinced the Brigade of Guards to metamorphosize into an elite panzer corps. See: Sir Giffard Le Q. Martel, Our Armoured Forces (London: Faber and Faber, 1945), 104, 361. It was imitated by Canada with varying success. Some, like the 21st and 22nd CAR, continued the customs of the Brigade of Guards. There were other minor differences including traditional competition between regular and reserve officers.

⁵⁸ The six were: The Argyle Light Infantry (Tank); The New Brunswick Regiment (Tank); The Essex Regiment (Tank); The Ontario Regiment (Tank); The Calgary Regiment (Tank) and the Three Rivers Regiment (Tank). RG24 Worthington Memo 1944. The Three Rivers Regiment was bilingual (40% francophones in 1936). J. Y. Gravel, Histoire du Regiment de Trois Rivières (Trois Rivières: Editions du Bien Public, 1941), 111.

THE ROYAL CANADIAN ARMOURD CORPS (1914-1945)

1914 Automobile Machine Gun Brigade

1916 1st & 2nd Motor Machine Gun Brigades

1917 1st Canadian Tank Battalion

1918 2nd Canadian Tank Battalion

1936 Argyle Lt Inf (Tank)
New Brunswick Regt (Tank)
Essex Regt (Tank)
Ontario Regt (Tank)
Three Rivers Regt (Tank)

1939 1 Div CAV Regt 2 Div CAV Regt
1 Hussars, FGH
Sqn, RCD
Sqn, LDSH

1940 1 Armd Bde
1 Hussars
FGH
Ontario Regt (Tk)
Three Rivers Regt (Tk)

1941 4th CDN ARMD DIVISION
1 Armd Car Regt (RCD)

1 Armd Bde
2 Armd Regt (LDSH)
6 Armd Regt (1 H)
10 Armd Regt (FGH)

2 Armd Bde
3 Armd Regt (GGHG)
5 Armd Regt (8 PLNBH)
9 Armd Regt (BCD)

1st CDN INF DIVISION
4 Recce Regt (PLDG)

2nd CDN INF DIVISION
8 Recce Regt (14 CH)

5th CDN ARMD DIVISION
18 ACR (12 Man D)

3 Armd Bde
25 Armd Regt (Elgin)
28 Armd Regt (BCR)
29 Armd Regt (SAR)

3rd CDN INF DIVISION
7 Recce Regt (17 DYRCH)

4 Armd Bde
21 Armd Regt (GGFG)
22 Armd Regt (CGG)
27 Armd Regt (SHER FUS)

1st Army Tank Bde
11 Armd Regt (ONTARIO)
12 Armd Regt (THREE RIVERS)
14 Armd Regt (CALGARY)

2nd Army Tank Bde
20 Tank Regt (16/22 SASK H)
23 Tank Regt (HALIFAX R)
26 Tank Regt (GSF)

1943 1st CDN CORPS
1 Armd Car Regt (RCD)

2nd CDN CORPS
18 Armd Car Regt (12 MAN D)

4 CDN ARMD DIVISION
29 Armd Recce Regt (SAR)

4 Armd Bde
21 Armd Regt (GGFG)
22 Armd Regt (CGG)
28 Armd Regt (BCR)

1st CDN INF DIVISION
4 Recce Regt (PLDG)

2nd CDN INF DIVISION
8 Recce Regt (14 CH)

5 CDN ARMD DIVISION
3 Armd Recce Regt (GGHG)

5 Armd Bde
2 Armd Regt (LDSH)
5 Armd Regt (8 PLNBH)
9 Armd Regt (BCD)

3rd CDN INF DIVISION
7 Recce Regt (17 DYRCH)

1st Army Tank Bde
11 Armd Regt (ONTARIO)
12 Armd Regt (THREE RIVERS)
14 Armd Regt (CALGARY)

2nd Army Tank Bde
6 Armd Regt (1 H)
10 Armd Regt (FGH)
27 Armd Regt (SHER FUS)

Figure 1

(recce) regiment,⁵⁹ an independent tank brigade, and two recce regiments, one for each infantry division. In 1942 the corps added a second armoured division (4 CAD), another independent tank brigade (2nd Army Tank Bde), and a third recce regiment for 3rd Canadian Infantry Division. In early 1943, the Corps was totally reorganized and reduced from twenty-three armoured regiments and six brigades to nineteen regiments in four brigades including divisional and corps reconnaissance units.⁶⁰

For a short time there were three Army Tank Brigades and three Armoured Brigades. Eventually 2nd Army Tank Brigade was broken up for reinforcements, the 3rd redesignated, and the entire corps reorganized again in what Montgomery called "Canadian musical chairs." By 1943, the Corps had settled down and comprised two independent tank brigades, renamed simply as "armoured brigades," two armoured divisions, three divisional recce regiments and three corps recce regiments.

The Division as Toolbox

The fact is that the British had no idea at all as to the sort of war they were going to fight, nor the sort of war that it would suit them best to fight if the enemy would be so kind as to allow them to choose.

Lt. General Sir Francis Tuker

On the contrary there was the uneasy marriage of the "tank-alone" school of the Royal Tank Corps, and the "armour-is-cavalry" school of the cavalry. To this want of intellectual preparedness was added want of operational experience....

Correlli Barnett, *The Desert Generals*

France 1940 had been an epiphanic experience. If Poland had been dismissed as a lucky victory against a second rate opponent, then no one could deny the triumph of panzers over both the French Army and the British Expeditionary Force. The all-tanks school had triumphed. It was a double triumph in that the French campaign at once

⁵⁹ 1st ACR (RCD) provided recce; the 1st Armd Bde comprised 2 CAR (Strathcona's Horse), 6 CAR (The 1st Hussars), and 10 CAR (The Fort Garry Horse). 2nd Armd Bde held 3 CAR (The Governor General's Horse Guards), 5 CAR (8th Princess Louise New Brunswick Hussars) and 9 CAR (The British Columbia Regiment). The 1st Army Tank Brigade had three regiments: 11 Armd Regt Tank (The Ontario Regt); 12th ART (The Three Rivers Regiment) and 14th ART (The Calgary Regiment). Lastly, there were two divisional recce regiments. 1st Canadian Infantry Division : 4 Recce Regt (4th Princess Louise Dragoon Guards); 2nd Canadian Infantry Division: 8 Recce Regt (14th Canadian Hussars).

⁶⁰ The Elgins (25 CAR) became an Armoured Delivery Regiment, The BCR (28 CAR) joined 4th Armd Bde replacing the Sherbrooke Fusiliers and The South Alberta Regiment (29 CAR) became 4 CAD's recce regiment.

legitimized both mechanization and large armoured forces and it also gave bragging rights to the Royal Tank Corps which had been heretofore dismissed as annoying zealots. In fact, the War Department had incorrectly interpreted the essential element of the German victory. It was the panzer division, not the panzer, that defeated the Allied armies. The German commanders created mission oriented, customized groupings that reflected a sound doctrine and an experienced organization to drive it.

The Germans conducted tactical groupings made to order for the task required. When the mission was done, the tools were put back into the box. There was no tribal system of regimental or corps fealty to fight against; the Wehrmacht loyalty was to the division. It was this ability to act as siblings of a greater family that permitted quick and efficient ad hoc battle organizations.

For the British, the campaign in France was an initial "shake out" whereas by 1940, the German army had done with experimentation. Spain, Austria, Czechoslovakia and the final dress rehearsal in Poland had honed the panzer blade and produced battle-wise staffs. Nevertheless, doctrinal superiority and experience could always be stopped cold by determined leadership and good kit. The panzer arm, protected by complete air superiority, raced through France defeating penny packets of Allied armour. The one fear was that a solid concentration of tanks attacking the very exposed flank could end it all. This nearly occurred when the BEF finally, albeit briefly, got its ducks in a row.

On 20 May a counter-attack by British Matildas near Vimy Ridge almost succeeded in cutting off the spearhead of the panzer army – Rommel's 7th "Phantom" Panzer Division. General Martel's tanks⁶¹ routed the flank guard and then savaged the main body. German counter-attacks by Panzer IIIs and Pragas were easily beaten off; the SS Division Totenkopf, in its first campaign, broke. Martel was elated:

His tanks were knocked out quite easily by our 2-pdr. anti-tank gun, whereas our infantry tanks resisted the shell fire of the corresponding enemy 37-mm. gun without difficulty. Some tanks were hit fifteen times without having an effect on the tank or the crew. When a tank can advance and ignore the fire of the main enemy anti-tank guns, a great moral effect is produced.⁶²

⁶¹ Martel, 65. The Tank Brigade only had two battalions: 4th and 7th RTR.

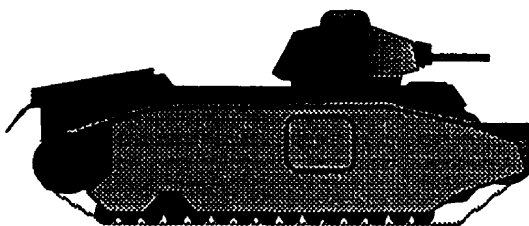
⁶² Martel, 69.

WESTERN "INFANTRY" MAIN BATTLE TANK

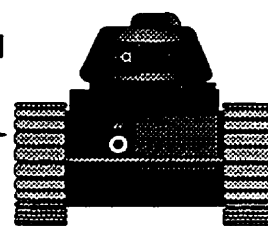
FRENCH INFLUENCE

FRANCE 1935: CHAR B1 bis

Gun: 75mm (Hull); 47mm (Turret)
 Combat Weight: 32 tons
 Armour (max): 60mm
 Speed: 17 mph
 Crew: 4
 First Combat: France 1940



HULL MOUNTED
 75mm
 MAIN GUN



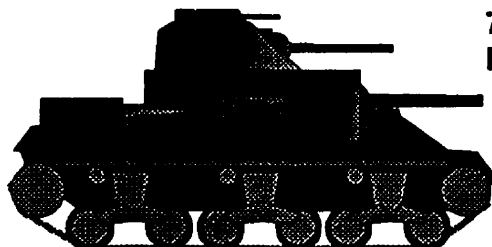
BRITAIN 1938: Infantry Tank Mk IIA "Matilda"

Gun: 40mm (2 Pdr)
 Combat Weight: 26 tons
 Armour (max): 80mm
 Speed: 15 mph
 Crew: 4
 First Combat: France 1940



UNITED STATES 1940: GRANT M3

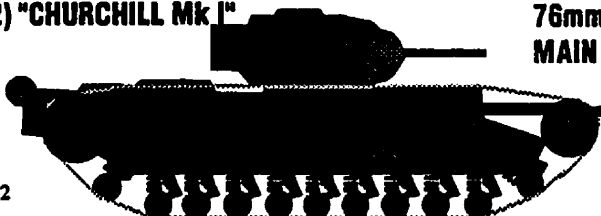
Gun: 75mm (Hull); 37mm (Turret)
 Combat Weight: 30 tons
 Armour (max): 88mm
 Speed: 25 mph
 Crew: 6
 First Combat: Western Desert 1941



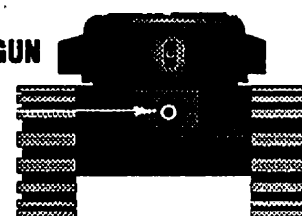
HULL MOUNTED
 75mm
 MAIN GUN

GREAT BRITAIN 1941: Infantry Tank Mk IV (A22) "CHURCHILL Mk I"

Gun: 76mm (Hull) 40mm (Turret)
 Combat Weight: 38.5 tons
 Armour (max): 102mm
 Speed: 15 mph
 Crew: 5
 First Combat: France (Dieppe) 1942



HULL MOUNTED
 76mm
 MAIN GUN

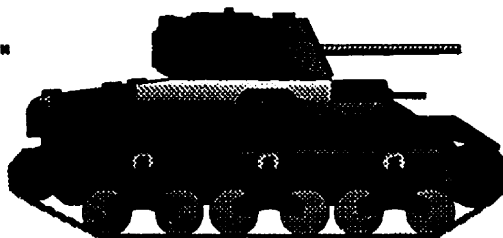


By 1942 the British SCRAP the HULL GUN.

"CHURCHILL" Mk II and IIIs' MAIN ARMNAMENT is mounted in TURRET.

CANADA: 1941 Tank Cruiser Mk II "Ram Mk I"

Gun: 40mm (2 Pdr)
 Combat Weight: 28 tons
 Armour (max): 76mm
 Speed: 25 mph
 Crew: 4



©Jarymowycz
 Aug 97
 INFTANKS.CDR

"If Tanks are to survive at infantry pace while supporting men on foot, they must resist the fire of current anti-tank guns, and yet retain the ability to destroy hostile men and weapons, including enemy tanks."

British General Staff Policy amendment, 1938

Figure 2

Rommel was forced to bring up a battery of 88mm dual purpose guns from his divisional anti-aircraft battalion to finally stop the British advance: "I personally gave each gun its target."⁶³ Martel's tanks, unsupported by infantry, were reduced to ineffective troop sized elements⁶⁴ that eventually were forced to withdraw, ending the only serious Allied attack in the 1940 campaign.

The lessons were clear: tanks could not attack unsupported and required both armoured infantry and artillery to deal with enemy anti-tank gunners. Finally, mass was imperative if an armoured attack was to absorb losses and still have the punch to break through. Martel was appointed Commander of the Royal Armoured Corps (RAC) in December 1940 and immediately reorganized the armoured division, adding more artillery and infantry.

His attempts at reform were resented by RTC partisans, particularly General Percy Hobart: "One of the rudest men in the Army, a fanatic for his own conception of armoured forces, full of prejudices and especially intolerant."⁶⁵ Hobart was archetypal of the aggressive Fullerist advocate: "His tactical ideas are based on the invincibility and invulnerability of the tank to the exclusion of the employment of other arms in correct proportion."⁶⁶ The British evolved from "all tank" forces in which infantry, artillery and engineers were relegated to auxiliaries, to mixed brigade groups wherein each tank brigade was given its own infantry. British armour was organized in the French vogue; Infantry tanks were grouped in independent "Tank Brigades" while Cavalry tanks were organized into "Armoured Brigades." The cavalry spirit was proudly reflected. As late as 1943, the 7th Armoured Division (the "Desert Rats") had a "Light Brigade" and a "Heavy Brigade."⁶⁷ At one stage the armoured brigades became mini divisions, each with

⁶³ Rommel's account from: B. H. Liddell Hart, The Rommel Papers (New York: Harcourt, Brace and Company, 1953), 32.

⁶⁴ "We were now practically isolated in this area ..." Martel 69.

⁶⁵ Hobart went into the Western Desert to take command of the 7th Armoured Division and got them ready to take on the Italians but was soon sacked: see Martel and, J. P. Harris and F. H. Toase (Editors), British Armour 1918-1940: Doctrine and Development. Armoured Warfare (New York: St. Martin's Press, 1990), 48.

⁶⁶ Lt General H. M. "Jumbo" Wilson complaining to Wavell in November 1939. Kenneth Macksey, Armoured Crusader (London: Hutchinson, 1967), 165.

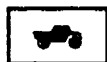
⁶⁷ This unfortunate commemoration of Balaclava seems to have been intended - "The Charge of the Light Brigade" has always been seen as a victory of the cavalry spirit, not a resounding tactical defeat.

WESTERN ARMoured DIVISIONS 1942

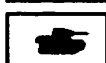
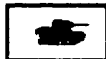
BATTALION EQUIVALENTS

BRITISH ARMoured DIVISION

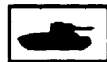
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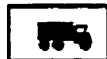
LIGHT BDE



HEAVY BDE



INFANTRY BDE



DIV TROOPS



Armoured Car Regt

Lt Bde: 3 LT Tk Regts; 1 Motor Inf Bn; 1 Arty Regt

Hvy Bde: 3 Med Tk Regts; 1 Motor Inf Bn; 2 Arty Regts

Inf Bde: 3 Inf Bns; 1 Arty Regt; 1 AntiTank Regt

Div Troops: AntiTank Regt; AAA; Sigs; Engineers

6 Tank Bns: Tk/Inf/Arty Ratio 6:5:4

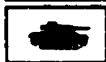
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DIVS 1942.CDR

GERMAN PANZER DIVISION

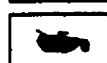
RECCE BN



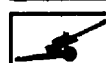
PZ REGT



PZ GREN REGT



ARTY REGT



Recon Bn

Tank Regt: 2 Med Tk Regts

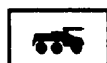
Panzer Grenadier Regt: 3 PzGren Bns

Arty Regt: 2 Med Arty Bns; 1 Heavy Arty Bn

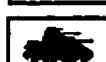
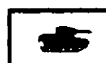
2 Tank Bns: Tk/Inf/Arty Ratio 2:3:3

AMERICAN ARMoured DIVISION

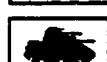
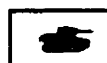
RECON BN



TANK REGT



TANK REGT



INF REGT



3 ARTY REGTS



Recon Bn

Tank Regt: 1 Lt Tk Bn; 2x Med Tk Bns

Tank Regt: 1 Lt Tk Bn; 2x Med Tk Bns

Inf Regt: 3 Motorized Rifle Bns

3x Arty Regt

6 Tank Bns: Tk/Inf/Arty Ratio 2:1:1

Figure 3

its own infantry and artillery battalions, but without the supporting arms and services (engineers, ordnance, transport, signals, etc.) to make them effective Kampfgruppen. The Brigade Group was accused of being “a fancy name for a disastrous dissipation of effort.”⁶⁸

In August 1942, General Auchinleck ordered armoured divisions to fight as tactical units, not as brigade groups. “We have always opposed the pernicious infantry brigade group system. It does for small wars but it is rubbish for modern war. It leads to confusion, dispersion, unbalancing of forces and chaotic planning.”⁶⁹ Finally, the armoured division was reduced to a three tank battalion armoured brigade, with its own motorized infantry battalion, and a three battalion infantry brigade. This was the model adopted by Canada.

Still the tactical problem continued in that British armoured divisions fought their brigades as independent entities. They were regularly committed in bits and defeated in bits: “For Ritchie had thrown his armour into battle piecemeal and had thus given us the chance of engaging them on each separate occasion with just enough of our own tanks.”⁷⁰ There was still no working doctrine that permitted the division’s tools to be effectively used. Although armoured divisions were streamlined, their two brigades fought as separate entities. The divisional organizations continued to be armour heavy; the infantry and artillery were banished to “Support Groups.”

The Afrika Korps arrived in Tripoli well schooled in the all arms battle. The panzer division, as a tool box, permitted German Kampfgruppen to dominate.⁷¹ The British did not employ Kampfgruppen “all arms teams”; their tanks attacked without infantry or artillery, which were locked up in medieval keeps called boxes:

⁶⁸ P. G. Griffith, “British Armoured Warfare in the Western Desert 1940-43”: J. P. Harris and F. H. Toase (Editors), Armoured Warfare, (New York: St Martin’s Press, 1990), 70. See also: Paddy Griffith, Forward into Battle, (Wiltshire: The Crowood Press, 1990).

⁶⁹ Auchinleck quoted; LtGen Sir Francis Tuker, Approach to Battle (London: Cassell, 1963), 105.

⁷⁰ Rommel, quoted by: Liddell Hart, The Rommel Papers 208.

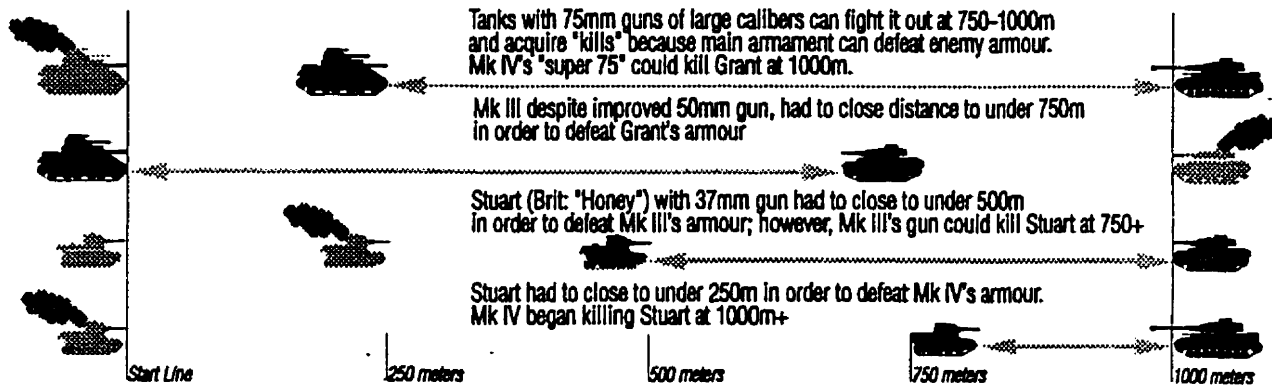
⁷¹ The British persistently redesigned their formations; the 7th Armoured Division went through at least four organizational changes, hosted seventeen different armoured regiments and nine different infantry battalions within two years. See: MajGen G. L. Verney, DSO, MVO, The Desert Rats (London: Greenhill Books, 1990). Verney lists all four separate orders of battle for the 7th Armd spanning 24 months.

The TANK BATTLE: A GUN DUEL

Desert battles were compared to Naval engagements

"no captain can do very wrong if he places his ship alongside that of the enemy."

Nelson



Most tank battles fought at UNDER 500 meters

The TANK BATTLE: BASIC TACTICS

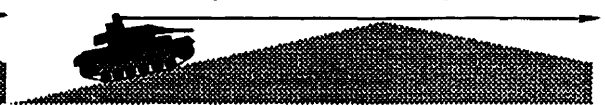
"HULL DOWN":

Tank fires while vehicle **HULL** is hidden from en gun fire



"TURRET DOWN":

Tank commander observes entire vehicle (hull and **TURRET**) is hidden



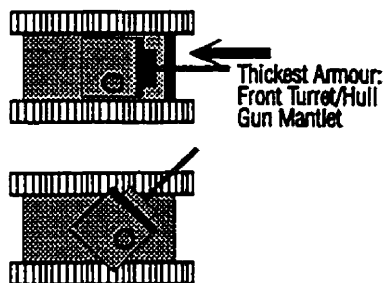
Tanks with main armament in hull are at disadvantage in "HULL DOWN" position: most of Grant remains visible.

Most desert tank battles fought at "best (longest)" effective range and on relatively flat desert terrain at average ranges 500-750m.

The TANK BATTLE: BASIC TACTICS

FACING ENEMY:

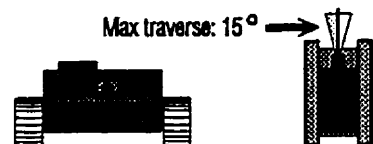
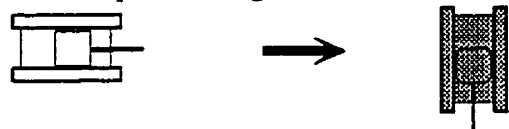
Frontal **ARMOUR** is strongest



TURRET allows tank to maneuver and fight. Vehicles without turrets are **NOT** proper tanks: "Tank Destroyers", "Assault guns" or "Sturmgeschütz"

TACTICAL MANEUVER:

Aim is to get a **FLANK** or **REAR** shot while presenting own front to enemy



Assault guns: better armour, lower profile; cannot maneuver and fight; limited traverse on main gun

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Figure 4

There was an even more disastrous result from this failure by the British Staff to design a homogeneous battle group. The infantry in their "boxes" when in defence, would call on the tanks for support when hard pressed, for they too needed 25-pounder H. E. on a scale which no single battery could supply. In the result the practice grew up of requiring British tanks to run around the desert attempting to protect the "boxes" threatened with being overrun.⁷²

Laagers and Desert Logistics

Tank battles stopped at night in the desert, allowing both sides to replenish and repair. The British rallied to the rear and formed protective laagers (which is exactly what the American and UK Armoured Divisions did during Operation Desert Storm in the 1991 Iraqi campaign). The laager (pronounced "lahger") was a Boer word and referred to a defensive circle of wagons. The Germans formed laagers as well but they did so on the battlefield. This permitted German electrical and mechanical engineers, organized into recovery and repair teams, to move forward during the night and repair the tanks left on the battlefield. The Germans had well equipped mobile repair shops that could handle all minor and most major repairs – repairing tracks, transmissions, main guns, radios, and dust filters.

However many vehicles the Germans lost they were going to get a far greater number back in action than we could because of their efficient recovery system. Their huge tracked and wheeled tank-transporters were actually going into battle with the tanks themselves. Even while the fighting was going on, the men in the transporters were prepared to dash into the battle, hook on to damaged vehicles and drag them to a point where they could start repairs right away.⁷³

Most tanks were abandoned after one hit due to fear of fire and since both sides used solid shot, the damage was usually repairable. If anti-tank shot penetrated armour, it caused "splash"; the violence of the penetration melted the armour plate as it entered and bits of molten metal flew around wounding the crew. By owning the battlefield, Rommel

⁷² G. Macleod Ross, in collaboration with MajGen Sir Campbell Clarke, The Business of Tanks 1933 to 1945 (Devon: Arthur H. Stockwell, Elms Court, 1976), 174. "These boxes faced four-square, ready to meet attack from any direction. It was the old idea of the British square at Waterloo.... Each box was completely surrounded with a ring of landmines and barbed wire. Guns faced outwards.... The boxes were only a mile or two square at the most, and were provided with water, food and ammunition to withstand a siege." Alan Moorehead, African Trilogy (London: Hamish Hamilton, 1944), 314.

⁷³ Moorehead, 224.

would often salvage as much as fifty percent of his day's losses. The British did not have a comparable organization. British tanks were taken to Corps or Army rear areas to effect repairs. By the end of the African war, the British Army had organized their own corps of electrical and mechanical engineers (EME).

Another major problem was battlefield replenishment. The British brought their fuel up in flimsy tins that leaked and could be cut with a bayonet ("Petrol lay around in flimsy square tins"⁷⁴); there were estimates of up to twenty percent fuel losses during transport caused by leaking tins. The Afrika Korps used a steel container. The British showed ungrudging respect for German resourcefulness; the Wehrmacht's gas cans, dubbed "Jerry Cans," were collected as prized booty.

If France 1940 demonstrated the decisiveness of massed armour in operational maneuver, then the Western Desert was the tactical sweat shop. The debate of "armour or gun" was fought to an inconclusive end. Both sides scrambled to introduce better protected and better armed tanks. The Germans started with one important advantage – the 88mm anti-tank gun. The weapon killed British armour at distances of two thousand meters or better. The "88" provided the Germans with an anvil upon which to hammer British armour or a shield to deflect an attacker's blow while they attacked another more vulnerable part. The British seemed incapable of effectively responding to the challenge.⁷⁵

⁷⁴ Moorehead, 343. Their most popular use was as stoves. A tin was cut in two, half filled with sand, doused with petrol and lit, allowing the crew to "brew up" their tea. "Brew up" was a particularly desert term and referred both to meals and tanks. The German cans were sturdy, had an effective stopper and could carry petrol or water. They are still called *Jerrycans* today by all English speaking armies and the basic German design is still used, although the containers are now made of hard plastic.

⁷⁵ "As soon as the German 88-mm. A.A./anti-tank gun appeared near Sollum on the Egyptian frontier in the summer of 1941, there were many calls on G.H.Q. Cairo to release some of our 3.7-inch A.A. guns for anti-tank work with the Desert forces, but not till the Battle of Gazala a year later were these powerful, flat-trajectory guns fitted with anti-tank sights and armed and converted to this ground role. It is still a mystery why this was not done before and why, when as many as sixty-two were so converted, only a trickle of them were in use in that battle." Tucker, 14. The British AA gun was not popular with the British Infantry as an anti-tank gun. Its high silhouette was difficult to hide and its tremendous back blast kicked up great dust clouds that promptly invited enemy attention.

DESERT SOLUTIONS

SEEKING A TACTICAL ANSWER TO OPERATIONAL THREAT

DESERT TACTICS: "BRIGADE BOXES" - THE NEW BRITISH SQUARE The "PIVOT" and Armour Maneuver

ARMOUR "PIVOTS" AROUND STRONG ANTI TANK DEFENCES: FREE TO MANEUVER / ENGAGE IN "ALL TANK" DECISIVE BATTLE

BRITISH DIV LEVEL COUNTER STROKE:
MASS OF ARMOUR ATTACKS GERMAN COLUMNS
ON THE "WRONG SIDE" OF MINEFIELDS
SEPARATED FROM SUPPORTING
ECHELONS (ARTY; AMMO; PETROL; REPAIR)

BRITISH FORM "BRIGADE BOXES": WELL DUG IN INFANTRY / ANTI TANK,
SOWN INSIDE STRONG MINEFIELDS; LINKED BY MUTUALLY SUPPORTING
ARTILLERY. THESE ACT LIKE BRITISH SQUARES IN WATERLOO AND
FORCE GERMAN "CAVALRY" TO EITHER DESTROY ITSELF IN FRONTAL
ATTACKS OR MANEUVER AROUND AND BE PINNED AGAINST THE MINES
AND BOXES BY BRITISH HEAVY CAVALRY (MASS OF ARMOUR).
AGAIN, BRITISH INFANTRY IS SEPARATED FROM ARMOUR.

SCREENING RECCE FORCES CLASH:
GERMAN RECCE DERNES
MAIN DEFENSIVE AREAS;
SEEKS MASS OF BRITISH ARMOUR

BRITISH LIGHT ARMOUR DESTROYS
GERMAN OPERATIONAL RECCE:
REMOVES GERMAN "EYES and EARS"

BRIGADE
BOX

MINE FIELDS

BRIGADE
BOX

GERMAN PZ DIVISIONS AVOID BRITISH DEFENDED AREAS;
PUSH THROUGH GAPS IN MINEFIELDS;
MANEUVER TO SEEK OUT AND DESTROY
BRITISH ARMOUR THEREBY ACQUIRING
OPERATIONAL DOMINANCE

GERMAN INITIAL HASTY ATTACKS ON "BOXES"
ARE REPULSED; MUST EITHER PREPARE
FOR A FORMAL ATTACK WITH SUPPORTING ARMY
AIR AND ARTILLERY RESOURCES (TIME WASTED)
OR SEEK EASIER AVENUE TO BRITISH REAR AREAS

Figure 5

The US Army: Getting Ready for Africa and Europe

The tank was introduced to protect against automatic small arms fire, which was developed so greatly during and since the World War. Its answer is fire against which the tank does not protect – the anti-tank gun. That this answer failed was primarily due to the pitifully inadequate number and power of French and British anti-tank guns, as well as their incorrect organization.

General L. J. McNair

The Tank Destroyer concept, “initiated by George C. Marshall, nurtured by Lesley J. McNair, and implemented by Andrew D. Bruce, was the US Army’s response to the revolution in warfare known as the blitzkrieg.”⁷⁶ Marshall, whose patience had been sorely tried by both the Infantry and Cavalry Chiefs, directed in 1940 that his G3 establish a small planning and exploring branch, primarily to consider anti-tank defense. The foxes were in the doctrinal hen house.

A series of Anti-tank Conferences were called in April 1941 and representatives included all Branch Chiefs. It was decided to create a “Tank Destroyer” – a 75mm gun mounted on a half-track – and form “divisional Anti-tank Battalions in each foot infantry division, motorized infantry division, and possibly, armored force division and second, to form GHQ Anti-tank battalions.”⁷⁷ The Infantry Branch embraced the McNair Doctrine:

An increase in armor or gun power can have no purpose other than to engage in tank to tank action - which is unsound. Moreover, such a tank would be disadvantageous in carrying out the primary mission of armor - to defeat those elements of the enemy which are vulnerable to tanks. The answer to heavy tanks is the tank destroyer.⁷⁸

Although the Louisiana Maneuvers created an armoured métier within the upper echelons of the US Army, Louisiana did not nail down tactical solutions. The McNair bund were encouraged by British experience in the Western Desert. In May 1941, the British lost over three hundred tanks within two days during Operation *Battleaxe*. Tank Destroyer (TD) theorists noted the effect of anti-tank fire and felt vindicated. The fact

⁷⁶ Dr. Christopher R. Gabel, Seek, Strike, and Destroy: US Army Tank Destroyer Doctrine in World War II (Fort Leavenworth, Kansas: Leavenworth Papers No. 12. Combat Studies Institute, US Army Command and General Staff College, 1985), 67.

⁷⁷ AGF Study No. 29., The Tank Destroyer History Historical Section, AGF 1946, 2-3. The McNair case rested on a sure fire argument to convince Congress: “It is poor economy to use a \$35,000 medium tank to destroy another tank when the job can be done by a gun costing a fraction as much.”

⁷⁸ Bailey, 9.

that the very deadly 88mm had no counterpart in either American or British arsenal was overlooked.

A year later, American Grants surprised the Germans. Despite the obvious shortcomings, their armour and fire power more than made up the difference. The American 75mm could penetrate the “face hardened” armour German tanks were sporting. At long range, the Grant’s armour bested the long 50mm L/60 on Mk IIIs. Predictably, when the new version of the Mark IV, the Ausf F2 with a long 75mm KwK L/43 gun, appeared, it defeated the Grant with ease. Nonetheless, the TD lobby dismissed tank vs. tank engagements. Tanks were to be massed in Armored Divisions until breakthrough was prepared by the infantry. They would then perform as Mongol hordes and run amok in the enemy rear. The first test for American Armor would be in Africa.

It did not work well; worse, Kasserine demonstrated the tank destroyer doctrine was “a fundamentally flawed set of principles.”⁷⁹ Marshall and McNair remained unconvinced, even after a December 1942 fact finding tour returned from Tunisia and declared: “The Doctrine of having TDs chase tanks is absurd.”⁸⁰ The TD programme continued despite their inability to survive a punch-up and, more serious, it diverted effort from the race to develop an American heavy tank. As the 5th and 8th Armies captured Rome, the Americans were stymied in the bocage of Normandy, slaughtered by Panthers and Panzerfausts – Bradley was forced to look for towed anti-tank guns because all he had were Shermans and TDs. The Tank Destroyer doctrine was the old artillery response to cavalry: grouping gun battalions to defeat Cuirassiers with another grand batterie. McNair’s pocket battleship solution – an armoured fighting vehicle that could run away from trouble – did not work because eventually even the Graf Spee had to turn and fight.

⁷⁹ Gabel, 67.

⁸⁰ Its leader, General Jacob Devers, presented interesting conclusions: “The Sherman was the best tank on the battlefield; the tank destroyer was not a practical tactical concept; the war was a war of firepower and; American troops would have to acquire a higher standard of discipline.” He was selectively ignored. Quoted by MGen E. N. Harmon, commander 1 US Armd Div. The Ernest N. Harmon Papers. MHI.

Helping the British

The American preparation for war was thorough.⁸¹ American tank crews were introduced into desert combat by sub units which was something the Canadian Army, despite efforts by McNaughton, did not achieve.⁸² The AGF used the Desert Training Center in Fort Irwin, as well as considerable maneuver areas in Texas. American armoured divisions and their staffs reached North Africa already desert worthy. By 1943, American equipment was battle proven but the armoured divisions were not. The 8th Army's post Kasserine holier-than-thou attitude enraged American officers who expected gratitude for saving Egypt with Grants and Shermans rather than condescending advice on how to beat Rommel.

I do not believe we should be over exercised by the opinion of the British as to our organization and methods. I do not believe the British know any more about how to fight an armoured division or how it should be organized than we do.⁸³

Experienced AGF tank officers noted that El Alamein had been the one major British success but it also demonstrated that Montgomery could not handle armour. The first and only time he created an armoured corps of two full divisions, the Corps de chasse, Montgomery botched the job.⁸⁴

The desert demonstrated the two approaches to armoured warfare – the German “tool box” versus the British two solitudes. Even within the armoured division, the infantry was almost an annoyance: a soft skinned target that had to be got out of way or protectively dug in so that the tanks could get on with the job of winning the main battle.

⁸¹ The first M4s arrived in Egypt in August 1942 (“Great secret”) and remained hidden until 2nd Alamein.

⁸² An advance party from the tank development center in Aberdeen established an Ordnance Training School at the Royal Army Corps School in Abassia, Egypt on 4 May 1942 under Colonel George B. Jarrett. The Americans quickly proved accomplished at Desert maintenance and soon established their own school, a successful rival to the RAC Desert School. The British at first criticized: “... American upstarts who didn't know a thing about desert warfare.” Canadians did acquire combat experience in Africa but on an individual basis as over two hundred “Can Loan” officers volunteered to serve with British units. It produced battle savvy junior leaders but not the experienced staffs and formation commanders required to lead Canadians in Italy and France.

⁸³ The Ernest Nason Harmon Papers. USAW. C. Harmon commanded both 1st and 2nd Armd Divs.

⁸⁴ Barnett, 269, 271-282; Tucker, 252-257.

WESTERN ARMoured DIVISIONS 1943

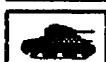
BATTALION EQUIVALENTS

BRITISH ARMoured DIVISION

RECCE REGT



ARMD BDE



INF BDE



DIV TROOPS



Div Troops: AntiTank Regt; AAA; Sigs; Engineers
 Recce Regt
 Armd Bde: 3 Med Tk Regts; 1 Motor Inf Bn
 Inf Bde: 3 Motor Inf Bn
 5 Arty Regts; 1 AntiTank Regt

3 Tank Bns: Tk/Inf/Arty Ratio 3:4:6

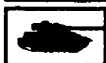
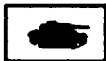
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GERMAN PANZER DIVISION

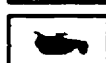
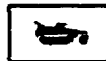
RECCE BN



PZ REGT



PZ GREN REGT



ARTY REGT

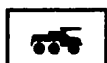


Recce Bn
 Tank Regt: 2 Med Tk Regts
 Panzer Grenadier Regt: 3 PzGren Bns
 Arty Regt: 2 Med Arty Bns; 1 Heavy Arty Bn

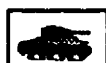
2 Tank Bns: Tk/Inf/Arty Ratio 2:3:3

AMERICAN ARMoured DIVISION

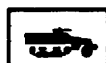
RECON BN



TANK REGT



INF REGT



3 ARTY REGTS



Recon Bn
 Tank Regt: 3x Med Tk Bns
 Mech Inf Regt: 3x Mech Inf Bns
 Arty Regt: 3x Arty Bns

3 Tank Bns: Tk/Inf/Arty Ratio 1:1:1

Figure 6

This led to “boxes” and the “pivot” doctrine⁸⁵ which made some sense in the desert, but was unfortunately taught as a universal armoured-infantry technique and found its way into Normandy. In retrospect, the Germans did most of the teaching in the desert. They excelled at logistics, technology, and, most importantly, in tactical command. The British had no Rommel. Meanwhile, American opinion of their allies had not risen during their African and Sicilian exploits:

The British soldier ... his knowledge of minor tactics in general is below that of our soldiers. Between British officers, high or low, there is no comparison. Our officers are fundamentally better grounded in tactics than I have ever seen in any British officer.⁸⁶

By the end of 1943 the British had settled on the makeup of their armoured division and the Americans had been tested. They finally won their first tank battles at Gela, Sicily and at Salerno⁸⁷ defeating a poorly coordinated attack by 16th Panzer Division. Again, the fact that naval, not tank, gunnery dissipated Kesselring's attack was recognized en passant. The AGF saw it as a vindication of the Sherman. After-action reports praising the M4 were accepted at face value. The prospects of repeating this sort of success in France seemed logical. Reports from Military Attachés in Moscow about the new main battle tank, the Mk V Panther, did not cause grave worry. The prospects of technological inferiority and a “great tank scandal” seemed remote.

Panzer Armee Kanada

The 1943 armour reforms left the Canadian Armoured Corps with four major formations: 1st and 2nd Armoured Divisions, independent tank formations designed to work with an infantry Corps, and the 4th and 5th Armoured Divisions (4 CAD and 5

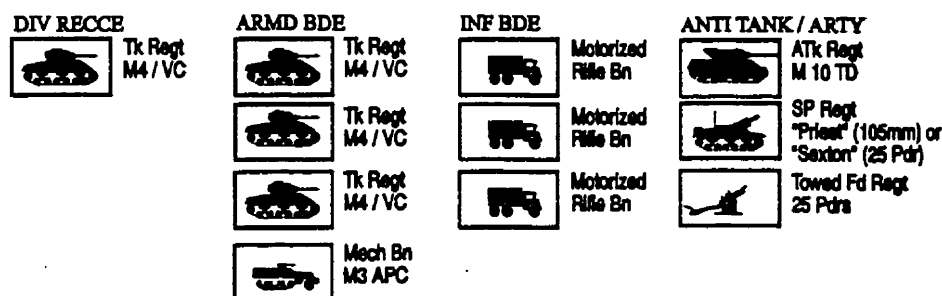
⁸⁵ “The brigade is made up of three independent units ... the pivot is in the form of a triangle ... average side for a bde will not be more than 2400 yds.” RG24 13788 HQ 4 Cdn Armd Div Trg Bulletin No. 49 “The Pivot” 12 Oct 43, 1.

⁸⁶ In this letter, sent during the Salerno Operation, Harmon added: “... and if we should lose this bridgehead, which might happen, it will be because the German breaks through on the British side.” Letter to Gen M. W. Clark, V Army. 27 Sept 43, Harmon Papers.

⁸⁷ The Gela counter-attack by the Herman Goering Panzer Parachute Division (90 Mark IVs and 17 Tigers) was met by anti-tank, tank, and naval gun fire. The Germans lost forty-five tanks, of which ten were Tigers. Again, as in Tunisia, the Tiger seems to have made no serious impression. Afteraction reports glowed: “mighty proud of his M4 tank.... Knocked out six Tigers ...” Bailey, 53.

CAD) designed for the breakout and pursuit. Here was a splendid mechanized force tailor made for France. It was to be dissipated by both Allied and Canadian commanders.

CANADIAN ARMoured DIVISION 1943-44



5 Tank Bns equiv: Tk/Inf/Arty Ratio 5:4:2

Figure 7

Each armoured division comprised two brigades. The armoured brigade held three tank regiments and a mechanized infantry battalion equipped with armoured personnel carriers (American M3 White half tracks). The infantry brigade had three motorized infantry battalions. By 1943, the Canadian Army had given up on its own tank, The Ram II, but decided against using the British Churchill tank. All Canadian armoured regiments were equipped with the American M4 Sherman. The armoured reconnaissance regiment was also equipped with Shermans as were the two independent armoured brigades. The divisional and corps reconnaissance regiments were equipped with armoured cars.

Armoured doctrine stated that tank divisions were only to be used for the breakout and pursuit phase of war;⁸⁸ therefore tank support for infantry divisions came from GHQ Tank battalions dedicated to this role. The British army used "Tank Brigades" equipped with slow, well armoured "Infantry Tanks": the Matilda, the Valentine, and eventually the Churchill. In the Canadian army the infantry support mission was awarded to the M4 Sherman, the wrong tank, saddled with the wrong doctrine.

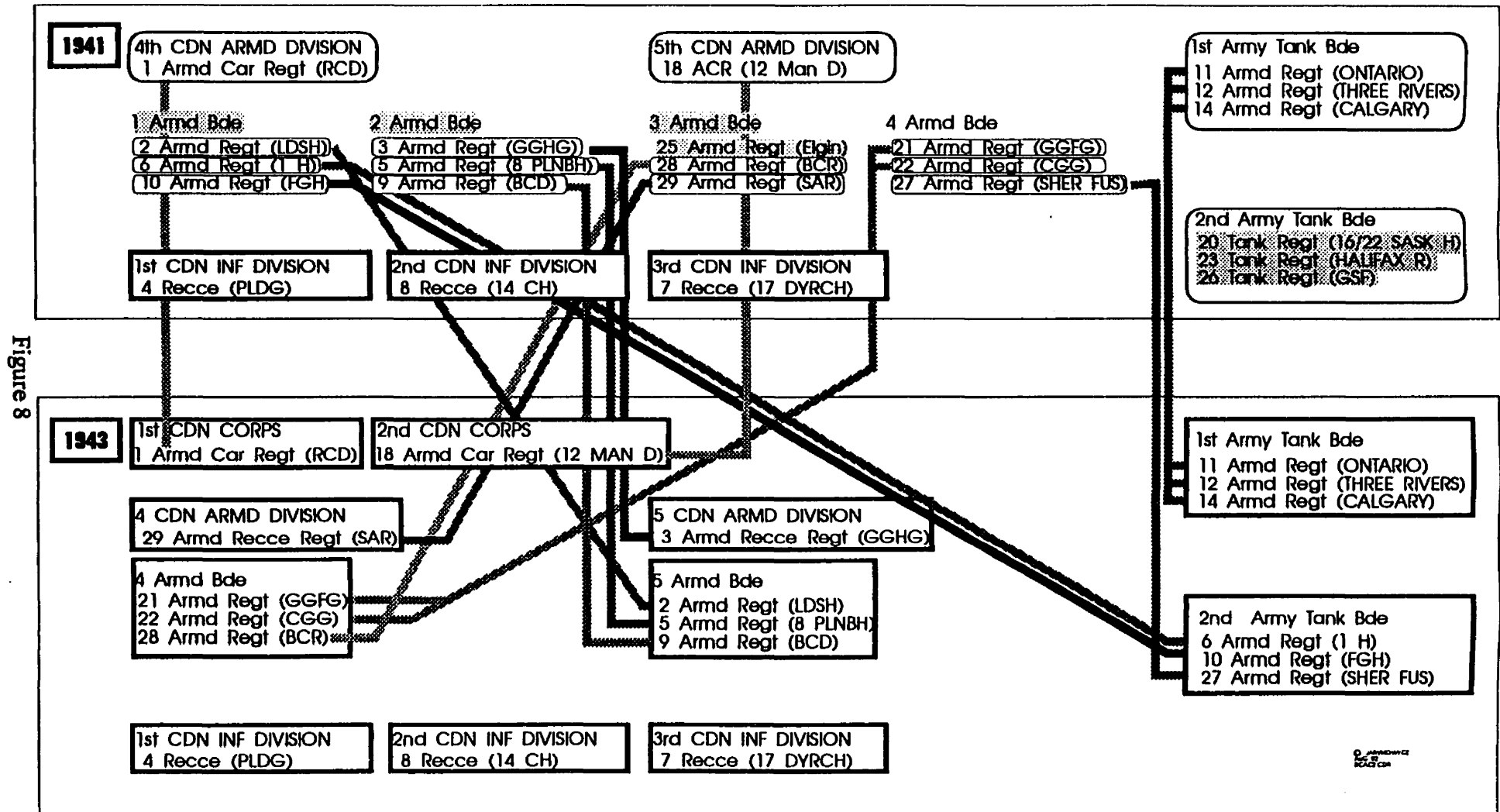
The Italian Battle School: 1943 - 1944

We had our first real battle on a divisional level with the Germans.

1st Cdn Div. War Diary, 8-9 December, 1943

⁸⁸ FM100-5, 24 Jan 1941 and the original draft, FM17-10, 21 Jan 1941 "Doctrine and Organization of the Armored Division." MHI.

THE ROYAL CANADIAN ARMoured CORPS THE 1943 REORGANIZATION THE CREATION OF AN OPERATIONAL FORCE



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During the 1943 winter, the Allies had become completely mired in the Italian peninsula. The “soft underbelly of Europe” hardened as Hitler introduced first class divisions supported by new tank battalions.⁸⁹ The US army now had over eighteen months of battle experience in Europe, which included North Africa, Sicily, and the Salerno-Anzio battles. The Canadian army was entering its fifth month of operations. The British 8th Army was well into its fifth year of war. It became painfully clear that lessons learned in the Desert would not play in Europe.

Italy was tough, mountainous, rugged, and cruel to armour. The terrain soaked up infantry and ruined tanks. Divisions slated to be “D Day Dodgers” were doomed to a year of bloody battle in what was to quickly become a secondary and relatively unimportant front. The Apennines divided Italy into east and west theatres wherein corps and armies fought in near isolation. Major ranges ran north-south, minor mountains and river valleys fell away to the east and west, anchoring the Adriatic and Tyrrhenian Seas. There was no open country, no formational maneuver, no place to go but north. With little possibility of operational surprise,⁹⁰ it was the last place a tactician would contemplate armoured operations. Unfortunately, it was also the first place Canadians deployed their first armoured division.

Despite the protests of the commander of the Canadian Forces, General McNaughton, the First Canadian Army was divided between England and Italy. The decision to deploy a corps in the Mediterranean was sound. Canadians needed battle experience to train both formations and senior staffs. This should have been done in 1942 but the Dieppe⁹¹ disaster prevented it. Sending the First Canadian Division into Sicily for experience made sense; keeping it there was questionable. Creating a full corps by deploying the 5th Canadian Armoured Division to Italy made no military sense at all and

⁸⁹ More Tiger battalions were sent SchwerPz Abt 501, 502 and the most menacing tank destroyer to date, the Ferdinand or Elephant. Ninety Elephants were built but were badly mauled at Kursk. The sixty survivors formed a schwer Pz Jaeger abt (heavy Tank Hunting Battalion) and were sent to Italy.

⁹⁰ Both Salerno and Anzio were brilliant operational surprises that should have produced victory. However, the option was forever gone as “D Day” approached and naval assets re-deployed to England.

⁹¹ The first Canadian armoured formation to see battle, The Calgary Regiment (14 CAR), was destroyed on the beach at Dieppe but managed to set the right tone for the Corps: the first tank off the barge and the first senior officer killed was the CO, Lt.Col J. G. Andrews. Terence Robertson, The Shame and the Glory – Dieppe (Toronto: McClelland and Stewart, 1962), 358. The Calgaries were equipped with Churchills. For Italy they were remounted in Shermans.

Montgomery wasted no time in telling its commander, General E. L. M. Burns,⁹² just that: "You're useless to me, totally useless."

Fighting in Italy: Not the Desert

The 5th Canadian Armoured (5 CAD) did not profit by its first two commanders. Simonds left before he could fight the division and was replaced by Maj.Gen. E. L. M. Burns, his literary adversary from the CDQ mechanization debates. Despite his passion for armour, Burns was not the man for the job. His sour external appearance earned him the nickname "Smiling Sunray." His superior officers quickly had reservations about his battle skills: "Exceptionally high qualifications but not a leader. Difficult man to approach, cold and most sarcastic. Will never secure devotion from his followers."⁹³ When the Chief of Staff CMHQ, Lt-Gen K. Stuart, visited Italy in July 1944, he was met with complaints from General Leese, Commander 8th Army regarding 5 CAD.⁹⁴ Lt. Col B. M. Hoffmeister, a militia officer, was given the division and Burns was kicked upstairs. Burns did no better as a Corps Commander.

1st Canadian Armoured Brigade (1 CAB)⁹⁵ quickly learned some important basics. The Three Rivers Regiment's (12 CAR) first encounter was typical. The unit advanced with infantry into difficult terrain but soon became separated.⁹⁶ German machine gun fire kept the Canadian riflemen pinned down while tank hunting teams went

⁹² Actually the first battlefield commander of 5 CAD was General Simonds. Before he managed to acquire any battle experience he was appointed Commander 2nd Canadian Corps and sent to England.

⁹³ RG24: MG27 III B11 Vol. 54. "Officers Overseas Personal Evaluations." Stuart also wrote: "Has probably one of the best staff brains in the army and whilst he will lead his division successfully, he would give greater service as a high staff officer."

⁹⁴ "a. Lack of effective control of his Div. Comds by the Corps Comd; b. Improper working of the "G" staff; c. Poor organization of traffic control; d. Lack of vision and drive on the part of the Chief Engineer 1st Cdn Corps; e. Poor command and staff arrangements by HQ 5 Armd Div...the question of Corps Commander ... Leese said: a. That Burns is entirely lacking in the type of personality required for a Corps Comd, b. That he was lacking in power of command, c. That he was lacking in tactical sense, d. That he felt the Divisional Commanders and principal staff officers had lost confidence in their Corps Commander,In these circumstances Leese considered that Burns should be replaced either by a well tried Canadian Commander or by the best British officer that could be made available." Notes by Lt Gen K. Stuart Regarding His Trip To Italy. 21 July 1944. RG24: MG27 III B11 Vol. 54. Stuart.

⁹⁵ Three armoured Regiments: 11 CAR (The Ontario Regt); 12 CAR (The Three Rivers Regiment); 14 CAR (The Calgary Regiment).

⁹⁶ Gravel, 54.

after the Shermans. After taking severe casualties, the 12th Armoured Regiment's M4s fled. New ad hoc operational procedures were quickly established: "Tanks should not be sent into villages without infantry leading ... mortars are a danger to the Sherman diesel engine."⁹⁷ Established drills had "infantry leading" through covered terrain. In Italy this definition stretched to include open terrain with scrub, earth mounds, thin orchards, and small farms.

Battlegroups were understood in principal but, as Stacey had noted,⁹⁸ experimenting against the 1st SS Panzer Korps would be a finishing school almost too difficult to handle. It was going to be a hard summer.

Artillery Combat

In the nineteenth century a general watched the battle, in the early twentieth he stared at an empty landscape wondering what was happening on the other side of the hill ... but in the 1940s he could listen to the battle.⁹⁹

Combat in Italy soon created casualties from machine gun and mortar fire. When tanks were requested, they demanded infantry support. The riflemen hesitated since the very reason that prompted requests for tanks, machine-guns and mortars, were still in place. The preferred solution was "bags of arty fire." The conditions in Italy forced greater emphasis on artillery in order to save lives. "Ammunition expenditure was extremely high ... casualty lists were correspondingly reduced."¹⁰⁰ Tactical problems,

⁹⁷ BRAC Report, 12 Oct 43. RG24 14186. Cdn Archives.

⁹⁸ Stacey's critique of Canadian performance is the toughest to date: "...we had probably not got as much out of our training as we might have.... The Canadian Army suffered from possessing a proportion of regimental officers whose attitude towards training was casual and haphazard rather than urgent and scientific.", 275. Stacey limited his criticism to commanders below Brigade level.

⁹⁹ Bidwell, 198.

¹⁰⁰ R.-E. Cockran, Canadian Gunner Battle School 1943-1945: The Italian Campaign and the Employment of the 1st Canadian Infantry Divisions Artillery (1982 MA Thesis, University of New Brunswick) and, Shelford Bidwell Gunners at War A Tactical Study of the Royal Artillery in the Twentieth Century (London: Arms and Armour Press, 1970). See also: R. G. S. Bidwell, "The Development of British Field Artillery Tactics 1940-1942: the Desert War" and, "The Development of British Field Artillery Tactics: Old Principles - New Methods 1940-1943" Journal of the Royal Artillery, March and September 1968; Shelford Bidwell and Dominick Graham Fire Power: British Weapons and the Theories of War. (Boston: George Allen and Unwin, 1985). Also, Kenneth Brookes, Battle Thunder, the Story of Britain's Artillery (London: 1973); Brig A. L. Pemberton, Development of Artillery Equipment and Tactics (London: 1950); LCOL G. C. G. Grey, "Regimental Organization - A Defence and a Claim" Royal

peculiar to Europe, were identified during the Sicilian operations but the gunners were not capable of correcting them before the peninsular campaign. "By 1941 [British] artillery officers supporting armoured regiments were mounted in tanks and equipped with a second radio on the tank command network."¹⁰¹ Sadly, the luxury of a tracked vehicle for FOOs (Forward Observation Officers) was limited to tank divisions.¹⁰²

Gunner radios were mounted in vehicles which tried to stay on roads since cross country movement "shook the hell" out of the set. Because vehicles could not follow the infantry, supporting an attack meant either the infantry relaying back to the gunner net via radio or the FOO dismounting.¹⁰³ Given good communications, the FOO spoke directly to the guns. Unlike the American artillery, Canadian FOOs commanded their own guns and could order, not request, fire.

In 1942 when medium and heavy guns became available in greater numbers, it was decided to group them together under a brigadier and headquarters with an organic signals unit. The title for these powerful fire organizations was "Army Group, Royal Artillery" (AGRA). They were deployed as corps troops¹⁰⁴ – as many as three hundred guns could be directed against a target in a remarkably short period of time. Artillery

Artillery Journal, (No.3, 1942); G. W. L. Nicholson, The Gunners of Canada (Ottawa: Queens Printer, 1972).

¹⁰¹ Notes from the Theatres of War, No.1. (Cyrenaica: November 1941), 4.

¹⁰² The common map used in Africa was 1:100 000; these were replaced by Italian 1:25 000 maps which permitted more detailed fire planning. Fire control was by "survey" - fire of more than the 4 - 6 guns of a single battery could be concentrated rapidly on a single target. The gun position officer fixed his position from the map using a compass while the observing officer plotted targets converting from terrain to the map grid. Canadian gunners, indeed, all Commonwealth artillery, used the British Parham system (General H. J. Parham, R. A.) that directed that every gun that could bear on the target as soon as it was laid and loaded, would be fired.

¹⁰³ "On 17 Jan in the 11 Cdn Inf Bde, three FOOs were knocked out early and another was pinned down for half a day. As a result no observed fire could be brought down in support." D Hist 171.009 D116. CMHQ Trg Liaison Letter No. 9, 15 June 44, Part IV, 1. The Number 18 Set (portable "man pack") radio used a dry cell battery which had a limited life. The range was approximately two miles in good terrain. The Artillery used the No. 19 Set. This was vehicle mounted, employed a wet cell battery, and had a much greater range; however, it was not man portable. The Gunners also had the No. 22 Set which could be put on a sled and pulled by two men. Its whip antenna could broadcast 5 - 16 miles. Unfortunately, it was not employed below regimental level. An improved portable radio, the No. 38 set, was finally available to FOOs in 1944. It also had a limited range (1.5 - 3 miles, depending on terrain) but it did give gunners the ability of going forward on foot and re-broadcasting through their vehicle's No.19 set. Cockran, 88.

¹⁰⁴ Bidwell, 258.

doctrinal evolution, what Cockran calls the “Gunner Battle School” of Italy¹⁰⁵ evolved briskly.¹⁰⁶ The appointment of Brigadier W. S. Ziegler as Commander Royal Artillery (CRA) in March 1944 created the driving force behind these advances. Infantry officers were taught a simplified method of controlling fire by observed shooting and “on call” targets became available in early 1944. These innovations left the 1st Corps technically ahead of 2nd Canadian Corps which was concentrating on the amphibious invasion.

Getting Ready for the Western Panzers

There was to be no more experimenting. Doctrine and eqpt had to be finalized now, due to the short trg period available

Minutes, Montgomery Trg Conf 11 Jan 44

The Canadian tank battalions prepared for Normandy in different ways. Second Canadian Armoured Brigade (2 CAB) was both the designated “Army Tank Brigade” tasked with supporting the infantry battalions of 2nd and 3rd Infantry Divisions, as well as the amphibious assault formation supporting General Keller’s infantry on D Day. 2 CAB tank regiments spent much time practicing beach landings and waterproofing their tanks. Meanwhile, 4th Armoured Division’s battalions concentrated on standard armoured training.

The 2nd Canadian Corps mustered a total of ten armoured regiments. Each regiment paraded an average of sixty main battle tanks (MBTs): fifty-five M4 Shermans, twelve M4VC Fireflies and twelve Stuart reconnaissance (“recce”) tanks. The organization called for three squadrons of M4s of four troops each. Every tank troop comprised four MBTs: three 76mm gun Sherman M4 but only one Sherman VC “Firefly” (a converted M4 with a 17pdr – 76mm main gun). Production delays had limited

¹⁰⁵ Cockran, 94. There were five major Canadian offensive operations in Italy: Sicily, The Moro-Ortona Salient in December 1943, The Liri Valley, The Gothic Line, and the Montone-Savio River. Problems identified in Sicily were only partially solved by Ortona. The Liri Valley required on the spot solutions for immediate problems as they occurred in battle. It is considered a key turning point – from then on the Divisional Artillery was capable of providing necessary fire support and “able to experiment with the tactics of fire support.”

¹⁰⁶ Flexible time or on call concentrations against enemy positions replaced moving barrages and gained popularity as a solution to control problems. By the time the 1st Corps reached the Gothic Line, artillery control problems had been largely overcome. Canadian gunners produced tactical innovations that included flexible fire plans and specific target concentrations called for exclusively by radio – set piece artillery barrages were out of vogue, only on-call targets and smoke screens were used. Flexibility had become the key.

distribution of the only tank that could kill Panther and Tiger to twenty-five percent of establishment (one FireFly per troop of four MBTs). It would not improve until 1945.

Training for battle in France rarely included divisional or brigade level exercises. Most regiments were left queuing up for space on the Salisbury Plain or Bovington. Training was at the troop or squadron level. The basic level of armoured skills was covered in the initial (often the only) tank course offered. Armoured crew training comprised a four week course which covered the entire spectrum of armoured skills from driving and gunnery to tactics.¹⁰⁷ The final week was spent at Lullworth Ranges where crews practiced for two days firing 75mm AP, 75mm HE Coax MG, "Ground Browning" (50 Cal HMG) and Pistol. A full five days were used for travelling, setting up, cleaning up, maintenance and "turning over tks to new course."¹⁰⁸ A thirteenth day was set aside for rest. The remaining fifteen days were mostly spent teaching driving skills. This was an acceptable introduction only if supplemented by additional regimental training, however, the curbed availability of maneuver areas in the UK hindered this. Training continued on a strictly rationed basis, and generally limited to troop level.

Meanwhile, in France, the German army had mustered the crème de la crème of its armoured force. The armoured formations deployed in Normandy were the best in the Third Reich. The term "elite" was not merely applicable, it was required.¹⁰⁹ German panzer divisions were restructured after the defeat at Kursk. The final version, the type 1944 panzer division, included the equivalent of three armoured battalions and two panzergrenadier regiments. The tanks were grouped in the division's Panzer Regiment: a Panther equipped battalion and a second composed of PzIVs, the workhorse of the

¹⁰⁷ Four hours were devoted to teaching "Hull Down" and "Turret Down" positions, the sine qua non of tactical survival. Two full days were devoted to "Troop Tactics" and a further two days were set aside for squadron tactics. "Sqn Tactics" included "Sqn in Defensive posn Supporting Inf." One day was spent in "Tk vs. Tk action using Blank, sqn against sqn, or half sqn against half sqn, if two sqns not available." CAC Fd Trg Syllabus (Armd) 1943-44, D Hist 141.009.

¹⁰⁸ Almost 50 percent (twelve days) of the total 28 days were spent in movement, maintenance and administration. CAC Fd Trg Syllabus (Armd) 1943-44.

¹⁰⁹ Eighteen German armoured formations fought in the Normandy Campaign. They included nine panzer, of which five were SS, and one SS Panzergrenadier Division. The remainder were independent battalions and assault gun brigades of which the deadliest were the three Tiger battalions and one JagdPanther battalion. Only two panzer divisions were allotted complete complements of APCs: the Grossdeutschland, whose strength equalled a small Corps, fought exclusively in Russia, however the 130th Panzer Division, better known as PanzerdivisionLehr, was stationed in Normandy.

WESTERN ARMoured DIVISIONS 1944

BATTALION EQUIVALENTS

BRITISH / CANADIAN / POLISH ARMoured DIVISION

RECCE REGT



ARMd BDE



INF BDE



TD / ARTY

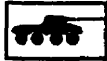


Armoured Recce Regt
 Arm'd Bde: 3 Med Tk Regts;
 1 Mech Inf Bn
 Inf Bde: 3 Motor Inf Bn
 1 SP Regt, 1 Fd Arty Regts;
 1 AntiTank Regt (TDs)

5 Tank Bns equiv: Tk/Inf/Arty Ratio 5:4:2

GERMAN PANZER DIVISION

RECCE BN



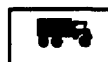
PZ REGT



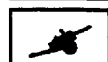
PZ GREN REGT



PZ GREN REGT



JPZ / DIV ARTY

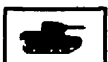


Recce Bn
 Tank Regt: 2 Med Tk Regts
 2x PzGren Regt: 6 PzGren Bns (one x APCs)
 JPz Bn
 Arty Regt with 3x Bn (SP/Med Hev)
 Nebelwerfer Bn

3 Tank Bns equiv: Tk/Inf/Arty Ratio 3:6:4

AMERICAN ARMoured DIVISION

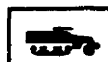
RECON BN



TANK REGT



INF REGT



3 ARTY REGTS



Recon Bn
 Tank Regt: 3x Med Tk Bns
 Mech Inf Regt: 3x Mech Inf Bns
 Arty Regt: 3x Arty Bns

3 Tank Bns: Tk/Inf/Arty Ratio 1:1:1

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 AUG 97
 DIV1943.CDR

Figure 9

German army. The panzergrenadier battalions were victims of Allied strategic bombing; production could not keep up with both losses and equipment tables. Of the six panzergrenadier battalions allotted per panzer divisions, only one was to be equipped with armoured personnel carriers, the half tracked Schützenpanzerwagen (sdKfz) 250 series. The remainder were transported in trucks. The panzer divisions' artillery regiment held 105mm and 150mm towed guns and there was only one self propelled battalion, combining both the heavy and medium SP types, the 105mm Wespe and the 150mm Hummel.¹¹⁰

The Type 44 panzer division's armour was divided between the panzer regiment and the PanzerjaegerAbteilung (tank destroyer) battalion. The latter was initially equipped with the Sturmgeschütz III (Stug) assault gun. The Stug had a very low silhouette (chassis of the PzKw Mk III), was heavily armoured, and initially designed to support close assault by infantry. Its 75mm StuK 40 L/48 gun had proven to be an effective tank killer in Russia where Stugs were used both as "infantry tanks" as well as tank destroyers. The type 44 TD battalions were to be equipped with the new and very deadly Jagdpanzer IV, the larger, sleeker evolution of the Stug based on the Mark IV chassis. It carried a deadly 75mm PaK 39 L/48 gun which could kill all western and most Russian tanks.

German production did not keep up with losses or Hitler's insistence that new armoured formations were to be created in 1943 and 1944. Few panzer divisions in Normandy were fully up to establishment. Units arrived in the west as skeletons with very few tanks and began to rebuild in the comparative peace of France and Belgium. Within a few months, the ranks were filled with recruits, transferred cadres, and veterans coming back from hospitals and home leave. Tanks trickled in from third line repair or factory rebuilds and PzIV battalions "took a number" and awaited their turn for conversion to Panther. The restructured battalions were trained in the great panzer centers of the Third Reich: Paderborne, Graffenwohr, Senelager and the former French Army tank training school at Mailly-le-Camp.

¹¹⁰ Artillery SPs were built on obsolete or readily available tank chassis: the Wespe used the PzII, Hummel the PzIV. Allied SPs were put on Grant, Ram and Sherman chassis.

Initially, the Panther Battalions concentrated on their basic skills which included first line repair and maintenance, driver training, radio operating, and gunnery. By 1943-44 cross training was an unaffordable luxury. New crews learned only one task: driver, radio operator/loader or gunner. Commander I SS Pz Korps, General Sepp Dietrich, recalled a Mk V that had to be shifted: the "crew commander drove the tank into place but had the greatest difficulty."¹¹¹ As soon as a graduated battalion was sent to its parent division, the second stage of training began. This was to consist of concentrated gunnery and tactics based on the Kampfgruppe, the all arms team. However, training ammunition was scarce: "five rounds per crew per month"¹¹² was average; few gun camps were held and controlled gasoline rations limited maneuvers.

The renowned efficiency of the panzer divisions was founded upon vigorous training at the sub unit level and outstanding leadership. The most heavily decorated and most experienced NCOs and officers were placed in charge of recruit training. The battle experience of the leaders made up for the limited training opportunities available. A good example is the 12th SS Hitlerjugend (12 HJ). Comprised of teenagers from the Hitler Youth, it was derided in the western press as "the milk bottle division," "Hitler's baby division" and used as an example of the deteriorating state of the German army. Within two weeks of battle it had mysteriously metamorphosed from "the kid division" to "fanatical ... Hitler's pet crop of terrorists ... more animal than human" to, finally, elite.¹¹³ Again the answer was experience. The officer and NCO cadres of 12HJ came from its parent unit, the 1st SS Leibstandarte Adolf Hitler, the absolute standard of perfection. Hitlerjugend officers and NCOs had a minimum of one campaign in Russia; many had two or three and the original cadre, like Kurt Meyer, began fighting in the 1939 Polish campaign.

¹¹¹ B-155 SS OberGruppenführer Georg Keppler I. SS Panzer-Korps 16.8-18.10.44, 2. and, MS C-048. SS General Fritz Kraemer, "Das I. SS Pz. Korps im Westen 1944" (Part 2) Appx 2. MHI. See also, RG24 10 677 Interrogation Report Joseph "Sepp" Dietrich, 3-6.

¹¹² Operations Research Office ORO T 117 Alvin D. Coox and L. Van Loan Naisawald, "SURVEY OF ALLIED TANK CASUALTIES IN WORLD WAR II", Operations Research Office, The Johns Hopkins University, Fort Leslie J. McNair, Washington, 31 March 1951 (Hereafter cited as ORO T 117). German Estimates and Comments on Their Own Tank Casualties. Anx 2, Apx E.

¹¹³ Luther, 58, Stacey, Victory Campaign, 133-137, English, 212, also RG24 10811 WD 2nd Cdn Corps, Enemy Int Sums, June 44, and, RG24 13766 WD 3 CID June 44.

The Enemy Order of Battle

German panzer divisions in Normandy sported a varied order of battle. Several had their first battalions still undergoing conversion and arrived in battle with no Panthers. One was partially equipped with French tanks. The Pzjaeger battalions were still primarily equipped with Stug III and at best had one or two companies of the new JPz IVs. The Normandy panzer arm looked like this:

GERMAN PANZER UNITS NORMANDY 1944 JUNE - JULY¹¹⁴

DIV:	<u>1 SS</u>	<u>2 SS</u>	<u>9 SS</u>	<u>10 SS</u>	<u>12 SS</u>	<u>17 SSPzGR</u>
TK REGT:	SS PzRegt 1	SS PzRegt 2	SS PzRegt 9	SS PzRegt 10	SS PzRegt 12	
1st Bn:	Mk V	Mk V	Mk V		Mk V	
2nd Bn:	Mk IV	Mk IV	Mk IV	Mk IV	Mk IV	
Stug/JpzBn	SSStugAbt 1	SSStugAbt 2	SSStugAbt 9		SSJPzAbt12	SSStugAb
DIV:	<u>2 PZ</u>	<u>21 PZ</u>	<u>116 PZ</u>	<u>PZ LEHR</u>		
TK REGT:	Pz Regt 3	Pz Regt 22	Pz Regt 16	Pz Regt Lehr		
1st Bn:	Mk V	Mk III/IV		Mk V		
2nd Bn:	Mk IV	Mk IV	Mk IV	Mk IV		
Stug/JpzBn	JPz Abt 38	Stug Abt 200	JPz Abt 228	JPz Abt 130 Tiger spzcoy		
TigerBn:	101 SSspzabt	102 SSspzabt	503spzabt			
Stug Bde:	PzBde 341	PzBde 394				
JgdPz Bn:	654 sjpzabt					
Ind Pz Abt:	100ertzpzabt	206ertzpzabt				

Table 1

The 9th, 21st, 116th and 10thSS Panzer Divisions had no Panthers at all.¹¹⁵ The strongest division in France was the Panzer Lehr.¹¹⁶ All Lehr panzergrenadier battalions

¹¹⁴ As at 25.7.44, based on returns from 5 Pz Army Daily Reports ("Abendmeldungen") and translated Oberkommando West. See: Bundesarchiv RH21-5/44, "Kriegstagebuch Panzer-Armeeoberkommando 5.", Abendmeldungen 23.7.44 - 25.7.44. See also complete German Order of Battle for France July 1944 in: MS B-162, Oberkommando West War Diary, translated, "The West (1 Apr-18 Dec 44)", MHI Panther-Abteilungen (recently converted fm MkIV) arrived at the last moment:

Abt	Parent Div	Str	Month
1./SS-Pz.Rgt.12	12.SS-Pz.Div.	79	June 44
Pz Lehr Regt	Pz.-Lehr-Div	89	June
1./Pz.Reg.3	2.Pz.Div.	79	June
1./SS-Pz.Rgt.9	9.SS-Pz.Div.	79	June
1./SS-Pz.Rgt.1	1.SS-Pz.Div.	79	July 44
1./SS-Pz.Rgt.2	2.SS-Pz.Div.	79	July

The numbering of each panzer division's tank regiment varied. The SS regiments took the name of their division: 1 SS Pz Regt for 1st SS LAH, 12 SS Pz Regt for 12th SS HJ etc. The Wehrmacht regiments reflected a complex historical past and evolution: Pz Regt 3 was in 2nd Panzer Div, Pz Regt 22 was attached to 21st Pz Div. Fully equipped divisions (1 SS, 2 SS, 12 SS, 2nd Pz and PzLehr) were stabled with incomplete formations; for example, 9 SS had no tank destroyer battalion, 10 SS had neither a Jagdpanzer nor a Panther battalion. ETHINT 67, WD 5 Pz Army, 14; and, Bundesarchiv RH19IX/20 Heeres Gruppe B "Meldungen & Unterlagen Ic von der zeit 1.7.44 - 31.8.44": 16.8.44. MHI.

had APCs, a ratio unmatched by any panzer formation in the west, including 1st SS LAH. The next strongest formations were 2nd Panzer "Vienna" Division, and 12th SS Hitlerjugend. The remaining divisions averaged forty-five tanks per Mk IV battalion and thirty-five Panthers each.¹¹⁷ Panzer Ersatz und Ausbildungs Abteilung 100 and Panzer Abteilung 206 were equipped with obsolete tanks¹¹⁸ that were good for chasing maquis away from rear area headquarters but little else.

Three of the panzer divisions were "born" in the west; the 9th SS Höhenstauffen, 10th SS Frundsberg and 12th SS Hitlerjugend were raised in Belgium and France and had about one year of training.¹¹⁹ At the beginning of the Normandy campaign, the 9th SS and 10th SS were in Russia, sent there in April 1944 to rescue the 1st Panzer Army trapped in the Tarnopol Pocket. They returned to Normandy as the 2nd SS Panzer Korps

¹¹⁵ It was, a shadow of Rommel's old unit. Its two understrength MkIV battalions, augmented with a surprising number of Pz Mk IIIs, included outdated French tanks: 94 Mark IVs plus Sturmgeschütz Abteilung 200: 23 Somuas, 43 Hotchkiss and 45 Lorraine converted to tank destroyers, mounting German, French or Russian 75/76mm guns in open armoured compartments, built in local factories on the initiative of the division staff. Lefebvre, 120-123 and, RG24 10677, Interrogation Report GenLt Feuchtinger, 25 Aug 45.

¹¹⁶ 97 Mk IV, 86 Mk V, 40 Stug III/JPz IV, and a company of Tiger IIs. Its King Tigers were cursed with a myriad of mechanical defects and only 6 reached Normandy.

¹¹⁷ Table 2: Panzer Arm strength as at 7 June 1944:

	PzLehr	2Pz	116Pz	21Pz	9Pz	1 SSPz	2 SSPz	9 SSPz	10 SSPz	12 SSPz
MkIV	97	94	58	98	71	42	44	41	32	91
MkV	86	67				38	25	30		48
TD	40	41	21	111	5	44	36	38		44
	17 SSPzGren		sPzAbt 503		SS101	SS102	Jpz654		E/Az100	E/Az200
Tiger			24		37	28	12			
TD		32								
Fr AFV									15	24

The 9th Panzer Division participated only in the Falaise Gap and its tanks were quickly lost in rearguard actions and mechanical breakdown. The independent Stug brigades were actually assault gun battalions redesignated by OKW as brigades in 1944. They were deployed in small packets as "infantry tanks" in the American sector.

¹¹⁸ PzErsatz 100 had 27 tanks (8 Hotchkiss, 1 Renault B-1, 1 PzKwIII and 17 Renault R-35s); PzAbt 206 had 23 tanks (14x PzKw 38-H 735(f):Hotchkiss; 4x PzKw 35-S 739(f):Somua S-35; and 5x PzKw B-2 740(f): B-1 bis). See: Lefebvre, 122-123.

¹¹⁹ 9th SS "Höhenstauffen" was raised in January 1944 and by February was training at Mailly-le-Camp; its sister unit, 10th SS "Frundsberg", also raised in Jan 43, trained in the Angoulême area, then in the Pyrenees. 12th SS "Hitlerjugend" was raised in June 1943 and trained in the Beverloo, Belgium military training area. R.J. Bender and H.P. Taylor Uniforms, Organization and History of the Waffen SS Vol 3 (San Jose: Bender, 1972), 43, 57, 95. For a German review of the origins of SS Division heraldry, See: "A Speech made by Himmler to the 17th SS Pz Gr Division, 'Goetz von Berlichingen' " 10 April 44, in France. Anx 2 to G2 Periodic Report No.32, 12 Army Group. Chester B. Hansen Papers. Documents and Reports Folder July 1-15, 1944. MHI.

on 26 June; by then all three "Hitler Youth" divisions¹²⁰ were veterans. The PanzerdivisionLehr began as an elite unit simply because it was formed by grouping the staffs of the panzer training schools throughout Germany. The instructors, decorated veterans, formed a division of experts. Allied Intelligence had some problem with Panzer Division 130 (Lehr) at first. "Lehr" means "training" and it was assumed this was a unit composed of raw recruits. It soon became painfully evident what PanzerLehr really was. Lavishly equipped, it fought with a determination and expertise that quickly won it genuine respect.

Tigers

Only three Tiger battalions were stationed in France during the Normandy campaigns – all three fought exclusively in the Caen sector. The 101 SS and 503 schPzAbt were generally east and south of Caen and the 102 SS fought Southwest of Caen in the Odon-Orne triangle. Tiger battalions were organized into three 14 tank companies for a theoretical strength of 45 tanks. This was rarely the case and troop strength was never maintained once combat began.¹²¹ The Tiger battalions were originally intended to be both independent units and part of a panzer division's "schwere kompanie." In early 1944 the heavy tank policy was changed; Tigers were no longer sent to panzer divisions but now formed exclusive independent units, "schwere panzer abteilung" (schPzAbt), heavy tank battalions under corps control to be grouped with divisions only as required. The first were Wehrmacht Abteilungen and began with the 500 series, SS Tiger Abteilungen were formed in the summer of 1943.¹²²

¹²⁰ 9th and 10th SS had large cadres of Hitler Youth. Most 9 SS recruits were ethnic Germans from Hungary, and the Berlin area - 70% were conscripts. The 10th SS was similar. The 12th SS was raised as "a new elite all-German division...a second Leibstandarte." The Officers and NCOS were drafted from the 1stSS LAH, and while most of its recruits were volunteers directly from the Hitler Youth, it had a portion of conscripts and even HiWi volunteers from eastern front PWs. See: Hubert Meyer 2-8, Luther 1-11 Bender/Taylor, 44, 58, 96. Also, M. Cooper The German Army 1933-1945 (London: Scarborough, 1991), 502-3.

¹²¹ The only Tiger battalion to be equipped with KingTigers, besides the "lost" company in PanzerLehr, was Schwerepanzerabteilung 503. The unit had been formed in May 1942 and had fought at Kursk where it was credited with "501 tanks, 388 anti-tank guns..." destroyed.Lefebvre, 114.

¹²² They were renumbered in October 1944; 101 SS became 501 SS schPzAbt, 102 SS became 502 SS, and so on.

The advent of the Stalin, the T34/85, and to some extent, the Firefly, put an end to the Tiger's virtual invincibility.¹²³ Tiger I production was entirely stopped in August 1944, tapering off as Tiger II construction took over. This was considered a mistake by Guderian and other panzer generals. The time lost during the changeover to the more complex Tiger II deprived the Germans of several hundred MarkVIs. The King Tiger was the better tank, but by 1944 the question was quantity, not quality. Any super 75mm gun, let alone an 88, was sufficient to kill any allied tank and most Russian armour. In the end, only fourteen KingTigers actually fought in Normandy. The combined Tiger strength of the three schwere (heavy) battalions totalled eighty-nine tanks¹²⁴ on D Day.

Canadian Mechanization: Conclusions

The first step in forming the CAC was basic training, a task at which Worthington excelled. The second, doctrinal training, was to prove elusive to the Corps. It was eventually taught as pure theory and remained as such, but current theory changed seasonally with each British defeat or victory in the Western Desert. Although the Canadian Armoured Corps' equipment would be on a par with any western ally, its leadership was in dire need of operational experience. The Corps was rushed off to England where it would be schooled in the ways of desert warfare and guided through the lush downs of southern Dorset where training was doomed to endless repetition of squadron drills across cramped training areas where solutions to field problems were soon committed to memory by the dullest tactician. Divisional exercises were not held except as comprehensive movement problems which worked the division and corps staffs but frustrated the regiments and brigades since most areas, especially wheat fields, were strictly off limits to armour:

¹²³ "The Tiger, for a long time regarded as a 'Life Insurance Policy', is relegated to the ranks of simply a 'heavy tank' ... No longer can the Tiger prance around oblivious of the laws of tank tactics... This means, inter alia, that Tigers can no longer show themselves on crests 'to have a look around' but must behave like other tanks." Orders were to cross crests only "in a body, by rapid bounds, covered by fire" - or else "detour." Instructions to Tiger Abt crews fm Insp General Pz Troops June 44, MS C-048. SS General Fritz Kraemer, "Das I. SS Pz. Korps im Westen 1944" (Part 2) Appx 2. MHI.

¹²⁴ 1st Company, 503 schPzAbt. KingTigers for 3rd Company "reached Paris, but not Normandy." Lefebvre, 119. 503schpzabt: 24 Tigers; 101 SS: 37 Tigers; 102 SS: 28 Tigers. MS 155, General der PzTruppen Krueger, "I SS Pz Corps (16 Aug-6 Sep 44)"; MS B-747; B-748; B-749, Gen der Waffen SS Bittrich, "II SS Pz Corps (14 Jun - 5 Jul 44)"; and, Lefebvre, 114-119.

We often fail to get the full value from our training because of restrictions that are imposed to prevent damage to crops or to property. So many orders have been issued on this subject that officers and men hesitate at times to leave the road; as a result we often see head-on collisions [tactical battles] with no attempt at quick deployment off the road, rapid maneuver, and flanking movements. All this is very bad ... it leads to unreal situations; it also develops bad habits within units, and reacts adversely on the standard of minor tactics.¹²⁵

Tank crews sent to Normandy were skilled in driving, communications and at an acceptable gunnery standard, but their regimental and brigade commanders had no idea what to do with them in open country. Meanwhile, in Canada, bisected with efficient roads and rail heads, hours from the tank assembly plants of Detroit and Montreal, lay vast training areas that extended for hundreds of kilometres. The rush to meet the Empire's demands denied the Canadian Army its own formative maneuvers. It may be argued, of course, that with the gunner-infantry attitude prevailing in Ottawa, no new doctrine would have emerged had they occurred even then. Certainly Worthington had neither the political clout nor, perhaps, the vision to organize operational level exercises. Camp Borden and Dorset would have to do.

The Canadian Army did not convert to mechanization; it was raised as a mechanized army. It was the solution British, French, and American philosophes had argued for: put tanks into the cavalry; accept the obvious, simple fact that the essence of the cavalry spirit is mounted warfare, not horse warfare. Unfortunately, the Canadians implemented British techniques with little regard for their own roots. The Cavalry adopted RTC terminology, style, and attempted to redefine itself around the black beret. The CAC was built on ersatz traditions and imposed doctrine. Although the Canadian Army was to become, proportionally, the most mechanized in the entire war, the Canadian Armoured Corps lacked experienced commanders.

In Canada we have no soldier trained in the operation of what responsible military opinion recognizes as the potentially most powerful arm of the

¹²⁵ Comments by LtGen B. L. M. Montgomery as Comd, South East Command. Nevertheless he went on to state: "Tracked vehicles, such as tanks and carriers, can do great damage to cultivated fields unless great care is taken. Such vehicles will keep to roads whenever they can. When moving across country they should avoid cultivated fields, root crops, hop fields etc." RG24 14136 WD Commander Canadian Corps Dec 42: "Damage to Crops and property" Issued, 11 May 42, 7, 11.

service – and what is more serious, no officer trained in the command of this arm.¹²⁶

Burns's words were prophetic. The Canadian Army's failure to produce officers qualified in temperament and experience to lead armoured formations was to cost dearly.

¹²⁶ Burns, "A Step Towards Modernization", 305.

CHAPTER TWO

MANEUVER WARFARE IN THE BEACHEAD - TWO ARMOURED BATTLES

Buron: 7 June

Battlegroup Cunningham vs. Kampfgruppe Meyer

As the boats moved slowly from the quayside the pipers climbed to the bows ...

Every North Nova tingled as he heard the "Atholl Highlanders"

Will R. Bird

D Day Armour

The Normandy landing was an impressive example of Allied power. Although the Soviet strategic offensives were far more formidable machines of destruction, the technical sophistication and organization of *Overlord* was unequalled. The West, at last, drew admiration from Stalin. Surprise was total. OKW was taken completely off guard and did not release the panzer divisions in time to launch a counter stroke that could have destroyed at least one of the landing areas. Major-General R. F. L. Keller's 3rd Canadian Infantry Division assaulted Juno Beach, supported by the 2nd Canadian Armoured Brigade commanded by Brigadier R. A. Wyman. Its DD (Duplex Drives) Shermans "swam in" and provided the first waves of infantry with direct gunfire. Although some tanks were swamped, the Shermans that did reach the beaches rattled the German defenders, a second rate "static division," the 716th Infantry. The unit had been stripped down but it still had mortars and artillery. Despite the questionable quality of its troops,¹ the concrete and steel made up for natural bravado.²

¹ German formations in France had been stripped of their reconnaissance companies and best men. Replacements consisted of older men and "HiWis" - volunteers from the PW cages of the Russian front. At least a third of most German infantry divisions (and some Panzer and SS units) had Ukrainians, Poles and Russians.

² The 716th fought well in its bunkers with some troops hanging on after they had been surrounded. The radar station at Douvres, a group of bunkers, held out for days and would create serious problems for the Keller by denying the North Novas effective artillery support on 7 June. Stacey, *Victory Campaign*, 122-24, 134.

One squadron of armoured cars from a British unit was to provide the division reconnaissance. A vanguard of Keller's own recce, "A" squadron, The 7th Recce Regt (17 Duke of York's, Royal Canadian Hussars), landed with the first waves but was organized as dismounted "Contact Detachments." The Dets were both insurance and court spies. They established a supplementary communications link "whose primary task would be to see that the divisional commander was kept informed as to just what his Battalions were doing."³ Medium Reconnaissance, which meant to discover the location of the enemy armoured reserves as well as information on the Orne crossings, was assigned to "C" Squadron, The Inns of Court Regiment. The British armoured cars "were to lunge forward as soon as coastal defences were overcome and destroy all bridges over the Orne along a fifteen mile stretch."⁴ However, "C" Squadron landed late smack into a jam of vehicles. At one point, the divisional commander himself was directing traffic.⁵ Keller did not receive information about German reserves and key bridges were not destroyed. The 21st Panzer and 12th SS moved freely across the Odon and Orne Rivers.⁶

The Canadian armour that survived the landing was aggressively handled. The deepest Allied penetration on D Day was by the 6th CAR (The First Hussars). A troop from "C" Squadron penetrated to Secqueville-en-Bessin but, without infantry support, the tanks withdrew to the safety of the beach defence perimeter for the night.

German Reaction

Field Marshal von Rundstedt did not control his own armour. The SS panzer divisions were operational reserves, released by Hitler himself. Control of Wehrmacht panzers was a compromise reached after what Von Geyr called a "cock fight." Rommel,

³ Stacey, Victory Campaign, 82. Most dets' radios went dead. Aggressive officers moved along the beaches "looking for things to do." Interview with LtCol W. Bowen, 17 DYRCH, Elgin, Nov 1989. Bowen eventually directed naval fire against a beach gun that was blocking the Winnipeg Rifles' progress.

⁴ Stacey, Victory Campaign, 81.

⁵ "Rod was in the middle of things, directing traffic himself. We never did get off the beaches until dark." Personal interview, correspondence with General S. V. Radley-Walters, 1987, 1990, 1993.

⁶ GenLt Edgar Feuchtinger, "History of 21 Pz Div" ETHINT (European Theatre Intelligence Series), MS (Manuscript) B-631, MHI.

as commander of Army Gruppe B, was permitted control of three panzer divisions: 2nd, 21st and 116th Panzer.⁷

General Edgar Feuchtinger's 21st Panzer Division would react quickly, but its meagre strength was dissipated in a series of confused orders that led to wasted countermarches. The 21st Pz was not a first class formation. It supplemented the Mark IV Battalion with an ersatz collection of assault guns. "Panzer Abteilung 200" sounded menacing but could only fight from ambush. Nevertheless, the only panzer counter-attack conducted on the afternoon of 6 June was launched by 21st Panzer Division. After initially chasing British and Canadian paratroopers around the west bank of the Orne, Feuchtinger ordered the 1st Abteilung of Panzer Regiment 22 to attack the gap between Juno and Sword. This dangerous thrust was stopped by British anti-tank fire from the low ridge near Périers. Although the PzIVs were forced back, the accompanying infantry, elements from Panzergrenadier Regiment 902, actually reached the coast at Lion-sur-Mer, separating the Canadian and British beachheads and relieving 716 units. They did not stay. Fleets of gliders flying over their heads to LZs near Caen convinced them they were about to be cut off. The armour battle continued near Bieville and Périers. Oberst von Oppeln-Bronikowski, commander of Pz Abt I, ordered his tanks onto the defensive near Bieville. They checked the advance of 27th British Brigade from hull down positions and, arguably, saved Caen.

The D-Day actions of 21 Panzer have come under some criticism. General Marcks, Commander LXXXIV Korps, saw them leave their start line but was not impressed with the hesitancy of the panzerkompanies. Nevertheless, Lion-sur-Mer was reached by eight p.m. - this success was followed by a premature decision to abandon the town. Although there was plenty of light, confusion dominated the battlefield. The 902 proved to be a scrappy outfit and did not simply run away. They hit Le Régiment de la Chaudière that evening, overrunning a platoon and causing some consternation in 8th

⁷ He did not own the most powerful unit in Normandy, Panzer Division 130 (Pz Div Lehr), which was at full strength - a rarity in the Wehrmacht. However, Pz Lehr had to recall its Panther battalion which was entrained and en route to Russia. The Panthers were being loaded at 0230 on June 6th but the bn did not get underway until 1700 D Day. By 1830 the Division began its march from Chartres - some 200 miles. By 7th June it had lost 84 halftracks/prime movers/SP guns, 10% of its trucks and 5 tanks to air strikes. Effects of Strategic and Tactical Air Power on Military Operations: Annex No. 17. "Summary of Observations Generalleutnant Bayerein, CG Panzer Lehr Div on Effect of Air Attack June 1944- to April 1945." 5 June 45. The Sheffield Edwards Papers (G3 Air SHAEF). MHI.

Cdn Brigade.⁸ By the morning of the 7th, both Pz Abt I and PzGren Regt 902 were northeast of Caen⁹ astride the Orne River blocking approaches from Sword.

The one panzer division capable of launching a serious counter stroke was the 12th SS Hitlerjugend Panzer Division but it was beset by delays. Its road march was targeted by Allied "Jabos" (fighter bombers). Only one regiment and portions of the Mk IV battalion reached Caen by evening. D Day armoured battles were a series of gun duels between Canadian tank troops and German anti-tank guns. The 12th SS vanguard, thanks to the delay battle fought by 21st Panzer Division, reached Caen and deployed north of the city.

The Canadian Commanders

D Day's main task was to get troops ashore and establish a beach head - SHAEF did not want another Dieppe. The Canadian D Day commanders were hand-picked for the mission. 3rd Div was an amphibious assault division. Major General Rod Keller, who looked like he could punch his way into France, was chosen because he would eventually make "a two-fisted and competent Corps Comd."¹⁰ However, he did not impress Lieutenant General Kenneth Stuart, the Chief of Staff at CMHQ: "Pompous, inconsiderate of others. Anything but brilliant and much over-rated. Consider that he has not the ability to command a Brigade in the field much less a Division."¹¹

Keller, who had survived a minor discipline problem quietly handled by Canadian Army Headquarters, seemed to have Generals H. D. G. Crerar's and G. G. Simonds's confidence. He certainly was the man to get the battalions onto the beach. But he proved unable, both tactically and spiritually, to get much more out of his troops. Keller answered to a complex command structure: General Crocker who commanded I Corps, General Miles Dempsey, commander 2nd British Army, and finally, Montgomery who led 21 Army Group. General Omar Bradley (1st US Army) would soon command the American 12th Army Group but was operationally subordinate to Montgomery,

⁸ Stacey, Victory Campaign, 134-135.

⁹ Feuchtinger, B-631.

¹⁰ RG24: DHist 312.009 Stuart Correspondance, 26 March 1944.

¹¹ RG24: MG 27 III, B11, Vol 54. File: "Officers Overseas Personal Evaluations."

appointed to fight the bridgehead battle by the Allied Supreme Commander, General Dwight David Eisenhower. Until he felt ready to move his headquarters from England to France, Eisenhower made Montgomery responsible for both lodgement and breakout. Direct British command over Canadians would continue until the commander of the First Canadian Army, General Crerar, had landed both his infantry divisions. The 2nd Canadian Infantry Division (2 CID) was to follow 3 CID as soon as the beaches could accept more traffic.

Once 2nd Canadian Corps was ashore, its commander, Lieutenant General Guy Simonds, would assume tactical control. He had been well regarded as a division commander in Italy:

Most outstanding officer but not a leader of the type that will secure the devotion of his followers. Similar in characteristics to General Burns and would give his best service as a high staff officer. Has undoubted ability and will fight his division and make few mistakes.¹²

When the remainder of the Canadian contingent had landed in early July, First Canadian Army Headquarters would be established under General Crerar. It was to prove to be an interesting exercise in personalities. Simonds and Crerar already disliked each other; a silly incident in Italy just made things worse.¹³

Montgomery did not think much of Canadian senior officers in general. If he had a Canadian favourite, it was Guy Granville Simonds, British born, with an agreeable Empire style that fit in easily with any British staff. Straight shooting Canadians who were critical of British methods (and there was much to be critical about) were disliked and dismissed as crude Americans, or worse, colonials. General Montgomery considered

¹² RG24 MG27 III B11 Vol 54. Stuart: "Officers Overseas Personal Evaluations."

¹³ Simonds disliked his old boss Andy McNaughton and was instrumental in embarrassing him publicly during the Italian campaign. He next fought with Crerar; their correspondence contains a forgive and forget resolution that was made through clenched teeth. Crerar had arrived in Italy to take over 1st Cdn Corps. He wished to quickly establish a headquarters and bring Simonds under his control. Simonds did not wish to answer to Crerar. He preferred Montgomery. When Crerar sent his LO, Capt Kirk, to measure Simonds's command caravan so he could have a duplicate built, Simonds gave Kirk a blast and threw him out. Crerar felt this was a personal slight to himself, which it was. The two officers exchanged a series of legal sized, single spaced, typed letters over the event while the Corps was fighting Germans. By the third series of exchanges, Simonds apologized (sort of) and the two agreed to forgive and forget; they didn't. RG24 Crerar Papers: Italian Correspondence with Simonds. 1943 CMHQ internal struggles even reached the ears of the Min of National Defense. "...telegrams that have passed...like those emanating from partisans on opposite sides than from co-workers from a common cause." RG24. 312.009. LD52. Stuart Correspondence. 26 March 1944.

Simonds his protégé. The Italian campaign had tested Simonds as an infantry commander. For a gunner, he did well; but then Italy was a gunner's war.

Simonds's next appointment was commander, 5th Cdn Armoured Division. He never took it into action. By January 1944, he was in England, selected to command 2nd Cdn Corps. He brought George Kitching with him and gave him the 4th Cdn Armoured Division. Kitching had served Simonds as GSO 1, in 1st Cdn Div Headquarters. His only armoured command, indeed his only major command was the 11th Infantry Brigade, 5th CAD. As he was whisked off to England by February 44, he was unable to get any experience in the workings of a large armoured formation. He did, however, put in one brigade attack:

My brigade had not been able to train with tanks during December ... we had little opportunity to train with the Three Rivers Regiment before going into action alongside them. So the need for much closer co-operation between armour and infantry was the first of our lessons. We also discussed the pros and cons of the artillery barrage and whether it might have been better to do our initial attack on a two-battalion front instead of one.¹⁴

Kitching's appearance in London did not meet with Crerar's approval: "I am opposed to commanders being followed, wherever they go, by their personal favourites."¹⁵ Nevertheless, Crerar could be professional in his evaluations. By May 1944, he indicated to Stuart that he was prepared to choose Simonds over Burns as his replacement: "In my opinion, both Simonds and Burns are capable of filling the appointment of Army Comd. Of the two, Simonds would probably be more brilliant and show more drive in field operations."¹⁶

Simonds's arrival at 2nd Cdn Corps promptly resulted in a severe shake up in command: "He was not noted for an abundance of tact or discretion. Even Montgomery

¹⁴ These same words might have been written to describe 4 CAD's performance after *Totalize*. See: Gen George E. Kitching, *Mud and Green Fields* (St. Catharines: Vanwell, 1993), 174. Kitching commanded 11 CIB from 1 Nov 43 to 13 Feb 44. His brigade attacked into the Ortona Salient (15-18th January 44). The 5th Armd Div did not get into any serious "armoured" action until the battles for Rome (24 May-4 June). See also, Stacey, *Victory Campaign*, 367-370, 427, 692.

¹⁵ MG 27 III. B11, Vol 54. Letter to Stuart. 17 Jan 44.

¹⁶ RG24 MG27 III B11 Crerar Papers Vol 3. "Top Secret to Gen Stuart" 16 May 44.

found his protégé 'a little headstrong.'"¹⁷ General Worthington was sacked from 4th Cdn Armoured Div because he was too old. Simonds's youth movement swept out any battalion commander or brigadier who Simonds decided was antediluvian.

I regard it as a first duty of every commander and commanding officer to see to it that the command of subordinate formations or units is in fit, competent and energetic hands. In this matter there can be no compromise, and I consider a commanding officer who tolerates ineffective subordinates, is himself unfit for the responsibility of command.¹⁸ [underlining is Simonds's]

Simonds went on to explain his philosophy of command. He produced a comprehensive slate that outlined the "Essential Qualities in the Leader." These included:

In no sense listed in any order of priority ... Moral Qualities (Character and loyalty); Mental Qualities (Knowledge, Judgement, Initiative and Alertness) and Physical Qualities (Fitness, Skill at Arms and Youth). "A man is never too young for a job, but he may be too old.... If an officer is fit to command a unit at twenty-five, he will be twice as good in command as he will be at thirty-five."¹⁹

While some unit commanders may have deserved to be canned, there were a lot of tactical babies thrown out with the geriatric bath water. General F. F. Worthington did not shine as a trainer of divisions, but he was a trainer of men. His exercises in the UK demonstrated little finesse and rudimentary understanding of armoured doctrine at the operational level. Worthington liked to surprise his enemy by doing the unusual. Some of his tactical ploys were regarded as silly pranks, and some were. Stuart did not think he had the stuff to command a division:

Aggressive, with reputation as fearless fighter. Not a good disciplinarian.... Allows his interest to become absorbed in too many matters outside his command, leading to complaint of difficulty of securing proper direction and guidance on the part of his subordinate commanders. Consider present command too high for his abilities.²⁰

His replacement, Major General George Kitching, had absolutely no armoured experience and arrived in Normandy without a single divisional training exercise under

¹⁷ James Eayrs, In Defence of Canada – Peacemaking and Deterrence, (Toronto: University of Toronto Press, 1972), 61.

¹⁸ RG24 Vol 10925 239 C3(D9) Simonds to "All Formation Commanders 2nd Canadian Corps" 19 Feb 44.

¹⁹ RG24 Vol 10925 239 C3(D9) Simonds, 3.

²⁰ MG.27 III B11, Vol 54. "Officers Overseas: Personal Evaluations."

his belt. He had virtually no time to train “his” division. Simonds’s command decisions before Normandy were curious; in July and August, they were to prove deadly.

Plans and Geography

During the Thunderclap Conference held on 7 April 44, Allied commanders agreed on three initial phases for Normandy Operations: “(a) the seizure of the lodgement area, including Caen and the country south and east of it; (b) the occupation of the Cherbourg peninsula; and, (c) the seizure of the Brittany ports.”²¹ With Caen secured, the Allies were in a position to strike for Paris or Brittany. If Caen remained in German hands then the Allies would be forced into a “battle of the beach head” – fighting to get enough physical room to actually land their breakout force. The geography of Normandy is divided in two main areas. West to east, the ground is mostly bocage (extensive hedge rows with thick roots that prevented armoured maneuver) except for the area around Caen. The only clear area, indeed, the best tank country in north-west France was south of Caen. A May 1944 Intsum (Intelligence Summary) circulated to D-Day formations gave this description of the Caen battle area: “Topography: low lying, featureless, gently undulating cultivated countryside ... there are few hedges.”²² Given operational surprise, aggressive action could deliver Caen into Allied hands by 7 June. Kudos for Rod Keller’s initial success belonged to the company and battalion commanders who wrestled the defences from German hands. Keller’s ability to command his division in battle was about to be scrutinized. He could take a beach, but could he take Caen? His first test was on 7 June.

²¹ RG24 Vol 12745 Interview with Lt Gen G. G. Simonds by C. P. Stacey.

²² RG 24 14045 IntSum Apx A to 2 CAB 00 No. 1. May 1944.

9 Brigade Strikes for Caen

His blood spattered face was very pale and all at once each man realized that the war was very near.

Will R. Bird: NNS land on Juno Beach

By the morning of 7 June the situation at Juno looked most promising. The beaches were secure, all three brigades and their armour had come ashore, and no major German counter-attack had taken place. Save for 21st Panzer's raids against 8th Brigade, there had been no serious enemy activity. The radar station at Douvres held out and there was only sporadic fire along the Canadian front. Every now and then a solitary anti-tank gun or machine gun would open up, but the soldiers quickly dealt with these interruptions. The aim was to take Caen and the road to Caen lay open. Keller ordered his depth formation, commanded by Brigadier D. A. Cunningham, to strike south and capture Carpiquet airport.

Cunningham was a lawyer from Kingston, Ontario. A tall, well spoken, intelligent officer, he was fiercely proud of the fact that he commanded the only "Canadian Highland Brigade."²³ He had previous battle experience in Italy (he had been Crerar's G1 Ops) and was well liked by the British; both Crocker and Dempsey had great expectations of him. Cunningham got along with Simonds and Crerar²⁴ but he did not get along with his immediate boss. He considered Keller a "sergeant major."²⁵ On D-Day, Cunningham pushed the 9th through 8th Brigade and set up Brigade HQ in Basly, about two miles from the front line that extended south to Villons-les-Buissons. Later, General Keller confided to Crocker that he felt Cunningham had "failed to take objectives."²⁶

²³ 9 CIB comprised: The Highland Light Infantry of Canada The Stormont, Dundas and Glengarry Highlanders, and The North Nova Scotia Highlanders. Cunningham always wore a Balmoral and often sported a kilt. Personal interview with Brig D. A. Cunningham, Kingston Ontario, 14 Jan 1990.

²⁴ RG24 MG 30 157. Vol 8L D Crerar Papers. Confidential letter to Stuart. 10 Jul 44.

²⁵ Cunningham did not think much of Keller's intellectual ability and considered his Divisional Commander pushy: "I don't think he really knew what the hell to do...I don't think he had all the qualities a divisional commander should have...leading and knowing his troops." Keller had previously instructed Cunningham on the Militia Staff Course at RMC. He still treated Cunningham as "a student." Cunningham, 4.

²⁶ It is not clear, but likely that Keller was actually referring to the attack on Carpiquet. RG24; MG30 157. Vol 8LD. Crerar Papers. Hand written Confidential letter from Brig A. E. Walford (DA&CMG, 1 Cdn Army) after interview with Keller. 13 Jul 44.

Carpiquet Airfield was located southwest of Caen on a flat plateau that gave away to the south and the Odon River. The plateau overlooked the junction of the Orne and Odon rivers. On a clear day, one could see across the Orne onto the plain that led to Bourguébus Ridge. Looking south past Fleury, Verrières ridge lay on the horizon like a beached whale. Control of Carpiquet gave a commander domination of the Orne crossings as well as a direct route to the center of Caen, the bridges leading to Falaise, and Paris. Should Cunningham capture Carpiquet and exercise a bit of initiative, he could push another of his three infantry battalions through the open ground of the Caen hippodrome directly to the hotel-area and Gestapo headquarters. This would give him immediate access to the Orne bridges. Should an aggressive divisional commander follow up 9th Brigade with a determined push and 2 CAB's tanks, Caen could easily fall on the second day of the invasion. Carpiquet was not defended. The only German units in the area were a motorized flak platoon on the airfield itself and a battery of 105mm medium howitzers. All three units were from the 12th SS (Hitlerjugend) Panzer Division.

The Hitlerjugend Panzer Division

12th SS was raised in 1943 near Beverloo, Belgium. Its cadres were mostly volunteers from the Hitler Youth, although it had transfers from Wehrmacht units as well as general conscripts.²⁷ The officers and Non-Commissioned Officers (NCOs) were combat veterans drawn from the Hitlerjugend's "parent" unit, the Leibstandarte Adolf Hitler (LAH), the elite 1st SS Panzer Division.²⁸ The average recruit age was seventeen and the soldiers were treated accordingly. Kurt Meyer boxed the ears of a homesick soldier who had run away during basic training: "That's in place of your father. Now off

²⁷ In addition to transfers and conscripts, the division's other ranks included about 500 Italians, Russians and Volksdeutsche. Hubert Meyer, Kriegsgeschichte der 12.SS-Panzerdivision "Hitlerjugend" (Osnabrück: Munin Verlag, 1987). Vol 2 and, Hubert Meyer, trans H. H. Henschler, The History of the 12. SS-Panzerdivision "Hitler Jugend" (Winnipeg: Fedorowicz Publishing, 1994), 6-8, also, Craig W. H. Luther, Blood and Honor: The History of the 12th SS Panzer Division "Hitler Youth", 1943-45 (San Jose: R. James Bender Pub., 1987), 30-33, 62, 93.

²⁸ Besides cadres of NCOs and jr officers, 23 high ranking (Captain and above) officers transferred from 1 LAH to 12 HJ including the Div Comd, Fritz Witt, Hubert Meyer, Max Wünsche, Arnold Jürgensen, Heinz Prinz, Hans Scappini, Wilhelm Mohnke, Bernhard Krause, Gerhard Bremer, Hans Siegel and Kurt Meyer himself. See: H. Meyer, 802-813. Also, Rudolf Lehmann und Ralf Tiemann Die Leibstandarte Band IV/1, (Osnabrück: Munin Verlag, 1986).

with you, and do your duty like the others. The matter is forgotten.”²⁹ The parental attitude to command was an intelligent choice. Most Hitlerjugend soldiers had fathers on the Russian front and left home while their families endured the horrors of Allied strategic bombing. Many had recently lost one or both parents. The officers and Senior Non-Commissioned officers were more like older brothers; the unit commanders were father figures.

Many officers and NCOs, in fact, took a special interest in the boys such as letters to authorities and even comforting them when homesickness struck. Divisional policy in general promoted an unusually close relationship between unit leaders and their troops. The result of such a bonding process would be poignantly evident during the Normandy campaign, when, on occasion, young soldiers risked their lives to retrieve the bodies of fallen leaders.³⁰

Despite the larger than life legends associated with the 12HJ, it was not raised as an elite panzer division, but as motorized infantry. A visit by General Guderian in October had so impressed him that he at once accepted their request to be upgraded to a panzer division. This was not easy in 1943. That the unit received any equipment at all was due to its progenitor, the 1st SS, and the efforts of its well connected officers. The commander of Hitlerjugend's Panzer Regiment, SS Brigadier Max Wünsche, (“decorated like a Christmas tree...approx 6ft 4in in height, broad shouldered...a good looking man, blonde, with eyes not unlike Meyer's, and in one phrase, the perfect example of Aryan youth as laid down in the pages of 'Mein Kampf'...”³¹) had served as Hitler's aide until he convinced his reluctant Führer to allow him to fight with the LAH in Russia. The unit acquired equipment by pleading and scrounging. Its first armoured vehicles appeared via 1st SS largesse. Wünsche's initiative gave the HJ Panzer Regiment a unique look in the German panzer corps. When Italy surrendered in 1943, Wünsche raided the storage depots of the Italian navy and brought back brown leather coveralls and jackets made for

²⁹ “Discipline was strict, the youths forbidden to drink, smoke or to patronize the local brothels. In fact, any relationship with girls was prohibited for those under 18. The boys were given sweets instead.” Luther, 62, 74.

³⁰ Luther 62.

³¹ RG24 10474 “Special Interrogation Report BdeFührer Max Wünsche Comd 12 SS Pz Regt”, 24 Aug 45. The commander of 9th Panzer Kompanie was von Ribbentrop, son of the Nazi foreign minister.

Italian submarine crews. The leathers proved to be an excellent protection for tank crews against burns and were the envy of German and Allied armoured units alike.

12 SS was a 1944 type panzer division. It was organized around three maneuver units: a panzer regiment and two panzergrenadier regiments. SS Panzer Regiment 12 comprised two tank battalions: a Panther battalion and a PzKw Mk IV battalion. Although its infantry was designated "panzergrenadier" (armoured infantry), there were fewer armoured personnel carriers (APCs). The average was one Schützenpanzerwagen battalion per regiment, but the 12 SS only had one APC battalion (in Mohnke's 26th SS PzGren Regiment) for the entire division.³² The unit was supported by dual purpose FLAK 88mm and a strong artillery regiment.

The division's order of battle included 177 tanks.³³ In addition, the division's anti-tank battalion had three companies (28 vehicles) of the JagdPz IV, a vehicle better armoured than any Allied tank, superior to the Mark IV, and mounting the same gun as the Panther. Unlike Allied tank destroyers, the German JagdPanzers were well armed and armoured. They could both support infantry and fight Allied tanks. Main battle tanks were used in the recce troop instead of light tanks. The 12th SS was unique in that it had a fifth tank company in its second battalion.³⁴ On 6 June the 12th SS fielded 185 tanks; the total MBT strength of its opposite number, the 2nd Canadian Armoured Brigade (2 CAB) was 190 Shermans and 33 Stuart reconnaissance tanks.³⁵

³² 12 SS Pz Div(as at 6 Jun 44): SS Pz Regt12: 1st Bn 63x PzV Panther, IIInd Bn 94x PzIV; SS Pzjg Bn12: 28x PzjgIV and 12x 75mm Pak 40; 12 SS PzArty Regt: Only one of its three battalions was self propelled. 1st Bn 12x Wespe 105mm SP, 6x Hummel 150mm SP; IIInd Bn: 18x105mm towed; IIIrd Bn: 4x 105mm towed, 12x 150mm towed; The division had its own multiple rocket launcher battalion, "Nebelwerfers." SS WerferAbteilung 12: 12x 150mm Nebelwerfer; 6x 280mm Nebelwerfer, 6x 320mm Nebelwerfer; SS FlakAbteilung 12: 12x 88mm Flak, 9x 37mm Flak: 25th SS PzGren Regt; 26th SS PzGren Regt (3rd Bn in APCs); Recce Bn; Pioneer Bn; and three support services battalions. Commander: SSBrig.Fhr. Fritz Witt; Chief of Staff: Stubaf Hubert Meyer; SS PzRegt12: Ostubaf Wünsche; 1st Pz Bn: Jürgensen, 2nd Pz Bn: Prinz SSPzGrenRegts 25, 26: Staf Kurt Meyer, Mohnke; Recce: Stubaf Bremer. H. Meyer 352-359.

³³ 94 Panzer IVHs, 63 Panther Gs, 12 Panzer 38(T)s and 8 command tanks. PzKw IV Ausf H featured a high velocity KwK 75mm L/48 gun. The Panther carried the hot KwK42 L/70 75mm gun. The Pz 38(t) was a Czech tank and used by 12 SS FOOs as an arty command vehicle. See: H. Meyer and, F. M. von Senger und Etterling, Die Deutschen Panzer 1926-1945 (Munich: Lehmanns Verlag, 1965).

³⁴ Perhaps due to von Ribbentrop's connections, he ended up commanding the extra company.

³⁵ RG24. WD 2 CAB. Tank State 6 June 1944. Each regiment reported 55 Shermans, 12 VC Fireflies and 11 Stuarts. However, Stacey notes: "The 1st Hussar's strength had been so reduced in the D Day fighting that squadrons had to be combined into one and the regiment was not ready to give immediate support to the infantry when the advance began." Stacey, Victory Campaign, 126.

Gegenangriff

The first 12th SS unit to reach Caen was the 25th SS Panzergrenadier Battalion commanded by SS Brigadeführer Kurt Meyer. Six years' battle experience in Poland, France, the Balkans, and Russia had produced a battle-wise, aggressive commander. Meyer's dynamic career earned him the title "Schnelle Meyer." By the time he commanded the 12th SS Division, he was known as "Pantermeyer."³⁶

Standing approx 5 ft 10 in. in height, broad shouldered, thick set, his whole appearance dominated by his cold grey-blue eyes, which fixed one with what almost amounts to a stare whenever he is talking, Kurt Meyer is the personification of National Socialism.... On military matters his mind was crystal clear, and once having orientated himself on a map he was able to go through the campaign phase by phase giving strengths, boundaries, tasks with consummate ease. The whole time, however, his conversation was coloured by the pride that he had in his men and the way they fought.³⁷

12 HJ's progress was hampered by Allied air power and petrol shortages. The Panther battalion and Mohnke's 26th Pz Gren Regt would not arrive in Caen until the night of the 7th. The Panzer Division Lehr was so heavily attacked that it would not reach the beachhead for days and 21st Panzer had shot its bolt. 12HJ was alone. The counter-attack against the Allied beaches had to be conducted by Meyer's brigadegroup. Neither the German nor the Canadian attack plan was particularly creative. Keller ordered Cunningham down the main road and that's exactly what Cunningham did. The 9th Brigade advanced "one up": the North Nova Scotia Battlegroup marched south on the Les Buissons-Carpique macadam.

Meyer, with his objective, "The Beaches," deployed his regiment "three up." His battalions were spread across the front line in an arc. The 3rd Battalion was on the left near the western outskirts of Caen and to the rear of the Abbaye Ardennes, which served as Meyer's command post. The Abbaye was a miniature fortress; its high stone walls surrounded gardens, ponds, great medieval barns, a main residence, and the great Abbaye

³⁶ "Pantermeyer's" tank experience was limited to panzerjägers in Poland. He made his name as the dare devil CO of the motorcycle company and the recce battalion. The "panzer" sobriquet is more a reference to character rather than exploits in tanks. The Chief of Staff of 12 SS was Hubert Meyer, no relation. The officers were given a cigarette ration. Since he did not smoke, the COS traded his cigarettes for sweets and jam. He was privately called "Marmalade Meyer." Personal interview Hans Siegel, 1991.

³⁷ RG 24 10474 Special Interrogation Report BdeFührer Kurt Meyer Comd 12 SS HJ, 24 Aug 45.

BURON: 7 JUNE 1944

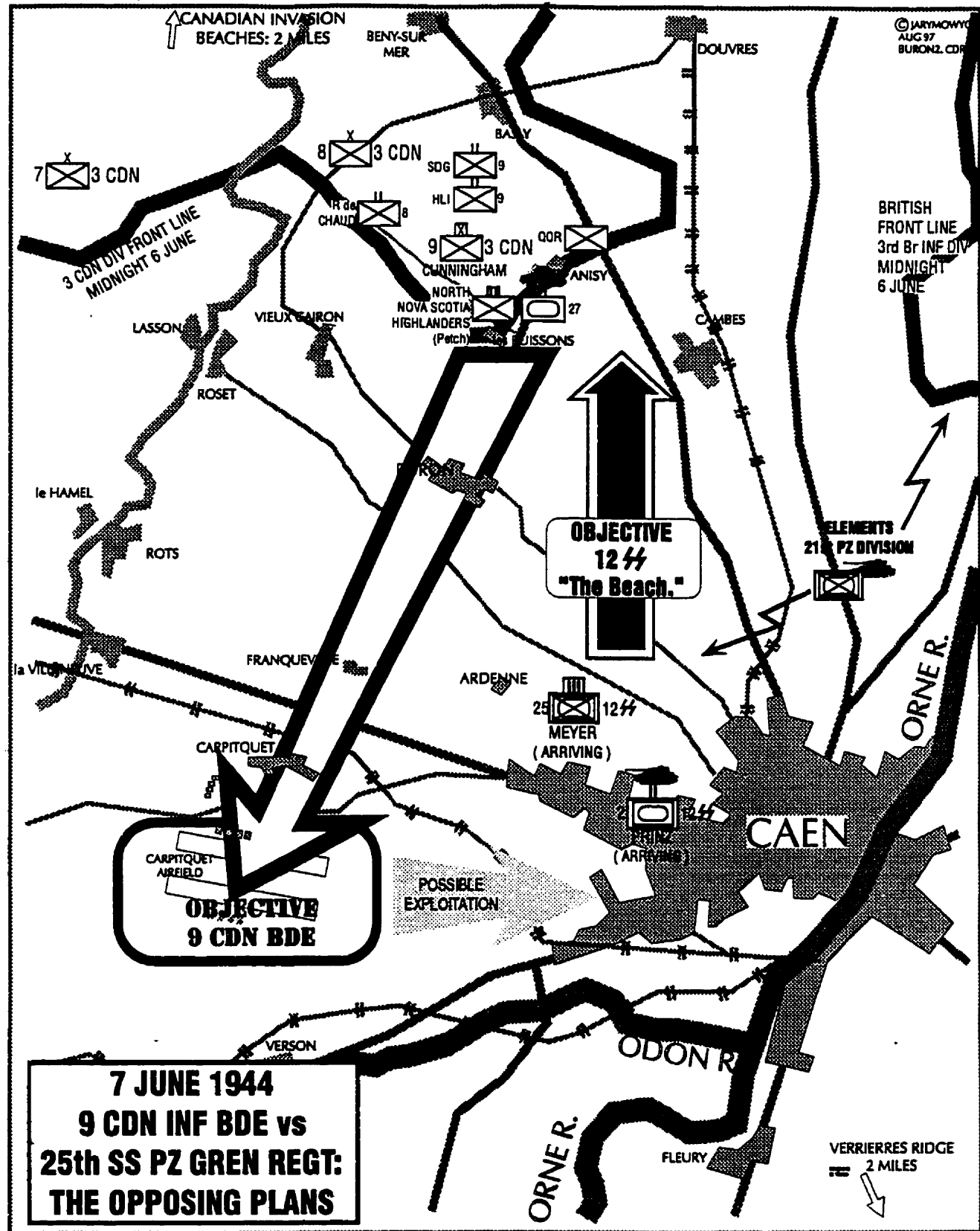


Figure 10

itself which was a tall feudal structure with splendid carvings, gothic windows, and four turret-towers. Each turret was about five stories in height and provided magnificent views over the Caen countryside, overlooking Cussy, Authie, and Gruchy. The northern towers faced the channel beaches – “le manche” could almost be seen.

The 2nd Bn deployed northeast of the Abbaye at Bitot, parallel to 1st Bn in the village of La Folie. Meyer arranged Prinz's 2nd Bn in a tight arc behind the infantry battalions. The 5th and 6th Pz Companies were astride the Caen-Bayeux highway, covering Carpique and the Abbaye Ardennes. The PzIV's killing zone was the main road from Les Buissons that led south through Buron and Authie to Carpique. 7th Pz Coy was southwest of the Abbaye Ardennes just above St. Germain-la-Blanche-Herbe. Captain Hans Siegel's 8th Pz Kompanie was south of La Folie, supporting 1st Battalion. “Company” is generous as Siegel's entire command was 4 PzIVs. The 9th Pz Company was held in reserve south of the Abbaye. Prinz's battalion paraded less than fifty tanks.³⁸

In support, Meyer had a large slice of the division's artillery and multiple rocket launcher regiments (105mm, 170mm and Nebelwerfer batteries) as well as the infantry guns integral to the rifle battalions.³⁹ In addition, he was given medium and heavy flak (dual purpose 88s) which he deployed along the left and center as an anti-tank gun line. From his position high in the northwest tower of the Abbaye, Meyer could see the wide panorama of the front. On his left rear was Carpique and the main highway to Bayeux. Behind him were the spires of Caen, and to his far right were elements of 21 Panzer blocking the approaches from the British beach at Douvres. Across his front was the open flat ground that led to the Canadian beaches. Nothing was seen of Canadian troops, although firing was heard in the direction of Les Buissons and Douvres. The barrage balloons on the horizon gave a good indication where the center of each beachhead was.

How Meyer planned to storm the beaches is not clear. Based on his Russian experience, there was a good chance that if he broke through the outer perimeter and began to run amuck in the rear areas, the Canadians would panic and collapse. He did not think the Canadians were going to be tough to crack and referred to them as “kleine

³⁸ Siegel estimates “About 30 panzers [from II Pz Bn] participated in the 7 June attack.” Interview Hans Siegel, Normandy and Bad Teinach, 1991, 1992. See also Luther, H. Meyer, and K. Meyer.

³⁹ German doctrine allowed infantry regiments and battalions lavish numbers of 81mm mortars as well as low velocity 75mm assault guns. This “regimental arty” was towed or manhandled into position.

fische.”⁴⁰ Information from both 716 and 21st Pz told Meyer he faced the better parts of two divisions on two separate beaches. His journey to Caen must have convinced him of the deadliness of Allied fighter bombers, but his Eastern Front background could not have prepared him for the weight of naval gun fire that awaited him should he get close to the beaches. Conversely, the closer the combat, the safer he was. By striking quickly, breaking in, and playing the fox in the hen house in the beach administrative area, Meyer could be safe from both artillery and air, but he would have to move quickly. His armour had arrived in dribbles, held up by air attack, mechanical breakdown, or empty fuel tanks. Wünsche’s Panthers were stranded east of the Orne waiting for fuel, and Meyer’s men were tired after twenty-four hours of road marching.

The Canadians

The Canadian battlegroup was based on the North Nova Scotia Highlanders (NNS) which consisted of a unit from the Maritimes whose officers and men were a hardy collection of fishermen, farmers, and hard-rock miners. The NNS was grouped with a unit from Quebec, The Sherbrooke Fusilier Regiment (27 CAR). The “Sherbies,” recruited from Quebec’s eastern townships and the western provinces, like the NNS, were mostly a collection of farmers and miners. Their officers were generally from the cities, many of whom were students or graduates from Bishop’s University. Both units were hard working “no frills” regiments and, by 1944, thoroughly trained. However, unlike the 12 SS, neither the Canadian officers nor the NCOs had any previous battle experience.

The NNS comprised four infantry companies supported by its own mortars, anti-tank platoon, and reconnaissance platoon. The Support Company had enough bren gun carriers⁴¹ to mount a company; basically, the Novies were “leg infantry” – they walked to

⁴⁰ RG24 10677 Interrogation Lt General Feuchtinger, CO, 21st Pz.Div. 25 Aug 1945.: “When Feuchtinger had briefed Meyer on the situation, the Standartenführer assured the GenLt that the English “kleine fische” (little fish) would soon be thrown back into the sea.”

⁴¹ Fully tracked, lightly armoured utility vehicles; no over head cover and armed with the Czech designed “Bren” gun, the standard light machine gun found in an infantry section. The carriers were slightly larger than a Jeep but had good cross-country ability and were certainly preferable to advancing on foot.

battle.⁴² The Sherbrooke regiment was three squadrons strong. The Regimental Commander, Lt.Col. Mel Gordon, had his own Headquarters troop and the Regimental Recce troop which held eleven M2 Stuarts, with turrets.⁴³ The North Novas, commanded by Lieutenant Colonel Charles Petch, ("his ability as a soldier and his forceful personality were responsible for the unit's attainment of a high degree of efficiency"⁴⁴) were supported by a platoon of medium machine guns from the 3rd Divisional Machine Gun Battalion, The Queen's Own Cameron Highlanders of Canada, and a troop of M10 tank destroyers from the divisional anti-tank battalion. Artillery support was to be provided by 14th Medium Field Artillery Regiment (Priests); naval gunfire was to be controlled by a Naval Fire Direction officer.

The Advance to Contact

Petch did not begin his advance until 7:45 a.m.⁴⁵ Minor sniper and long range anti-tank fire seems to have delayed the NNS. The opposition possibly consisted of determined 716 stragglers, but more probably incorporated remnants of the same 21st Panzer Combat team (192 Pz Gren Bn)⁴⁶ that had hit Le Régiment de la Chaudière on the night of the 6th. Petch deployed his battlegroup; Stuarts from 27 CAR recce troop led as the vanguard:

Behind them came "C" Company of the Highlanders, riding on the battalion's carriers. Next came a platoon of medium machine-guns from the Cameron Highlanders of Ottawa, a troop of tank destroyers of the divisional anti-tank regiment, two assault sections of pioneers and four battalion 6-pounders. Behind this vanguard, which was commanded by

⁴² North Nova Scotia Highlanders: Pipe Band and HQ, four rifle companies A, B, C, D; Anti-tank Platoon: 8x 6 pdr; Mortar Platoon: 12x 3" mortars; Recce Platoon, Pioneer Platoon, Carrier Platoon, Signal Platoon. CO: Lt Col Charles Petch, 2IC: Major D. F. Forbes, RSM Joe MacNeil, A Coy: Maj L. M. Rhodenizer, B Coy: Maj J. W. Douglas, C Coy: Maj J. D. Learment, D Coy: Maj C. F. Kennedy.

⁴³ "Canadian" Stuarts in Italy had their turrets removed and were used as both recce and FOO vehicles. Normandy Stuarts kept their turret and the 37mm gun. "Policy re removal of Stuart turrets left to discretion of fms." RG24 14186 BRAC HQ First Cdn Army, 31 Jul 44.

⁴⁴ Will R. Bird, No Retreating Footsteps - the story of the North Novas (Kentville: Kentville Publishing, 1983), 25.

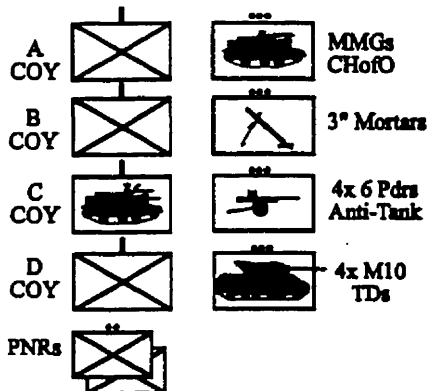
⁴⁵ Stacey, Victory Campaign, 126.

⁴⁶ Stacey, Victory Campaign, 127. See also Meyer, Craig, von Luck.

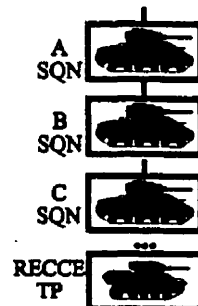


NORTH NOVA SCOTIA BATTLEGROUP 7 June 1944

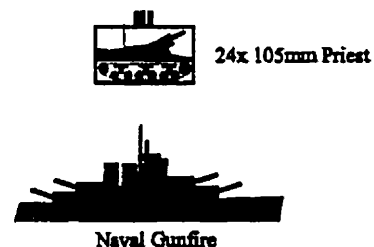
NORTH NOVA SCOTIA HIGHLANDERS Lt.-Col. C. Petch



THE SHERBROOKE FUSILIERS (27 CAR) Lt.-Col. M.B.K. Gordon

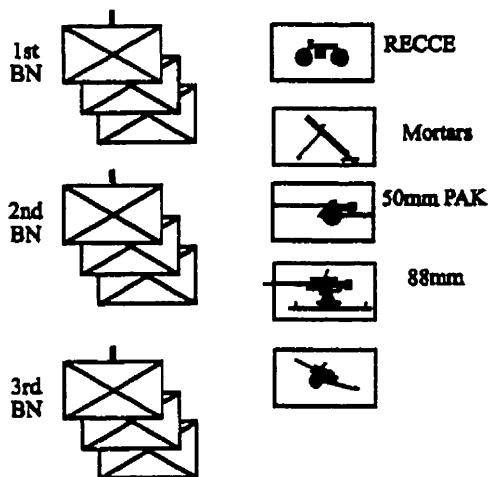


14th FIELD REGT RCA

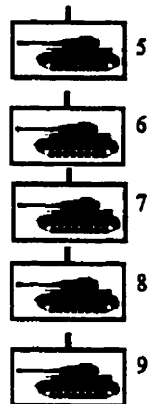


25th SS PANZERGRENADIER REGT KAMPFGRUPPE 7 June 1944

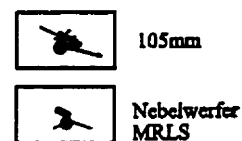
25th SS PZGREN REGT SS-Brigadeführer K. Meyer



2nd BN, 12th SS PANZER REGT SS-Sturmabführer H. Prinz



12th SS ARTY



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Figure 11

Major J. D. Learment of the North Nova Scotias, came the main body of the advanced guard, three infantry companies riding on Sherman tanks.⁴⁷

Petch controlled an armour heavy battlegroup which consisted of a full regiment of tanks and his own battalion. In the open country south of Les Buissons, the tanks should have been leading and maneuvering freely. Instead, they carried infantry. In the Italy doctrine of 1944, tanks were ordered in support to infantry. Although this was a situation where someone (Cunningham or Keller) should have ordered an armoured battlegroup with "infantry under command" to strike for Caen, no one seems to have thought of it.⁴⁸ The Kampfgruppe principle was not being practiced by Canadians.

Meyer, an infantry commander, had tanks under direct command. More important, Meyer was forward, observing the battle. Cunningham, in British-Canadian style, was at his Headquarters following events based on radio situation reports. While the North Novas appear to have simply driven south astride the road, there is evidence that LtCol Gordon attempted some maneuver with his squadrons, but since they carried riflemen, it must have been limited. Until the infantry dismounted, the tanks were, de facto, "battle taxis." There was a minor skirmish with anti-tank guns before they secured Buron.⁴⁹ It had taken Petch three hours to advance less than two miles.

⁴⁷ Stacey, Victory Campaign, 128.

⁴⁸ It would not have been too difficult to sort out. The 27th CAR and the NNS were old friends and had rehearsed this exactly a year before on Exercise Ram "designed to practice close cooperation between the North Novas and the Sherbrooke Tank Regiment." By June 44, after three 36 months in the UK, the NNS had completed 21 major training exercises: Beaver II, Thistle, Conqueror, Beaver IV, Tiger, Harold, Alpine, Ladybird, Airedale, Spartan "the greatest offensive exercise ever staged in the military history of these Islands" - London Times 12 March 1943), Welsh, Beach, Ram, Scalpsie, Ulysses, Pirate, Snowball, Push, Endeavor, Pedal, and, Prank. "... the Novas rode on tanks...." Bird, 39. They could not have been better trained or more ready.

⁴⁹ "Two 88-mm guns are said to have been knocked out before the village was in our hands. Buron was occupied by 11:50." RG 24 15271 WD NNS 7 June 44. According to Hubert Meyer, there were no 88s in Buron. There were 88 Flak guns from 1/Flak12 outside Cussy and in Franqueville but it is not clear if they deployed there before or after the Buron battle. No unit from 12 SS opened fire before 1400. Meyer did note "To the left were only stragglers from 716 Inf.Div and small groups of the 21.Pz.Div, probably from panzerjägerabteilung 200." H. Meyer, 40. See also ETHINT MS B-814 "Interview Pz Col Fritz Kraemer", 28.4.48.

First Blood: "Panzers - March!"

Suddenly, all hell broke loose.

RSM "Bill" Baillie, NNS

The Canadian battlegroup's advance had been observed with great interest by Meyer from the Abbaye's turret.⁵⁰ He decided to delay his own attack and engage this very promising target which was pushing south so nicely concentrated, its flanks totally exposed. "He immediately directed that fire could only be opened on his order."⁵¹ "B" Company, North Novas, pushed towards Authie which was approximately 1200 meters south of Buron. The infantry dismounted halfway and the Shermans deployed to give covering fire. "Shortly 'C' Company passed two platoons in carriers through 'B'. After a short skirmish they took Authie and proceeded to dig in on the south edge of the village, which was under intense mortar and artillery fire."⁵² It is not clear who was involved in the skirmish as 25 SS was not yet launched into the counter-attack. The 9th Brigade Operations Log has Authie secured at 1300 hours. "Ten minutes later the Brigade informed Division that there was armour 800 yards east of Authie...."⁵³

At this point Petch stopped all aggressive action, even though "27th Armoured Regiment's Stuarts had reported themselves in Franqueville, close to Carpiquet."⁵⁴ By now "A" Company had also dismounted their tanks and were pushing on alone. Petch had decided to withdraw the troops in Authie and form a "battalion fortress" on the rising ground north of the village. "A" Company accordingly dug in southeast of Gruchy. Meyer's initial instructions were compromised when Petch stumbled into a firefight, lost initiative, and decided to dig in. Clearly, the Canadians could not be tempted further. Meyer's concern grew as from his northeast he saw British tanks "assembling in the area south of Colomby-sur-Thaon."⁵⁵ With Petch declining to advance and settling for a vague

⁵⁰ 12HJ HQ Sigs section had rigged wire to the turret providing Meyer with communication with his entire command. His arty FOOs also used the Abbaye as an OP.

⁵¹ H. Meyer, 42.

⁵² Stacey, Victory Campaign, 128.

⁵³ Stacey, Victory Campaign, 128.

⁵⁴ Stacey, Victory Campaign, 128.

⁵⁵ H. Meyer, 42.

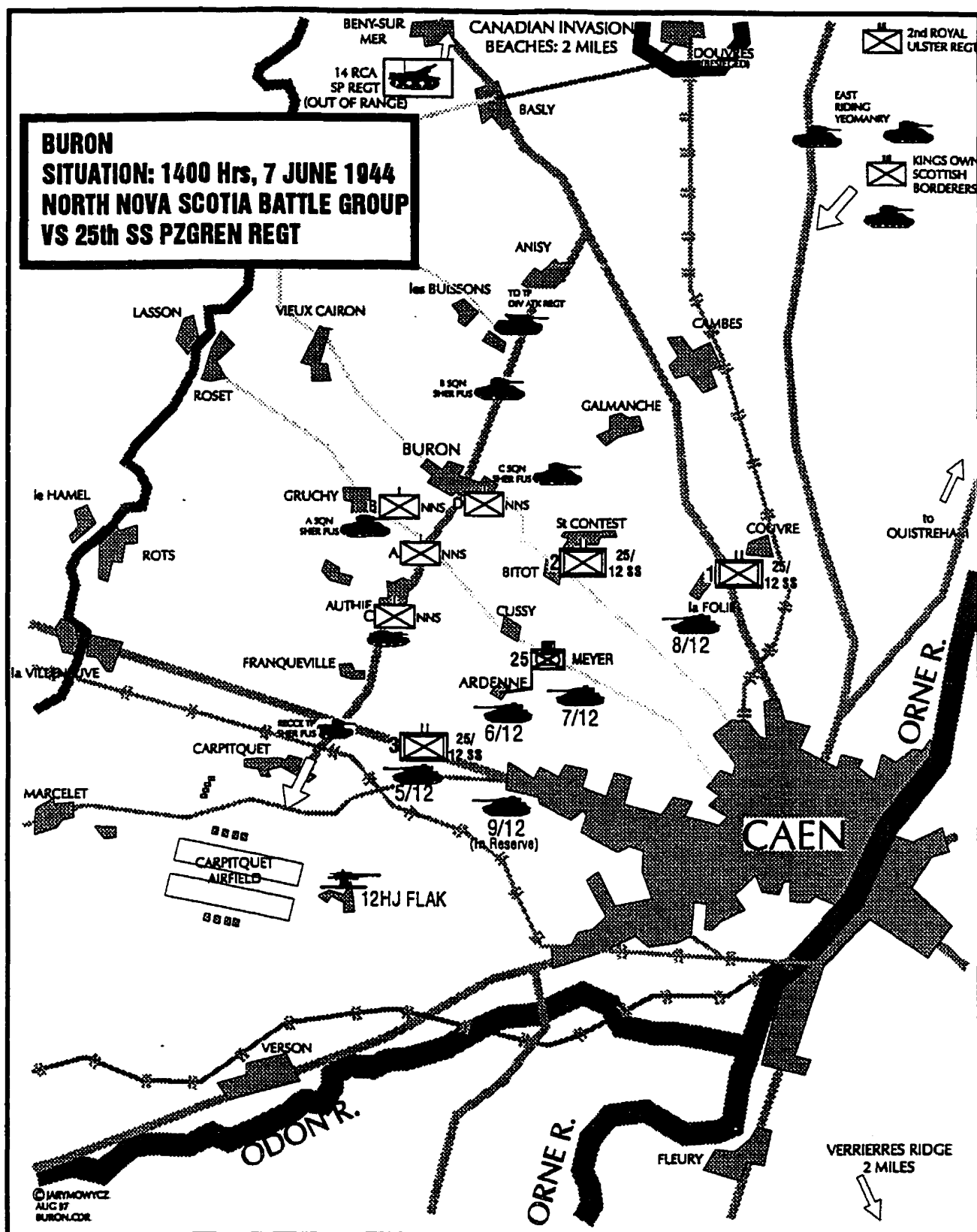


Figure 12

“fortress” around Buron, the circumstances were perfect for a bold brigade commander to take the reins and initiate maneuver warfare: use the Novas as the Brigade “pivot” and swing a second battalion onto Carpiquet since the lead squadron of 27th CAR was just about there. This is what the 1944 doctrinal instructions described and these were the accepted tactics. But there was no leadership from brigade. Cunningham was still well back; running the battle by acquiescence. Once Petch lost the will to push, 9 Brigade stopped cold, which was unfortunate because Cunningham had two fresh infantry battalions down the road. Up to this moment, save for scattered fire and a few stonks from mortars, nothing significant had occurred. Suddenly the situation came to a head:

Untersturmführer Porsche was reconnoitring with his four Panzer IVs along the Franqueville-Authie road. At 1400 hours he unexpectedly encountered Sherman tanks of the Sherbrooke Fusiliers which were approaching from Authie. In the brief fire fight three of his panzers were knocked out.⁵⁶

Meyer wasted no time. He turned to the commander of the 12th SS Pz Regt, Max Wünsche, who was with him in the Abbaye turret, and signalled the attack. Wünsche promptly issued the order “Panzers-March!” and the Hitlerjugend whirlwind descended on Petch’s Maritimers.

Buron: Phase 1 - The Attack of the 3rd /25 SS PzGren

Captain Fraser kept shooting until he was killed. So did the North Novas with him, and the Sherbrooke Fusiliers and the Cameron Highlanders who elected to fight to the finish.

Will R. Bird; North Nova Scotia Regiment History

The tactical situation was not in the Canadians’ favour. The leading Stuarts of the 27 CAR Recce Troop had reached Franqueville and the troop leader actually reported seeing Carpiquet airfield.⁵⁷ They disappeared from the battle the moment Wünsche ordered his tanks forward. They were likely immediately engaged by Prinz’s 5th Panzer Company which presumably destroyed most of them very quickly.⁵⁸ The German attack

⁵⁶ H. Meyer, 42.

⁵⁷ Interview Gen Radley-Walters, Caen. 1992. Franqueville leads to the Bayeux highway and then falls into a low gully made by the main railway line to Bayeux. Beyond this dead ground one can easily make out the green sweep of the airfield and the spires of Caen. The Stuarts must have felt they were practically in Caen.

⁵⁸ The midnight June 7th Tank State reported by 27 CAR to 2 CAB shows only 2 operational M3s out of the troop’s complement of 11. RG24 14045 WD 2 CAB 8 June 44.

"surprised the enemy in the left flank.... Within a short time several Shermans were in flames and exploded."⁵⁹ Petch's battalion, with both flanks in the air and no support at hand, was caught flat footed as the lead companies were trying to extricate themselves from Authie. "C" Company and part of "B" Company were overrun. Things became truly perilous when it was realized that the supporting Canadian artillery regiment, 14 RCA, was not in range and could give no indirect fire support.⁶⁰ Worse, the Naval FOO's communications completely broke down, thereby eliminating any hope for naval gun fire as well.⁶¹ Although the Highlanders and their supporting tank squadron fought determinedly, the enemy attack swept all before it. Directly, "A" Company near Gruchy was hit and after a solid fight, it too, was overrun. All that stood between Meyer and Les Buissons was "D" Company, frantically digging in at the southeast corner of Buron.

Tank and Infantry Close Quarter Battle

As German infantry pushed forward through the waist high wheat,⁶² their Panzer IVs swept wide to the west of Authie and Gruchy to cut off Buron. They were met by two squadrons of the 27th which swung left and right around Buron in an attempt to save the leading companies. 5th and 6th Panzer Companies were hit by both Sherman tank fire and Canadian anti-tank guns. Four Panzer IVs were immediately set on fire. As the tank battle raged, the Hitlerjugend launched their attack on Buron. But "D" Company would not budge and heavy house to house fighting ensued. Buron, 1500 meters north of Authie, was in range of 14 RCA and, for the first time, the panzergrenadiers had to contend with heavy indirect fire as well as desperate small arms fire from the North Nova's platoons. Further, the Sherbrooke squadrons' fire was now augmented by fire

⁵⁹ H. Meyer, 42.

⁶⁰ 14 RCA was "stepping up" by battery during the NNS advance but came under "continuous mortar fire" in its new gun area (probably from the Germans at Douvres). Major "Jimmie" Stewart recalls taking both direct and indirect fire while trying to deploy. Interview, Bdr. J. Stewart, July 1994.

⁶¹ "Bill" Baillie, a NNS Sgt at Buron, remembers seeing "the young Naval officer standing on the road beside his useless radio, crying - just crying in frustration." Personal interview RSM W. Baillie, 1992.

⁶² The attack was filmed by an SS Cinema team: b/w footage shows a bright sunny day, the tall wheat fields around Buron and the young panzergrenadiers, half hidden in the grain, advancing with their tanks. See: NFB archives in Montreal, The Canadian National Film Archives, Ottawa and British Film Archives, British War Museum, London; the film has close-ups of knocked out 27 CAR Shermans as well as a frame of a half burned sweatshirt with a crest and identification "Canadian Armoured Corps."

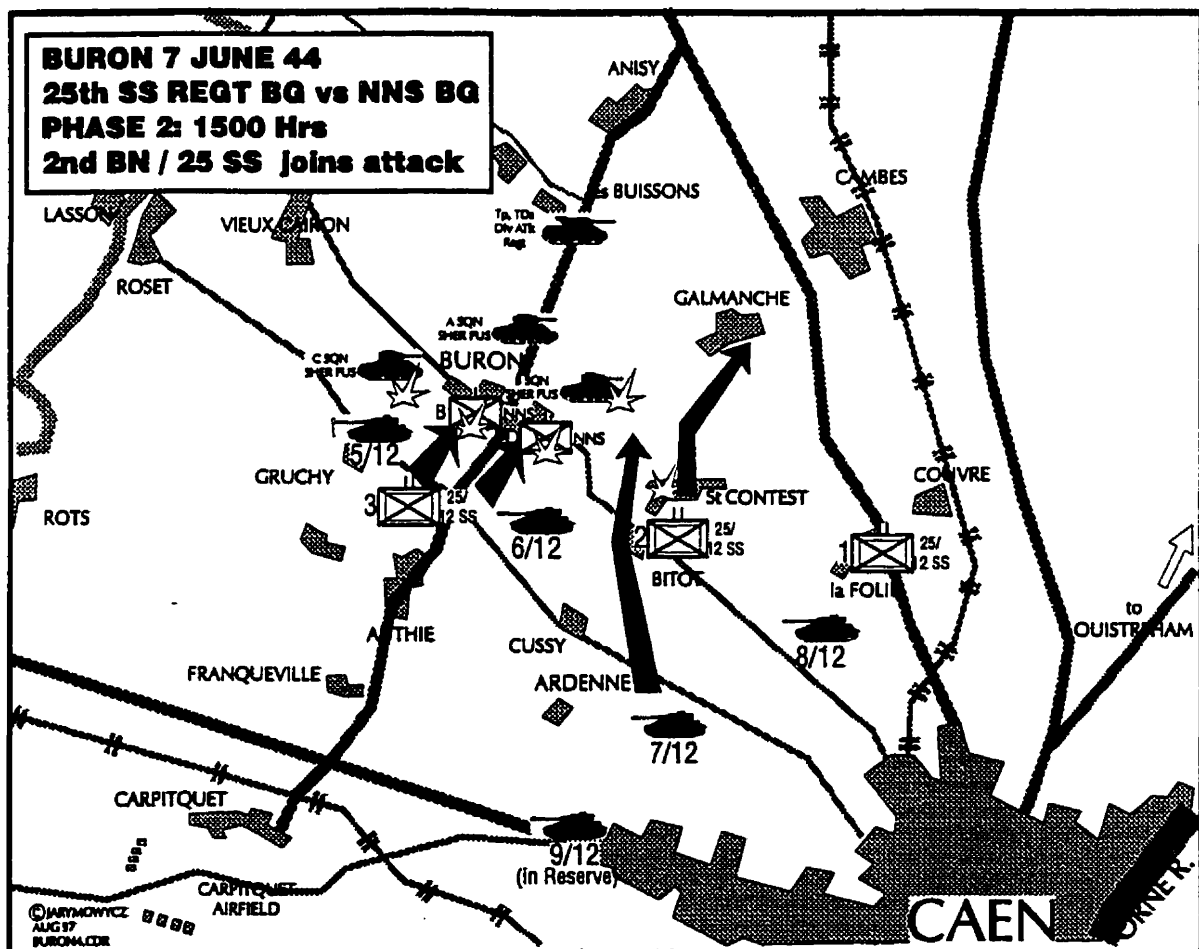
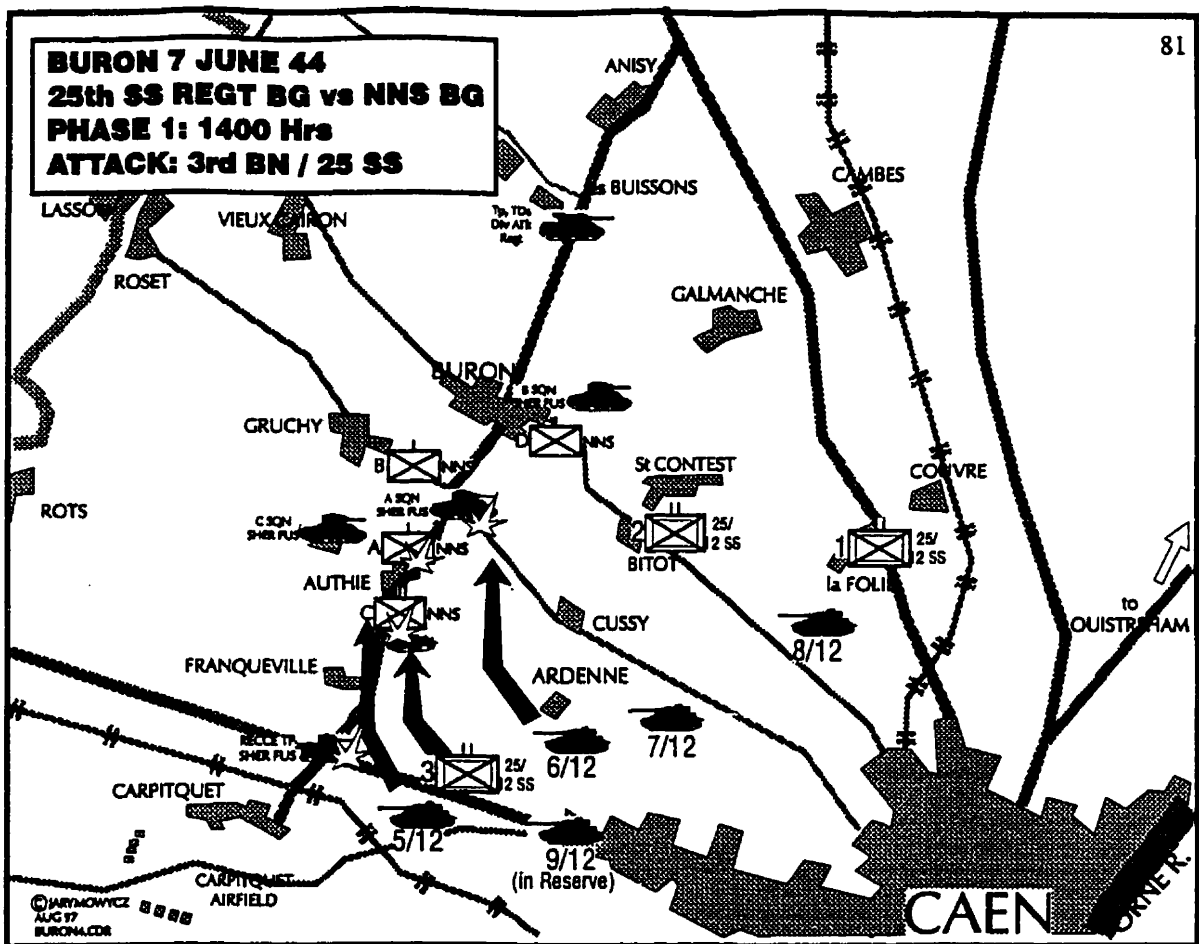


Figure 13

from the Tank Destroyer troop near Les Buissons. Although not effective against Panther and Tiger, an M10 could dispatch a Pz IV with ease: "The defense by the Canadians was so strong that the panzers had to turn back."⁶³ Buron held.

Buron: Phase 2 - The Attack of the 2nd /25 SS PzGren

At 1500 hours Meyer ordered his center and right wing to attack. The battle for Buron appeared to be in hand, but strong British forces were demonstrating on his far right and making a bid for Cambes, on the north road that led to the center of Caen. 2nd/25 SS Pz Gren had no enemy in front and the Canadians on its right were withdrawing. Its commander, Sturmbannführer Scappini, attacked through St. Contest and into Galmanche "without encountering serious resistance, bothered only by artillery fire."⁶⁴ The supporting panzer companies followed the panzergrenadiers in a wide wedge formation, pausing every now and then to exchange fire with the Sherbrookes on their far left. The 1st/25 SS was not ready to attack and waited until Scappini's companies had secured their left flank before advancing against Cambes where they knew the larger parts of two British infantry battalions, and at least one armoured regiment, awaited them.

The confusion around Buron continued. Petch fell back towards Les Buissons while Gordon's tanks gave him covering fire. Although the infantry battle had been all SS thus far, the tank battle was better matched. The PzKw IV H was a fair counterpart to the M4 Sherman. Each tank's gun could defeat the armour of the other at extreme range. The Sherbrookes were concentrated around Buron with sixty-seven gun tanks, including twelve Firefly 17 pdrs; the 2nd Pz Battalion was strongly supported by artillery and 88 anti-tank fire but committed its tanks piecemeal. 5th and 6th Panzer Companies had no more than twenty tanks between them and, even if 9th and 7th Company got in the odd lucky shot, the combat ratio was still about forty to sixty-seven in the Canadians' favour. Prinz's 5th and 6th Pz Companies were short by at least seven tanks, while the 27th CAR was augmented by additional fire from the M10 troop near Les Buissons. Nevertheless, it

⁶³ H. Meyer, 42.

⁶⁴ H. Meyer, 43. As Scappini and his command group were out on a recce, they "were surprised by three advancing Canadian tanks." Scappini was killed.

was about as fair a tank fight as one got in Normandy. The Sherbrookes had the numerical advantage, but the experience edge went to the panzers.

Cunningham had still not come forward and continued to follow events via wireless. Brigadier Wyman did the same. His location is not confirmed, but, in accordance with Canadian procedure, he was likely co-located with 9 Brigade or Keller's Headquarters. As he became aware of the tank battle, he reacted to Gordon's pleas for support. At 1430 hours 27 CAR reported themselves heavily engaged with enemy tanks in the Buron area and asked for reinforcement. Brigadier Wyman ordered 10 CAR to stand by to move in full strength and went forward.⁶⁵ As Meyer's second phase commenced, 3rd/25 SS gave Buron another try:

... attack on Buron with the remaining panzers. Again, house to house fighting. Many prisoners were taken. We pushed past the edge of town. Heavy machine gun fire, we pressed our heads into the ground. There was no possibility of further advance. We had to withdraw again.⁶⁶

Once more "D" Company defeated its attackers. The confusion of battle could not result in any sort of rational deployment by Petch. "D" Company, or what was left of it, held Buron. Remnants of "A" and a large part of "B" Company were in the grain between Buron and Les Buissons. Gordon's armour was on the flanks, mostly to the east, engaging 5th and 6th Pz Coys as well as the newly appeared 7 Pz Coy as it headed toward St. Contest. The center approach was covered by TDs and what was left of the NNS anti-tank platoon.⁶⁷ The 3rd/25 SS attacked again.

The German attack consisted of two waves of infantry, then the panzers advanced slowly and purposely. The infantry of the Novas withdrew to positions directly south of Les Buissons. As it turned out, only five men of "C" Company and few of "A" Company made it there. German infantry pursued them, recaptured Buron and then attacked "D" Company of the

⁶⁵ RG24 14045. WD 2 CAB, 7 June 44. "At 1430 27 CAR reported themselves heavily engaged with en tanks in the area of Buron and asked for relief. Brig Wyman ordered 10 CAR to stand by to move in full strength and went fwd using 2 HQ tanks to make a personal recce of the sit. At 1700 Brig Wyman returned with the news that the situation was in hand." RG 24 14045 WD 2 CAB 7 June 44.

⁶⁶ Strummann Vasold report. Quoted in H. Meyer, 42.

⁶⁷ The platoon, now under command of Sergeant J. J. Martin, deployed in the tall grain covering the center road leading to les Buissons. They were at the mercy of any attacking infantry. Exposed and unsupported, they opened fire on a PzIV troop as it attempted to skirt Buron and drive into Les Buissons. Personal interview, J.J. Martin, 1991.

North Novas with Bayonets. Our tanks rolled past "D" Company and retreated with only minor losses.⁶⁸

"D" Company hung tough and beat back the assault. Undaunted, Ostubaf Milius organized his companies for yet another attempt. Throughout, a defeatist attitude prevailed in Petch's headquarters.

The battalion prepared to defend itself to the last. When the panzers came around the flanks, the remaining tanks of the 27th Canadian Armoured Regiment, the self propelled anti-tank guns in the woods of Les Buissons, and all light infantry weapons opened fire over the heads of our own troops on the north edge of Buron.⁶⁹

"D" Company's stand seemed to put things into some sort of perspective. A potential rout became a partial withdrawal to a final stand, but then the final stand area became the start line for a battalion counter-attack.

Buron: Phase 3 - The Attack of the 1st/25 SS PzGren and The North Nova Counter-attack

At 1615 hrs Meyer launched the third and final stage of his attack. Waldmüller's 1st Battalion moved north toward Cambes supported by Siegel's 8th Panzer Company. The objective was the village of Anguerny, five miles north and halfway to the coast. As they reached Cambes they ran into two British units, 2nd Royal Ulster Regiment and the tank squadrons of the East Riding Yeomanry. A bloody battle ensued with heavy losses on both sides. Eventually the Ulsters withdrew but Waldmüller was too battered to pursue. He ordered his Kampfgruppe to withdraw to the southern edge of Cambes. Both sides settled for a stand off.⁷⁰

Meyer's attack had ground to a halt. He had taken heavy casualties but had little to show for it. Two companies of Novas were overrun but Buron was still in Canadian hands. Meanwhile, Milius' third attack was making progress. Supported by mortars,

⁶⁸ RG 24. WD 27 CAR. 7 June.

⁶⁹ There was much talk of withdrawal to a "battalion fortress" near Les Buissons to await the dreaded final attack. RG 24. WD NNS. 7 June.

⁷⁰ The accompanying panzer action was short lived. Though Siegel's entire command amounted to five Mark IVs, he courageously attacked; one of his tanks broke down and his own command tank was disabled: "Artillery fire made a tree fall on my panzer's turret. It was jammed and I could not traverse. My other tanks drove past but soon were knocked out. One tank fell into a shell crater. All my tanks were disabled in minutes. They were not destroyed; we repaired them in the evening but the attack ended after only a few minutes." Personal interview H. Siegel, 1990, 1992.

artillery, and Nebelwerfers, the Hitlerjugend determinedly advanced into Buron and again engaged in savage house-to-house close combat.

At about this time, a runner from "D" Company reported to Petch that their forward positions had been overrun and help was required at once. This seemed to have triggered Petch's dormant aggressiveness as he ordered an immediate counter-attack. A scratch North Nova-Sherbrooke combat team of about one infantry company and a decimated squadron of tanks advanced toward Buron: "A savage battle followed as we attacked with the remaining twelve tanks under cover of strongly concentrated fire, directed by a forward observation officer, on the forward positions of "D" Company."⁷¹ Petch's attack succeeded. The group reached "D" Company, drove out platoons of 3rd/25 SS Panzergrenadier Battalion, and recaptured Buron. For all intents, the battle was over as both sides reorganized and attended to the many wounded. Sadly, the battle did not end with a Canadian roar, but a whimper:

At dusk Brigadier Cunningham granted the remnants of the advanced guard permission to fall back to Les Buissons. The 9th Brigade's other units (The Stormont, Dundas and Glengarry Highlanders and the Highland Light Infantry) had moved up and dug in in this area. The remains of the North Nova Scotias and the Sherbrooke Fusiliers now moved to join with them in forming a brigade fortress.⁷²

The Tank Battle: Boldness

At 1700 Brigadier Wyman returned with the news that the situation was in hand.

2 CAB War Diary, 7 June

There can be little fault found in the conduct of the Sherbrooke Fusiliers. They and the Novas were victims of a doctrine out of place in Normandy. Grouping an armoured regiment in support to an infantry battalion vanguard in open country created obvious problems. A doctrine that was built around a pivot mentality hastened to construct a fortress (the brigade "boxes" of the Gazela Line at Tobruk) at the first sign of a panzer attack. Maneuver warfare was not attempted. The basic principles of war, Concentration of Force and Maintenance of the Aim, became secondary to a "safety first"

⁷¹ RG 24 WD NNS: 7 June.

⁷² Stacey, Victory Campaign, 132.

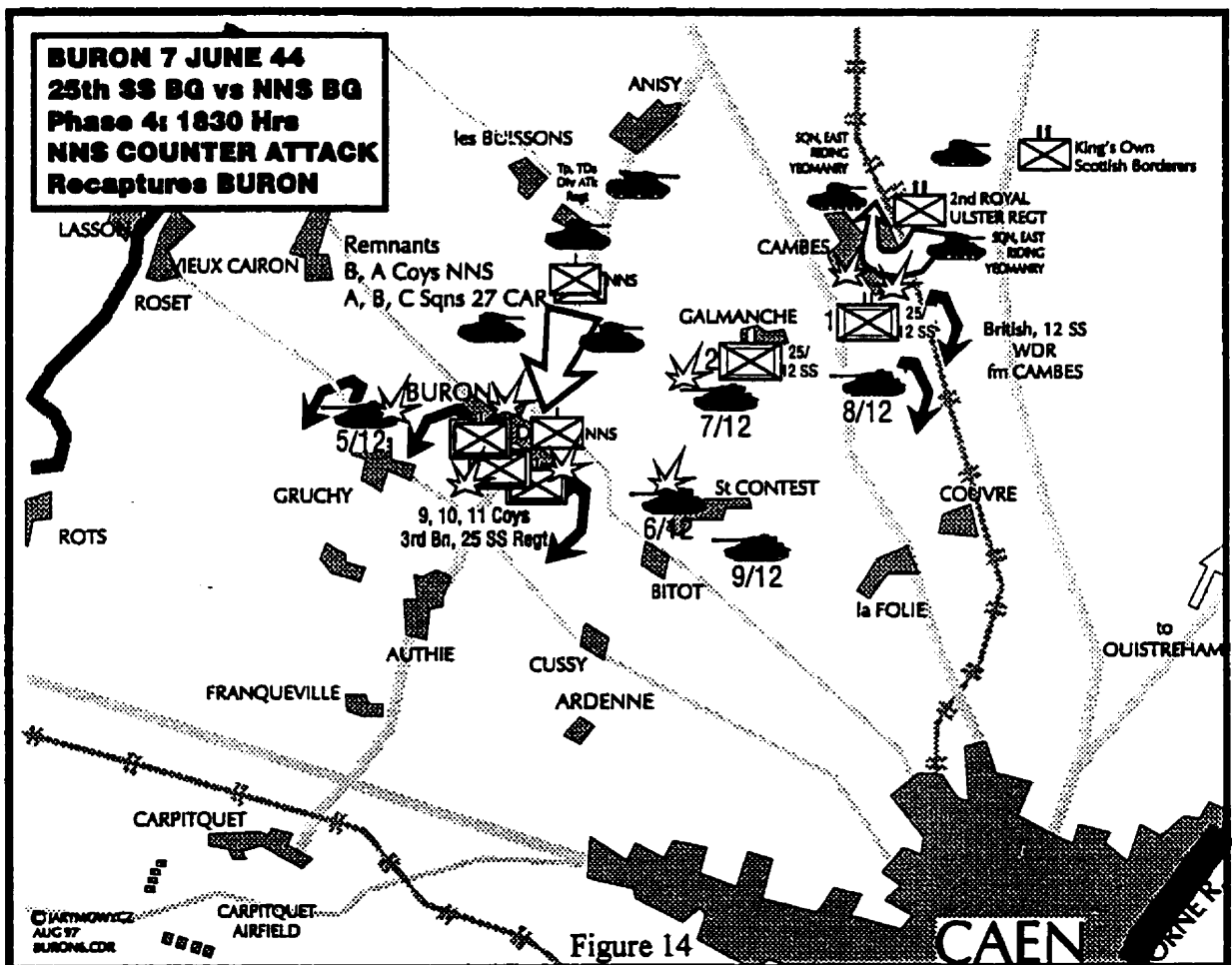
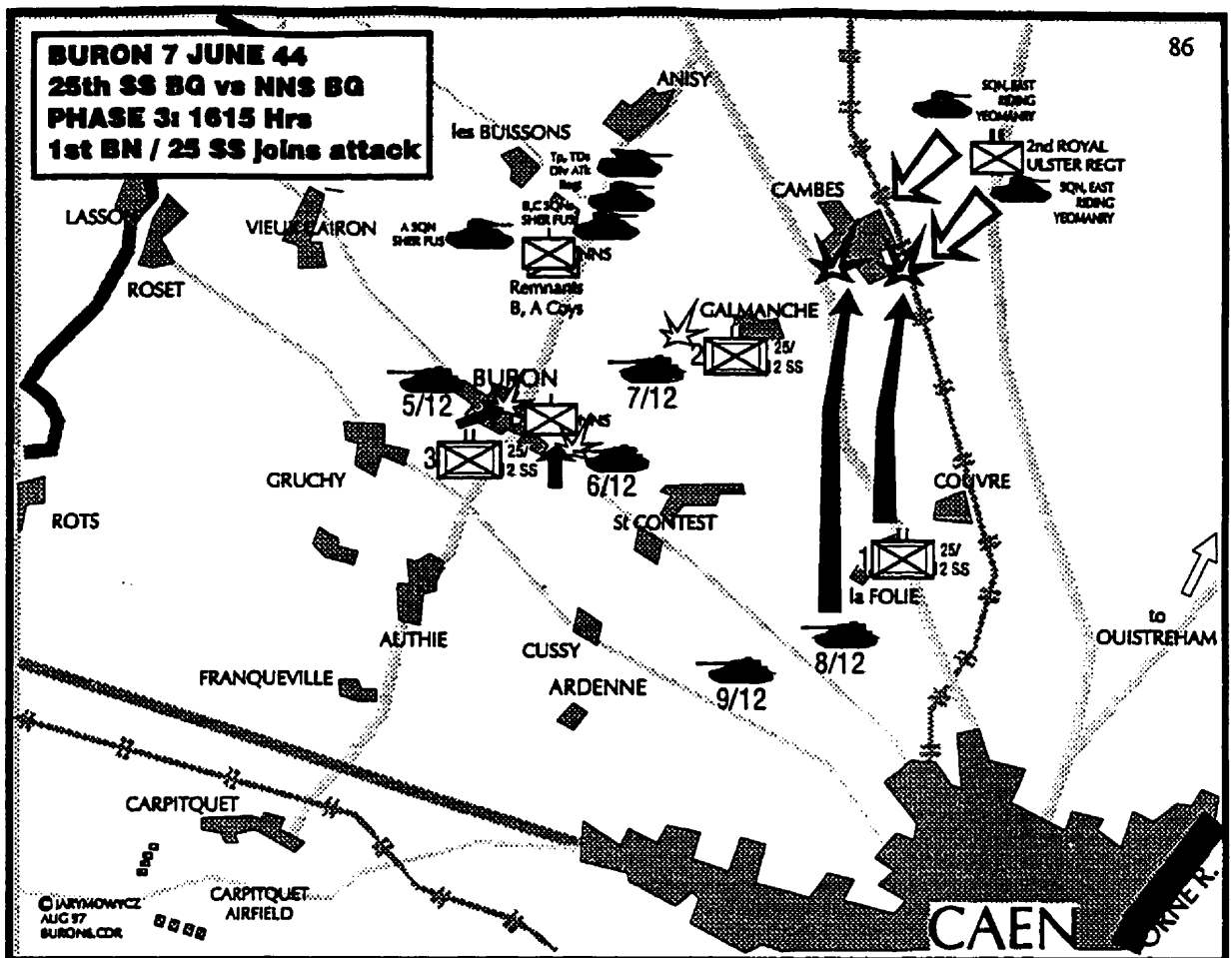


Figure 14

attitude that finally gave ascendancy to the enemy. The Canadians reacted to the 12 SS when they were in a position to force the issue.

Meyer's attack was not a particularly clever bit of tactics. He sent in his meagre tank resources piecemeal, his rifle battalions did not support one another, and he had no effective reserve. Was it poor judgement or contempt for the inexperienced Canadians? The question is answered as one examines Meyer's attack on Bretteville the next day, 8 June. He sent in his motorcycle company and Jürgensen's Panther battalion to be cut up by the Royal Winnipeg Rifles in street fighting.

In many ways Meyer is a good example of what Worthington would have been like in Normandy. He was not a great tactician. He inherited a first rate staff, so it is hard to say if he was a good divisional commander. But, he was a dynamic and aggressive leader. He inspired his men, he took personal risks, and he led from the front. Although his turret in the Abbaye Ardennes gave him an unobstructed view of the entire battlefield, Meyer toured the area on a motorcycle, personally visiting battalion commanders during the thickest fighting. When a British push near Malon threatened his right flank and he saw troops begin to fall back, he "ran towards them and pointed at the enemy. Recognizing their commander, the youths returned at once to their posts. Having steadied the faint of heart, Meyer returned to l'Abbaye."⁷³

His opposite number, Cunningham, did not figure prominently in the battle. This again was not a question of courage, but of doctrinal training. Cunningham finally left his headquarters and moved forward to see Petch when the North Novas had pulled back between Buron and Les Buissons. He estimated he got within four or five hundred yards of the German tanks. He had not come up to take over the battle: "I saw a counter-attack. You can't alter much. You're putting in an appearance, helping out what you can do."⁷⁴ It is mere speculation to consider what a counter-attack by two battalions would have accomplished instead of Petch's ad hoc combat team. The very minimum would have been a solid control of Buron. Could Cunningham have attacked without armour? By 1700 hrs the Sherbrookes had been reduced to about twelve fighting tanks. There were, however, more tanks in 2 CAB. Brigadier Wyman's conduct was passive. He had given

⁷³ Craig, 143.

⁷⁴ Cunningham interview, 5.

the First Hussars, 10 CAR, a warning order at 1430 hrs. They never joined the battle. Wyman does not appear to have taken additional action beyond his initial instructions to stand by. Gordon's queries regarding their arrival were calmly, yet evasively, answered, but no decisive action was taken.⁷⁵

With an armoured regiment in his hip pocket,⁷⁶ it is curious why Wyman did not play a bolder and more aggressive part in the battle. He was "posted to Comd 2 Cdn Armd Bde from BRAC Cdn Army in order that this formation would have battle-experienced Comd in very important assault stage."⁷⁷ Again, he showed himself to be a defensively minded commander conforming to a defensive doctrine. How Wyman could interpret the chaotic scene around Buron, and the desperate counter-attack by a handful of tanks and infantry against an SS Panzergrenadier Regiment as a "situation well in hand,"⁷⁸ is confusing. There is no evidence that Wyman made personal contact with Petch, Gordon, or Cunningham. It is not clear how far forward his reconnaissance took him. Had he arrived in 27 CAR's battle lines, he would have seen the plain before him strewn with the burning wrecks of sixty tanks: more than he had ever witnessed in his entire battle experience in the war. His hesitation in sending in 10 CAR may have been part of a scheme to counter-attack should Meyer reach Les Buissons. These were safe, conservative tactics; a tank regiment in reserve offered the 9 Brigade box armoured depth. Wyman's command decision was, basically, to do nothing.

With naval and field artillery gunfire behind him, Cunningham was safe, but it was not a propitious start for the Brigade. A certain amount of confusion, perhaps fear, may have influenced Canadian deployment; however, both Cunningham and Wyman

⁷⁵ RG 24-14045 WD 2 CAB. 7 June.

⁷⁶ 2 CAB Op Log records: 1435 Hrs 7 June: To 27 CAR "Are you able to maintain your posn." 1440 Hrs To 10 CAR "Stand by to move in full strength"; 1447 Hrs (to 2 CAB fm 27 CAR): "Q. Are we going to get rft? A. Can you hold out for the moment? (No reply); 1457 Hrs (To 27 CAR): "10 CAR has been ordered to standby in full str and will be ready to reinforce." RG24 14043 2 CAB Op Log.

⁷⁷ DHist MG 30 E 157. Crerar Documents. Msg CANMIL to Main HQ First CDN Army. 8 Aug 44. Bingham replaced Brigadier N. A. Gianelli (LSH RC) who relinquished command on 18 May 44 - a late time to change bosses. The decision was a knee jerk reaction, part of Simonds's determination to surround himself with youth. Gianelli was 49 years old "the oldest commander of a field formation in the Cdn Army." WD 2 CAB. 18 May 44. He was considered "somewhat below the average of the officers attending" the Cdn Staff College when rated as a Captain in 1925. Archives, RMC Library. Confidential. RMC 6-14-3. 17 March 25.

⁷⁸ WD 2 CAB, Radio Logs: 7 June 44.

were brought into 3rd Div because of their combat experience in Italy. The Hitlerjugend was no more seasoned than 9 Brigade; the difference was leadership. Even though Meyer and Prinz were more experienced than Cunningham or Wyman, the key was that they were well forward and aggressive. They had a sense of the battle and psychologically dominated their opposite numbers.

The real question is where was Keller? Wyman technically did not have the authority to launch a brigade group counter-attack. Wyman's 2 CAB was the infantry tank brigade. Keller could have launched a divisional counter-stroke. With Cunningham's Brigade and Wyman's tanks, an aggressive push would at least have reached the outskirts of Caen, if not the Orne. It must be remembered that on 7 June, Buron was the only game in town for 3rd Cdn Div. No other operation that day presented the promise or the consequences that a successful attack toward Caen would bring. The 7th of June was the first of two occasions in the battle for the beachhead that Keller formed and attacked with what was, for all intents, an armoured battlegroup. If he had the foresight to group a strong strike force, why did he not follow it up? Keller never did come forward to see Cunningham or Wyman during the battle. Why he did not became clearer as the battle for Caen extended into late June and early July.

Gordon vs. Prinz: Eine Reine Panzer Kampf

Buron was the first armoured battlegroup battle in the Normandy Campaign. It reflected the current state of an inadequate doctrine: self imposed restraints on the use of armour which reflected inexperience rather than common sense. Command relationships were ad hoc; no one was the boss. It was very polite, and very British. "In support" meant that you did your best but did not compromise your own doctrine and tactics. "By the book" tactics meant using long range fire and speed to keep out of trouble. This did not make for dynamic tactics or leadership. The concept of Auftragstaktik (mission driven tactics) was not inculcated during tactical training. Combat teams and small groupment tactics were about to evolve naturally in the American divisions far to the west in the bocage but not around Caen. The absence of an Auftragstaktik approach meant

Behfclstaktik⁷⁹ (Command driven tactics) dominated. The Americans recognized it early. The Canadians did not.

The employment of the 27 CAR Recce troop is unfortunate. They advanced like a large raindrop on a window astride the road to Carpiquet until they were hit by 2nd SS Panzer Battalion and promptly vanished from the battle. Their fate was discovered the next day by a Panther zug (tank troop) attacking toward Norrey via Carpiquet: "We drove past an airfield ... where a tank battle seemed to have taken place the previous day. A number of knocked-out light tanks, probably English, were scattered through the terrain."⁸⁰ Apparently the Stuarts actually reached the airfield. There was a good scrap and they may have taken a few of Prinz's panzers with them: "I think I also saw knocked out Panzer IVs."⁸¹ In situations as this, main battle tanks were required for recce. A troop of Shermans are better than Stuarts because they can do something about a hard contact; both fight for information or defend the area they have reached, creating that important "pivot" that was cardinal to the tactics taught Canadians. As an alternative, a troop of eleven Stuarts, divided into four or five patrols, advancing on a 3000 - 5000 yard front, could very well have made a difference. They could have advised Gordon and Petch that the western flank was open, the eastern flank, Ardennes to St. Contest, was crawling with Meyer's troops, and that Carpiquet was unoccupied. Using armoured recce aggressively is what armoured tactics are all about. It should be remembered that when the 12 SS was ordered to advance to the beaches and counter-attack, their divisional Aufklärung unit was split into four scouting parties, each of which contained a couple of eight wheeled armoured cars.⁸² The mission covered a front of well over fifteen miles. The point is, recce must seek out the enemy.

⁷⁹ See: LtCol Knut Czelslik, "Auftragstaktik – Thoughts of a German Officer", Infantry, Vol 81, No.1, Jan-Feb 1991: "General Otto von Moser mentioned the concept of Auftragstaktik for the first time when he wrote in 1912, 'leadership action ... by which the higher leader does not give his subordinate a binding order, but more an excerpt from his own thought process, through which he demands the intellectual cooperation for the accomplishment of the combat mission.' ... The double-edge nature of Auftragstaktik therefore becomes clear – in the context of direction and independence, of free maneuver room or not, of responsibility and obedience.", 11.

⁸⁰ Report by Unterscharführer Alois Morawetz, leader of a half zug from 3rd Pz company of 1st Bn, 12 SS Pz Regt (Panthers). Quoted in Meyer, 58.

⁸¹ H. Meyer, 58.

⁸² 1. party: Untersturmführer Kudoke...coastal sector Villers-sur-Mer - Deauville to Honfleur. 2. party: Unterscharführer Zinzmeister...Houlgate-Dives-Cabourg and east to the mouth of the Orne. 3. party:

The first armoured battle augured well. Two balanced forces met, slugged it out at battle range, and reaffirmed confidence in their own armour and gunnery. Once the crew's armour got over their jitters, troops and squadrons performed splendidly and basic training was validated: troops maneuvered, Fireflies⁸³ provided overwatch, and panzers were destroyed. The 27th CAR left the battlefield weary, bruised but tested, and battle proven. Although the 27th recorded respectable kills, "Reported they had in turn knocked out thirty-one enemy tanks, four enemy SP guns, and eighteen anti-tank guns. Eleven of the ko'd en tanks were believed to be Tigers,"⁸⁴ they had not met the enemy's main battle tanks. There were no Tigers in this battle; indeed, they would not appear in any number until the Canadians had crossed the Orne. Meyer reported nearly three hundred casualties to his panzergrenadiers, seventeen tanks destroyed, and an equal number damaged.⁸⁵ It is likely that thirty-four German tanks were hit and at least temporarily abandoned in the armoured battle. Most suffered minor damage and were recovered at night, but at one point there were three dozen deserted or burning Mark IVs strewn around the battlefield.

Canadian losses were heavy. The North Novas reported 242 casualties and another 128 men taken prisoner which was a terrible toll for a regiment in its first battle. The Sherbrooke Regiment recorded twenty-one Shermans knocked out and seven damaged.⁸⁶ Many Canadian tanks were repairable.

Unterscharführer Fingerhut...Orne river-Riva Bella and the coastal sector to St. Aubin. 4. party: Obersturmführer Hansmann. Bayeux area and the eastern coastal sector to Courseulles." Meyer, 58.

⁸³ Hans Siegel recalls no special instructions regarding Fireflies during June. "All panzers were targets."

⁸⁴ WD 27 CAR 8 June 1944; see also WD 2 CAB and 2 CAB Tank State 8 June 44.

⁸⁵ Craig puts the number at "A dozen Panzer IVs were a total loss, and others had been damaged." Craig, 145. 27 CAR War Diary claims forty-one enemy tanks, attached squadron estimates total thirty-three plus five probables.

⁸⁶ The Op Log at 2 CAB records at 2100 7 June: "Remainder 27 CAR est at 25 tks orchard 993741. 10 CAR has Sqn in vicinity...." RG24 14045 OP Log 2 CAB. Five days after the battle the Sherbrookes were still short 18 Shermans, 8 Fireflies and 4 M3s for a total of 30 lost or in repair tanks. An unofficial tank state for 7 June puts Sherbrooke loses at 34 Shermans, 9 Fireflies and 9 Stuarts: total of 52 AFVs. This probably represents a more accurate picture of "tanks knocked out in battle." The actual 2 CAB Tank State for midnight 7 June shows a deficit of thirty-six Shermans and six Stuarts which made a total of forty-two tanks lost. The first available Tank State for 27 CAR was on 12 June when they reported thirty-seven Shermans, four Fireflies and seven Stuarts available for action. RG24 14045 OP Log 2 CAB and 27 CAR WD.

7-30 JUNE 44: Avg Tank States 12 SS Pz Div vs. 2 Cdn Armd Bde ⁸⁷							
	<i>Tigers</i>	<i>Mark V</i>	<i>Mark IV</i>	<i>JPz/Stug</i>	<i>JgPanth</i>	<i>Totals Pzs</i>	<i>Total MBTs</i>
12 SS Pz Div		63	94	28		185	
2 Cdn Armd Bde							193
TOTALS		63	94	28		185	193

Table 3

Buron should be remembered as a major armoured battle - a striking panorama of over ninety tanks, Canadian and German, littered across the battlefield. In their first armoured trial, both 2nd Panzer Abteilung and 27th CAR fought well. But then courage was never the issue. By giving the battlefield to Meyer, Keller and Cunningham settled for defeat instead of triumph. Meyer's efforts to bulldoze through the Canadians, though technically unimpressive, were delivered with aggressive determination. Even though the North Novas beat him at the Company and Battalion level, Meyer defeated the Canadian leadership at the Brigade and Divisional level through boldness. Giving up Buron was to cost 3rd Division four more bloody weeks of battle to capture a town they held on 7 June.

Le Mesnil-Patry 11 June: Battlegroup Wyman vs. Kampfgruppe Mohnke

He had tried to make a tourniquet using the ribbon of his Knight's Cross and a flashlight.

Hubert Meyer

The situation on the beachhead was unsatisfactory. Keller was behind schedule, most of the D Day divisional objectives were still not taken by D+5, and the beach area had become a crowded place. Luckily, German assaults against the Canadian beaches were poorly planned and executed. Each Hitlerjugend attack failed before the determined fire of the raw infantry battalions of 7th and 9th Brigades. The 12th SS record is a juxtaposition of bold personal leadership by senior and junior officers, exceptional determination and bravery by young, inexperienced panzergrenadiers, and mediocre tactics. Combat experience in Russia gave 12th SS leadership command superiority but it did not give them tactical superiority. A sober examination will show they were, in fact, poor tacticians. The Buron attack and the bravado of pushing Jürgensen's Panthers into Bretteville may reflect boldness, but makes little military sense. However, Russian

⁸⁷ Canadian data based on 2 CAB Daily Tank States and Radio Logs reporting Tank States. RG 24 Vol. 14,046 7 June 44 to 30 June 44. For German statistics see: RH21-5/44, "Kriegstagebuch Panzer-Armeeoberkommando 5.", Abendmeldungen 7.7.44 - 30.7.44, and, History 12.SS-PzDiv Hitlerjugend, 57, 71, 78, 85. Meyer lists "58 Pz IV and 44 Pz V (Panthers)" ready for action on 24 June, 93.

veterans knew that reckless audacity succeeded more often than not, particularly with superior tanks. Again and again the Germans used their panzers with a confidence and audacity that bordered on brash stupidity. Although psychologically daunting, Panther or Tiger could not make up for the fact that they were bound to be destroyed if they attacked a defensive position in either close terrain or built up areas.

Any German attack was doubly arduous in the face of Allied air supremacy. Nonetheless, even the air force could be outfoxed. As early as 9 June, panzer companies openly maneuvered despite the threat of Typhoons. The Hitlerjugend quickly discovered the pilots' habits: "The twelve Panthers were lined up next to each other at a right angle to the railway line.... There were almost no fighter bombers in the air, as was usual for noon-time."⁸⁸ Allied control of the skies denied panzer divisions routine replacements. Bringing up petrol, ammunition, and spare parts was in itself a frustrating operation. What is amazing is that the Germans managed to run their tanks for the full three months, to maneuver at the operational level, and conduct strategic deployment. In the face of all the air forces deployed against them, in late June 1944, OKW redeployed a full SS panzer corps from Russia plus an additional three panzer divisions from northern France and Belgium in less than three weeks. This then was the status quo of German arms: a superb doctrine, an efficient experienced staff, and a command technique that often translated into absurd battlefield solutions. Bretteville is a good example:

With the dusk the Kampfgruppe began the attack from the area south of Franqueville. 4. Panzerkompanie moved on the right of the road, 1. Panzerkompanie to the left. Most of the motorcycle riflemen had mounted the panzers. Standartenführer Kurt Meyer accompanied the troops in a sidecar motorcycle as he had promised to his 15. Kompanie during training for the first attack.... A group of motorcycle riflemen and the vehicle of the artillery observer drove behind Kurt Meyer, 100 m further behind came the rest of the motorcycle riflemen. The Panthers drove at high speed through the open and flat terrain towards Le Bourg. The Regimental commander Kurt Meyer raced into the small village on his motorcycle.⁸⁹

⁸⁸ After action report Alois Morawetz. Meyer, 58.

⁸⁹ Meyer had briefly commanded the 15th Motorcycle Company, and promised the young Hitlerjugend recruits that he would be with them when they fought their first battle and lead them into their baptism of fire. He kept his word, even though this was an attack by Jürgensen's 1st Pz Bn and he had his hands full facing British 3rd Div troops and 9th CIB with his own, 25th Pz Gren, regiment. See H. Meyer, 55, Luther, 163.

In an action all too familiar, the Hitlerjugend attack drove into a kill-area. Steady Canadian anti-tank fire and accurate shooting checked the triumph of the will: "Wünsche drove with his command panzer to Norrey. He came under heavy fire.... With heavy hearts, Kurt Meyer and Max Wünsche had to make the decision to break off the attack."⁹⁰

At last the Panthers withdrew, leaving burning comrades. Meyer tried to storm the enemy with quick and violent close assaults. This worked on the Russian front but failed time and again against prepared Canadian defenses. The German contempt for the quality of American, British and Canadian soldiers appears throughout the Normandy campaign. The Allied over-dependence on artillery and a hesitancy to exploit success had been noted by the Germans:

The morale of the enemy infantry is not very high. It depends largely on artillery and air support. In case of a well placed concentration of fire from our own artillery and infantry will often leave its position and retreat hastily. Whenever the enemy is engaged with force, he usually retreats or surrenders.⁹¹

Conversely, in defence, the Thin Red Line tradition appears to have been well borne by the rifle battalions. But then, the defence was everyone's preferred option in Normandy. Hitlerjugend grenadiers were particularly vigorous. They fought with fanatical determination and would not surrender. In the attack, confronted by Canadian air and artillery superiority, they were generally beaten. The Meyer legend was mostly style, not tactics.

Le Mesnil-Patry: A Second Armoured Battlegroup Attack

It was a complete and costly failure.

C. P. Stacey, on Le Mesnil-Patry

For this operation the Bn will be under command of 6 Armd Regt.

War Diary, QOR, 11 June 44

In the early morning of 11 June, General Keller ordered his second, and last, armoured battlegroup attack. He selected the 6th CAR (1st Hussars) to attack and capture

⁹⁰ H. Meyer, 56. Morawetz: "They were burned, without exception, in their faces and hands... 15 of the 35 crew members from the knocked out panzers had been killed. The rest, with few exceptions, were wounded, almost all with burns.", 59. Max Wünsche later wrote to Hubert Meyer: "I could have cried with rage and sorrow." H. Meyer, 55-56. See also, RG24. WD Regina Rifles. June 8 44 Bretteville. Report Lt. Col. Matheson.

⁹¹ Quoted in Stacey, Victory Campaign, 274.

Le Mesnil-Patry. The village was south of the Bayeux-Caen highway and railway lines, just below Bretteville, and covered the western approaches to Carpiquet and Caen. The hurried decision to attack the village was:

... probably taken at a conference which General Dempsey held with his two Corps commanders at 5:00 p.m. on 10 June. Headquarters 1st British Corps, under which the Canadian division was still operating, logged at noon 11 June a message from 30th Corps concerning an attack then being launched by the 69th British Infantry Brigade in the area about Bronay. The log noted, "3 Cdn Div to keep 50 Div fully informed about progress of 2 Cdn Armd Bde which will help 69 Bde."⁹²

Bronay was just one mile north-east of Le-Mesnil-Patry. If the attack succeeded, the 2nd Battalion of 26th SS PzGren Regt would be cut off and destroyed; a gap torn in the 12 SS front leading directly to Carpiquet, the rear of Caen, and the Odon-Orne juncture.

Commander 2 CAB, Brigadier R. A. Wyman, gave orders at 1100 a.m., 10 June.⁹³ The commander of 10 CAR "held his own an hour later."⁹⁴

Wyman's ability to command an armoured brigade is open to question. He was imported from 1 CAB in Italy where he was not overly popular or considered tactically able by his peers and subordinates.⁹⁵ Heavy set and of medium height, he resembled Keller which perhaps influenced the Canadian senior staff. The high regard he enjoyed from Crerar was to prove most useful. Wyman enjoyed having a good time; three weeks before the Normandy Invasion, he lingered at a Mess Dinner, "drinking whiskey until 0745 a.m. with two other officers"⁹⁶ and was discovered drunk by the milkman. In the ensuing banter, Wyman discussed D-Day in some detail, particularly 3rd Division's role. His visitor reported the conversation to the authorities. Montgomery immediately ordered a general court-martial for Wyman. Only Crerar's direct intercession, "Wyman's

⁹² WD 2 CAB; WD 6 CAR; Stacey Victory Campaign, 140.

⁹³ WD 2 CAB. 11 June 1944.

⁹⁴ WD 6 CAR. 11 June 1944.

⁹⁵ Wyman had been a Militia officer in the Artillery (92 Field, Edmonton) and a CNR clerk before the war and this may not have impressed his armoured confreres. Wyman argued with his 1 CAB regimental commanders who questioned his "experience." These included Lt.Col E. L. Booth DSO (12 CAR - Three Rivers Regt; later as Brigadier commanded 4th Armoured Bde, 4 CAD during Totalize-Tractable); LtCol (later Brigadier) C. A. Richard "Stoney" Richardson DSO (14 CAR - Calgary Tanks). Richardson is reputed to have said: "I hope we don't have to fight as a brigade as Wyman will have us killed." Personal Interview, Brigadier Harold Hurdle, RCSigs, HQ 1 CAB; 6 June 96.

⁹⁶ MG30 E157 Vol 7. Brig Wyman, 2 CAB. Incident May 44. Report of Court of Inquiry.

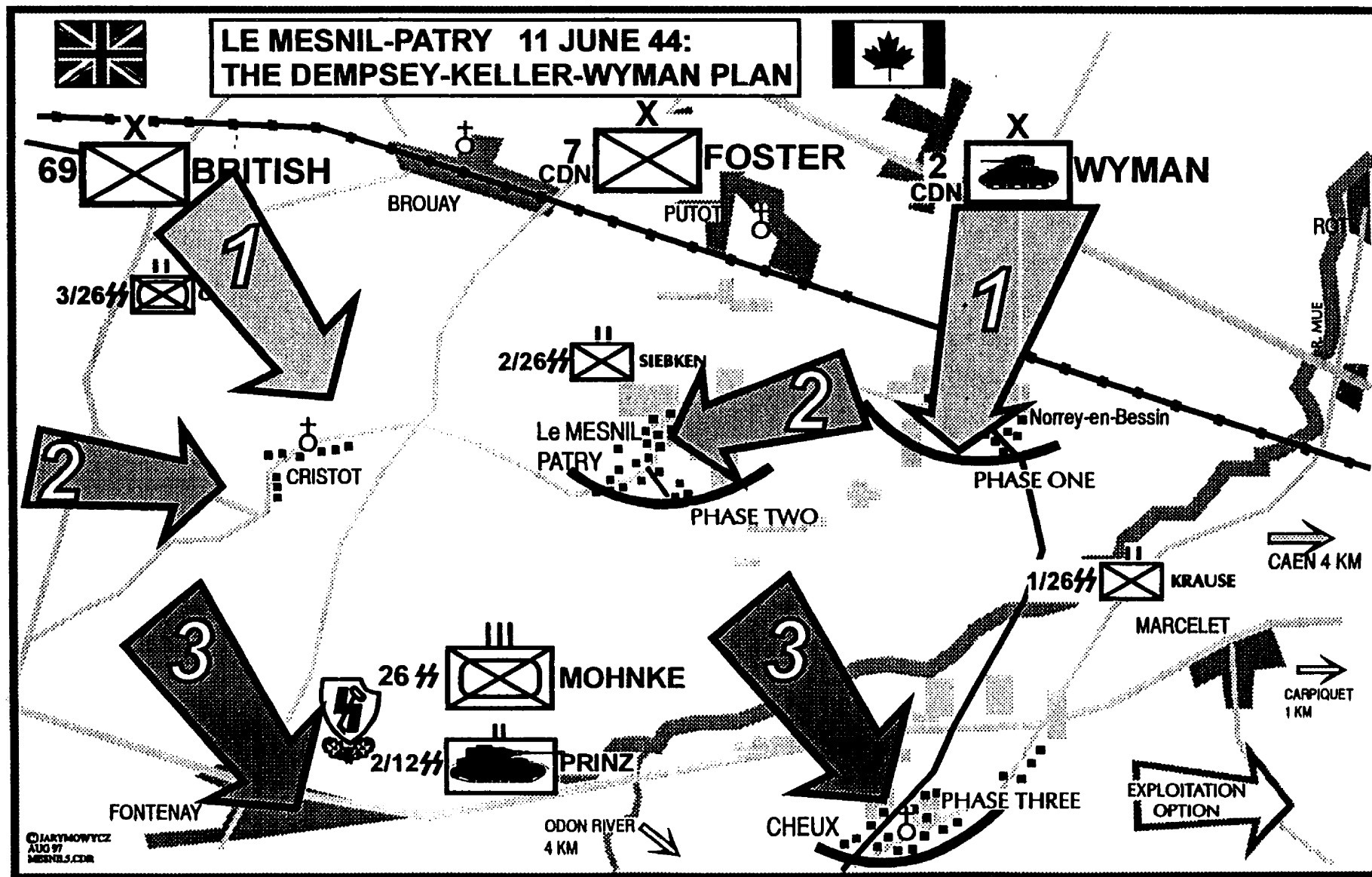


Figure 15

continued command of 2nd Armd Bde is important from the operational point of view,"⁹⁷ saved his neck and insured that he would lead 2 CAB into battle. At the 10 June Orders Group, 2100 hours, Wyman:

... announced his plan to be that 10 CAR should make a good intermediate objective tomorrow 11 June, by last light and that 6 CAR should go through to the final objective 12 June. 6 CAR is to make use of 11 June to get as much rest as possible for tank crews who are thoroughly tired out.⁹⁸

But at 0730 hours, 11 June, 2 CAB War Diary recorded that "orders were received from div to adv the time of the attack toward Cheux and carry out as early as poss today, instead of tomorrow."⁹⁹ Wyman scheduled a second O Group for 1100 at Bray: "6 CAR ordered to cross S/L by 1300 hrs ... the Bde Comd decided to follow closely behind the attacking regt with a small tactical headquarters in 3 tanks."¹⁰⁰

The 1st Hussars went into battle procedure. Ideally, the commanding officer would conduct a detailed reconnaissance with his "R Group" (a Reconnaissance Group composed of attached arms, artillery representative, and his Sqn leaders) then complete a thoughtful appreciation of the situation before issuing orders. In turn, the Squadron commanders would issue their more detailed orders to the troop leaders. This process would be repeated, concurrently, by each supporting arm. Staff Schools stressed that commanders had to think "two down": consider the time required to inform the lowest group in the chain, the trooper and soldier, who would do the actual fighting. This seldom occurred in Normandy. Troops were generally briefed en passant on their way to an objective, if at all. 6 CAR attempted to react to the new attack time: "In the morning we were told we were moving at 1100 hrs Sun 11 Jun. I knew one tank would be left behind, but was told later that only eighteen took part in the shoot. There was no briefing."¹⁰¹

Some 1st Hussar troops were "under the impression it would be a quiet HE shoot with the Artillery."¹⁰² There was no time for a CO's appreciation; if there had been, it

⁹⁷ MG30 E157 Vol 7. Letter from Crerar to Montgomery 14 May 44.

⁹⁸ WD 2 CAB. 11 June 44.

⁹⁹ WD 2 CAB. 11 June 44.

¹⁰⁰ WD 2 CAB. 11 June 44.

¹⁰¹ D Hist 141.4 A6013(D1). and WD 6 CAR: Account of Personal Experiences in Action on Sun Jun 11-44. Tpr Dodds AO, 6 CAR(1H) Appx 10, 1.

¹⁰² Dodds, 1.

would have had little use since the attack was micro managed to the point where the orders given by Brigade were simply repeated to each level of command. The rush to battle would create problems that spelled Le Mesnil-Patry's doom: "The attack was thus put in at very short notice and with less careful preparation than would have been desirable, particularly in respect to artillery support."¹⁰³

The plan was that "B" Squadron and one COY of INF were to seize the initial objective, LE MESNIL-PATRY, while "C" Squadron deployed on high ground on the right flank to support them with covering fire. There was no time for the Div Arty plan and the shortness of time allowed for planning did not give the sub-unit commanders the chance to brief their men of their own individual tasks.¹⁰⁴

The armoured battlegroup would advance south across the Caen-Bayeux Highway, cross the east-west railway and attack through Norrey-en-Bessin with a view to seizing the high ground south of Cheux. The operation's base was the 7th Cdn Brigade front lines. The tactical firm base would be provided by The Regina Rifles who had a company astride the railway and in Norrey-en-Bessin. Grouped with 6th CAR were three companies from The Queen's Own Rifles (QOR). It was not made clear that they were part of an armoured battlegroup; some company commanders thought this was to be a "Rifles operation":

The attack on Le Mesnil-Patry would be made by "D" Company under Major J. N. Gordon. "A" Company, under Major H. E. Dalton, on the capture of the village, would pass through and secure the road junction half a mile beyond the town. Then "B" Company and "C" Company were to be carried on tanks a distance of some five miles from the Start Line to the high ground south of Cheux.¹⁰⁵

It is not certain whether the QOR Commander, Lt.Col D. G. J. Farquharson, attended Lt.Col Colwell's O Group or if his command relationship stipulated "Under Command" to 1st Hussars. The maneuver plan is confusing. It called for an advance south into the Norrey area and then a right flanking onto Le Mesnil-Patry. In addition, the QOR apparently understood their role to be a frontal attack from either Le Mesnil or Norrey or both onto Cheux.

¹⁰³ Stacey, Victory Campaign, 139.

¹⁰⁴ WD 6th CAR. 11 June.

¹⁰⁵ Lt.Col W. T. Barnard E.D., C.D., The Queen's Own Rifles of Canada 1860-1960 (Don Mills: The Ontario Publishing Company Ltd., 1960), 201.

“A plan conceived in sin and born in iniquity.” First, no time was allowed for reconnaissance; secondly, no artillery preparation was provided despite the fact that it was known that the place was strongly held; and thirdly, the men were expected to go in riding on tanks through flat wheat fields, thus providing perfect targets for the defenders.¹⁰⁶

The British (and Wyman’s) plan depended on a quick seizure of Le Mesnil. Once this was secure, the north-west quadrant of the 12 SS defence perimeter could be snipped off by a supporting attack from 69th (British) Infantry Brigade positioned to the north-east of Le Mesnil-Patry. Success would mean the destruction of the bulk of 26th SS Pz Gren Regiment, commanded by Obersturmbannführer Wilhelm Mohnke.¹⁰⁷ Beyond lay the opportunity to exploit to the Odon or hook back east toward Carpiquet and cut off the rest of the Hitlerjugend. Once Colwell’s Hussars established the “pivot” at Le Mesnil, the rest of Wyman’s armoured brigade, consisting of two regiments, 10th CAR and 27th CAR, would bash south and push for the high ground. With no Panthers or Tigers supporting Mohnke, this could be the operation that cracked the entire Caen defence.

The attack began after 2:30 p.m. Considerable time was spent netting in. Tanks had to tune their radios and ensure that all stations on their radio net (an organization of radios transmitting on a common frequency) were in communication. This included all regimental tanks¹⁰⁸ as well as supporting arms that joined the formation:

... spent most of Fri netting in the sqn tanks on the sqn frequency and on a flick to the RHQ freq. There were 21 tanks altogether on the netting. Five troops of three each with six in HQF two of HQF tanks were on the RHQ frequency, and on flick to the sqn. Many of the tps were green, most of them were new to me.¹⁰⁹

¹⁰⁶ Barnard, 201.

¹⁰⁷ Infamous in history as “Hitler’s last General.” Mohnke commanded the Führer bunker and was one of the last to see Hitler. Captured by Russians, he eventually returned to Germany evidently under NATO/CIA protection. His participation in PW incidents near Buron and Malmady during the Ardennes has never been officially investigated. See: Ian Sayer and Douglas Botting, Hitler’s Last General – The Case Against Wilhelm Mohnke (London: Bantam, 1989), 156, 163-169, 248-256.

¹⁰⁸ A communication “net” had over 60 radios, plus attached arms. Squadron Commanders used the Regimental command net, then another radio/frequency to communicate with troop leaders. If they did not have a second radio Sqn OCs would “flick” between the two. Officers also used the tank’s intercom to instruct driver and the gunner.

¹⁰⁹ WD 6 CAR. After action report Tpr Dodds, 1. “The netting was quite troublesome. We had moved the S at night and most of us had had only an hours sleep. We moved off and later I saw we had picked up some inf, the QOR. There was much delay during which the air was jammed by someone asking for Sun-Ray ... One other tank continually asked to be renetted, he had time to net a dozen sets by that time so I finally told him to “lock up and shut up.” Replacements in the Canadian armoured and infantry forces seem totally out of proportion

Leading a squadron required a quick thinking, calm officer. The officer commanding (OC), normally a Major, was responsible for navigation as well as tactics. He supervised his troop commanders as well as his own tank's fire and movement. Fireflies were deployed to conduct "over watch." If there was infantry to support, the OC had to deal with the company commander. The infantry radios often did not work. Thus, regular halts were required to permit their officers to approach the command tank and use the "infantry radio" which was, in effect, a call box with a phone mounted on the rear of the hull. If this was out (shot off or ripped off during movement)¹¹⁰ the OC leaned out and yelled. Most crew commander casualties were head wounds from shrapnel or small arms. "Buttoning up" was unpopular: "claustrophobic ... no reliable vision ... difficulty breathing."¹¹¹ Many tank officers simply broke down.

6th CAR had just received twenty replacement tanks and crew. The men were not completely trained but were sent into their first battle. Most of the regiment had little idea of what the mission was all about.¹¹² For many of the tank troops it was simply a case of "follow my leader" until they got into contact. Lt.Col. Colwell's regiment advanced south across the highway and railway tracks.

The Regiment's vanguard consisted of "B" Squadron, with "D" Company Queen's Own Rifles riding on the tank's back decks. Just south of the railway tracks was a knocked out Panther.¹¹³ A couple of nervous troops immediately deployed upon sighting it and several tanks engaged the hulk with direct fire.¹¹⁴ The road was narrow

with the casualties reported. Units in action less than a day are regularly complaining about the low quality of replacements. 1st Hussars took some cas on the beaches but did not fight serious actions until 11th June. The numbers of "green" troops suggest psychological cas were prominent as well. See Terry Copp and Bill McAndrew Battle Exhaustion: Soldiers and Psychiatrists in the Canadian Army, 1939-1945 (Montreal: McGill-Queen's Univ. Press, 1990).

¹¹⁰ "18 cases are reported of the inf telephone being torn off either by fouling fence posts etc., or by not being replaced securely enough after use." RG24 10460. Answers to Tk Gunnery Questionnaire. 33 Armd Bde. 25 Jul 44.

¹¹¹ RG24 10457 Report on RAC Weapons 14 June 1945.

¹¹² Tpr Dodds for example, who, despite working in a Squadron headquarters, had not been given any orders.

¹¹³ From 3rd Pz Company, 12 SS - a victim of the 8th June attack.

¹¹⁴ This regularly happened when troops reached new terrain. Three Panther hulks sat in a field south of hill 67: "Every time a new squadron came through the area they shot up those hulks. I bet they even reported them as kills. There was no sense breaking radio contact to correct them. People were just nervous and fired at the first target they came across." Interview Gen S. V. Radley-Walters. 1993.

with high abutments. The Regiment continued in single file and reached Norrey at 1430 hours:

... as our leading squadron was starting off they found that the Regt would have to pass through NORREY-EN-BESSIN in line ahead formation. Our inf had sown mines on both sides of the road BRETTEVILLE-NORREY, and they had not been lifted; there was no time to wait for them to accomplish this. We changed our start line as soon as this intelligence was received and "B" Sqn went on its way followed by "C" and "A" Sqns and RHQ close to the rear.¹¹⁵

The village was dominated by a charming gothic church in the center of town and that is where the battlegroup headed. The bell tower had served as an artillery OP and was badly damaged by Canadian artillery and tank fire. Burrowed inside Norrey was the Pioneer Platoon from 2nd Bn, 26th SS Pz Gren Regiment. The Canadian advance had been carefully reported and as the vanguard reached the town center, German artillery and mortar fire began to fall. The QOR, riding on the back decks of the Shermans, were totally exposed. There were two options: dismount and take cover in the beaten zone or increase speed and drive out of fire. The tanks increased speed. At the center of town was a crossroad. The road to Le Mesnil was a sharp right turn. At 1506, the regiment reported "advance held up by MG and mortar fire from en positions which they could not locate."¹¹⁶ The Hussar tanks attempted to steer through this under fire and try to reach the open fields beyond. "All hell breaks loose from the enemy lines in the way of mortar and MG fire and the casualties are considerable ... very few of the lads not wounded."¹¹⁷ The SS Pioneers had been instructed to:

let the tanks roll by and only fight the infantry following behind with rifles and machine guns ... since the enemy infantry did not follow the tanks but was mounted on them, the men opened fire immediately. The Canadian infantry jumped off. The tanks rolled, their machine guns firing wildly in all directions, at high speed towards Le Mesnil. Bloody hand-to-hand combat between the Pioneers and the Canadian Infantry broke out.¹¹⁸

¹¹⁵ WD 6 CAR. 11 June 44.

¹¹⁶ WD 2 CAB. 11 June 44.

¹¹⁷ RG24 15168. WD QOR. 11 June. At 1300 hrs WD reported " disembarking on Norrey-en-Bessin and forming up at 919704."

¹¹⁸ Meyer, 67.

Colwell had driven into a kill area. The Shermans were easy targets in the narrow streets and raced for open country. The Queen's Own Rifles were left to sort out the Hitlerjugend infantry. It was a logical decision. To stop and fight a single platoon would have jeopardized the entire attack; however, now the 1st Hussars were no longer a battle group. They had been stripped of their infantry and would have no secure base until "D" Company had secured Norrey, behind them. The whereabouts of Colwell's Stuart recon troop is not certain; they do not appear to have been used in the advance. The presence of a second QOR Company, mounted in carriers directly behind the lead squadron, would have been of some help. Instead; a fraction of "D" Company, about a platoon's worth of infantry doggedly trying to keep up on foot, followed the Shermans. The 1st Hussars' War Diary insists that "Between the two towns the enemy brought down heavy mortar and MG fire to bear on the Inf who were forced to go to ground. The tanks moved forward and mopped up the MG nests and Inf positions, thus allowing some of our Inf to gain the immediate objective."¹¹⁹ The Queen's Own Rifles agree with the Hussars that they were hit after passing through Norrey, despite 12 SS insistence that Norrey was held, at least partially, by their Pioneers:

Despite the hurry it was about 1430 hours before "D" Company, riding on the tanks of "B" Squadron 1st Hussars, left Norrey-en-Bessin. Le Mesnil-Patry was 1,200 yards away. The intervening country was practically all flat fields of grain. About 300 yards had been covered before the storm broke. In a few minutes half the company and half the tanks had been wiped out.¹²⁰

Panzer Battles

Meurte el caballo perdide el hombre

Spanish Cavalry Maxim

"B" Squadron, 6th CAR, broke out of Norrey and shook out into battle formation as it headed for Le Mesnil-Patry, one mile to the southwest. Meanwhile, "C" Squadron attempted to maneuver into open ground to provide covering fire.

While the battle was progressing "A" Sqn and "RHQ" were advancing through NORREY-EN-BESSIN to the start line which was just to the west

¹¹⁹ WD 6th CAR. 11 June 44.

¹²⁰ Bernard, 202.

of the town. Over the air came information from "B" Sqn that they had reached their initial objective and their forward troops were well on the way beyond Le Mesnil-Patry.¹²¹

Given German records and eye witness accounts, this seems doubtful. However, it is clear some of the Canadian Infantry and tanks eventually fought their way into the village.

"D" Company survivors now kept to the ground and crawled doggedly forward. Despite losses the outskirts of Le Mesnil-Patry were reached. Then Major Gordon Fewell wounded. Lt. H. G. Bean, already wounded in the leg, gathered together Sgt S. T. Scrutton, seven riflemen and two tanks. Working to a flank the little group entered the village at the eastern end.¹²²

What appears to have happened is that "B" Squadron and "D" Company cleared Norrey and were followed by "C" Squadron and one to two QOR platoons. As the leading Canadian tanks and infantry neared the objective, they were taken under fire from the northwest, from Le Mesnil-Patry, and from the southeast. The squadron had driven into another classical killing zone – a horseshoe of small arms and anti-tank fire.

Suddenly both "B" and "C" Sqns reported a/tank guns and tanks firing on them. This information was passed to our Bde who in turn ordered our men not to fire on them as they were friendly tanks. The CO ordered Major A D'A Marks "C" Sqn to hold his fire and fly his recognition flags. Major A D'A Marks acted upon this and even got out of his tank to ensure that all the tanks were flying their flags.¹²³

The battle had reached its culminating point. Colwell had broken through at the juncture of two SS Battalions, III./26 and I.26. Both were supported by Pak 75s but no Panthers, despite the Hussars' insistence in their after-action report that there were Mark Vs in the battle. The tank unit supporting 26th SS was 2 CAB's old nemesis, Heinz Prinz's 2nd Pz Battalion of PzIVs. To be exact, there was one panzer outfit in the immediate area: Hauptsturmführer (SS Captain) Hans Siegel's 8th Panzerkompanie.

Wilhelm Mohnke was well forward, watching the Hussar's attack. He promptly drove to Heinz's Headquarters to request "Panzer support against an attack by enemy

¹²¹ WD 6th CAR. 11 June 44.

¹²² Bernard, 202. After a brief firefight Lt Bean was wounded twice. The Sgt took command and the QOR group, six strong, withdrew. Bean was awarded the MC, Scrutton the MM.

¹²³ WD 6th CAR. 11 June 44.

tanks and infantry near Le Mesnil.”¹²⁴ Prinz ordered Siegel, who had just arrived at his HQ, to immediately turn north and investigate.¹²⁵ The 8th Pz Company was already deployed in an “ambush position behind the sector of II./26, approximately 1 km south of Le Mesnil.”¹²⁶ The noise of battle caught their attention and soon they observed “mushrooms of smoke, generated by knocked out tanks.”¹²⁷ Siegel ordered his tanks to counter-attack. “Within a minute or so, four or five Shermans were burning.”¹²⁸ As he arrived on the battle field, Siegel could not make out the location of the Canadian armour. He followed a tree line and then saw dug in panzergrenadiers pointing north-west with their entrenching tools. “I decided to have look.”¹²⁹ Following their direction, he pushed through the woods and suddenly before him lay the 6th Canadian Armoured Regiment: “B” Sqn pushing forward towards Le Mesnil and “C” Sqn far to the rear moving up to support. He ordered an immediate attack with his company headquarters troop which consisted of three Pz Mark IVs. While the remainder of his company engaged the Hussars from the Le Mesnil area, Siegel conducted a bold flanking maneuver that brought him square against the exposed left rear of “B” Sqn and onto the flank of “C” Sqn as it was trying to advance forward to assist. “Even before our infantry was ready to storm ahead, the three panzers drove past the burning wrecks and between the fruit trees to our own main line of resistance.”¹³⁰

Siegel’s counter-attack was immediately observed by the Hussars: “... the enemy were beginning to outflank us.”¹³¹ Caught in a cross fire, losing tanks, short of infantry support, and now hit from his left flank by Siegel’s HQ troop, Colwell was forced to concede: “The position of the whole regiment was in danger of being outflanked by the

¹²⁴ Meyer, 68.

¹²⁵ Siegel had arrived at Prinz’s HQ to participate at the awarding of Iron Crosses to his men. There were no tanks in the immediate vicinity of Le Mesnil. Personal Correspondence Siegel, 1993.

¹²⁶ Meyer, 68.

¹²⁷ Meyer, 68.

¹²⁸ Untersturmführer Jeran, 8th Pz Coy. Quoted in Meyer, 68.

¹²⁹ Conversation/correspondence Siegel; Normandy, Bad Teinach. 1990, 1993.

¹³⁰ Untersturmführer Jeran, 8th Pz Coy. Quoted in Meyer, 68.

¹³¹ WD 6th CAR. 11 June. At 1521 6 CAR reported “En Hornets (tanks) coming in on right flank.” at 1623: “We are being engaged by en Hornets on right flank.” 1648: “One inf coy almost wiped out also severe tank cas. Sunray ordered wdr to SL.” 1746: “CO’s veh Kao’s.” RG24 14045 WD 2 CAB. Ops Log. 11 June 44.

enemy's armour, so the CO ordered his Sqns to the original start line to reform.... "B" Sqn went on fighting as they must not have received the order to withdraw."¹³² There was little of his Regiment left¹³³ for Colville to save: thirty-seven Shermans had been knocked out in the battle.¹³⁴ The heart of the regiment had been torn out. The full horror of the Regiment's "Black Day" was made all the more painfully clear when the Regimental Padre reached the battlefield on the night of the 16th:

In some cases the bodies were indistinguishable from one another; simply a mass of cooked flesh welded together in the great heat; we had to sift through this for identity tags. Each tank told the same story - broken legs, broken arms, open chest wounds, and so on, had trapped many so that they had burnt alive. The screams I thought I had heard during the action had not been imaginary after all.¹³⁵

"B" Squadron had been virtually wiped out; all officers and non commissioned officers, save three, were dead. The Regiment lost a total of eighty Hussars; "D" Company of the Queen's Own Rifles lost ninety-six, all ranks. The 12 SS casualties amounted to 189 Grenadiers and panzer crews, of whom fifty-four were killed. Casualties to Siegel's Pz Kompanie were light: three tanks, of which one was repaired, and one man dead.¹³⁶

¹³² WD 6th CAR. 11 June 44.

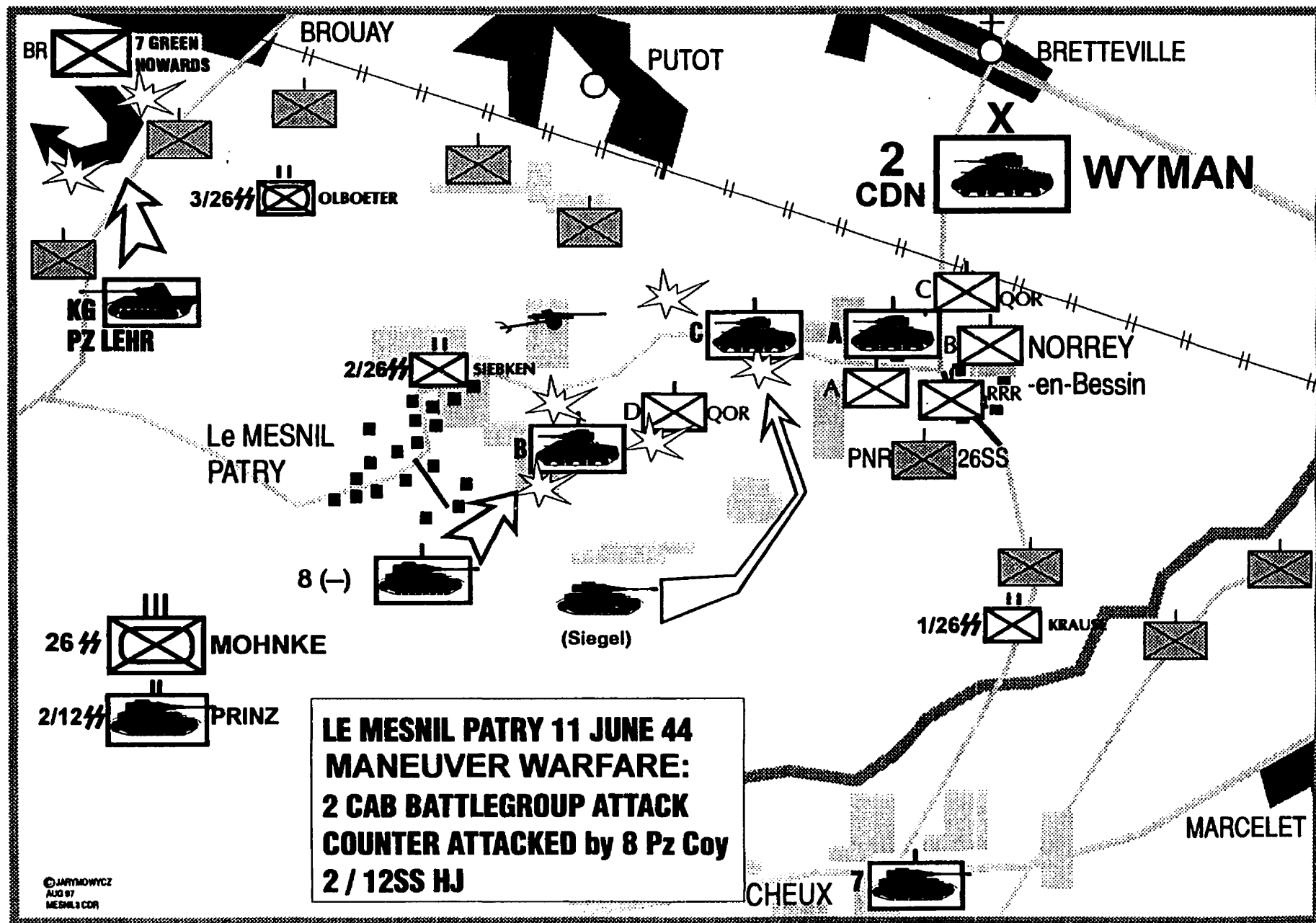
¹³³ Evidently even the withdrawal was a nightmare: "Further calamity struck. The Germans managed to get in to our artillery wireless net and put in a call for defensive fire on the Queen's Own area and on The Regina Rifles at Norrey-en-Bessin. It was a clever move on the part of the enemy. Immediately heavy fire poured down; some twenty minutes elapsed before the Brigade HQ could get it stopped. The havoc wrought was dreadful." Bernard, 202. It is certainly possible this occurred. 12 SS discovered an intact 27CAR Sherman on June 8th with marked maps, codes, and signals operating codes. (H. Meyer: 7-8 June). The sudden deadly appearance of Cdn artillery is a puzzle. It is possible they were firing in support throughout the battle but not noticed by Hussars or QORs.

¹³⁴ 2 CAB WD records "1830 - 6 CAR rept CO's tk was ko'd. At 1900 LtCol R. K. Colwell came to Bde HQ himself to give the first clear account of what happened."

¹³⁵ A History of the First Hussars Regiment (London, ON: privately printed, 1951), 77.

¹³⁶ Siegel's subsequent actions in battles around Caen earned him the Ritterkreuz (Knight's Cross to the Iron Cross).

Figure 16



Battle Analysis

Perhaps the most important aspect of the General Staff Corps lay in the fact that its members were trained to judge events and make appreciations, both operational and tactical to a definite and uniform system.

Heinz Guderian; Panzer Leader

Conceived in sin and born in iniquity.

Company Commander QOR; Commenting on the Le Mesnil-Patry attack plan

This was the first "official" armoured attack in Normandy by 2 CAB and was also to be their last.¹³⁷ The assault was a rash action, yet one of those inspired things that could go either way: 30th Corp's idea about a double envelopment was clever enough but the method was suspect. It was a hurried affair against a prepared defensive position held by a determined enemy who had already been proven to have deadly arms in the area. As it turned out, neither 69th Brigade nor the Panthers showed up. The Hussars' losses were later rationalized by Canadian headquarters with lame stories to ease the Regiment's agony:

"It turned out later that the Regt had been thrown in to the attack suddenly to break up a Panther div attack, so saving 7 CIB from being cut off and in the broader picture it helped 7 Armoured Div to advance on our right flank, so the fairly heavy casualties had not been in vain."¹³⁸

The main British attack by 69th Brigade fizzled early. For a brigade attack, there was little supporting fire delivered against Le Mesnil-Patry. The British start line was only two miles from the village. The southern thrust advanced about eight hundred yards before turning back under heavy fire. The big push toward Bronay, after advancing about a mile, was deflected back to the north-east. The victors were 2nd Bn, 26th SS, supported by a company of Panthers from 2./12 SS and an armoured Kampfgruppe (II./130) from PanzerLehr. The armour of 69 Brigade was never close enough to help 6th CAR, making

¹³⁷ Simonds's parade ground marshaling of the brigade in *Totalize and Tractable* should not count.

¹³⁸ WD 6th CAR 11 June 44. In fact, 7th Armoured did not attack until the 13th, its thrust was toward Villers Bocage, where it was destroyed by Wittman's famous "lone Tiger." See Chester Wilmot, The Struggle for Europe (London: Collins, 1952) 309.

it doubly tragic that the Canadian regiment was ordered to hold its fire during a crucial time of the battle for fear of hitting friendly troops.¹³⁹

A list of doctrinal “don’ts” were broken.¹⁴⁰ It would be difficult to assign exclusive blame to Wyman. He was following Keller’s orders, who in turn was ordered by Crocker to conduct a hasty attack. However, there was no proper battle procedure, no recce, and a series of start lines, the last of which was not secured. What the 6th CAR War Diary and Official History refer to as start lines were actually phase lines. The Battlegroup start line, the Caen-Bayeux Railway, was held by an infantry company from The Regina Rifles who appears to have had at least some troops as far forward as Norrey itself.¹⁴¹ The Reginas did not secure Norrey and if they were aware of the presence of 26th SS Regt’s Pioneer Platoon, it was not relayed to Colwell. The hurried battle procedure meant most Hussars and certainly most Riflemen had no idea of the coming operation or really where they were going. Tank crews who survived a hit on their tank found themselves totally lost when they tried to return on foot.¹⁴²

The Fire Plan appears to have been rushed and incomplete. The attached FOOs finally called down artillery but it was too late. It is not simply hindsight to suggest a good stonk on Norrey and Le Mesnil as the Hussar vanguard was approaching. As flawed as Allied doctrine may have been, what did exist was ignored. There was no supporting fire base and the Hussars, who arrived on the battlefield one squadron at a time, were engaged and destroyed piecemeal. Intelligence was incomplete despite the activity of Mohnke’s Regiment in the days preceding the attack. Quite obviously, there was not enough infantry. All of “D” Company, QOR, was wedded to “B” Squadron and their

¹³⁹ According to the 6th CAR War Diary the order was complied with by some troops, perhaps C Sqn. There is reasonable doubt that B Sqn, directly engaged with the SS and under attack from Siegel’s company would have checked fire. Siegel recalls a spirited firefight continued right up to the end. He also recalled that some of the Canadian tanks camouflage (netting or piles of straw) were set on fire during the battle.

¹⁴⁰ Colonel English refers to it as “this disgraceful affair”: John A English The Canadian Army and the Normandy Campaign - A Study of Failure in High Command. (New York: Praeger, 1991), 214.

¹⁴¹ Barnard, 202; refers to “The Regina Rifles at Norrey en Bessin.” See WD Regina Rifles.

¹⁴² Dodds recalls: “I was kneeling on the flooring re-arranging the ammo when the tank was struck. The dvr’s hatch was knocked off and the 75 knocked out, the breech etc., shook violently and went skywards, Sgt Johnson said “Bail Out.” The Capt gave one hesitant look skywards and then both were gone.” Dodds eventually made his way back to 6th CAR (it took 24 hours). His recommendations: “The value of briefing of all ranks before an operation so that they will know which way to go when unhorsed is evident, also each man should have a pocket compass if such a thing is possible.”

action, though gallant, was confused and fragmented between Norrey and Le Mesnil. It is unclear what "A" Squadron and the other three QOR Companies were doing throughout the action. If the German account is to be accepted, they were still fighting through Norrey throughout the battle. The 12 SS Pioneers must be credited with a most determined defence.

Unlike the 7 June action by 27th CAR, there was no satisfying final counter-attack to restore the situation. But then Colwell did not have the resources Mel Gordon enjoyed. He was about three infantry companies short and there were no attached anti-tank guns, not even a troop of M10 Tank Destroyers. The 1st Hussars Recce Troop was not used. The Stuarts could have given valuable service by a quick reconnaissance into Norrey or by probing the approaches toward Le Mesnil-Patry. "C" Squadron does not appear to have entered the show and was stuck trying to get out of Norrey. There appears to be no effort made by Colwell, despite the fact his RHQ was at the rear of the tank column and in front of the remaining three QOR companies, to attempt to maneuver or take control beyond his two orders to fly recognition flags and then withdraw.

The Brigade reserve, 10 CAR, was not called forward. Wyman's inexperience was evident, which is curious since his alleged combat background was the specific reason why he was given the appointment as Commander, 2nd Armd Bde.¹⁴³ Clearly, armoured experience in Italy was worth little in Normandy. The doctrinal training of 2 CAB or QOR does not seem to have prepared them for an armoured operation. As infantry tanks they were trained to support infantry, but Le Mesnil was an armoured show with the QOR supporting the tanks. It was to be the last 2 CAB battlegroup.¹⁴⁴

The Commander of 2nd Armoured Brigade did not appear on the battlefield and neither did his boss, General Keller. As before in Buron, Le Mesnil-Patry was "the only game in town." Wyman attempted to impose leadership by radio. Placing his tactical headquarters (three tanks) on the wrong side of Norrey and declining to come forward during battle ensured he would have no knowledge or influence on Le Mesnil-Patry. He

¹⁴³ "Brig Wyman was posted to COMD 2 CDN ARMD BDE from BRAC CDN ARMY in order that this fmnn would have battle-experienced COMD in very important assault stage." Crerar Papers. Gen Montague, CanMil London, from Crerar, Main HQ First Cdn Army. 8 Aug 44.

¹⁴⁴ "As a result of today's action by 6 CAR the Bde Comd R. A. Wyman, early this morning made note that we are being outgunned by the enemy and that we should have a higher proportion of Sherman VCs with 17 Pdr." RG24 WD 2 Cdn Armd Bde 12 June 44.

was content to follow the events on wireless until a shaken unhorsed Colwell walked up to his Sherman and reported. This was no way to run an armoured attack.

The effects of the June battles began to tell on the armoured regiments of 2 CAB. By 21 June ("D plus 15") the mounting losses and mechanical breakdowns had not been matched by arrival of replacement tanks from the beaches. The villages abandoned by Cunningham and Keller on 7 June were now the object of bitter, costly battles. By 6 July regiments had been reduced to thirty-four tanks and some infantry battalions to "fifty-four men per coy."¹⁴⁵ The battles to extend the beachhead were small, costly affairs. The regiments of 2 CAB, in good "infantry tank" fashion, were fragmented and parceled out one squadron at a time per operation or per infantry battalion. In Operation *Windsor*, the attack on Carpiquet Airfield (4 July), the North Shore Regiment and Le Régiment de la Chaudière were each supported by a squadron of tanks from 10th CAR, The Fort Garry Horse (FGH).¹⁴⁶ Another Squadron of FGH had been attached to the Winnipeg Rifles and been so badly mauled by Panthers of 1st Bn, 12 SS Pz Regt, that "At 9:00 Brigade ordered the battalion back to the start line and 44 rocket-firing aircraft were sent in to attack 17 enemy tanks or self-propelled guns which had been reported dug in around the airfield."¹⁴⁷ "A" Squadron, Sherbrooke Fusiliers, had been sent on a diversion to demonstrate on the left towards the Château de St. Louet and Gruchy. This was "successfully executed and a considerable number of casualties were inflicted on the enemy without our own force suffering any important losses."¹⁴⁸

¹⁴⁵ WD 27 CAR, 8.

¹⁴⁶ RG24. WD FGH. July; WD Regt de la Chaudière; Jacques Castonguay [et] Armand Ross Le Régiment de la Chaudière (Levis: imprimé privé, 1983), 270-275. The history totally ignores the presence of Canadian tanks in the battle.

¹⁴⁷ RG 24. WD Royal Winnipeg Rifles Jul 44; Op Log 3rd Inf Div, Jul 44.

¹⁴⁸ The squadron leader, Major S. V. Radley-Walters, was "highly praised for his excellent and invaluable work by Maj-Gen Keller...." WD 27 CAR. Supplemental Report 17 Jul 44, 3. "A" sqn had "accounted for some 75 Germans, a 37 mm A/TK gun with other possibles and no loss to themselves other than 2 tks damaged on a minefd."

CHAPTER THREE

BREAKOUT 1: *OPERATION ATLANTIC* JULY 19 The First Battle for Verrières Ridge

The Strategic Commander

Divisions are grouped according to this employment in the plan. I will never employ an armoured corps.

B. L. M. Montgomery: 21st Army Group staff Conference, 13 Jan 1944

It is a matter of debate whether General Montgomery had a strategic mind. An examination of his activities in Africa and France suggests he had a flair for lavish spectacle and liked to dabble in maneuver warfare but he was not good at it. Montgomery's claim to fame is the "set piece" battle which is an attritionist approach based on numerical superiority, an embarrassment of artillery, and a stubborn succession of frontal attacks until one side runs out of men or equipment. This seemed to work in Africa. The first El Alamein (Alem Halfa) was a brilliant defensive battle with all respects to its purported architects, General Sir Claude Auchinleck, Commander-in-Chief Middle East, and Major-General E. Dorman-Smith, acting Chief of Staff, Eighth Army.¹ The breakout, often called the third El Alamein, featured a pathetic inability to use the "force de chasse" composed of two armoured divisions designed to follow the 8th Army Schwerpunkt and overrun the remnants of the German-Italian host as it fled to Tripoli. The dean of desert warfare outfoxed Montgomery. The one "all Monty" defensive victory over Rommel was at Medenine where the Africa Korps threw itself onto the British flank and got some of its own medicine. There was no maneuver warfare. Montgomery arrived in Normandy experienced in the "ducks-in-a-row" offensive and somewhat disappointed by the stalemate of Italian operations.

¹ See Correlli Barnett The Desert Generals (New York: Viking, 1961) 177-189 and, Tucker, 137-141.

It was Eisenhower's wish that Montgomery assume operational responsibility in Normandy. By the end of June, with three German armies in the area, breaking out would require organizing a strategic offensive using the resources of two army groups. "D Day" was a brilliant example of an Allied strategic offensive; a failure could have set the war back by years. The aim of the next effort would be a breakout battle that ended with the Allies across the Seine. The first goal was to breakout and acquire operational maneuver thereby securing the destruction of the German army in the west and/or the capture of Paris. Either could bring about an operational, perhaps strategic, victory. Montgomery was working against time and geography.

Time was critical because every week brought in more American divisions and strengthened Bradley's hand. It is not unfair to suggest Montgomery wanted another Alamein and preferred an all-British knockout punch to an Allied or American win. Although he insisted that he had planned Normandy all along as an American victory – draw the Germans to the east, break out on the west – his actual conduct shows a series of desperate attempts to crack the Germans near Caen. Montgomery's other obstacle was the bocage. The sunken lanes, paralleled by medieval hedges that could stop a tank, reduced the Normandy battle to a series of bloody company-platoon-sized actions fought at ranges of less than one hundred yards. At least that was the situation in the American and British sectors.

In the Canadian sector the open ground beyond Caen was an armoured officer's dream. Unfortunately, the long ranges favoured German tank guns. This, coupled with the very determined, almost fanatic, defence by the Hitlerjugend Division, presented a daunting task. Nevertheless, a breakthrough near Caen could mean immediate operational maneuver. A breakthrough in the British-American sector de facto resulted in another two weeks of fighting through bocage until open area was reached.

If Montgomery had a strategic bent then a generous interpretation could be that he attempted a series of chess moves: Operation *Epsom* (reaching the Odon River), the taking of Carpiquet, dominating the Odon-Orne junction and the western Orne crossings and Caen's left flank, and finally, Operation *Windsor*, the capture of Caen itself. Ignoring the thrashing of 7th Armoured by 101st Schwer Panzer Abteilung (in effect, Wittman's two Tigers), the British had successfully pushed their way into the Odon Valley and were

doggedly fighting for the heights overlooking the Orne Valley by early July. It was clear that taking Caen was going to be a costly effort. Montgomery responded by using a strategic arm to win an operational offensive – the Allied bomber force.

Using the heavies to clobber Caen did marvelous service for the troop's morale but accomplished little. The city was turned into a rubble strewn obstacle and could have become a Stalingrad had the Germans chosen to defend it. Strategic bombing in support of a ground offensive was contrary to both RAF and USAAF doctrine. It put them under Army command, albeit briefly, and set a dangerous precedence – bombers as heavy artillery. Caen set the pattern for the Allied Strategic Offensive; any serious attempt at a breakout would be preceded by a heavy air attack. It was the key difference that separated the Allied operational mechanics. The Russians fired artillery, the Western Allies dropped bombs.

Caen initiated the pattern and *Goodwood* was confirmation. Montgomery had failed to break out during *Windsor*. There was a hurried German withdrawal but no rout. Now he had to do it all again. This time he had the benefit of being on the Orne and better able to take advantage of the British foothold on the eastern bank captured by 6th British Para Div on D Day. Ordering heavy bombers and squeezing all his armour into the eastern bridgehead, Montgomery prepared for "El Alamein IV." This was a grand plan if *Epsom* and *Windsor* were the detailed part of a strategical whole. Conversely, the case may be made that the previous attacks were a series of individual attempts ending with *Goodwood* before Montgomery became truly strategic and planned the double offensives of *Cobra* and *Spring* on 25 July.

Goodwood

We have nothing to fear from Panther and Tiger Tanks

General Montgomery, 4 July 1944

I do not need an American armoured division for use on my eastern flank; we really have all the armour we need.

Montgomery to Eisenhower, 8 July 1944

AP shot 88mm was quite extraordinary – as they came across the tops of the corn you could actually see them coming – as they left a wake rather like that of a torpedo ... and one could, in fact, take evasive action.

Major Bill Close; "A" Sqn, 3 RTR, north of Cagny, 19 July 1944

Operation Goodwood had the potential to chase the German armies across the Seine. General O'Connor's 8th Corps, comprising three British armoured divisions (7th "Desert Rats," 11th, and the Guards Armoured) were to break out on the east of Caen, fan out onto the high ground of Bourguébus-Verrières, and exploit towards the Seine and Falaise. Planning on the Corps level started on 13 July.

... the operation presented unusual difficulties, involving an advance for the first three miles through a corridor two miles wide both flanks of which were held by the enemy. It was therefore decided to enlist, for the first time on a large scale, the aid of the Strategic Air Force in the tactical role of neutralizing these menacing flanks....²

The bomber support was impressive: "Between 0545 and 0800 hours on 18 July, 1056 Lancasters and Halifaxes of Bomber Command, 570 Liberators of the VIII Air Force and 318 Mediums of the IX Air Force operated in close support...."³ The effects of the attack were initially devastating: "70% of Prisoners of War interrogated 24 hours after Bomber Command's attack ... could not be interrogated because they could not hear."⁴ The aims of *Goodwood* have been much debated. If it was part of a grand scheme

² RG 24 10554 L215 B2.013 LD2. Secret. The Goodwood Meeting 18-21 July 1944. Para 1. The *Goodwood* conference was a post-mortem held to analyze the operation's failure.

³ RG 24 10554 215 B2 Secret. Tactical Bulletin No.38. Operations by Bomber Command in Close Support of the Army - Caen, 18th July, 1944. "This raid was either the most useful or one of the most useful of the operations carried out by Bomber Command in direct support of the Allied Armies." Martin Middlebrook and Chris Everitt, The Bomber Command War Diaries 1939-1945 (London, Penguin, 1985), 544.

⁴ RG 24 10554 215 B2 Secret. Para 12. Extract from SHEAF report on Goodwood bombing. Diary entry from officer 2 CAB: "It was a scene of utter desolation. I have never seen such bomb craters. The trees were uprooted, the roads impassable. There were bodies in half, crumpled men. A tank lay still burning with a row of feet sticking out from underneath. In one crater a man's head and shoulders appeared

to “write down” German armour and open the door for Bradley in *Cobra*, it was not made clear to the armour commanders. Rather than expect a “holding battle”:

“Pip” Roberts relates that: “We had discussed in conference with Dick O’Connor what should be done after we were firmly established on the high ground beyond Bourguébus and I am quite sure that Falaise was in everyone’s mind as a point to be aimed for. When Hobart went up to 8th Corps HQ before the battle, O’Connor consulted him as to ‘the best formation in which the three armoured divisions should move once they had broken through into open country.’ ”⁵

Goodwood included a virtual “who’s who” of the grand old chaps of Royal Tank Corps doctrine. Besides the vast operational experience of O’Connor and the tactical background of Roberts, there was the raging bull of the Royal Tank Regiment, General Hobart himself. It is possible that this fellowship of the British armour decided to misinterpret Montgomery’s infantry approach and redefine the operational aim as, in fact, a breakout. However, it is more likely that a blitzkrieg was exactly what General Montgomery wanted. Here was a bomber blasted Schwerpunkt that made Guderian’s breakthrough at Suden insignificant. Eisenhower himself expected no less than : “a drive across the Orne from Caen towards the south and southeast, exploiting in the direction of the Seine basin and Paris.”⁶

Intelligence information prior to the attack estimated elements of three panzer divisions in the area (21 Pz; 1 SS LAH; 12 SS HJ) for a total of two hundred tanks and thirty-five assault guns⁷. This did not appear to include the presence of two Tiger battalions: 101 SS schwerPanzerabteilung and 503 schPzAbt. The 503rd, a Wehrmacht unit, was equipped with one company of brand new Tiger II B, the “Royal” or ‘King Tiger’ – the most advanced tank in the world.

The German defenses had been set by Rommel himself; *Goodwood* was to be the last Rommel-Montgomery battle. The defence zone began with a thinly held outer perimeter of observation posts and machine-gun nests. Behind lay the main defensive

sticking out from the side. The place stank.” Maj Gen H. Essame, Normandy Bridgehead (London: Ballantyne, 1970), 155.

⁵ RG 24 10554 L215B2.001D2. File by C. P. Stacey, taken from draft sent to him by Liddell Hart. 9 Sep 54.

⁶ General D. D. Eisenhower, Report Normandy Campaign ETO 1946. MHI.

⁷ Goodwood Conference.

area based on “web” defence: fortified villages with interlocking arcs of fire covering the forward zone and buttressed by more strong point hamlets. In the rear, deployed in open agricultural land, studded with a number of compact, well-built stone villages, were the German gun lines.⁸ In total, Rommel created five defense lines supported by mobile reserves of Pz IV, Panther and Tiger battalions. If German armour was permitted to maneuver, it could block any British penetration with accurate long range fire.

Resolute local commanders who had survived the savage bombing⁹ (most Germans were in shock, many soldiers went mad¹⁰) sat tight and fought from villages that stood like rocks in an armoured British sea. Decisive local commanders reacted quickly and organized effective ad hoc anti-tank defenses.¹¹ Soon British squadrons were being shot up from the flanks and rear.¹² Disorder began to emerge. The British armoured division still fought in two solitudes. The tanks, à la old Fuller / RTC doctrine, went in alone. As German reserve tank battalions arrived (Panthers from 1st SS and 12th SS as well as Tigers from 101 SS and 503 schPzAbt), the British tank divisions received increasingly deadly fire from their front as well. Soon the plain before Bourguébus was covered with nearly five hundred burning British tanks. The *Goodwood* offensive failed. Lt. General G. G. Simonds, who had just arrived to take over 2nd Canadian Corps,

⁸ Eisenhower, Para 5: Terrain. In addition, there were three railway lines that had to be crossed, two of which were elevated embankments. The entire area was dominated by Bourguébus Ridge.

⁹ RG 24 10554. DAT Air Ministry Tactical Bulletin No.38 (Anx I.B). In addition, “From 0700 - 0745hrs 9 USAF dropped 100 lb and fragmentation bombs in the area of the ‘tank run’ (fused nose instantaneous to avoid crater). From 0830-0900hrs Frénouville, La Hogue and Bourguébus were bombed by 8 USAF using 1000 lb bombs “to disrupt enemy concentrations and prevent or delay counter-attack.”, 2.

¹⁰ The Commander of No.2 Company of Tigers from 503 SchPzAbt deployed in the middle of the bombing area described tanks “thrown in the air like match sticks” and soldiers driven to suicide.

¹¹ The 21st Panzer’s Colonel Hans von Luck was shocked to see masses of British tanks south of Colombelles heading toward Bourguébus and the Paris highway. He quickly reorganized village strong points then noticed a flak battery still attempting to engage Allied tactical air. “I gave clear orders to get immediately involved in this battle by fighting the British tanks.” The Luftwaffe officer gave “..a flat refusal. So I took out my little pistol and asked him whether he would like to be killed immediately or get a high decoration. He decided for the latter.” Within minutes the battery was shooting British armour. See film documentary Operation Goodwood for this particular version and, Hans von Luck, Panzer Commander The Memoires of Colonel Hans von Luck (New York: Praeger, 1989), 154.

¹² “Pip” Roberts candidly recalled the effects of German fire: “Perhaps you would like to consider what you would do as commanding officer when having not heard from your rear squadron for some time, and you look back and you find that they all seem to be knocked out...some of them were burning, some of the crews have bailed out - at any rate, they are not operational.” Operation Goodwood.

watched the disaster from the bluff on the east edge of Carpiquet airfield.¹³ It was to make a lasting impression and influence his next two operations.¹⁴ *Goodwood* confirmed another Montgomery pattern: any failed breakout attempt was immediately re-baptized as a "holding battle."

Problems in Canadian Command

one might almost say fright ...

General Crocker, evaluating Keller's leadership of 3 Cdn Div

When Montgomery had removed some British commanders because of high casualties and disappointing performance, his Army Commander, Dempsey, told him he had the same problems within 3rd Canadian Div. The Canadian push towards Caen had fallen flat beginning with the battle of Buron on 7 June. Subsequent brigade offensives like Le Mesnil-Patry or the attack on Carpiquet were poorly planned, poorly supported, and mostly, at brigade and divisional level, poorly led. The results were the same: mounting casualties to the infantry¹⁵ and a continued stalemate. The attacks on the eastern (Caen) flank produced little; the frontal probes were doubly frustrating since they were being fought to recapture the same villages that Keller had agreed to give up on 7 June.

The Commander of 3rd Division was not well. The four weeks of fighting had affected his health and military judgment. He had punched his way into Normandy and promptly ran out of ideas. The first criticism came from senior British commanders. Keller's immediate boss, General Crocker, wrote an adverse report with veiled reference to corpulence and drink. "Keller is not really fit temperamentally and perhaps physically;

¹³ Goodwood's failure totally enraged Eisenhower and confirmed the desire of Air Force officers, still angry after the army's failure to exploit the Caen bombing, to get rid of Montgomery: "...the attempt by Tedder and the little coterie of British staff officers at SHEAF to get Montgomery sacked, which actually got as far as Churchill..." Essame, 157.

¹⁴ Marshal Sterns: Sterns Papers - correspondence between Prof. Reginald Roy and Marshal Sterns (Simonds's ADC) which took place during the preparation of Dr. Roy's superb book: Normandy 1944.

¹⁵ "The SD and G Highlanders had only 51 men per coy left..." RG24 14287, Ops Charnwood (Caen). 27 Cdn Armd Regt (Sher Fus) 17 Jul. After action report and "lessons learned": one of the most complete armoured historical documents found for June-July 44. Also, RG24 15271 WD SDG July 44.

he is a man who has the appearance of having lived pretty well.”¹⁶ More serious was the warning that Keller was ruining his division:

... the Div lapsed into a very nervy state.... Exaggerated reports of enemy activity and their own difficulties were rife; everyone was far too quick on the trigger, and general attitude of despondency prevailed ... the steadying hand of the Commander was required. It was totally lacking; indeed the state of the Div was a reflection of the state of its commander. He was obviously not standing up to the strain and showed signs of fatigue and nervousness (one might almost say fright) which were patent for all to see.¹⁷

Keller's commanders, including Montgomery, recommended he be sacked. Even though he had ruthlessly removed British commanders on the same front, Montgomery passed the decision along to Crerar. Crerar deferred to his subordinate, Guy Simonds.

Both had been handling another problem – Keller's attempts to sack Cunningham. The Buron battle had opened a nerve (“... Bde had failed to take objectives ... delay in use of reserve ... lack of drive....”¹⁸). Subsequent actions resulted in an adverse report and Keller's insistence that Cunningham must go. There was a serious personality clash.¹⁹ Crerar decided that Cunningham had not been handled well by Keller but then “Crocker's handling of Keller has not brought out the best in the latter.”²⁰ Keller was ordered to see Simonds. The interview began with a discussion about the proposal to fire Cunningham. Keller was adamant. Simonds suddenly produced British reports criticizing Keller's command of 3rd Division. Keller read them – it was a devastating blow. He broke down: “He did not feel his health was good enough to stand the heavy strain and

¹⁶ There was earlier evidence of a minor drinking problem in UK and discipline from Crerar: “Keller...drank too much and made an objectionable fool of himself on social occasions.” Crerar Papers. V2, 3 May 43 Keller enjoyed himself in the mess. “He usually called for a bottle of Johnny Walker Black to be set in front of him. This was normally gone by the end of dinner.” Colonel G. Routley, 17DYRCH, personal interview, 25 October 1988. If drink was a problem for Keller, it does not seem to have become serious until Normandy. A more likely analysis is that Keller's health suffered from the combination of battle exhaustion, nerves, diet and drink.

¹⁷ RG 24 10633 Crerar Papers. V3 Letter from Crocker. July.44.

¹⁸ RG 24 10633 Crerar Papers V3. Letter fm Brig A. E. Walford DA&CMG First Cdn Army. 13 Jul 44.

¹⁹ Keller had been Cunningham's DS at Staff College. The sophisticated lawyer left unimpressed with his regular force boss. Keller may have been jealous of Cunningham's status: “Cunningham was the ‘white-haired boy’ with Crocker and Dempsey before the assault.” Interview Cunningham, 1990 and Crerar Papers, 10 Jul 44 letter to LtGen Ken Stuart.

²⁰ RG 24 10633 Crerar Papers. 10 July 44 letter to Simonds. In a letter to Stuart Crerar wrote: “I am not sure at all of Keller being able to last the course.” Crerar Papers 15 Jul 44.

asked that he be medically boarded as he felt that he would be found to be unfit.”²¹ It is difficult to say whether Keller agreed with the censure, or if the realization that every one of his superiors (Crocker, Dempsey, and Montgomery²²) thought him useless, was too much for his ego. What is clear is he took the easy approach. He did not fight for his job. He tried to quit for reasons of health. Today, an enlightened chief medical officer might have agreed with Keller. His inability and subsequent frustrations and fatigue had made him a high ranking psychiatric casualty.²³ Keller tried to get Simonds to let him go. Simonds would have none of it. He looked beyond Keller and saw a division that was faltering spiritually as well as physically. He figured the loss of a brigadier and the div commander would be too much: “I am NOT prepared to recommend his removal on evidence at present available to me.”²⁴

There is not much evidence to show Keller or Cunningham were beloved or had legendary status in 3rd Division. They were liked. Generally, they were not well known. Cunningham was not a showman; he tried to do his job – “I visited each battalion daily.”²⁵ As the Normandy battle grew complicated, Keller sought the protection of his headquarters more and more. He did not appear forward during battles. As an infantry officer he likely suffered the news of the mounting casualties as much as the battalion commanders. There is little direct evidence to support Crocker’s insinuation that Keller was a coward. However, it is clear he did not lead from the front. Keller and Cunningham remained at their posts. Simonds sent them into *Atlantic* and *Spring*. Both would not do particularly well but by then, the battle was well out of a brigade or divisional commander’s hands. It had become a Corps show. Normandy was now Simonds’s war.

²¹ Crerar Papers 14 Jul 44 Memorandum.

²² Crerar Papers. Dempsey agreed, as did Montgomery: “undecided and apprehensive, and was in no sort of way a Commander...I consider he is not good enough to command a Canadian division...”

²³ see Copp and McAndrew, Chapter 6.

²⁴ Crerar Papers. V3. 27 July 44 Simonds to LtGen Sir Miles C Dempsey, GOC Second Army. Simonds was concerned “„with the bigger problem of maintaining morale of 3 Canadian Division.” Although he noted: “I believe MajGen Keller has failed to do his best....”

²⁵ Cunningham, 5.

Foulkes vs Schack

The Canadian portion of *Goodwood* was called *Atlantic*. The operational instruction for *Atlantic* was issued on 16 July from Simonds's headquarters. 2nd Cdn Corps had become operational on 11 July. General Simonds owned 8000 yards of front – the 2nd and 3rd Canadian Infantry Divisions, the 2nd Canadian Armoured Brigade and the 2nd Canadian Army Group Royal Artillery.

While British armour was attacking south and east, the 3rd Cdn Div was to cross the Orne with two brigades and work its way along the east bank, driving out Germans from the industrial parks of Colombelles and Vaucelles. A Canadian advance protected the British right flank and drove towards the bridges and roads that connected Caen to the southern plains and Bourguébus. It was a slow, dirty process. Fighting in built up areas is an infantry man's war. The Germans called it rattenkrieg. Keller's advance did not help the British much. His division was soon bogged down in a time wasting, life wasting effort against second rate troops that had become formidable defenders in the rubble. Bombing and artillery fire turned each house into a fortress.²⁶

On the far right, Simonds introduced a new Canadian Division into battle – Lieutenant General Charles Foulkes's 2nd Infantry. The division had arrived in late June and by the 19th was ready for battle. Foulkes owned three full brigades of infantry – nine rifle battalions. His task was to secure a supplementary crossing on the Orne at Faubourg de Vaucelles and push south towards Verrières ridge: "... and will be prepared on orders GOC 2 Cdn Corps, to capture area Verrières 0460 by an attack..."²⁷ The 4th Cdn Inf Brigade (Brigadier S. Lett²⁸) was the vanguard followed by 5th CIB. The objective was Verrières Ridge. The Orne crossing was not easy. The south bank suddenly rose as steep cliffs that dominated all approaches from Caen. The baptism of fire introduced several battalions into battle including the Black Watch from Montreal.

²⁶ Stacey, Victory Campaign, 158; D'Este, 315-316.

²⁷ RG24 2 Cdn Corps Operational Instr No.2 Operation Atlantic. 16 July 44.

²⁸ Lett had been wounded in Dieppe. He was wounded again on the 18th. LtCol C. M. Drury took over briefly and "Lt Col F. A. Clift of The South Saskatchewan Regiment acted thereafter until Lt Col J. E. Ganong took command of the brigade." Stacey Victory Campaign, 172. Neither the Brigade nor The South Sask were commanded by their original COs throughout *Atlantic*.

The defenders were from the newly arrived 272. Infanterie Division, commanded by Lieutenant General Friedrich August Shack. The 272nd was one of the 1943 series of infantry divisions reformed after demobilization in the months following the campaign in France. Its complement was a mixture of regular infantry, older veterans, and Polish, Russian and Ukrainian volunteers.²⁹ The 272nd was training on the French Riviera near the Spanish border when the invasion struck. By 18 July, Schack's men were deployed behind the Orne River, defending the southern suburbs of Caen and the gateway to Verrières Ridge. The contest between Foulkes 2nd Cdn Inf Div and Schack's 272 Infantry has been noted en passant within Canadian Military History. It is an interesting subplot to the battles for Verrières. On 18 July the two divisions, trained but untested in battle, were locked in a bloody struggle that would last until 27 July. The two commanders' duel was never fully resolved, but the *Goodwood-Atlantic* high watermark was reached when Foulkes had nearly five battalions on, and adjacent to, Verrières Ridge.

Charles Foulkes was born in England, grew up near London Ontario, joined the Militia and was eventually commissioned into the RCR as an infantry officer. He served in various appointments and enjoyed a meteoric rise during 1941-43. Foulkes was a regular officer with a career that matched his personality: careful, methodical and dull. He was not a great soldier and he was not a particularly good divisional commander. His performance during *Atlantic* and *Spring* eventually drew the ire of Simonds who tried to get rid of him. However, Foulkes had an important ally in General Crerar who protected him. They shared a common trait – hatred of Simonds.

Foulkes's opposite number, August Schack, was well educated for a regular officer, holding a degree in Theology from Breslau. A veteran of the Great war, his battle experience included Poland, France 1940, Lapland and Russia. He had commanded the War College in Potsdam, the 216th Infantry Division on the eastern front, and assumed command of 272nd on December 1943.³⁰ The Canadian Intelligence Corps conducted a

²⁹ Mostly German (generally older than Class 1 Inf Divs) with a high number of "HiWis" (foreign volunteers) included from Russian PWs, Ukrainians, Poles, even Asian types: WD 5 CIB records noted 272 PWs looked "Jap, probably Lapland or Mongol." Ser. 68, 19 July 44.

³⁰ Personal File F. A. Schack. Office of the Chief of Historical Operational History (German) Branch. 1 Apr 1945. MHI. Schack served in Russia May-October 43, Commanded 272 Dec43-Sep44; 81 Corps Sept 44; 63 Corps Nov-Dec 44; 32 Corps March - May 45.

detailed interrogation of Schack in August 1945. The investigating officer decided he was a complete idiot:

GenLt Friedrich August Schack, Commander of 272 Infantry Division is one of those generals who never knew anything and forgot it all. A thinner and more gentle version of the Erich von Stroheim type of Prussian general, Schack's irremovable monocle and shaven head portrayed the ruthless, efficient German officer so loved by Hollywood. A high pitched, excitable voice and rather vacant, shifting eyes – an absent minded, stupid man, born, rather than made, to his profession. His knowledge of details such as boundaries of the division, localities of formations or strengths of units at any given stage in the battle was pitiful. Even the date of the invasion had slipped his memory, and he excused his vagueness about the numbering of the regiments in his division by explaining that he was subsequently given command of 81 Corps and had, therefore, forgotten a great deal about 272 Infantry Division. After a morning with General Schack, it can only be said that the reason 272 Infantry Division remained in the Normandy battle at all must have been due to a capable divisional staff, and an undoubtedly efficient Corps Commander. It could have achieved nothing at all under the sole direction of its commander.³¹

In fact, Schack's division inflicted more casualties and created more reverses for 2nd Canadian Corps than any other German Division in the Normandy Campaign. If Schack was totally incompetent, it seems to have escaped the German High Command as well as his American captors who interrogated him two years later.³²

Schack had deployed according to Rommel's orders. The forward line was along the Orne followed by a series of suburban strongpoints from Caen to Hill 67. As more troops arrived, they were organized in web defence and formed four more lines of defence that included Hill 67, Verrières Ridge, and its reverse slope. Behind the ridge

³¹ RG24: 10677 "Special Interrogation Report GenLt F. A. Schack" HQ Cdn Forces Holland. 2 Aug 45.

³² He was decorated four times and was to earn the Eichenlaub to the Ritter Kreuz in September 1944 for his division's stand in Normandy. He next served as commander of three different infantry corps. During American interrogation Schack appears opinionated and knowledgeable. His memory improves enough to offer a complete divisional Order of Battle and name each unit and subunit commander down to support company level: MS B-702 "272d Infantry Division by General der Infanterie a.d. Friedrich-August Schack", Historical Division HQ US Army, Europe. 1947. MHI. See also: Martin Jenner, Die 216/272 Infanterie Div. Ban Nauheim. Podzun. 1964.

were Schack's artillery and Rommel's mobile reserves. These included elements of 2nd Panzer Division and the elite 1st SS Leibstandarte Adolf Hitler (LAH).³³

LAH was a superb panzer formation. It traced its roots to the praetorian guard raised to protect the Führer and then earned battle honours in France 1940 and Russia. It enjoyed the best of men and the pick of equipment. Its commander was SS Oberführer Theodor Wisch: "As a type he was entirely different outwardly from Kurt Meyer.... Pleasant faced, with sunken eyes brought on no doubt by the suffering of the past year."³⁴ Wisch relieved 12 SS HJ south of Caen in early July and after ten or twelve days handed over to Schack's 272nd. "... the Panzer IV Abteilung was left under corps command to help 272 Div on the west bank of the Orne."³⁵ 1 SS tank strength was high – "about 100 to 120 runners."³⁶ During *Goodwood* LAH Panthers helped destroy Montgomery's armour while its Pz IVs wrecked 4th and 6th Canadian Infantry brigades on Verrières.³⁷

Simonds vs. Dietrich: Round 1

He gave the Waffen SS a style and an esprit de corps which may possibly be compared only with Napoleon's Imperial Guard.

Otto Skorzeny, of SS General Joseph "Sepp" Dietrich

Normandy operations took on a totally different tone when Lt. General Simonds activated 2nd Cdn Corps Headquarters.³⁸ Simonds was to conduct four major offensives: *Atlantic*, *Spring*, *Totalize*, and *Tractable*. In each battle his foe was the 1 SS Panzer Korps and his opposite number was Obergruppenführer (SS Lt General) Josef "Sepp" Dietrich. They were very different in style and temperament. Simonds dominated his Corps; he commanded ruthlessly and planned each battle down to battalion level. His plans offered little or no room for initiative or maneuver. Each battle began as a set piece

³³ "The 1 SS Pz Div was placed in readiness in the rear of the 272 Inf Div in the area St AIGNON-IFS-FEUGUEROLLES-BRETTVILLE-SUR LAIZE." ETHINT MS B-540 by Gen der Infanterie Friedrich-August Schack : "272 Infantry Division (15 Dec 43-26 Jul 44), 9.

³⁴ Interrogation Report Brigadeführer Wisch, Comd 1 SS Pz Div. RG24 10677. 25 Aug 45.

³⁵ Wisch, 2.

³⁶ RG24 10677 Special Int Report: Brigade Führer Wisch, 1.

³⁷ Battle at La Hogue. Wisch, 2-3. Arriving in the Verrières area were the remainder of 2nd Panzer, the van guard of 116th Panzer, elements of 9th and 10th SS Pz Divisions and 102nd SS schPzAbt

³⁸ Simonds opened his Tac HQ at Amblie on 29 June; he formally took command of "800 yards of front in the Caen sector" at 1500, 11 July. Stacey, Victory Campaign, 166.

action in the image of his mentor, General B. L. M. Montgomery. Each, save the last phase of *Tractable*, ended in failure, confusion, and a disheartened abandonment of action by the corps commander. Simonds commanded through his exacting orders, constant conferences, and by radio. He was often found forward of his own division commanders but lacked the experience and personal flair to get great things out of his subordinates; he had serious reservations about three of them and the fourth, the only general with whom he had a decent relationship, he fired.

Yet Simonds is the great Canadian General of the Second World War. His tenure in this admirable position is partly due to his meticulous planning, but mostly because much of the serious competition was so dull and mediocre. Simonds was "a most forceful and original soldier. Ambitious, reserved and ruthless, Simonds was not an easy man to serve – he was intolerant of minds less capable than his own. Yet he received respect."³⁹ As a divisional commander he was rated as: "Most outstanding officer but not a leader of the type that will secure the devotion of his followers. Similar in characteristics to Burns and would give best service as a high staff officer. Has undoubted ability and will fight his Division and make few mistakes."⁴⁰ He was hated by his army commander who was jealous of him and attempted to prevent his appointment to Corps Commander.

On a number of occasions I have prevented him from following a foolish course of action, or got him "on the rails" again and my advice seemed to be sought ... Simonds is not only highly "tensed up" but also gives me the impression that he resents any control ... he has all the military brilliance for higher command in the field with his tense mentality, under further

³⁹ Wilmot 410.

⁴⁰ MG27 III B11 Vol 54 Ralston Papers 1943. "Officers Overseas Personal Evaluations" Burns was rated: "Exceptionally high qualifications but not a leader. Difficult man to approach, cold and most sarcastic. Will never secure the devotion of his followers. Has probably one of the best staff brains in the army...." Foulkes was credited with "exceptional ability, sound tactical knowledge, a great capacity for quick, sound, decisions, energy and driving power ... qualified to command a division." H. Crerar 9 June 42. MG30 E157. On 16 May 44 Crerar wrote to Stuart: "Simonds and Burns are capable of successfully filling the appointment of Army Comd. Of the two, Simonds is probably the more brilliant.... Simonds and I agree that, as regards mentality, Foulkes possesses the necessary qualifications (to command a corps). On the other hand, he has not been tried in the field ... he may not show himself equipped with the necessary mental and moral stamina." By 2 Jul 1944 Burns was out of the running for army command "In brief, General Alexander reports that in spite of other qualities, Lt. Gen. Burns shows lack of tactical sense and power of command." Crerar's attempts to sink the career of his fellow gunner found him in a strange alliance with Foulkes toward the end of the war. Their conspiracy both took away army command from Simonds and, despite efforts on his behalf by Montgomery, kept him in exile until August 1949. See. DHist Biog F: Foulkes Papers. Correspondance: Field Marshal BLM-Foulkes 12 and 26 Sep, 31 Oct 47; Correspondance Foulkes / Simonds 1947, 1948, 1949.

strain through increased rank and responsibilities, he might go "off the deep end" very disastrously indeed.⁴¹

Simonds's success was entirely due to Montgomery: "I have the highest opinion of Simonds. He tried to go off the rails once or twice when he first went into action with his division, but I pulled him back again, and taught him his stuff."⁴² Simonds's tactical ability has been given the benefit of doubt. Save for an amiable examination by John English,⁴³ his tactics have been politely, almost gently, ignored by a Canadian military history that appears to prefer to see Simonds as the compulsive genius, the scientist striving towards breakthrough in his laboratory, frustratingly let down by poor apparatus and untrained assistants.

The man who most often stymied Simonds's alleged brilliance was Sepp Dietrich. A virtually perfect antithesis to Simonds's cold, detached style, Dietrich was open, boisterous, gregarious, and loved by both his men and his commanders. He had the common touch. He was common.⁴⁴ Dietrich was one of the first German tank soldiers of the First World War; commissioned in 1923, he joined the Nazi Party and rose rapidly through the Allgemeine SS until he was appointed Commanding Officer of the Leibstandarte Adolf Hitler. He led the unit into combat in Holland, France, and Russia, where his counter-attack in the winter of 1942 recaptured Kharkov and brought deserved credit upon the LAH. By the summer of 1943 he handed over the 1 SS (by now an elite panzer division) and began to organize the new 1 SS Pz Korps. Despite his success in combat, ("Thanks to the leadership of Dietrich, the Leibstandarte escaped at least seven

⁴¹ DHist. 86/544 Crerar Papers. Personal and Confidential Letter to Montgomery. 17 Dec 43.

⁴² Crerar Papers. Correspondence from Montgomery to Crerar 21 Dec 43.

⁴³ And in some extent by J. L. Granatstein and Desmond Morton, Bloody Victory, 167, 173. John English forgives Simonds his failures but has less patience with Crerar: "Unlike anything produced by Crerar, the 2 Canadian Corps operational policy enunciated by Simonds reflected originality, clarity and completeness.", 238. J. L. Granatstein's The Generals - The Canadian Army's Senior Commanders in the Second World War (Toronto: Stoddart, 1993) is a political analysis of Simonds. His tactics are viewed from a safe, almost detached distance. Granatstein's conclusion is decisive: "Simonds: Master of the Battlefield." Dominick Graham's The Price of Command - a Biography of General Guy Simonds (Toronto: Stoddart, 1993.) has been savaged by his fellow historians (see: Granatstein review Canadian Military History: Vol 2, No. 2. Autumn 1993). It is a friendly account and does not provide more information on Simonds's tactical mind or reaction to his many tactical failures.

⁴⁴ Dietrich's charm did not win over his Canadian interrogators who described him as "Short, about 5'7" tall, squat, a broad, dark face dominated by a large, wide nose, rapidly dwindling hair, he resembled more the butcher that he started to be back in 1909 than the general he became in 1933." RG24 10 677 Special Interrogation Report. Oberstgruppenführer Joseph "Sepp" Dietrich., 1.

times from annihilation.”⁴⁵) and his obvious administrative skill, Dietrich was scorned outside the SS: “The Wehrmacht contemptuously referred to him as the ‘Wachtmeister’ (Sergeant Major).... Rundstedt’s description of Sepp Dietrich is admirable for both its accuracy and brevity. ‘He is decent, but stupid.’ ”⁴⁶

Within the SS, Dietrich was respected and regarded with affection. The identification devices and heraldry of the 1st SS LAH, 12 SS HJ and the 1 SS Pz Korps itself all bear testimony to Dietrich. His name, used as a pun, is the skeleton key or thieves’ tool within the shield that was fixed on every fighting vehicle and tank. “As a one-time NCO, his relationship with his men was closer than that of any other commander. Nevertheless, he expected the highest performance from his soldiers.”⁴⁷

On 12 June 1944 Dietrich took over command of Panzer Group West as well as retaining control of 1 SS Pz Korps; he became responsible for one of the largest and arguably most famous armoured forces in military history: four SS panzer divisions, three Wehrmacht panzer divisions and two Tiger battalions. He destroyed Montgomery’s armour in Operation *Goodwood*, wrecked *Atlantic* and *Spring*, and stopped *Bluecoat*. He snatched victory from Simonds after *Totalize* and *Tractable* appeared to have broken open the eastern Normandy front. His style was simple and direct (“a brave, incorruptible man”⁴⁸). He let his commanders go about their business. There was little apparent brilliance or the engineer’s precision about his style. Nevertheless, he got results.

There were two fundamental differences between Simonds and Dietrich. First, and most important, Dietrich could rely on both his own considerable experience and that of his commanders, most of whom he trained personally, and some of whom had served with him since 1933. Simonds had no such riches although he, like Dietrich, had never commanded a Corps before, he had no experience in armoured warfare and neither did

⁴⁵ MantFranz Kurowski Hitler’s Generals Edited by Correlli Barnett (London: Weidenfeld and Nicholson, 1989); -417.

⁴⁶ Special Interrogation Report. Oberstgruppenführer Josef “Sepp” Dietrich, 3.

⁴⁷ Kurowski, 417.

⁴⁸ Field Marshal Hans von Kluge, Letter to Hitler, 18 August 1944. Despite the snobbery shown toward Dietrich by the Wehrmacht’s Prussian hierarchy, von Kluge (who also originally dismissed Dietrich’s leadership qualities) came to respect him through out the fighting in Normandy: “I have come to know and appreciate as a brave, incorruptible man in these difficult weeks.” Quoted in Milton Shulman Defeat in the West (London: Secker and Warburg, 1947), 152.

his officers. Second, Dietrich's tactics did not arise from complex plans. They were straightforward and easily understood; he let his commanders do the fighting and he provided the reserves as they were needed. That, as Napoleon once noted, was the only activity left to a commander once the battle had begun. Simonds's operations were based on an intricate design and ended in disarray. Each offensive introduced a new formula, a new gimmick. That was the doctrinal difference between the two armies. The Germans knew how to fight and had confidence in a proven doctrine; the Canadians were learning to fight. The Simonds-Dietrich contests began with *Atlantic*.

The First Verrières: The German Counter-Attack, 20-21 July

We chased you from the beaches, we chased you through the grain,

You'll soon wish you never heard of the Normandy Campaign

"Luger Lugging Ludwig - Lay That Luger Down": Popular front line song, 2nd Cdn Inf Div, July 44

Intention: 2 Cdn Inf Div will be prepared to exploit to the SOUTH and secure areas
BASSE 0163 IFS 0463 pt 72 0461 ST. ANDRÉ-SUR-ORNE 0261 and area
VERRIÈRES 0560

Operational Order, 2nd Cdn Corps; Operation *Atlantic* 16 Jul 44

On the evening of the 19th, General Dempsey ordered Simonds to take over Bras from British armour as soon as possible. It was to prove impossible. The fields surrounding Bras, which was situated in the middle of Bourguébus Ridge, were littered with British armour. O'Connor's 8th Corps had been stopped cold. Keller's 3rd Cdn Division had just cleared Vaucelles and managed to get a brigade into Cormelles. The Germans still held the high ground. By next morning Dempsey issued an amended plan: 8th Corps would hold fast but 7th Armoured Division was to capture Bourguébus. 3rd Cdn Inf Div would relieve the battered 11th Armoured Division and the 2nd Cdn Div would advance southward and establish itself on the Verrières feature.⁴⁹

By 20 July, 2 CID was across the Orne and pushing south along the road that led to St. André, May, and Verrières Ridge. After tenacious fighting, the forward companies of the 272nd had been forced out of Vaucelles and Fleury-sur-Orne. Hill 67, which dominated St Martin, St André and May-sur-Orne, was secured. The Camerons pushed into St. André and Foulkes had three infantry battalions poised to capture Verrières itself.

⁴⁹ Stacey, *Victory Campaign*, 174.

GOODWOOD's LAST PHASE Situation 2nd CDN CORPS 20 July 44 "OPERATION ATLANTIC"

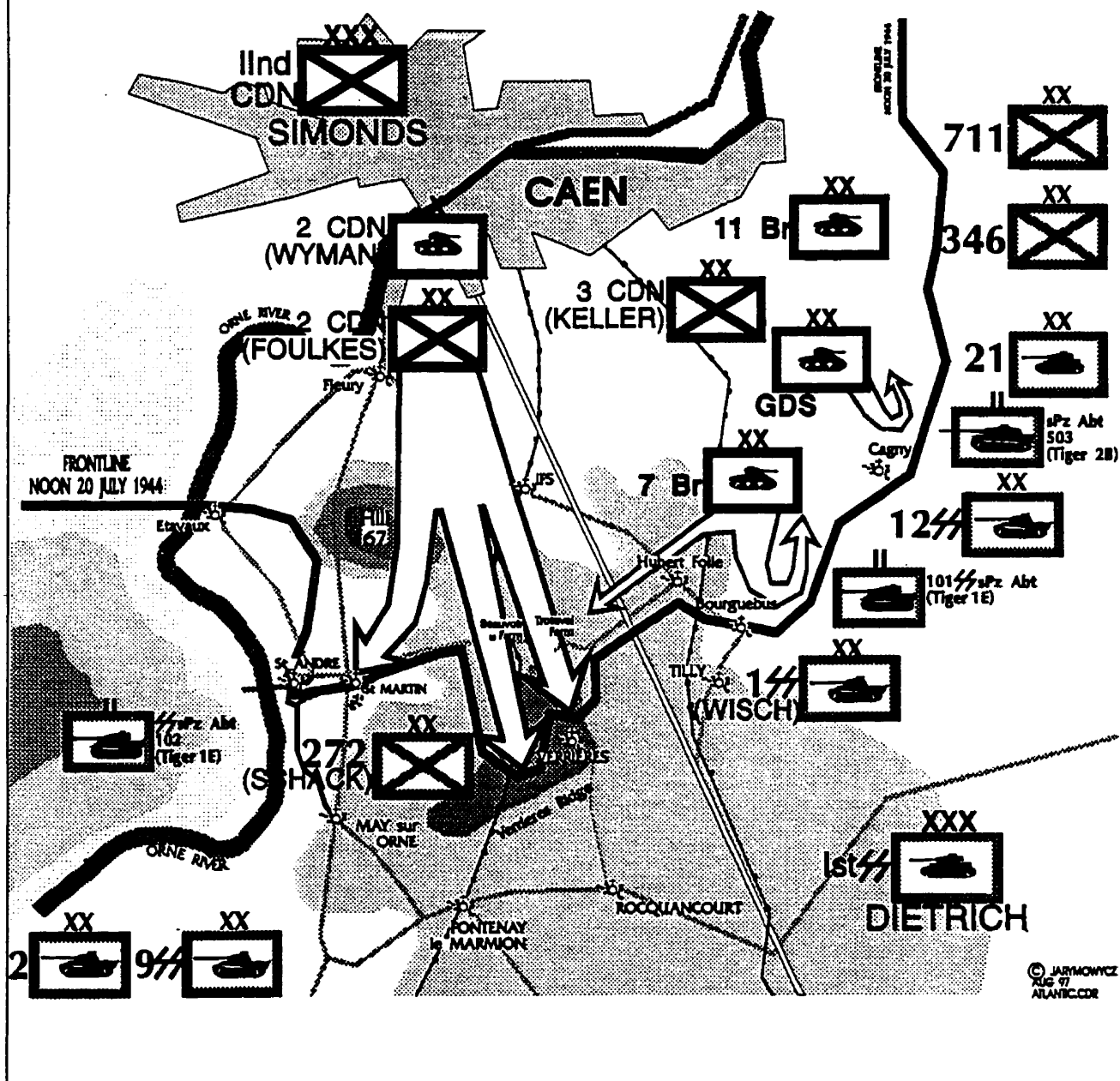


Figure 17

Commanding the division may have been frustrating for Foulkes. He was not a dynamic leader; he led from his Command Post via radio-telephones and was generally out of touch with the forward battalions. Had Foulkes wanted to direct the battle, he would have had little room for creative maneuver. 2nd Corps Staff planning reached down to battalion level; everything was spelled out. Every attack was frontal and the brigade staffs were reduced to cheerleaders. As it became evident to Simonds that the Ridge was within reach, he ordered Foulkes to push 6th Brigade forward and secure the most dominating feature south of Caen. Although *Goodwood* had failed as a breakout, if the Canadians could take and hold Verrières Ridge (a jumping off point for Falaise), part of the operation's objectives might yet be saved. At the least, Rommel's main defensive area would have been pierced and outflanked.

The final push for the ridge was made by Brigadier H. A. Young's 6th Infantry Brigade with the Essex Scottish placed under command.⁵⁰ The Brigade was spread out across the entire 2nd Division front. The Camerons were holding the right flank in St. André and engaged in a nasty house-to-house battle against the 980th Regt of the 272nd. The South Saskatchewan Regiment (South Sask) and Les Fusiliers Mont-Royal (FMR) were deployed two up and ordered to advance on a 2000 meter front. This meant the battalions would soon be totally out of sight of each other and not capable of mutual support.

The top of the ridge is flat and kidney shaped. The western end dominates May, St. André, St. Martin, and Beauvoir Farm. The eastern end controls Route Nationale 158, the Caen-Falaise Highway. The center has a slight depression; in that bowl is the village of Verrières, unseen except for the steeple of its church. Young's attack went in at 1500 hrs, supported by Typhoons and artillery. By 1730 hrs, the FMR had captured both Beauvoir and Troteval Farms and were advancing on Verrières village. To their right, the South Saskatchewan had pushed up onto the western crest of the ridge and were ready to swoop down on Fontenay-le-Marmion. It had also begun to rain. Behind the rain came a fire storm that turned success into tragedy. From the area of Verrières village, the

⁵⁰ 6 CIB had one of three French Canadian Battalions in Normandy (there were only four in Europe), Les Fusiliers Mont-Royal, led by the officers recruited from Montreal's French Canadian elite. The remaining units were from western Canada: The Queen's Own Cameron Highlanders and The South Saskatchewan Regiment.

Germans unleashed a violent counter-attack. Tanks and panzergrenadiers pushed forward supported by mortar fire. The two leading companies of the FMR disappeared.

The German attacks were by Kampfgruppen (KG) formed from 272nd Infantry, 2nd Panzer (KG Kohn) and 1 SS LAH.⁵¹ The Leibstandarte⁵² had Kampfgruppen in Verrières, Tilly-la-Campagne, and La Hogue. Their initial attack, by KGs composed of 5th and 6th Companies of 2nd Battalion, 1 SS Pz Regt (Mk IVs), supported by 9th Company, 3rd Bn, 1st Panzergrenadier Regt, appears to have come via Verrières.

They overran the leading FMR companies,⁵³ turned west, and, in concert with 2nd Panzer's Kampfgruppe Kohn, shattered The South Saskatchewan Regiment. As the westerners fought to conduct an orderly tactical withdrawal, Colonel Kohn's battle group⁵⁴ came upon the unlucky Essex Scottish. "Two of its companies are reported to have broken; it became disorganized and lost very heavily."⁵⁵ There was no Canadian armoured counter attack despite the fact 2 CAB faced Mark IVs and on hand was a veteran tank regiment – The Sherbrooke Fusiliers.⁵⁶

⁵¹ The 2nd Panzer was still east of the Orne but managed to organize a battle group and get it south of Verrières by 19 July. Bundesarchives: RH21-5/50 Kriegstagebuch des Panzer Armeeoberkommando 5. Angefagen 10.6.44; gefchloffen: 8.8.44. Reports 19-21 Jul 44. The guts of the unit: Panzer Regiment 3, PzGren Regt 304, and Div HQ did not appear in 2nd Cdn Corps area until 24 July. Major Koch commanded 2nd Bn, 3 Pz Regt. In the fighting west of the Orne the CO of 3rd Pz Regt, Col Kohn had been killed, the CO of 1st Bn, Major von Leesten, seriously wounded. Koch's KG deployed behind Verrières ridge: "we were sent to the rear in reserve, i.e. tanks, armd infantry and 2nd Bn 74th Arty Rgt." Statement Lt Peter Prein, April 1990.

⁵² The Division had concentrated in the Forêt de Cinglais area with its HQ at Lahousse (approx 3 km south of Verrières Ridge). Two of its Kampfgruppen had been in action west of the Orne at Eterville and Louvigny as late as 11-13 July. LAH counter-attacks began late 18th July and continued through 19th. By the 20th the Divisions main elements were on Bourguébus with KGs in La Hogue, Tilly-la-Campagne and Verrières. A combat team had been near Ifs but withdrew to Beauvoir far during the night of 19/20th. Rudolf Lehmann und Ralf Tiemann Die Leibstandarte Band IV/1 (Osnabruck: Munin Verlag, 1986), 178-182. Bundesarchives: RH21-5/50 Kriegstagebuch des Panzer Armeeoberkommando 5. Angefagen 10.6.44.

⁵³ The FMR was reduced to 50% effective strength. Two rifle companies "simply disappeared"; the depth company commanded by Major Dextraze came under "machine gun fire from tanks and mortars." They soon had 30% casualties and the attack stopped. During July 44, the FMR was able to produce only one strong rifle company. Personal interviews General J. J. Dextraze, 1990, 91, 92. See also, RG24 10985 Message Log 5 CIB, 19 July 44. --

⁵⁴ "Our counter-attack with all available elements of the 1 SS Pz Div LAH dislodged the enemy from BOURGUEBUS [Verrières ridge] which he had penetrated with about 50 tanks and took height 67 south of Fleury-sur-Orne." Oberst Kohn was killed west of St. Martin church 19/20th July. RH21-5/50 Kriegstagebuch 5 Pz Army 20.7.44, and, Stacey 178.

⁵⁵ Stacey, Victory Campaign, 175. See also: Schack, B-540, 10.

⁵⁶ 27th CAR's squadrons ("A" right; "C" left), had moved into position below the high ground to support an attack on St. André-sur-Orne. RG 24 14287 WD 27 CAR, 19 July 44.

The Corp's Counter-Attack: 21 July

Goodwood was shattered but had created some problems for the Germans. Although Montgomery had been embarrassed, by battle's end, 2nd Canadian Corps held part of Bourguébus ridge, Hill 67, Beauvoir Farm, and the town of St. André. Hill 67 overlooked the valley before Verrières Ridge and dominated the tactical approaches to the ridge and Fontenay-le-Marmion. The feature was a jump off point for any attack against Verrières. St. André was the anchor on the Orne. It controlled the only bridge in the area capable of taking Tigers and was the Orne terminus for the east-west road that connected Maltot and Vieux in the Odon salient with Bourguébus and the main Caen-Falaise highway, Route Nationale 158.

Dawn, 21 July, found General Foulkes still in a tactical muddle. The 6th Brigade had been thrown off the ridge and Troteval and Beauvoir farms were lost to German counter-attacks. The South Sask, totally disorganized, had been withdrawn from the battlefield.⁵⁷ The remnants of the FMR and Essex Scottish, each about two weak companies strong, were hanging on below Beauvoir, while the Camerons, grimly fighting for their foothold in St. André, were in danger of being surrounded. Sepp Dietrich, accompanied by LtGen Freiherr von Lüttwitz, Commander 2nd Pz Division, met with Schack on the 20th and decided to follow up their earlier success by ordering his panzer divisions to help Schack eliminate the Canadian battalion in St. André and recapture Hill 67.⁵⁸ The attacks began very early in the morning. "In der Nacht das Korps, das die LAH die 272. Inf. Div. links von uns bei ihrem Angriff zur Wiedereinnahme von St. Martin-de-Fontenay und St. André-sur-Orne unterstützen sol."⁵⁹ Assaults were made by Schack's 980th Regiment supported by a KG from 1 SS LAH – Panthers from 1st Abteilung, 1 SS Pz Regt and infantry from 2nd Battalion, 1 SS Pz Gren Regt.⁶⁰ The Kampfgruppe blitzed

⁵⁷ "170 prisoners of a Canadian inf div passed through the command post." Schack, B-540, 11.

⁵⁸ Dietrich was briefed on the 272nds counter-attacks and 2nd Cdn Div's poor showing: "Zu unserer Verblaffung erwiderte Sepp Dietrich in seinen bayerischn Dialekt: 'Eh es nicht schiesst, glaub ich nicht dran!'" WD 272.Inf.Div. 21 July 44. RH 26-272/5, 23.

⁵⁹ "That night the Corps ordered LAH and 272 Inf Div ... left of St Martin-de-Fontenay and St André..." Lehmann, 181 and Martin Jenner, Die 216./272.niedersächsische Infanterie Division, 1939-1945. (Bad Nauheim: Podzun-Verlag, 1964), 158-159.

⁶⁰ This battalion was motorized. Like the 12 SS HJ, and despite its status, the LAH had only one true pzgren battalion equipped with APCs - 3rd Bn from the 2nd SS Pz Gren Regt.

through the Essex Scottish and drove them back to Ifs, the 2 Pz KG pushed through St. Martin and around the flanks of the Camerons. The attack bogged down in bitter fighting that took heavy casualties from both sides:

Our own counter attack immediately launched from the south onto Hill 72 [Verrières] held up under enemy barrage and flanking fire from ST MARTIN, but we were able to recapture Hill 72 after bitter fighting ... some of our combat teams penetrated ST MARTIN and ST ANDRE SUR ORNE, but were unable to clear up localities before dark as the enemy was stubbornly defending bunkers and strongpoints which the Germans had constructed inside.⁶¹

Foulkes, after some urging from Simonds, acted to restore the situation. With three battalions broken and a third about to be overrun, the situation looked grim. Second Division still had not regrouped its armour, but it did have Simonds to sort out the artillery. Only one fresh battalion was in position to redress the situation – The Black Watch (Royal Highland Regiment), the crème de la crème of Canadian infantry. The Montrealers were a cocky group of officers from Westmount and men from the working classes of what seemed like every city in North America.⁶² The Watch had fought its way into Ifs by the evening of the 19th. The next afternoon they watched as the Essex Scottish and South Saskatchewan fell back in disorder from the German counter-attack. Commander of 5th CIB, Brigadier W. J. Megill DSO, deployed his battalions in a wide defensive arc in case the German attack gained momentum and struck north toward the Orne bridges. The German attack paused after clearing the 6th Brigade off the ridge. On the 21st, continuing counter-attacks by 272nd and 1st SS Kampfgruppen again threatened to storm Hill 67 and totally cut off the Camerons in St. André. General Simonds finally ordered Wyman's 2nd Armoured Brigade to support Foulkes's Division. Prompted by Simonds, Foulkes promptly tasked LtCol. S. S. T. Cantlie's Black Watch to strike south and conduct, in effect, the corps counterstroke.⁶³

⁶¹ Schack, B-540, 11.

⁶² The Watch was comprised of Montrealers but included Canadians from every province plus nearly 100 Americans, Ukrainians, Poles, Germans, Danes, Irish, English, even Scots - all wearing the Red Hackle. The unit was steeped in tradition and esprit de corps. During the Great War, the German Army had christened the kilted regiment "the ladies from hell." RG24 15009 "1st Bn The Black Watch RHR of Canada Pt II Orders", Parade States, June-July 44; Interviews, RSM C. W. Bolton, Cpl B. Duckett, 1990.

⁶³ The Orders Group ran late. The Watch crossed the start line as senior officers scrambled to reach their commands. Correspondance Capt Campbell Stuart RHR, 28 May, 1990.

The attack was supported by all available guns, shooting "a formidable artillery programme,"⁶⁴ and squadrons from 6th and 27th CAR. There was no real battlegroup formed. The Watch was not given a regiment of tanks under command and Wyman conversely, was not given the Black Watch and ordered to form an armoured battlegroup. It; it was, after all, ideal tank country.⁶⁵ The gunners laid down a perfect barrage; the Watch leaned into it as if on maneuvers. By 8:00 PM they had advanced just over a mile in "a real text book attack"⁶⁶ and secured the forward bluff of Verrières, digging in around the narrow gauge railway crossroads, about 500 meters west of Beauvoir farm. The front line had been secured.

Secure may be a generous word. Although Troteval and Beauvoir farms had been lost, the approaches to Ifs and 67 had been blocked; but there was still over a mile of open tank country between the Watch and St. André. The 17 pdrs had not gone forward and the tank squadrons hung back. Throughout the counter-attack, Canadian and British tanks had been supported by fire from the rear. From their positions on 67 and the crossroads, two highland regiments, the Calgary and Black Watch, were to enjoy a ringside view as a third highland battalion, the Camerons, was about to receive the full attention of Dietrich's 1 SS Panzer Korps. The Germans overlooked St. André from the wooded high ground of Feuguerolles across the Orne, from May-sur-Orne, and finally, to the east, from Verrières itself. It was a perfect killing ground. The only tank squadron forward of 67 was "A" Squadron, 27th CAR (The Sherbrooke Fusiliers Regiment).⁶⁷

⁶⁴ Stacey, Victory Campaign, 176.

⁶⁵ "Unquestionably, they should have been intimately supported by tanks that far better than infantry chests could lean into a barrage and take a hit. Doctrine played a part here, as well as an armoured corps perception that other arms failed to understand the limitations of armour, that tanks should not be expected to lead attacks against prepared enemy anti-tank positions." English, 230. English is correct. The Black Watch counter-attack, delivered against a recently arrived, disorganized enemy on the forward slope of Verrières ridge was not about to meet any serious pak fronts. This was the time and place to lead with as much armour as Wyman could scrounge.

⁶⁶ Interview Brigadier W. J. McGill. Kingston. January 1990.

⁶⁷ J. A. English, one of the few military historians prepared to discuss fault in Canadian commanders notes: "The Sherbrookes were slow to dispatch their reserve squadron forward." English, 229. He could have better said: "Wyman was slow to dispatch his reserve regiment forward."

Radley-Walters and the Panzers

Stout-hearted, calm and deliberate crew comds who make haste slowly will in every engagement best the enemy's ponderous tanks.

After Action Report, A Sqn, 27 CAR; Operation *Atlantic*

"A" and "B" Sqns, with "C" Sqn in reserve, moved up to fire posns in sp of inf at first light. Enemy counter-attacks developed at 0630 with infantry and tks, at 1430 hrs and at 1700 hrs, all of which were driven off.⁶⁸

WD 27 CAR 22 July 44

Major S. V. Radley-Walters's "A" Squadron had been tasked to "support" the Cameron Highlanders in St. André. It was a typical armour-infantry grouping for the time. Radley-Walters discussed the situation with the closest Company commander and "did what I could to help out."⁶⁹ The Commanding Officer of the Camerons, LtCol. N. H. Ross, did not command the tanks assigned to him; he could, however, request assistance. It was a poor doctrinal solution, but in this case worked out well because of the squadron commander's aggressiveness. Radley-Walters was from Sherbrooke Quebec, son of a Minister, a graduate of Bishop's University.⁷⁰ A large, powerfully built man, he played varsity football, loved hunting and fishing and spoke with a soft Eastern Townships drawl that suggested a simple, honest farmer. His quiet demeanor disguised a sharp analytical mind and determined stalker's instinct that made him the top Canadian tank killer in the Second World War. He had been in action from the D Day landing, the tank battle at Buron, and the feint at Carpiquet.⁷¹ He had that rare but successful combination of the tank ace: a good eye, an aggressive, daring nature, and bags of hunter's luck. The Sherbrooke Fusiliers were not only well led by their CO, LtColonel Mel Gordon, but well served by creative and tactically gifted squadron leaders who strove to develop gunnery techniques and improvised battle field solutions to overcome the German advantage.

Radley-Walters's contribution to RCAC doctrine was customized armoured protection and smoke tactics: his squadron pioneered appliqué armour in 2nd Army⁷² by

⁶⁸ RG 24. 27 CAR WD. P. 7. (Narrative) 22 Jul 44.

⁶⁹ Interview Radley-Walters. Kilaloe, Normandy, Kingston. 1989, 90, 92.

⁷⁰ He acquired his nickname "Woppy" at Bishops from a Czech roommate who could not manage to pronounce "Radley-Walters." The men in A Sqn called him "Major Rad."

⁷¹ RG24 27CAR WD.

⁷² RG24 10460. BRAC Report on 2 CAB July 44. "Maj Radley-Walters stated that Churchill track links loosely tack welded on his glacis plate deflected 88mm AP shot fired from a range of 100 yds."

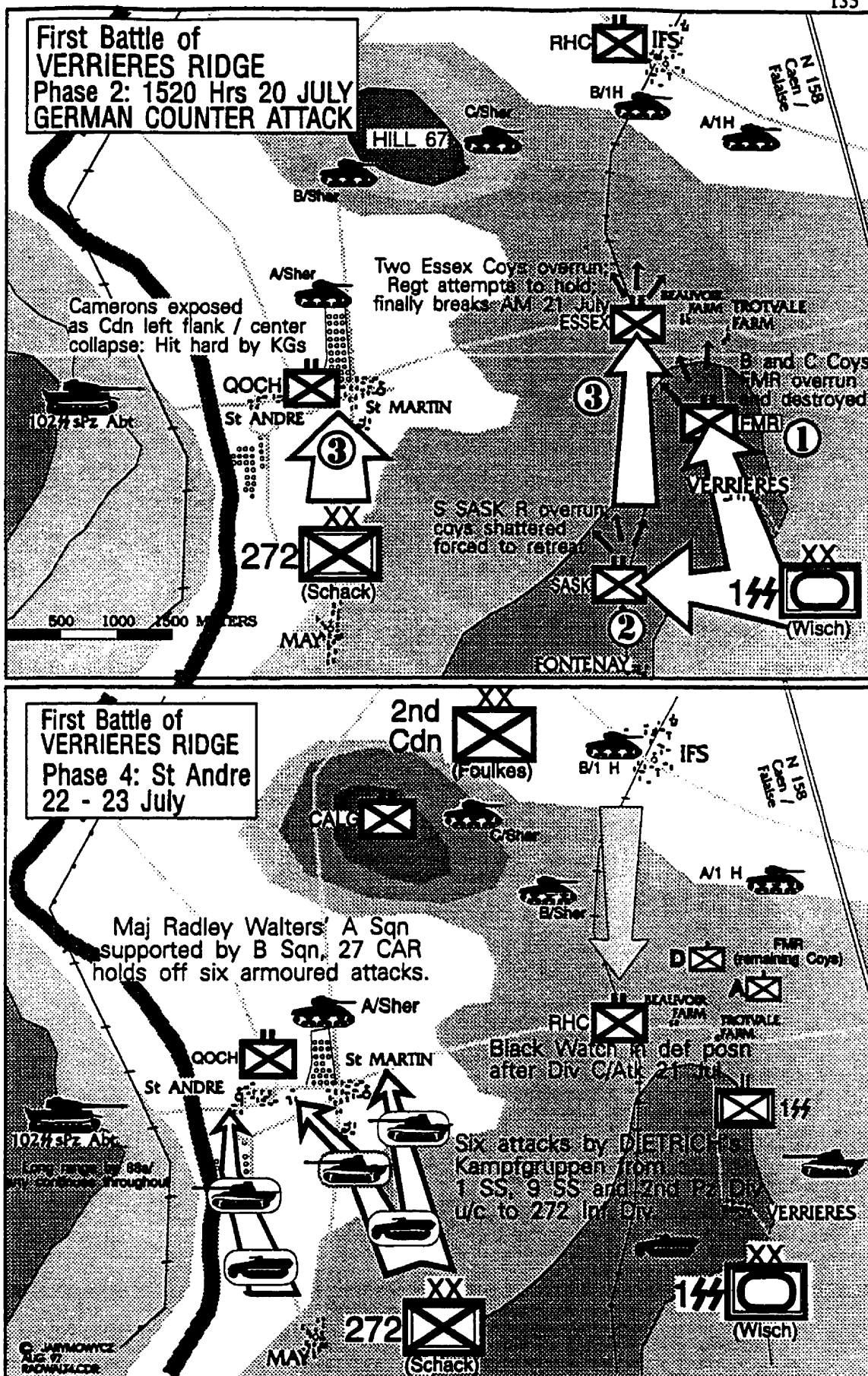


Figure 18

welding tank tracks to his Shermans for point defence. In the attack he used smoke and maneuver against the superior panzers. He joined the Camerons ready to fight. It was to prove the most intensive seventy-two hours of his war.⁷³ "A" Squadron deployed north of St. André to cover the approaches and get a clear view of Verrières, the dominating ground. "The orchard NE of the town was occupied by 1800 hrs along with a handful of inf."⁷⁴

On arriving on the high ground (023624) tks were seen immediately below in the valley at a range of approx 600 yds. Confusion arose, due mainly to poor visibility.... They were ascertained to be PzKw V's in two gps of 8 and 6 respectively approx 300 yds apart. The group of 8 was immediately to our front and the group of 6 to our left front. After one hour's exchange of fire, during which we lost one tank, there was no noticeable effect on the enemy. It was decided to place some of our tks along the orchard WEST of the main road and just NORTH of St. André proper.... All tks laid smoke whereupon the recce offr led the way down the main road with 1 tp, the remainder of 4 tp and 2 tp following in that order. No 4 troop peeled off into the orchard and immediately adopted good fire positions among the consolidating inf; six of the three remaining seven tanks pushed on into the NE area of St. André -- one tk, caught along the main road where the smoke screen thinned, was KO'd. For two hours the enemy was engaged from three sides with the battle raging in our favour. Around 1430 hrs we accounted for eight PzKw Vs as against five of our own. However, the posn of the six tks NE of the town was becoming perilous -- two tks being KO'd, two turrets jammed and another with its crew commander dead. Furthermore the enemy inf were ... a perpetual source of danger as they infiltrated to within 25 yds. 2100 hrs found the Sqn consisting of six tanks (32% eff strength) assisting in an observation role from the high ground north of St. André until darkness.⁷⁵

This was the classic Allied Normandy tank battle. "A" Sqn ran into a Kampfgruppe attack, either 1st or 9th SS⁷⁶. The panzergrenadiers went forward and

⁷³ "Counter-attacks developed on St. André from the SW and SE at 1715 hrs. Others were broken up by arty fire. The Regiment destroyed 13 enemy tanks...." WD 27 CAR. 21 July.

⁷⁴ "The tps were disposed tactically with 1 and 2 tps maintaining hull-down observation posns 100 yds left of the orchard on to the high ground immediately in front; Sqn HQ including the 17 pr was in the fwd orchard; 3 and 4 troops were in reserve and in sp in the rear of the orchard. Before last light, two enemy PzKw V's appeared on the horizon at 500 yds in full view of sqn HQ but NOT of the tps. On engaging, one burst into flames and the second was immobilized." WD 27 CAR A Sqn After Action Report. *Atlantic*. July 44.

⁷⁵ "A" Sqn After Action Report July 44.

⁷⁶ Both 1st Bn, 9 SS Pz Regt and 1st Bn, 1 SS Pz Regt had KGs in the area and both launched attacks within a 48 hour period. RH 26 272, July 44. Bundes Archive.

circled to the west of N128, the main road, trying to get into St. André. The tanks wheeled around "the Factory" and sent one panzer company right, to flank St. André, just east of N128. When the fire fight began, the Shermans' range was 600 meters, incapable of penetrating the Panthers. There were only two options for Radley-Walters: remain hull down on Hill 67, call for artillery, and watch the fight (this would have meant abandoning the Camerons in St. André), or, to boldly attack. An aggressive charge was the only way "A" Sqn could close the range and allow its tanks to use their superior turret traverse and wrest some advantage from the Panthers. It was a gutsy move. Firing smoke rounds to cover its approach, "A" Sqn attacked. The action was a jewel of small unit tactics. Boldness was costly and by midnight, the Sqn had been reduced to six tanks.

The successful Canadian counter-attack and Simonds's continued presence on 67 was noted with concern by Heeresgruppe B. The recapture of Hill 67 was given priority. By afternoon, 21 July, four Kampfgruppen from 1st SS Leibstandarte Adolf Hitler, 9th SS Höhenstauffen, 2nd (Vienna) Panzer Division and even a battle group from 2nd SS Das Reich⁷⁷ deployed in the May/Fontenay area ready to attack St. André and Hill 67.⁷⁸ Undaunted, Radley-Walters maneuvered south toward the orchard at St. André and took up fire positions to support the battered Camerons.

Enemy tks appeared in force at about 1000 hrs numbering as many as 14 at a time on the high ground south of St. André at 1500 yds. They were immediately engaged. Within an hour five were burning and the remainder withdrew. Around 1600 hrs they again appeared in force but out of range.... Around 1800 hours when we were stealthily moving the 17 pr into a good fire posn the enemy attacked the general position with tanks and inf. At least two tks were within 100 yds before being spotted. A quick exchange of fire resulted in our destroying two against one of ours.⁷⁹

The surprise attack was conducted by Panthers from 1st Battalion, 9th Pz Regiment, 9 SS Höhenstauffen who worked their way through town and sneaked up on

⁷⁷ DasReich has been recorded as "the" SS panzer division fighting the Americans on the west flank of the bridgehead, in fact, of its two Kampfgruppen, one regularly appeared in the Caen area and a DasReich KG was in May-sur-Orne circa 21-22 July.

⁷⁸ Across the Orne were the anti-tank guns and artillery spotters of 10th SS Pz Div Frunderberg supported by 102nd SS schPzAbt, whose Tigers were ordered to support attacks against 67. In addition, the artillery of 1st SS PZ and 2nd SS Pz Korps plus the fire of two complete Nebelwerfer Brigades, the 7th and 8th was superimposed onto the area. RH21-5/50 Kriegstagebuch des Panzer Armeeoberkommando 5. Angefagen 10.6.44; gefchloffen: 8.8.44.

⁷⁹ "A" Sqn After Action Report July 44.

"A" Squadron.⁸⁰ The Höhenstauffen attack continued but its fury was directed against the Camerons in house-to-house fighting:

"The enemy attack continued for about half an hour but mainly on the posns SOUTH of the town. The remainder of the evening found us engaging anything and everything up to 2100 yds with the 75mm and the 17pr."⁸¹

Lt Col. Ross's Camerons fought almost hourly platoon battles. At several places the 272nd's positions were literally across the street from the Highlanders.⁸² The last attack (at 1700 hrs) was launched from the SE toward St. André sur Orne.

"A" Sqn was in posn in an orchard prepared to meet this thrust and called for assistance from "B" Sqn ... accounted for 13 Geraldts, mostly Panthers, with an additional 2 probables during the day. At 1920 hrs the enemy was withdrawing towards May-sur-Orne under our fire and probably not more than 3 or 4 tks successfully retired over the ridge.⁸³

At night "A" Squadron would pull back behind the orchards north of St. André or on the western slope of 67 and form a squadron leaguer.⁸⁴ Once the squadron reached a safe harbour it would be met by its A1 echelon vehicles which had crawled forward in "black out drive" to deliver ammunition and petrol. If possible, the Regimental Sergeant Major sent up a hot meal in "hay boxes"; if not, the men made do with iron rations. The

⁸⁰ "About 20 Jul 44, 9 SS Pz Div was subordinated to 1 SS Pz Corps to eliminate by a counter-attack a strong penetration in the Corps area east of the Orne." MS# B-748 Battles and Movements of II SS Pz Corps From 24 Jul to the Beginning of Sep 44, 1.

⁸¹ The Cameron's Regimental History also notes that "...a gun crew of the attached Anti-Tank troop gave heroic support. The gunners accounted for five enemy tanks at point blank range, engaging in a duel almost 'muzzle-to-muzzle' with the ferocious and determined enemy." The Camerons also used their platoon anti-tank weapons (the PLAT) to defend against Panthers at close range. R. W. Queen-Hughes, Whatever Men Dare: a History of the Queen's Own Cameron Highlanders of Canada, 1935-1960. (Winnipeg: privately printed, 1960), 105.

⁸² Mortars and 88s "had the placed taped." The Camerons were within hailing distance of the Germans throughout the action: "... Capt. Dave Rodgers had the unique experience of carrying on a verbal slanging match with a German soldier who was an ex-Canadian." Queen-Hughes, 106.

⁸³ "A" Sqn After Action Report July 44.

⁸⁴ On 19 July, 27 CAR Tank State was 53 M4, 8 VC and 7 M3. By midnight 23 July, Tank State was 25 M4 and 6 VC. The Regiment's 50% losses were mostly borne by A Sqn. RG 24 WD 27 CAR, WD 2 CAB. Hard evidence of 2nd Pz and 9 SS presence was given to Corps Intelligence: Höhenstauffen PWs and captured a bergepanzer MkV (recovery tank) with the Trident markings of 2 Pz. "As darkness approached, the rally flag was flown and we pushed off to laager near Fleury sur Orne. One tp of "B" Sqn relieving "A" Sqn. The tanks at the rear of the column became involved in the darkness in confused fighting."

RG 24 WD 27 CAR. After Action Report on Atlantic by "A" Sqn. July 44.

Squadron leaguer gave them a few precious hours to repair, replenish, and rest.⁸⁵ 23 July was warm and cloudy. 2nd Corps Headquarters was busy planning Operation *Spring*. At 1 SS Pz Korps Headquarters interest in St. André and Hill 67 continued. The last German thrust came over the open ground between May and the Verrières crossroads. The bulk of a Panther battalion appeared and pushed south towards St. André:

18 German tanks were pinpointed by Maj S. V. Radley-Walters, OC "A" Sqn, east of May-sur-Orne during the morning. Air support was requested immediately and although it was subsequently ranked MOST IMMEDIATE by Comd, 6 Cdn Inf Bde, it took one and a half hours to find out from 2 Cdn Inf Div that air sp was not available. This ideal target had by then, somewhat dispersed and medium arty hit the remainder.⁸⁶

Long range fire by Fireflies and infantry 17 pdrs from 67 kept the Panthers at bay.

Artillery fire took the fight out of the supporting German infantry and the panzers decided not to go in alone. The last attack of *Atlantic* ended with a shrug. The Camerons and "A" Sqn had survived – only just.⁸⁷

One of the longest and tactically, most interesting armoured contests in the history of the Canadian Armoured Corps had been fought at St. André. During a seventy-two hour period from 21 to 23 July, the battlegroups of five panzer divisions, four of them SS, had attacked St. André. They had decimated the Camerons and effectively destroyed "A" Sqn twice but the Canadian force hung on and defeated each thrust. Tanks from three panzer divisions penetrated into St. André. Panther hulks were found near the church, at

⁸⁵ The squadron commander did not rest: "The fresh crews weren't always trained ... I'd get a lantern and gather the new men around the back of my tank – pick up some stones and start explaining tactics: 'Here's how we work...here's how I want you to support each other'." Interview Radley-Walters. Kilaloe, Normandy, Kingston. 1989, 90, 92. See: DHist 171.009 D110 "First Cdn Army System of Replacement" Appx B to CMHQ Trg and Liaison Letter No. 9. 8 Aug 44.

⁸⁶ WD 27 CAR . 22 July 44.

⁸⁷ Radley-Walters was totally frustrated at the time it took an "air tentacle" (the British term for the Forward Air Controller – an Air Force officer in a truck with a powerful radio to direct Typhoon attacks) to arrive: "I'll never forget the sight. About 20 Panthers crawling over Verrières ridge, there they were, the biggest target I had ever seen. We hit them with everything we had and kept calling for air support. Finally, in the afternoon this Brit officer arrives, flight boots, sweater, scarf, big RAF moustache, gets out of his truck and with a big toothy smile says: "Right, where's the Hun?." They had to stop me. I was going to hit him." Interview, Radley-Walters. Air support caused concern in 5th Brigade as well. Brigadier McGill recalled seeing the Panthers moving forward and frustrated with the inactivity, personally drove to Caen to "shake up the Air net." He was held up by traffic jams. Interview, Brigadier McGill. One reason may have been the weather: "Cloudy weather and heavy rainfall on 21 Jul 44 prevented the enemy from committing his airforce in support of ground combat to the ordinary extent ... bad weather continued during the following 3 days and only cleared on the afternoon of 24 Jul." Schack, B-540, 11.

the crossroads of N 162, throughout St. André, St. Martin and the fields beyond. 27 CAR claimed twenty-six tanks destroyed and four probables, mostly by "A" Squadron. This total amounted to thirty per cent of the regiment's tank victories since D Day, including the battle for Buron on 7 June. The defence has passed into military obscurity, mostly because of the whirlwind of blood, fury and tragedy that was to follow across the same fields of grain on 25 July: Operation *Spring*.

Atlantic Lessons Learned: Tanks Versus Infantry

Well may the wheat and sugar-beet grow green and lush upon its gentle slopes, for in that now half-forgotten summer the best blood of Canada was freely poured out upon them.

C. P. Stacey

The 19 July German counter-attack was a good example of what the RTC ideal world was all about – a good demonstration of local initiative and Auftragstaktik.⁸⁸ If tanks could catch unsupported infantry in the open, any action quickly became a rout. In the case of 6th Brigade, three under-strength companies of Pz IVs (about twenty to thirty tanks) scattered the entire formation. The LAH counter-attack accomplished two of its goals: restoring contact with the overrun 272nd Grenadiers in Beauvoir Farm and checking the entire Canadian attack – an impressive bonus was throwing 6th Brigade off the ridge and reestablishing the HKL. Putting aside the Orne crossing and house clearing through Fleury and Ifs, this was 2nd Division's first full day in action since Dieppe. The inexperience of battalion, brigade and division commanders was clear. The beauty about the Verrières position is that most of the crest and forward slope can be comfortably observed from Hill 67. This required a strong mix of determination, leadership, and, it must be said, courage. The tactical commander need not sit in a cellar trying to make sense out of garbled radio transmissions or liaison reports. Fleury and Ifs were less than two kilometres from Hill 67. All Foulkes had to do was drive up (in a tank if that was

⁸⁸ Explanation of "Auftragstaktik": "Gen. DePuy: '...do what the next higher commander would do if he were there and knew the same situation.' Gen. v. Mellenthin: 'Exactly. The success of Auftragstaktik presumably rests, at least in part, on knowledge by the subordinate of the higher commander's concept of operations and objectives. In these circumstances the subordinate can choose sensible courses of action which contribute to the desired outcome within the framework of the overall scheme.'" Extract: "Generals Black and Von Mellenthin on Tactics: Implications for NATO Military Doctrine" BDM Corporation, Virginia, 19 December 1980, 17-18. MHI.

preferred) and simply look. The rain, German fire, and Canadian inexperience took their toll.

There are several important questions raised in this battle. Where were the 6 pdrs of the three infantry battalions and where were the 17 pdrs attached to the brigade? Veteran hands would have brought them forward without being told to. By the time 2nd Anti-tank Regt was finally ordered to advance, it was too late. They ran into an LAH troop and were wiped out. These things are learned from experience or realistic training. Senior Officers' TEWTs may have concentrated too much on "beach-head tactics," yet 2nd CID was not a "landing division"; training in the UK may have been incomplete.⁸⁹ Simonds and his generals needed more time to shake Italian dust out of their map cases and sort out a doctrine for the open areas south of Caen. The tactical grouping for *Atlantic* was awkward and belied the inexperience of both.⁹⁰

A fresh brigade, grouped with Wyman's 2 CAB, would have been a better choice to attack the ridge. 6 CIB, under an action commander, went in with no mutual support. They were overrun and swept off the ridge. The only stable brigade was Megill's, which had established a pretty solid defensive arc based on the Orne, Hill 67, and Ifs. Veterans would have expected Foulkes to use Megill or 4th Brigade to counter-attack. Instead Foulkes did nothing; Simonds took over the battle and personally snatched the Black Watch away from Megill and placed it under Clift's command. He then ordered 6th Brigade to counter-attack. The corps counter-attack was conducted exclusively by the Black Watch, supported by three squadrons of armour from two different regiments. The attack had plenty of Div and Corps artillery; Simonds saw to that.

The most puzzling question has to be where was 2nd Canadian Armoured Brigade? July 20 was the sort of situation Wyman had probably hoped for at Le Mesnil-Patry. The terrain was ideal for armour. 2nd Div had broken through to Verrières. The question became if not now, when? The bulk of an entire armoured brigade watched an

⁸⁹ "There was to be no more experimenting. Doctrine and eqpt had to be finalized now, due to the short trg period available." RG24 13711, WD 2 Cdn Corps. Minutes of Conference held by General Montgomery HQ 21 Army Group 0930 hrs 13 Jan 44.

⁹⁰ After Young was wounded, Clift took command as acting Brigadier. He was given a fourth battalion and ordered to attack Verrières. He already had the Camerons fighting a serious battle for the key village of St. André which should have held his complete attention.

infantry brigade routed. The answer was that there was no armoured brigade. Doctrine had seen to that as well.⁹¹ The Corps plan penny-packeted the tanks by individual squadrons and eliminated the possibility of an armoured counter stroke.

It had been a bad day for Allied armour all round: 7th Br Armd, tasked with supporting 6 CIB, sat back and did little while LAH Mk IVs wrecked the FMR and recaptured Verrières and Troteval Farm.⁹² Still, Wyman should have held a third regiment in his hip pocket ready to exploit just in case Simonds, Foulkes, Keller, or one of the brigadiers got lucky. While Simonds did not attempt to create an armoured battlegroup for a reserve, neither did Wyman. After Le Mesnil-Patry, Wyman's armour battles took on an interesting pattern.⁹³ They were defensive, they were defeatist, and they were never characterized by quick thinking. What could have been is best illustrated by what happened in the three-day battle that featured both a successful brigade counter-attack and a stalwart defence of St. André by the Cameron Highlanders and the Sherbrooke Fusiliers: two battered units standing against the continued assaults of battle-wise Russian and Italian front veterans.

Again, tactically, the German was far from perfect. Experience may have triumphed over the novice battalions of 2 CID but Dietrich appears as rushed and sloppy as Simonds. The German attacks were rashly planned and delivered in piecemeal fashion. With the armour available, there is little doubt that a single concentrated effort would have swamped the Camerons and Sherbrookes. Instead, they were regularly given respites; this favor, no matter how short, was decisive. Tanks were allowed to "bomb up," troops were visited by officers, morale was restored. The battle was fought at "Desert pace." Things stopped at night. Shermans and Panthers retired to their harbours to

⁹¹ "Tk bdes may be placed under comd of divs but regts not under comd of bdes. Regts should be placed in sp." Minutes of Conference Montgomery 21 AG 13 Jan 44. Para 15.

⁹² Stacey, Victory Campaign, 174-175.

⁹³ One reason why Simonds did not work closely with Wyman may have been because they did not hit it off in Italy. 1 CAB worked so often with 8th Army troops that when Simonds (Comd 1 Cdn Div) attempted to order around Cdn tank regiments, Wyman responded: "Sir, I am not under your command - I work for General Leese." Simonds was livid and had a long, unforgiving memory. Interview, Brigadier H. Hurdle. Radio Logs and WD of 2 CAB, 27th CAR and 10 CAR record that supporting armour saw the German counter-attack and individual squadron commanders asked for direction. Radley-Walters recalls that the tanks were "Told to hold their fire" for fear of killing Canadian infantry. "We saw them in the distance, lots of black figures running around - they could have been Germans. Then we saw what looked like white handkerchiefs waving. It was our infantry surrendering."

replenish and get an hour or two of sleep. Except for probing patrols by 272nd infantry, both sides left each other alone in the darkness. The German prospect to storm St. André and recapture Hill 67 was thwarted by bad planning and Allied guns. Although 19-23 July was over-cast, the power of three divisional artillery groups and two AGRAs could not be ignored. "The enemy ... succeeded in pushing back the bravely fighting but less well armed 272 Inf Div in costly battles."⁹⁴ After their ill-fated attempt to counter-attack the beachhead in June, the 1st SS Pz Korps was more cautious about testing Allied FOOs.

Canadian Armoured Doctrine was not created in the United Kingdom or Camp Borden; it evolved in battle. The RCAC's "Louisiana" was Normandy. It was a grass roots doctrine that first appeared at the troop, then-squadron, level. It does not appear to have cross fertilized or matured at the brigade and divisional level. There were no Mel Gordons controlling divisional maneuver from a turret well forward in the line of battle. Without stout-hearted, calm and deliberate leaders, 2nd Canadian Corps was sentenced to continued frustration. The Canadians had taken Verrières and lost it, but they hung on to Bourguébus, Hill 67 and St. André. Simonds's Corps was poised to complete the job and Montgomery, smarting from *Goodwood's* failure, ordered him to give it one more go. It was to be launched on the same day as Bradley's breakout at St. Lo on 25 July. Simonds called it *Operation Spring*. The operational problem facing Simonds was that Montgomery had succeeded too well in "writing down" the German armour. Simonds's Corps now faced the overwhelming aggregate of every German tank formation in France including the only JagdPanther battalion in western Europe.⁹⁵

A Sqn's Battle in St. André Reviewed

In retrospect, *Atlantic's* one bright light was the defence of St. André. This modest battlegroup encounter has been overlooked by Canadian military history yet for all the hand wringing about armour inferiority, it clearly establishes an important lesson: M4 squadrons, with Fireflies in intimate support, led by aggressive and experienced

⁹⁴ RH 26 July 44.

⁹⁵ RH 26 / RH21; Lehmann etc.: The 2nd SS Das Reich KG was in the area shortly after Goodwood /Atlantic but was soon drawn to St. Lo. Panzer units facing Bradley were Das Reich - initially with only the Pz IV battalion, 17 SS Pz Gren Div with a battalion of assault guns and the battered but game PanzerLehr.

officers, employing maneuver and all arms cooperation, were able to defeat Panthers both in defence and in the attack.

St. André is the only armoured action documented by after action reports from tank, tank troop and squadron commanders. It is corroborated by flanking regiments' reports and the War Diary of the Cameron's. More importantly it is substantiated by German archival evidence from 272nd, 9 SS, 2nd Panzer, 1st and IIInd SS Pz Korps War Diaries. Sherman M4 was totally inferior to Panther on most counts but the M4 Firefly was the best Allied tank on the front and, as part of a squadron team, quite capable of taking out Mark Vs. This laboratory experiment further illustrates that disadvantages aside, Canadian armour could handle itself if properly used and given a fighting chance.

This left the burden of responsibility for tactical and operational victory with the brigade, divisional, and corps commanders. Despite Canadian military apologists, this responsibility to group, employ and direct massed armour correctly does not diminish with higher rank. Without a doctrine and no armoured experience, Guy Simonds was soon to be given the opportunity to direct a grand armoured host. His veteran regiments in 2 CAB were ready and the newly arrived 4th and 1st Polish Armoured were still shaking out. The successful attack, its tactical plan, and the all important designation of assault echelons is in the hands of the overall commander. Simonds was about to get three kicks at the can.

CHAPTER FOUR

BREAKOUT 2: *OPERATION SPRING JULY 25* The Second Battle for Verrières Ridge

It may seem ungrateful to raise criticism at this stage. We are, however, a very self-critical nation. It has been our main source of strength.

Lt. General Sir Giffard Le Q. Martel

The British character is naturally not inquisitive enough and individual officers and soldiers tend to shirk inquiring into matters which they consider the business of other people

Cooperation with other Arms: The Tactical Handling of the Armoured Division. Feb 1943

Armour in Mass: Doctrine

By 1943 the British Army had officially renounced Fuller and Hart and admitted that tanks by themselves cannot win battles. The emphasis however, remained on armoured superiority. "If a commander succeeds in destroying the greater part of the enemy's armour, while keeping the majority of his own tanks fit for action, he can operate freely, quickly and boldly over wide areas."¹ The normal roles of an armoured division were defined as:

- a. Co-operation with the main army and the Air Forces in effecting the complete destruction of the enemy, usually by envelopment, or by deep penetration through his defences after a gap has been made in his main position by other formations.
- b. Pursuit.²

No mention is made of destroying the armoured formations of the enemy. Paradoxically, this task was given to the infantry divisions even though desert operations showed that infantry can only kill tanks in self defence. In the offensive, armour must do the tank

¹ Mil Trg Pamphlet No.41, The Tactical Handling of the Armoured Division and its Components (London: The War office, 1943), 2.

² Further: "c. Co-operation with other arms in the defence, usually by counter-attack. d. To threaten the enemy and so force him to alter or disclose his dispositions." Mil Trg Pamphlet No. 2. The Offensive. (London: The War Office, 1943), 8.

killing job. This was one of the lessons of *Goodwood*. The armoured advance in *Goodwood* was destroyed by enemy tank fire and Pak (Panzerkannone: anti-tank) strong points. Although much has been made of the web defence and fortified villages around Bourguébus, a complete analysis shows that mobile reserves (Panthers and Tigers) plugged the gap and threw O'Connor back.

By the summer of 1944 the set piece attack doctrine was force fed to Canadian Corps and Divisional commanders. Armoured divisions were to be kept in reserve, protected against casualties, until after the dog fight had been won by the infantry and breakout could occur. An Operational *Break In* and subsequent *Dog Fight*, as the Soviets were busy demonstrating in the East, required an overwhelming preponderance of artillery.³ Deciding that his gunners could not deliver, Montgomery had switched to heavy bombers. In his 13 Jan 44 Conference for senior commanders of 21 Army Group, General Montgomery stated his concept of operations. It should be remembered that Montgomery won at Alamein by out-lasting Rommel. The conference notes, which outline the proposed doctrine, devoted one paragraph to the "Use of Armour." In it Montgomery stated that tanks "must be brought through the breakthrough boldly to seize high ground."⁴ There are two problems here: Montgomery did not really know how to use tanks boldly and the bitter reality that, even with audacity and courage, a long range gun duel between Sherman and German main battle tanks was no contest. Massed tanks had to be handled with care lest the operational arm have its blade point broken.

British-Canadian attack doctrine began with a "break-in" by infantry divisions, supported by tanks as deemed necessary. Special armour (Flails, Fascines) might be made available. Individual squadrons, perhaps regiments, were added to the "dog fight" to guard the infantry brigades against counter-attacks by enemy armour, or support attacks on strong points. The armour used during the initial stages was what the British dubbed "Infantry Tanks" – independent Tank Brigades composed of Churchills and operating much like 2 CAB. The Armoured divisions were used exclusively to "break out and pursue".

³ See Chris Bellamy: *Artillery Red God of War - Soviet Artillery and Rocket Forces* (London: Brassey's Defence Publishers, 1986), 62, 66, 201-202 and, Gudmundsson, 135-136.

The essence of the 1943 doctrine for an armoured division's attack was based on securing a "pivot" around which its armoured brigade could maneuver. This was a desert tactic that was only theoretically practical in the bocage. It was, however, a possible option in the open ground south of Caen. Securing a pivot for maneuver was also the role of "the mixed divisions in the offensive." The Infantry Division's tasks were:

- a. To destroy the main force of the enemy
- b. To create opportunities for the employment of the armoured divisions, either around the enemy flank or through his front.
- c. To seize and hold ground as a pivot of maneuver for armoured formations
- d. To engage and to destroy enemy armoured formations.⁵

The experience of combat and the technical inferiority of Allied tanks demonstrated inherent problems with this doctrine and raised questions regarding the role of armour. If the role of infantry was to "destroy the enemy armoured formations," then what were tanks supposed to do – maneuver in open terrain as light cavalry?

The answer, demonstrated again and again in France, Libya and the Russian steppes, was clear: the role of massed armour was to destroy the enemy's massed armour by combat and then to destroy the enemy's army by maneuver. Only massed armour can attain strategic results via Operational Maneuver; that is why the Americans called it "the arm of decision." Maneuver over great distances gave Sherman more than a fighting chance. The trick was to get past the fixed defences. In the breakin-breakout phase, the Sherman bowed to the Panther-Tiger combination. In the pursuit, it ran their tracks off.⁶

⁴ RG24 13711, "Minutes of Conference Held by General Montgomery HQ 21 Army Group 13 Jan 44" (hereafter cited as Montgomery Trg Conf 14 Jan 44), 2.

⁵ Mil Trg Pamphlet No.41, 8.

⁶ Panthers were troubled with design defects and required regular maintenance - once extensive, prolonged maneuver began, they lost their advantage. See: Dept of Army Pamphlet No. 20-202 German Tank Maintenance in World War II, June 1954, 23-26.

Simonds and Tanks

A characteristic of good generalship is to concentrate overwhelming force and fire power at the decisive point and at the right time

The Offensive. War Office Pam No. 2, June 1943

A holding attack which actually engages, instead of a feint which does not engage, can seldom be effective if its attack fails, because the enemy is no longer under threat in that sector. He has won and can turn elsewhere.

LtGen Sir Francis Tuker

Simonds's early debates with Burns in the Canadian Defence Quarterly give some insight into how Simonds would use tanks: "Assisted by the neutralizing effect of artillery and machine gun support, tanks can close the enemy defences until they can see the hostile posts and engage them at decisive short range."⁷ Subsequent development as a formation commander does not appear to have changed Simonds's mind:

The situation in the TEWT was that the armoured brigade had reached its objective and was anxious to push ahead while the enemy was disorganized. Simonds laid down that armour should pause, reorganize on the objective and then wait until the artillery had caught up with them before advancing any further. Brad (Brigadier G. R. Bradbrooke, commanding the 5th Cdn Armoured Brigade) disagreed strongly with this policy and went on to commit 'hara kiri' by saying, "Why should I wait for another 24 guns when I've got over 150 of them in my tanks? I don't need the artillery to shoot me on to anything and I can get there quite well myself." ... The atmosphere became electric. Guy Simonds was an artillery man and to a gunner this was heresy of the worst kind.... Brad remained unconvinced and lost his command.⁸

Simonds's doctrinal loyalty was to artillery, not armour. Releasing the armour to fight freely was an uncomfortable option. He really had no idea what it was to do. To Simonds, to give the tanks their reins, to gallop and fight the enemy as they found him, was to surrender control. He was a Montgomery acolyte, and the Montgomery system was to stop "frigging about,"⁹ reorganize, and put the ducks in a row.

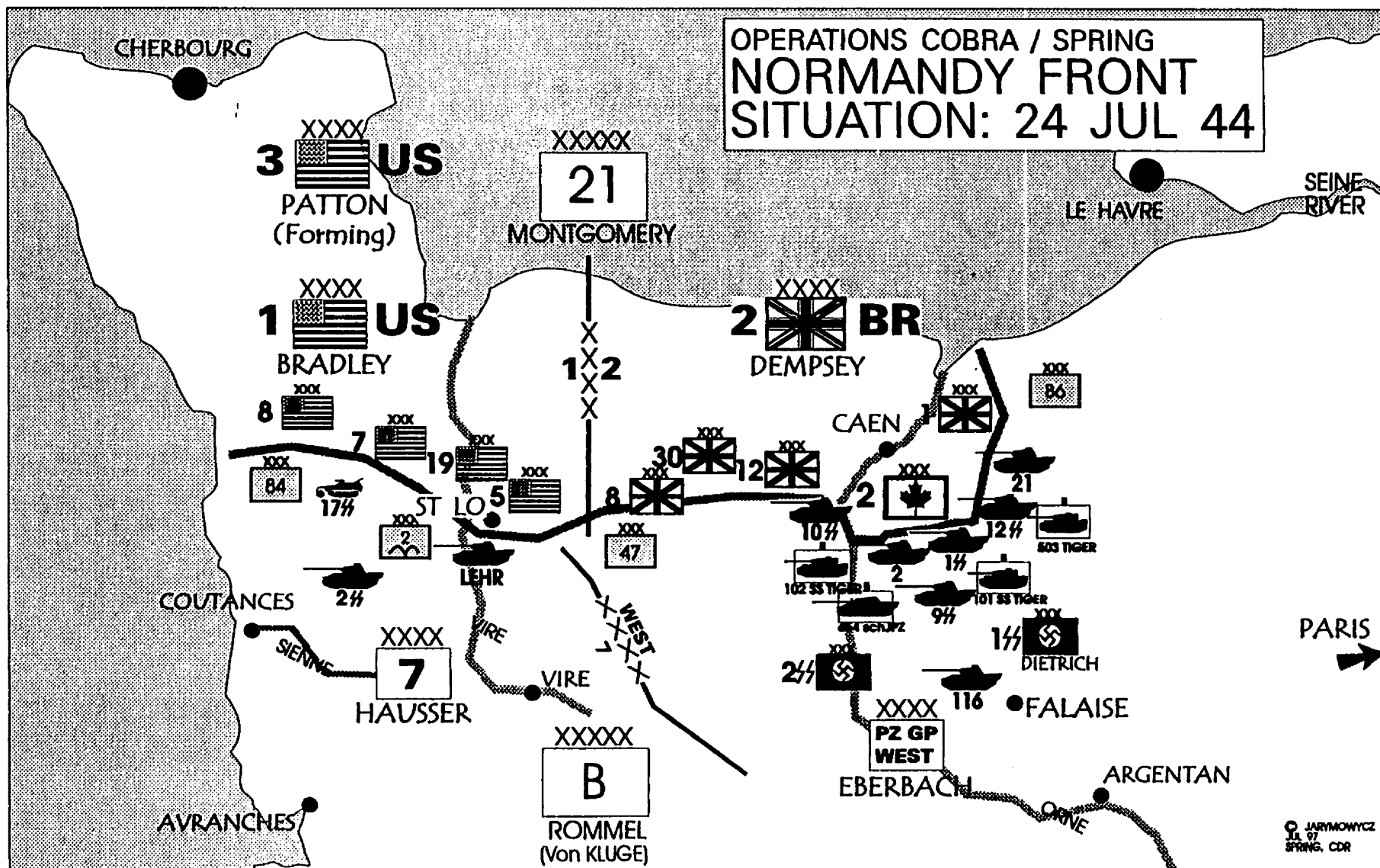
Spring was, in fact, "the second battle for Bourguébus ridge," the infamous *Goodwood* objective and actually a spur of Verrières ridge. When Simonds watched the

⁷ Capt G. G. Simonds, "The Attack", Canadian Defence Quarterly, Vol XVI Oct 1938, 379.

⁸ Kitching, 168.

⁹ Minutes, 13 Jan 44, 2.

Figure 19



British battle from the high ground southeast of Carpiquet airfield, he was shaken by the sight of tank after tank being taken out by German gun fire: "Within seconds it seemed as though 20 or 30 British tanks were 'brewing up.'" ¹⁰ As the smoke from hundreds of hulks smeared the horizon, he made up his mind. He turned to his aide, Captain Marshall Stearns, and said: "When my turn comes, we will do it at night." ¹¹

Operation *Spring* was Simonds's second Corps battle but the first proper "all Simonds" show. The operation was planned in great detail by the Corps. Basically, it was a frontal attack directly into the teeth of the strongest concentration of German panzer forces in the West and the largest number of SS units seen in the entire war on either front. ¹² In a post war interview, Simonds explained to C. P. Stacey that *Spring* was actually intended to be nothing more than a "holding battle" and the very nature and objectives of such an operation prevented him from revealing his real intent at the *Spring* Conference held on 23 July. ¹³

However, the Corps' operational order made it clear that *Spring* was another breakout operation. It was understood as such by both the Canadian and British formation commanders. No British ¹⁴ or Canadian general, besides Simonds, recalls that *Spring* was to be a holding battle. Foulkes, who became CGS, vehemently denied Simonds's

¹⁰ Marshal Stearns Papers: correspondence between Capt Marshal Stearns (ADC to Simonds) and Dr. Reginald Roy during the preparation of *Normandy 1944* (Toronto: Macmillan, 1984). From Dr. Roy's collection. Stearns, correspondence, 23 March 1981, 2.

¹¹ Stearns Papers, 2.

¹² The *Shuztstaffel* grouping facing Simonds actually exceeded German SS Panzer concentrations for the Kursk offensive (1943): six panzer divisions and three Tiger battalions not including schjipzabt 654 and 116th Pz Div which were within striking distance. See: Erich von Manstein, *Lost Victories* (Chicago: Henry Regnery, 1958), 443-448 and, RG24 Vol 10,680: "Weekly Reports HQ Army Group B 10.7.44-25.7.44" and 2nd Cdn Corps Int Report, "Locations of Identified German Formations", 25 July, 1944.

¹³ RG24 20,275 "Memorandum of Interview with Lt-Gen G. G. Simonds 19 Mar 46" by Col C. P. Stacey, 2. Chester Wilmot was convinced *Spring* was "essentially a 'holding attack' with very limited objectives at the crest of Bourguébus Ridge. Montgomery's directive of July 21st repeated his familiar theme. Second Army was to 'operate intensively' with the object of 'leading the enemy to believe that we contemplate a major advance towards Falaise and Argentan'." 390.

¹⁴ RG24 10,808. "Operational Orders - Spring", for British 7th AD and Gds AD stated clearly: "Corps Comd's Intention: a. To capture the high ground above La Bruyère 0756. b. To exploit to wooded area squares above 1160 and 1159... c. To exploit to secure the high ground round Cintheaux 0754 and to seize Bretteville and the crossings over the river [the Laison] at this place.", 1. Compare with: "Simonds confirmed that he had told General Dempsey in advance that a break-through was probably too much to hope for; but it was of course quite out of the question to issue an operation order on those terms ... General Simonds did not, however, go into detail with his appreciation to General Dempsey." RG24 20,275 Interview with Simonds 19 Mar 46, Stacey, 2.

allegation. Both British Armoured Division Commanders and all Canadian Brigade Commanders understood *Spring* to be “a blitz” – a night capture of Verrières and a dawn breakout by two armoured divisions toward Falaise.

Taking Simonds at his word, the tactics of a holding battle ought to be examined. There is an a priori puzzle: if the net result of a holding battle (a full commitment of the enemy’s armoured reserves) already existed before *Spring*, what was the operational aim of *Spring*? Clearly, to keep German tanks away from *Cobra*. Therefore a holding battle would have to not only force the line divisions (21st Pz, 1st SS, 10th SS, 12th SS) into counter-attacking but also force von Kluge to commit the operational reserves (9th SS, 2nd and 116th Pz).

Should Simonds bring most of these forces into battle he would accomplish the operational goal of a classic holding battle.¹⁵ The essential element requires the capture of a key part of the enemy’s defensive area. This forces counter-attacks that chew up the enemy’s reserves. If the enemy fails to recapture the key area taken but still has tank forces available, they are then “fixed” to prevent breakthrough attacks. This robs the enemy of operational maneuver within his own rear area. Therefore, the key is to capture and hold the enemy’s vital ground and he will be magnetized to your sector.

On the other hand, if Simonds meant to break out – or at least capture Verrières – then his tactics should have been dictated by his own published “Attack Doctrine.” Simonds’s understanding of the German defensive battle was acquired during the Italian Campaign, and, although the terrain and tactical problems were rather different, he superimposed his doctrinal solution onto the Normandy battlefield. In an Operational Policy for 2nd Canadian Corps published in early 1944, Simonds laid out his thoughts on the corps battle:

- 8. Either infantry or armoured divisions should advance on a single thrust line, disposed in depth on a one-brigade front, ...
- 10. Advancing on a single thrust line with brigades disposed in depth has the following advantages: (a) The divisional artillery, even if reinforced by a proportion of medium and field artillery from the corps, is only

¹⁵ The Pz Div Lehr, 2nd SS Das Reich and 17th SS PzGren Divisions were well west, facing Bradley’s 12th Army Group. 10th SS, with 102 SS, schPzAbt faced Dempsey but were deployed on Simonds’s flank overlooking the Orne and certainly capable of getting mixed up in *Spring*. RH21-5/44, Kriegstagebuch Panzer-Armeeoberkommando 5. Abendmeldungen 23.7.44 - 25.7.44.

sufficient to support attack by one brigade ... (b) The leading brigade, operating from a firm base, can act with great boldness, for there is always a solid anchor on which recovery can be made if the Germans make a sudden, strong counter-thrust ...

ATTACK 13. The essence of the German system of defence is the counter-attack.... A well planned infantry attack, with ample fire support, will penetrate such a position with comparative ease, but the first penetration will stir up a hornet's nest.... The success of the offensive battle hinges on the defeat of the German counter-attacks, with sufficient of our own reserves in hand to launch a new phase as soon as the enemy strength has spent itself. The defeat of these counter-attacks must form part of the original plan of attack which must include arrangements for artillery support and the forward moves of infantry supporting weapons - including tanks - on the objective.¹⁶

As before, the attack plan for *Spring* was outlined in the greatest detail by Simonds's staff and left no room for creative tactics at the brigade or battalion level and little latitude for innovation by the Division commanders. It violated the main tenet of Simonds's Doctrine: "a single thrust line in depth on a one brigade front..."¹⁷ perhaps because Simonds had little faith in Foulkes's ability to handle his green division as well as realistic reservations about Keller's battle skills. The plan also contradicted Simonds's theory of tasking:

The correct allocation of troops is best assured if each commander thinks in terms of formations or units "two below his own command"..., each commander will arrive at a correct allocation of troops without breaking up existing organization – the latter always a bad practice in battle where team work counts for so much.¹⁸

The classic Simonds Normandy battle featured the mathematical preciseness of an elaborate fire plan; it emphasized exacting staff work and attention to minute detail and timings. By July, brigade and battalion commanders were asked to execute, not think. Montgomery had advised Crerar that "No plan of battle survives enemy contact." Simonds certainly understood this but nevertheless created battlefield solutions with the following characteristics: creative attempts to solve a tactical problem that were complex, misused massed armour, and exaggerated German defensive capability and depth.

¹⁶ MG 30.E 157. Vol 7. Secret. 1-8 Ops 17 Feb 44. Operational Policy 2 Cdn Corps, 2. Underlining is Simonds's.

¹⁷ Simonds Op Policy, 3.

¹⁸ Operational Policy 2 Cdn Corps.

2nd Cdn Corps: Operation Spring

Corps Recce Regt Anti Tk Regt				
<u>Under Command</u> <u>Br Gds Armd Div</u>	<u>Under Command</u> <u>7 Br Armd Div</u>	<u>2 Cdn Armd Bde</u>	<u>2 Cdn Inf Div</u>	<u>3 Cdn Inf Div</u>
4 Armd Regts	4 Armd Regts	3 Armd Regts	1 Recce Regt	1 Recce Regt
4 Inf Bns	4 Inf Bns		9 Inf Bns	9 Inf Bns
3 Arty Regts	3 Arty Regts		3 Arty Regts	3 Arty Regts
1 Anti Tk Regt	1 Anti Tk Regt		1 Anti Tk Regt	1 Anti Tk Regt
<u>2nd AGRA</u>				
1 Arty Regt				
3 Medium Regts				

Table 4

Spring: Phases of Attack

The legacy of six weeks of breakout attempts was an overwhelming concentration of German armour in the area around Caen: seven panzer divisions (1 SS, 9 SS, 10 SS, 12 SS, 2 Pz, 21 Pz and 116 Pz), all three Tiger battalions and the JagdPanther battalion. These were specifically centered against General Simonds's 2nd Canadian Corps. The reasons were simple: it was great tank country, closest to the Seine and presented Montgomery the best prospects for destroying the Wehrmacht's forces in France. Although Bradley was about to launch Operation *Cobra*, given the dense bocage and constricted road network of le Suisse Normande, chances for a rapid and extensive American penetration appeared slim.¹⁹

Bradley's attack on the western flank has been touted as the climax of the master plan outlined by Montgomery in St. Paul's school well before the invasion. By the end of July, a successful attack anywhere on the Normandy front might save Montgomery's waning reputation. After the costly *Charnwood* and *Epsom* offensives and the disaster at *Goodwood*,²⁰ Montgomery's critics were having a field day at SHAEF.²¹ Eisenhower was

¹⁹ Bradley's initial plans were modest. The operational goal for 12th Army Group was Coutances and "crossing of the Sienne River" – 25 km from St. Lo. *Cobra* was planned in essence as a more moderate *Goodwood* and perhaps appreciated as such by Montgomery. See: Operation Plan "Cobra" Dated 13 July 1944, HQ 12 Army Group, issued 16 July 1944. Chester B. Hansen Papers, "Documents and Reports on Operation 'Cobra' Folder. MHI.

²⁰ "Goodwood was not, in fact, Montgomery's idea; it was Dempsey's." Alun Chalfont Montgomery of Alamein. (New York: Atheneum, 1976), 242.

livid after *Goodwood*'s failure and rumours that Churchill was about to relieve Montgomery of command abounded.²²

Another speculation was that Montgomery's vanity could not accept an all-American victory as the finale of the Normandy Campaign. He wanted desperately to defeat Field Marshal Erwin Rommel one more time. The "Desert Fox" had held his old nemesis pinned to the beaches for two months. *Goodwood* was their last test and unlike El Alamein, Rommel's defences prevailed²³ against the Montgomery "set piece battle." Rommel was wounded during *Goodwood* and replaced by Field Marshal von Kluge who did not change the defence scheme or Rommel's deployment of panzers. Montgomery may have understood Svechin's basic principles of the classic strategic offensive, ("Tactics are the steps from which Operational Art leaps – Strategy points out the path."²⁴) but he was to have considerable trouble with the planning and execution. Commanding four armies appears to have been too much for him. The probability of even limited success in the same area where *Goodwood* had failed was minute. Nevertheless, Montgomery ordered a second attack.²⁵ There are speculations as to why he

²¹ Particularly his RAF nemesis, Tedder. See: D'Este *Decision in Normandy*, 394-396, 501 Nigel Hamilton *Master of the Battlefield Monty's War Years 1942-44* (NY: McGraw Hill, 1983), 733-735, 737, Alister Horne *Monty, The Lonely Leader, 1944-1945*. (NY: Harper, 1994), 170-171, 220.

²² One version held that Churchill had landed in Normandy on 22 July with "the letter" in his pocket. "But the visit of General Marshall on 24 July must have been his worse moment - Marshall was quite prepared to unseat him because of slow progress. Colonel Dawney has recorded that this was one of the few occasions when Montgomery was visibly worried." Chalfort, 244. See: Hamilton, 737-740. Eisenhower was particularly frustrated at Montgomery's continual failure: "Ike is like a blind dog in a meat house - he can smell it, but he can't find it." Capt H.C. Butcher, *My Three Years With Eisenhower* (New York: Simon and Schuster, 1946), 619. Montgomery did not impress Bradley's Staff Officers: "spectacular entrance, standing in his corduroy trousers, his enormous loose fitting gabardine coat and his beret like a poorly tailored bohemian painter." diary, Col. Chester B. Hansen, 16 Jul 44. Chester B. Hansen Papers, MHI.

²³ See Liddell Hart, *The Rommel Papers*, 491-492, Ronald Lewin, *Rommel as Military Commander* (London: Batsford, 1968), 228, 487-488, Desmond Young, *Rommel* (London: Collins, 1950), 213; Butcher, 617-618. And, Wilmot 343, 351, 356-357.

²⁴ David M. Glantz "The Nature of Soviet Operational Art" *Parameters, Journal of the US Army War College* Vol XV, No. 1, 1985, 6.

²⁵ M 514: "Second Army will carry out its attack by Cdn Corps east of Orne to capture Fontenay. Start atk 25 July." Montgomery signalled his boss: "Am not going to hold back and wait on western front... Have ordered Dempsey to loose his forces tomorrow anyhow and the Cdn Corps attack will begin at 0330 hours 25 Jul." Msg to Eisenhower, 24 July 44. Omar N. Bradley Papers: Correspondance 1936-1960, MHI.

did. Montgomery pleaded strategic necessity.²⁶ He did not have complete confidence in Bradley or *Cobra* and envisioned “a series of left-right-left blows on either side of the Orne”²⁷ in order to “to keep the enemy guessing.”²⁸ He was sparring with the Germans (“pivot on our left ... swing hard with our right”²⁹) instead of landing the knock out blow. He justified his scheme for *Spring* to Eisenhower with an optimistic “It may well be that we shall achieve our object on the western flank by a victory on the eastern flank.”³⁰ This was not a convincing plot for a Strategic Offensive, which was, after all, Montgomery’s only job. The departure from the “set piece” approach was tactically refreshing, but what Eisenhower needed was a clear plan for an Allied version of Stavka’s³¹ “Summer Offensive,” not Marshal Ney’s “s’engager, puis voir” style. Montgomery placed two British armoured divisions (the 7th Armoured and the Guards Armoured) under command to Simonds; “de Guingand phoned Ike to assure him that Monty had ‘fattened up’ the attack.”³²

Spring was planned as 2nd Cdn Corps’ first night attack. The break-in phase was done exclusively by infantry battalions. Their mission was nothing less than the capture of Verrières ridge. H-Hour was 0330. This allowed the brigades approximately three hours before “tank light”³³ permitted the German defenders to bring long range fire to bear. Simonds’s plan specified three phases: securing the start line, capturing the center

²⁶ “Monty was not an unusual general. He was a competent general in positional warfare. But he never exploited his victories. He wouldn’t fight until he had everything ... the breakout came because Bradley and Patton got tired of waiting around for Monty and finally Ike gave permission to Bradley to go ahead.” Air Marshal Sir Arthur Coningham, Interview by Dr. Forrest C. Pogue, 14 Feb 1947. Pogue manuscripts, Patton Museum Library, Fort Knox, Ky.

²⁷ Quoted in Terry Copp and Robert Vogel, *Maple Leaf Route: Falaise* (Alma: Maple Leaf Route, 1983), 80.

²⁸ David Eisenhower, *Eisenhower: At War 1943-1945* (New York: Wings Books, 1986), 376; Montgomery’s directive, Stacey, *Victory Campaign*, 181-183.

²⁹ Horne, 231.

³⁰ Quoted, Copp / Robert Vogel, *Falaise*, 66.

³¹ Stavka (Stavka Glavnovo Kamandovaniya Vooruzhennykh Sil USSR): Politburo committee responsible for direction of all land, sea and air operations. Stalin was chairman. A. Seaton, *The Russo German War* (Novato: Presidio, 1971, 83. 598. And, J. Erickson *The Soviet High Command* (London: Macmillan, 1962), 598-9.

³² Butcher, 623. David Eisenhower says “bolster the attack”, 377.

³³ The earliest time when armoured gun sights could distinguish targets and support the infantry or engage tanks. The Zeiss optics on German tanks were considerably superior to Sherman sights. Further, the morning sun would rise over Verrières and burn straight into advancing Canadian eyes.

and flanks of Verrières (May, Verrières and Tilly), and finally pushing through second echelon battalions to capture the reverse slope strong points that anchored the German defence (Fontenay-le-Marmion and Rocquancourt). Once the reverse slope of Verrières had been secured, German counter-attacks would be at a disadvantage. Panzers would have to advance across open terrain visible to Canadian Fireflies and FOOs. German mortar and artillery gun areas would be in mortal danger, some under direct Canadian fire.³⁴ At this stage Simonds could release his two British armoured divisions to race for the high ground and subsequently, Falaise. That was his stated plan.

Alternatively, if in fact Simonds secretly planned to fight a holding battle, he must tear a hole in von Kluge's front, and establish a threatening bulge on Verrières. This would have the same effect as 22nd Brigade dug into Alem el Halfa ridge during Second Alamein.³⁵ any German armoured attack would be disrupted by artillery and shot to pieces by tank and anti-tank fire. If his opposite number, Dietrich, threw in all his reserves, Simonds would still have the Guards Armoured Division and parts of 2 CAB to block and, given the right moment, counter-attack himself.³⁶ If Simonds could force Dietrich to commit the KGs of 2nd, 1 SS, 12 SS, and 21 Pz, if he could entice 9 SS and 116th Pz forward, then Bradley's armour would have nothing to threaten its advance. The possibility of a Mortain counter-attack would be ruled out.

Canadian Intelligence

2nd Canadian Corps intelligence collecting had been superb. The final days of *Atlantic* had produced a complete breakdown of Shack's reinforced division down to the actual names of battalion and company commanders.³⁷ The presence of 1 SS Pz Korps

³⁴ The three supporting artillery concentrations planned by 5 Field in support of 5 Bde's attack were called, appropriately enough, "Skip", "Jump" and "Stumble" - "Stumble" was centered on May-sur-Orme. RG24 Vol 10,826 "Notes for CCRA's Conference on Operation 'Spring', 23 Jul 44" and, "2 Cdn Inf Div OO No. 1, 24 Jul 44", Trace "Y" RCA 2 Cdn Inf Div Arty Fire Plan 25 Jul 44.

³⁵ Barnett, 245,247.

³⁶ To react to a Canadian capture of Verrières, Commander 1st SS Pz Corps, Sepp Dietrich would have to counter-attack with 2nd Panzer and 1st SS Kampfgruppen and then consider tasking 9th SS. He had access to 102 SS schPzAbt Tigers, remaining JagdPanthers from 654 schj pzabt and perhaps the 10 SS Mk IV bn. However, he would require permission from von Kluge to move those away from the British sector.

³⁷ DHist MA/239, "Interrogation Report, 2 Cdn Corps, 24 Jul 44." Complete breakdown of 272 Arty Regt including "Personalities" (Commanding Officer, staff and battery commanders). Supporting

and its Tiger battalions had been confirmed during *Goodwood*. Since Simonds and his staff had the information available³⁸ it may be surmised that they decided a night attack supported by an overwhelming artillery fire plan would minimize the danger from tank fire. Besides, if the aim was a holding action, the more German tanks, the merrier.³⁹

1 SS Pz Korps			2 SS Pz Korps		Wehrmacht
1 SS LAH	12 SS HJ	272 INF	9 SS H	10 SS F	21 Pz Div
1SS Pz R (2 Bn)	12SS Pz R (2 Bn)	980 GR (2 Bn)	9SS Pz R (2 Bn)	10SS Pz R (1 Bn)	22 Pz R (2 Bn)
1SS PGR (3 Bn)	25SS PGR (3 Bn)	981 GR (2 Bn)	PGR H (4 Bn)	21SS PGR (3 Bn)	192 PGR (2 Bn)
2SS PGR (3 Bn)	26SS PGR (3 Bn)	982 GR (2 Bn)		22SS PGR (3 Bn)	125 PGR (2 Bn)
		272 Fus Bn			
1SS Arty (3 Bty)	12SS Arty (4 Bty)	272 Arty (4 Bty)	9SS arty (3 Bty)	10SS Arty (3 Bty)	Arty (3 Bty)
1SS JPz (3 Bty)	12SS JPz (3 Bty)	272 JPz (4 Bty)	9SS JPz (3 Bty)		200 JPz (2 Bty)
Wehrmacht			SS	SS	Wehrmacht
2 Pz Div	116 Pz Div	101 SS sPzAbt	102 SS sPzAbt	503 sPzAbt	
3 PzR (2 Bn)	16 PzR (1 Bn)				
PGR (2 Bn)	PGR (2 Bn)				
PGR (2 Bn)	PGR (2 Bn)				
Arty (3 Bty)	Arty (3 Bty)				
38 JPz (3 Bty)	228 JPz (3 Bty) ⁴⁰				

Table 5: German Forces Facing 2nd Cdn Corps

reports outlined the organization of the three Grenadier Regiments. Report MA 249, MA 238. RG24 Vol 10,677. In addition, French civilians had informed Cdn Int officers about the presence of mine tunnels under St. Martin as well as the shaft that connected Fontenay-le-Marmion to May and Rocquancourt.

³⁸ RG24: "21 Army Gp Intsum35, 36"; "2nd Army Intsum I.138", "1 Br Corps Intsum 47", 54, "2 Cdn Corps Intsums "45, 47, 49, 50, 54, 57 and "Interrogation Logs Period: 12 Jul - 26 Jul", WD 5 CIB, 19-22 Jul 44.

³⁹ RG24 Vol 14046 WD 2 CAB; Int Sums: "Apex A to Int Sum No.47" Dated 24 Jul44. Indicate some confusion: "Part of the mystery of the present whereabouts of the SS panzer divisions." However A Sqn, 27 CAR actions 19-22 July had confirmed presence 9 SS and 2Pz. RG24 Vol 14287 WD 27 CAR "Op 'Atlantic' 31 Jul 44", 21-23.

Table 6: 2nd Cdn Corps Int Summary No.13 : Estimate of Enemy Strs as at 23 Jul 44.

Formation	Inf Bns	Pz IV	Pz V	Pz VI	StugIII/JPz IV	Fd / Med Guns
1 SS Pz	4.5	60	20		35	44
9 SS Pz	4	20	50		20	41
10 SS Pz	2.5	30	25		30	41
12 SS Pz	3	45	35		30	30
2 Pz	3.5	30	20		37	42
21 Pz	2	60			30	20
272 Inf	4				9*	48
101 SS sPzAbt				25		
102 SS sPzAbt				30		
503 sPzAbt				30		

*Possibly Marders. For an Int Estimate this was remarkably complete except for 10 SS which did not have its Panther Battalion in Normandy. The presence of 116 Pz Div had not yet been discovered.

⁴⁰ Detail: 10 SS, 21 Pz, 116 Pz had no Panther Bn; sPzAbt: Tigers (503rd had a Coy of Tiger IIs); PGR: Pz Gren Regt - 1 SS, 12 SS, 9 SS, 10 SS and 2 Pz Divs each had 1 APC Pz Gren Bn, remainder were motor tpt. GR: Grenadier Regiment - each of 2x Inf Bns. Fus Bn: Fusilier Battalion (Div Recce - bicycle borne).

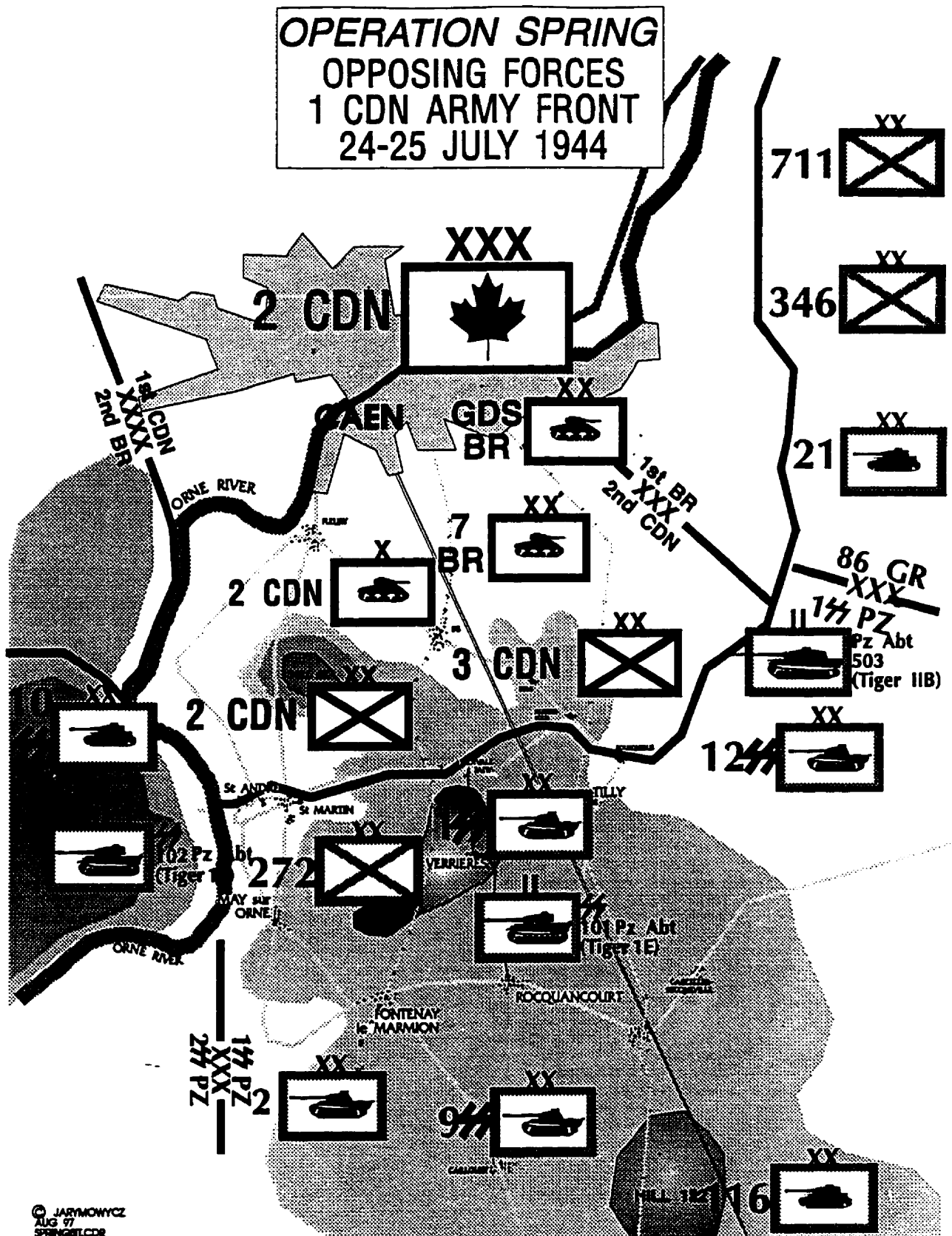


Figure 20

Foulkes vs. Schack: Round 2

General Foulkes was given three tasks. First, secure the division start line which was the east-west road that ran along the northern edge of Verrières through Troteval Farm, Beauvoir Farm, St. Martin, St. André and ended at the Orne river. Second, capture the two key villages that controlled the center and western flank of Verrières Ridge: Verrières and May. Third, secure Fontenay and Rocquancourt. Foulkes's tactical solution was interesting. He attacked two brigades up, each leading with an infantry battalion. However, given Simonds's detailed Operational Instructions, it could be argued he had few alternatives. Nevertheless, he could have chosen to be strong somewhere; instead, his tactical plan ensured he was weak everywhere.

On the left, 4 Brigade was to capture Verrières and Rocquancourt. Foulkes had reduced this brigade to two battalions: the RHLI (The Royal Hamilton Light Infantry – the “Rhilies”) and the RRC (The Royal Regiment of Canada). The start line was to be secured by another “borrowed” regiment, Les Fusiliers Mont-Royal, already shattered by *Atlantic*.

On the right, 5 Brigade was tasked with the capture of the western half of Verrières Ridge: the villages of May sur Orne and Fontenay-le-Marmion. Brigadier McGill had been ordered to throw two battalions against the main line of enemy resistance held by elements of at least four German battalions.⁴¹ To augment his divisional reserve, Foulkes ordered Brigadier McGill to transfer Le Régiment de Maisonneuve to 6th Brigade. In return he gave McGill the depleted Camerons, still trying to secure St. André. McGill's brigade now faced the challenge of using two infantry battalions with which to capture May and Fontenay consecutively. Given the state of RdeMais, S Sask and the Essex, there was no effective brigade reserve.

On the east side of the ridge, Keller's 3rd Canadian Infantry Division prepared to capture Tilly-la-Campagne. The North Nova Scotia Highlanders were already in

⁴¹ Bundesarchiv RH19IX/9 Tagesmeldungen vom 6.6.44 bis 31.8.44., 258. Schack's resources were: Grenadier Regt 980 (3 weak Bns); Gren Regt 981 (2 weak Bns, 481, 483); Gren Regt 982 (2 weak Bns, 350, 485); Fusilier Bn, Artillery Regiment, Anti-tank Bn. Roughly the equivalent of 7-8 Canadian Inf Companies. McGill was badly out numbered. Also B-540 Schack, 13-14 and, MS B-702 Gen der Infanterie Friedrich-August Schack, “272d Infantry Division (26 Jul-12 Sep 1944)” US Army, Europe: Historical Division, 1945, MHI, 1-2.

Bourguébus, just north of Tilly, and held their own start line. Keller was attacking one brigade up, one battalion leading against a strongpoint held by a company of Leibstandarte supported by Pz IVs. It was not going to be a pretty sight.

The final Corps Commander's conference was attended by both Divisional and Brigade commanders.⁴² In retrospect, Foulkes's Division was given too ambitious a task. To ease the burden, Simonds gave Foulkes 2 CAB (less one regiment) under command and lots of artillery support. But Foulkes knew less about tanks than Simonds. He awarded his armour piecemeal, by squadrons, one per brigade. Both he and Keller had generously allotted one squadron of Shermans to each battalion conducting the third phase assaults. As the battle became complex, they forgot about the rest. There was no mutual support within the divisions, nor within the brigades. Brigadier R. A. Wyman, Commander of 2 CAB, had no effect on *Spring*. His presence went unnoticed, unrecorded.⁴³

2nd Canadian Infantry Division
Command and Grouping 18 July-25 July 44
 GOC: Maj. Gen. C. Foulkes
 GSO1: Lt Col C. R. Archibald; CRA: Brig R. H. Keefler

Operation Atlantic

4th Infantry Brigade

Comd: Brig. S. Lett

The Royal Regiment of Canada

The Royal Hamilton Light Infantry

The Essex Scottish Regiment

5th Infantry Brigade

Comd: Brig. W. J. McGill

The Black Watch RHR of Canada

Le Regiment de Maisonneuve

The Calgary Highlanders

6th Infantry Brigade

Comd: Brig. H. A. Young

Les Fusiliers Mont Royal

The Queens Own Cameron Hi

The South Saskatchewan Regt

Operation Spring

4th Infantry Brigade

A/Comd: Lt.Col J. E. Ganong

The Royal Regiment of Canada

The Royal Hamilton Light Infantry

Les Fusiliers Mont Royal

5th Infantry Brigade

Comd: Brig. W. J. McGill

The Black Watch RHR of Canada

The Calgary Highlanders

The Queens Own Cameron Highlanders

6th Infantry Brigade

Comd: Brig. H. A. Young

The South Saskatchewan Regt

Le Regiment de Maisonneuve

The Essex Scottish Regiment

Table 7

⁴² Held at 1000 a.m. on 24 July. Simonds outlined the gen scheme of the proposed breakthrough. Simonds told Stacey that he decided not to hold a formal "orders group" for *Spring* just a series of conferences. Stacey interview Simonds, 2.

⁴³ It has been argued that there was little an arm'd bde commander could do: "Tactics we adopted in the UK: where does the brigadier go? He just set up beside the Div Commander and listened to the battle - even regimental COs had little influence on tactics." Interview, BGen Radley-Walters, May 94.

Schack's Defence

General August Schack's 272nd Infantry Division had taken well over thirty-five per cent casualties by the time *Atlantic* had ended. His regiments had been counter-attacking throughout the battle, the most recent efforts being the attempt to recapture St. André. By 25 July, Schack was reduced to three very weak regiments.⁴⁴ He deployed two up, using Highway 162 as the inter-regimental boundary. The 982nd Regiment was deployed east – in St. André and astride the Orne. The 981st Regiment was east of Route Nationale 162 and held St. Martin, the "Factory," (a mining industrial complex with a prominent elevator tower leading to the tunnel beneath) and the open area on the western forward slopes of Verrières. Its two battalions were well dug in and carefully laid out killing zones in the open fields.⁴⁵ The Fusilier Battalion held May and the third Regiment, 980, was in depth, defending reverse slope positions along western Verrières from May to Rocquancourt. This regiment was supported by the divisional anti-tank battalion, and the vanguard of a 2nd Pz Kampfgruppe, the headquarters troop of four Pz IVs, stationed in May.⁴⁶

The importance of holding on to the western end of Verrières did not elude Armeegruppe B Headquarters. On 23 July Schack was visited by Feldmarschalls von Rundstedt and von Kluge in his headquarters in Bretteville.⁴⁷ He reviewed the past day's fighting and outlined the precarious state of his division. The 272nd was quickly reinforced.⁴⁸ This gave Schack the depth he required to hold his sector against a corps

⁴⁴ Schack, 1, RG24 Vol 10,808. Interrogation Log, 2 Cdn Corps. 26 Jul 44. 272 had been in constant action with 2 CID and under continual observation by FOOs from area Hill 67 - life was miserable for Schack's men. PWs taken from 272 Fus Bn and 981 Gren Regt on 25 Jul "had no food for two days." Interrogation Log, 2 Cdn Corps. 26 Jul 44. See also: Terry Copp, The Brigade - The Fifth Canadian Infantry Brigade, 1939-1945 (Stoney Creek: Fortress, 1992), 60-61.

⁴⁵ The fields of fire were "Like roads cut through the wheat" for MG42 fire. "The wheat was waist high, you'd come to like an intersection of two cleared lanes and there would be MG fire coming in at about knee high level. I don't think they aimed at all. I think they just set up their machine guns and fired them while they hid in their trenches." Interviews, Cpl Duckett, RSM Bolton, Montreal, November 1989.

⁴⁶ RG24 Vol 10677. 1 Corps Interrogation Team "Report 272 Fus Bn, 272 Div. 1 Br Corps Cage. 3 Aug 44", *Atlantic - Spring* reduced 272 Fus Bn to "roughly 300 men: 3 rifle and 1 hy coy.", 2 Also, Schack, B-540, 12.

⁴⁷ RH26-272/5. WD 272. Infanterie-Division. 23.7.44. Although Dietrich is not mentioned, he was present. He had also visited Schack earlier (20 July 44) with LtGen F von Luttwitz (CO 2nd Pz Div).

⁴⁸ "Ausserdem wurde im abschnitt der Div. am 24.7.44 eine Panzerabteilung und ein Pz Gren.Btl. von 2.Pz.Div., eine Pz. Abt. und ein Pz Gren.Btl. von 9.SS Pz.Div., die Aufklar.Abt der 10.SS

attack. Schack's only dedicated reserve was Kampfgruppe Sterz from 2nd Panzer Division which comprised a weak Panther battalion, a depleted Panzergrenadier battalion, and a platoon of the deadly JpzIVs.⁴⁹

Within 1 SS Pz Corp's operational depth, only 30 minutes from May, sat two 9 SS Panzer Kampfgruppen: Gepanzerte Gruppe Meyer, commanded by Obersturmbannführer Otto Meyer (no relation to the Hitlerjugend's Kurt Meyer), and KG Zollhofer commanded by Obersturmbannführer H. Zollhofer, CO of the combined 9 SS Panzergrenadier force, "Regiment Höhenstauffen." These battlegroups, available to Schack but controlled by von Kluge, were the only SS reserve available – in fact, comprised the entire operational reserve for 1 SS Pz Korps. If their attack failed, Dietrich would have to ransack 1st and 12th SS for Kampfgruppen and re-deploy heavy reserve. Dietrich had ordered 503 sPzAbt, still grouped with 21st Panzer, to deploy closer to Verrières ridge. Its Tigers would soon poke their snouts into *Spring* and wreck Canadian armour supporting the attack on Rocquancourt.⁵⁰ The last, and only true operational

Pz.Div. unmittelbar hinter der H. K. L. beiderseits von St. Martin als Eingreifreserven bereitgestellt." (one tank bn and one pzgren bn from 2 Pz Div, a pz bn and one pzgren bn from 9 SS Pz and the recce bn from 10 SS Pz deployed behind the Forward Edge of the Battle Area (HKL) and in the St. Martin area). Bundesarchiv RH26-272/ 5. 272. Infanterie-Division., 27; see also ETHINT B-540 and Schack, B 702: 272 Infantry Division in Normandy, and, Martin Jenner, Die 216./272 niedersächsische Infanterie-Division 1939-1945 (Bad Nauheim: Podzun Verlag, 1964), 158-159. Schack did not actually have SS KGs "under command" Höhenstauffen was Dietrich's only Corps reserve and after the Attentat SS panzers were answerable only to Hitler or trusted SS generals.

⁴⁹ RH19 IX/9, WD Pz Armee5 places 10 SS Recce Bn south of St. Martin: the Factory area. ETHINT MS B-257, Gen F. v. Luttwitz, "2 Panzer Division in Normandy" US Army, Europe: Historical Division, 1945, 24. The formation was originally commanded by Gen Heinz Guderian until the Anschluss, after which it recruited from the Vienna area. It arrived in the Caen area: "16 July - transferred south of Caen ... evening of 24 July ... Div HQ at Angoville, 25 miles south of Caen.", 24-26. Also: Franz von Steinzer, Die 2. Panzer Division (Friedberg: Podzun-Pallas Verlag, 1974), 192, F. J. Straas, Geschichte der 2. Wiener Panzer-Division (Vienna: Vowinczel, 1977), 185-186, and, Helmut Ritgen "Kampf um May-sur-Orne am 25 Juli 1944" unpublished manuscript, Moorkamp, 1990.

⁵⁰ Dietrich claimed 503 sPzAbt was under command to 272nd Inf Div. There is contradicting evidence. 503 sPzAbt remained under command to 21st Pz (during *Bluecoat* and Falaise Pocket). Dietrich may have briefly snatched it from General Feuchtinger before *Spring*. Feuchtinger complained loudly and often that Canadians and English would "... eat him up" unless he was reinforced with "his" heavy tanks. Dietrich sneered: "Er hatte mehr Angst als Vaterlandsliebe" ("He [Feuchtinger] has more fear than patriotism"). RG24 Vol 10677: Interrogation Report. Oberstgruppenführer Josef Dietrich, 1. 2 Cdn Corps Int correctly identified 503rd's presence in 21st Pz and their new KönigTigers: "503 Hv Tk Bn ident ... under 21 Pz Div ... one of the three companies of 503 Hy Tk Bn is now known to be equipped with new 67 ton Tiger." RG24 Vol 14046. WD 2 CAB. Int Sum 41. 22 July 44. See: Interrogation Report GenLt Feuchtinger. RG24 Vol 10677, 25 Aug 45. PzArmee5 WD reports Tiger-Abt 503 "im Raum südwestl Moul" (9 km east of Tilly), "schw.Pz.Abt.101 sudl Tilly-la-Campagne" (area Rocquancourt, 2 km south of Tilly) and "schw.Pz.Abt.102, im Raum Preaux" (in area Preaux, which is 4 km west of St. André). RH 21/5-49, 10.6.44-8.8.44, and RH19IX/9, 258. The 654 sPzAbt (schwerejagdpanzerabteilung: heavy tank

reserve in Normandy, was the 116th Panzer Division deployed astride the Laison River and about 45 minutes away from Verrières. Simonds would succeed well beyond his own expectations if von Kluge would be forced to use this formation.⁵¹

Despite the company of some very respectable armour, Schack still had to fight the infantry battle. His regiments were much weakened by *Atlantic* and the trickle of replacements were of very poor quality. However there were plenty of MG42s and anti tank weapons: "every second inf man has a 'Faustpatrone'".⁵² He was supported by two complete Nebelwerfer Brigades (7th and 8th Werferbrigaden⁵³) plus the artillery resources of 1st SS Pz Korps and neighbouring corps; this consisted of almost one hundred batteries of 105mm and 150mm guns; not including hundreds of mortars which were the German infantry's favourite, and most effective, indirect fire weapon.⁵⁴ *Atlantic* had driven in Schack's forward zone. His defence was now based on company strongpoints in mutual support, each with an anti-tank capability, if only at the panzerfaust level. Whether Simonds realized it or not, and as Corps commander he should have, 5th Brigade's attack was to begin within the second stage of Schack's defence. *Spring* had already broken in.

9 Brigade: Death in Tilly

The 3rd Div attack jumped off right on time. The North Nova Scotia Highlanders left their Start Line and approached Tilly-la-Campagne with two companies up. "Monty's Moonlight" made the Highlanders uncomfortable. The enhanced light was made by

destroyer battalion). was also available. Its JagdPanthers were also west of the Orne and free to join 102 SS in creating havoc in the St. André area. The 654th was the only JagdPanther unit on the western front - so exclusive that it was only used as an operational reserve. OKW WD first recorded its presence when it appeared at May-sur-Orne in mid July. RH21-5/49, Abendmeldung Okdo.d.H.Gr.B, 24.6.44. and, RH19-IX/9 PzArmee WD Tagesmeldung 24.7.44, 935. See: Eric Lefèvre, Panzers in Normandy Then and Now (London: Battle of Britain Prints, 1990), 47,120.

⁵¹ Total "reaction time" included decision time and battle procedure. e.g.: Meyer's 9th SS KG was 30 minutes driving time from Verrières Ridge. Its reaction time (including a Warning Order, combat estimate, then Radio or Verbal Orders) without including time for recce - could take 45 minutes.

⁵² RH 19IX/9. 272 Div, Report 272 Fus Bn, 25.7.44.

⁵³ Equipped with 150mm Werfer, 210mm Werfer and 300mm batteries. see RH19 IX/20, Anlage 3 "Die Werferbrigaden 7 und 8", 2.

⁵⁴ RH19 IX/20, WD Heeresgruppe B. 24.7. 44. "86.A.K. - 55 Battr., I.SS-Pz.Korps - 20 Battr., II.SS-Pz.Korps - 25 Battr."

directing powerful search light beams off low clouds creating an eerie illumination which the Germans called Leichenlicht – “dead men’s light.”⁵⁵ Since the searchlights were in Caen, behind them, most infantry during *Spring* felt the effect dangerously silhouetted them to the enemy. The silence was suddenly broken by automatic fire. Immediately, casualties were taken by LtCol Petch’s men. Bloody hand to hand fighting ensued as the Maritimers met the Leibstandarte Adolf Hitler, simply the best division in the Third Reich.

Tilly was held by a battlegroup of panzergrenadiers from 2nd Battalion, IIIrd SS PzGr Regiment.⁵⁶ Close quarter combat erupted; the Germans shouted “Surrender, Canada!”⁵⁷ The stone buildings of Tilly made it into a natural fortress. Petch grabbed a house or two but by dawn his men were mostly huddled around the northern perimeter of Tilly while the Waffen SS defended their strongpoints. The North Novas were now too close for artillery support and daylight made movement suicidal. The NNS hung on while their CO desperately tried to get armoured support. Petch was back at the start line in Bourguébus, approximately 200 meters behind, using a radio to direct the battle.⁵⁸

Brigadier Cunningham ordered “B” Squadron, Fort Garry Horse (commanded by Major A. S. Christian), originally tasked to support the Highland Light Infantry into Secqueville, to go forward and help. The tanks advanced boldly, initially using a railway line for cover, then crossed into the open fields heading directly for the village.⁵⁹ Camouflaged within Tilly were tanks commanded by Untersturmführer Gerhard Stiller. It

⁵⁵ “artificial moonlight supplied by eight searchlight btys”; although the British Army Operational Research Group had come up with several navigation aides for night fighting, they were only for vehicles. RG24 14116 WD 6 CIB. 25 Jul 44. “Dead Men’s Light”: translation of taped statement made by Peter Prein, former Lieutenant and Signal Officer of 3rd Panzer Regiment, 2nd Panzer Division, correspondance, April 1990.

⁵⁶ Augmented by the Pioneer platoon and Flak zug (anti-aircraft troop) supported by 7th Pz Kompanie, 1st SS Pz Regt. Lehmann und Tiemann, 182 and, correspondance with Gerhard Stiller, OC 7 Pz Coy, 1 SS Pz Regt, LAH. 15 March 1990.

⁵⁷ Roy, 105.

⁵⁸ Petch’s conduct did not endear him to his battalion. Correspondance NNS veterans, 1990.

⁵⁹ Before his attack, Major Christian, “according to instructions, had been giving useful direct fire support.... No more tanks could be committed as the remainder of the Regiment might be required by 3rd Canadian Division in other important operations.” Lt Col E.M. Wilson, ed., Vanguard – The Fort Garry Horse in The Second World War. (Doetinchem: Uitgevers-Maatschappij, C. Misset NV, 1945), 46. See also, RG24 14234 WD FGH, 25 Jul 44: “Sqn remained in position of support all night though communications with the Inf broke down completely.”

should have been a fair fight: Shermans against Mark IVs.⁶⁰ Stiller held his fire until Christian was within 200 meters. He engaged the rear Shermans first, and then raked the squadron right to left. The rear troop was completely destroyed "keine fünf Minuten."⁶¹ - in less than five minutes. Christian refused to quit: "The squadron made three gallant attempts during the day to help the infantry but each time it was repulsed. Before the day was over, 'B' Squadron had lost eleven tanks - almost the entire squadron."⁶² Why Brigadier Cunningham sent in a single, unsupported squadron to rescue a battalion is unclear. There is no record whether Lt.Col. R. E. A. Morton (Commanding Officer, FGH) argued against it, or if he even knew. Separating squadrons from their regiments and grouping them with brigades was accepted doctrine in 2nd Cdn Corps, but ordering "B" Squadron to attack alone, over open country, was rash. To allow the squadron to continue its attack throughout the day without support or reinforcement suggests incompetence. This was a task for an armoured regiment. It is not clear if Cunningham and Morton went forward to have a look; it is more likely that they both stayed on the net following the action by wireless. The Garries, true to their lineage,⁶³ advanced unhesitatingly in the finest traditions of Canadian Cavalry.

The North Novas would spend the day on Tilly's outskirts, enduring small arms and mortar fire, until Petch ordered them out in the darkness. That night Keller, under Simonds's orders, told Cunningham he would have to go back in with two regiments: the NNS and the Stormont, Dundas and Glengarry Highlanders (SDGs). The North Novas

⁶⁰ Stacey states in Victory Campaign "B" Squadron "met Panther tanks and anti-tank guns." In fact, it was facing Pz MkIV Ausf Hs., 189.

⁶¹ "Wir haben Glück, das die Sonne noch so tief steht und die Tommy-Panzer, die jetzt von Nordwestern anrollen, gegen die Sonne richten müssen. Naher ran kommen lassen, lautet die Devise. Gefährlich richten sich ihre Kannonenmündungen auf unsere Heckenstellungen. Endlich. Leuchtsignal weis 'Feuer frei' Aus den Panzer-Lauerstellungen fegen die Leuchtspuren hinüber. Schus auf Schus jagt aus den Rohren, während weitere Panzer in unsere Heckenreihe einscheren. Keine fünf Minuten dauert der Zauber und der Angriff des Tommy steht." Personal correspondence, Gerhard Stiller, 16 April 1990.

⁶² Roy, Normandy 1944, 108. Stiller's sketches credit at least one Garry Sherman actually entering Tilly before it was knocked out by a flank shot from "Pz Nr. 711", hidden in the "Mariergarten." However, this could well be from a later (1 August) attack: Stiller correspondence.

⁶³ The FGH were original members of the Canadian Cavalry Brigade, the beau sabreurs that charged a German brigade at Moreuil Wood, 30 March 1918. See: CDQ Vol. 3. 1925-26. LtCol C. E. Connolly, "The Action of the Canadian Cavalry Brigade at Moreuil Wood and Rifle Wood- March and April 1918" and, Brereton Greenhous "The Position was Desperate, If Not Fatal - The Canadian Cavalry Brigade at Moreuil Wood", Canadian Defense Quarterly (CDQ), (Vol 17, No.4, Spring 1988). CDQ (Vol II Oct 1924), 399. CDQ (Vol III 1925-26).

were too bloody and numb to react; the SDGs “were staggered by this blow, felt by all ranks.”⁶⁴ 9 Brigade didn’t want to go back into Tilly; both COs pled their case to Cunningham who agreed and went to see Keller. A nasty scene erupted. Keller threatened Cunningham, who stood by his COs. By the early morning of the 26th, the attack was cancelled. Nevertheless, Keller ordered an investigation. Within days Cunningham, Petch and Christiansen of the SDGs had been sacked. *Spring* cost 3rd division both men and experienced officers – D Day veterans who had been in the field for two months. The eastern anchor of Verrières Ridge remained firmly in German hands.

Armour Destroys the Black Watch

I still have nightmares of that horrible and disastrous day. I still remember my friends’ faces today who were killed that day.

D81792 Pte. John Conway, The Black Watch

On the eastern flank 4th Brigade’s attack began well. The Royal Highland Light Infantry, commanded by Lt.Colonel John M. Rockingham, reached Verrières village quickly, and, in a fierce hand to hand battle, threw out the SS company which was dug in among the stone houses. The elite grenadiers⁶⁵ who had fought with fanatical determination and much skill had been given a rude surprise by the southern Ontarians. The center of Verrières Ridge was reported captured by 0750 hrs. It was to be the only Canadian success of the operation.⁶⁶

On the 5th Brigade front, the battle went much as feared by McGill. The Camerons failed to secure the start line. Their attack began at 2045 hours 24 July and they gave the task to a single company.⁶⁷ Meanwhile, the Calgary Highlanders’ supporting attack was given little tactical leadership from the battalion commander.

⁶⁴ RG24 15271 WD SDG, 25 July 44.

⁶⁵ A combat team from 1 SS comprised of an infantry company, engineers and anti-tank guns supported by armour. “Pz GrenRgt. 1 die 1., 2., und 15. Kompanie, vertärkt [reinforced] durch Sturmgeschütze und die 5./Pz.Rgt. 1 [Panthers].” Lehmann/Tiemann, 188-190.

⁶⁶ See: DHist 1206, Letter from Brigadier J. M. Rockingham to C. P. Stacey 27 Oct 1948 describing the battle for Verrières. Also, Brereton Greenhous Semper Paratus – The History of the Royal Hamilton Light Infantry (Hamilton: RHLI Historical Association, 1977), 245-250.

⁶⁷ RG24 Vol 14, 116. 6 CIB WD 24 Jul 44. : “Major Lane (led) the Camerons of C attack.... The attack by the Camerons was less dramatic (than the FMR attack) in that it involved a clearance of many places. This proved a slow and difficult task. At least 12 MG posts were cleared out before the coy got to its objective at about 0100 hrs the following morning.”

Although the Calgaries discovered that the start line was not clear, LtCol D. G. MacLauchlan took no decisive action. MacLauchlan set up his battalion tactical CP (Command Post) in an orchard north of the St. André-St. Martin crossroads and tried to direct the battle by radio.⁶⁸ The actual Calgary attack was led by Company commanders. It was poorly executed, featured no mutual support, and failed to capture May.⁶⁹ By the time the Black Watch had deployed for the advance to Fontenay-le-Marmion, the Calgary Highlanders were scattered all over the battlefield. The Watch was forced to clear Schack's troops out of the village, a task it never fully completed. When the Commanding Officer, LCOL S. S. T. Cantlie, moved to St. Martin Church to recce, he was killed by a burst of machine gun fire; the Second in Command, Major Modzfeldt, and the senior company commander were wounded. "Command of the unit was assumed by Major F. P. Griffin of 'A' Company sometime between five and five thirty."⁷⁰

As Griffin attempted to clear his start line and sort out his regiment, he was continually harassed by Division and Brigade Headquarters. Up to now things had been frustrating for Foulkes. Suddenly it appeared to be all right. The Royal Regiment of Canada signalled it was ready to bypass Rockingham at Verrières⁷¹ and cross the crest from the north east; all Foulkes had to do was to coordinate the Black Watch attack. If they advanced at the same time from the north west, he would have a pretty pincer. His late timings and failure at May would be forgiven. He demanded Megill get the Black Watch moving. Griffin was visited twice and summoned to the radio every five minutes. At last, Brigadier Megill himself appeared.⁷² There are conflicting stories as to what occurred.

⁶⁸ MacLauchlan was evacuated by Megill during the battle because he was "exhausted by the day's events" - more likely to get him out of the way. See Copp, 83, David Bercuson states: "MacLauchlan's leadership came into question." David Bercuson, Battalion of Heroes (Calgary: Calgary Highlanders Regimental Funds Foundation, 1994), 80.

⁶⁹ RG24 10,874, Brig W. J. Megill, "Report of Action Calg Highrs 25 Jul 44" 5 CIB, 28 Jul 44, 2. Lt.Col. D. . McLaughlin, "Account of the Attack by Calg Highrs on May-sur-Orne, 25 Jul 44." 2 Cdn Inf Div, 28 Jul 44, 1-2. Also, Copp, 74-75, and Bercuson, 76.

⁷⁰ Roy, 123. See also Dr. R. H. Roy, "Black Day for the Black Watch" CDO, 1985, 38-39.

⁷¹ DHist 112.31D Report on "Operation Spring" 25 Jul 44 prepared by Capt. J. Swettenham: "Then at 0825 hours, the battalion was reported to be 'just south' of Verrières.... Here may be found the real reason for the preemptory orders which reached the Black Watch to press on to Fontenay." Section 6, 5-6.

⁷² Copp 84-85, Roy 123-125, Interview Megill, 5.

Griffin set a compass bearing and led the Watch straight up the slopes of Verrières. It has been portrayed as a rash decision and the principal reason for Simonds's infamous "a series of mistakes and errors of judgment in minor tactics"⁷³ assessment, certainly aimed at Griffin and probably MacLauchlan. Griffin ordered the tanks to skirt his advance on the right, drive south to May and protect his flank until he reached his start line on top of the ridge. Then his Shermans could shoot him into Fontenay. "B" Squadron, under command of Captain John W. "Jake" Powell, had been delayed in St. André.⁷⁴ Griffin decided not to wait. The Black Watch battlegroup had not gone more than 600 yards when they ran into a German counter-attack.

Kampfgruppe Sterz

By ten o'clock the situation for 272nd Division was tense. Their right had been turned by the RHLI's capture of Verrières. Schack's forward companies reported Griffin more or less in control of St. Martin and the "Factory" and threatening May.⁷⁵ With his right flank threatened and the Hauptkampflinie (Main Battle Line) mostly lost, Schack ordered his armoured reserve, KG Sterz, to strike against St. Martin.

Major Sterz originally commanded the 2nd Panzer's 38th PzJaegerAbt. His KG comprised "the remaining tanks of 1st Bn 3rd Panzer Rgt, 12-14 Panther tanks, the remainders of 1st Bn, 304 Panzergrenadier Rgt, under Capt Scholing, an outstanding one-eyed officer, and the 75mm tank destroyers of 38th PanzerJaeger Bn."⁷⁶ Kampfgruppe Sterz⁷⁷ arrived on the ridge at the same time as the Black Watch, already under heavy fire from 272nd's machine guns and mortars, was approaching the crest. It was a

⁷³ RG24 20275 HQ Cdn Forces in the Netherlands. Lt.Gen G. G. Simonds, "Attack by R. H. C. - Operation 'Spring.'" 21 Jan 46., 5.

⁷⁴ RG24 20275 Col. C. P. Stacey, "Memorandum of Interview with Lt.Col. J. W. Powell, Subject: The Attack on Fontenay-le-Marmion, 25 July 44", 1,2. The Sqn Commander, Maj W. E Harris MP, had been wounded near "the factory" after Griffin's Orders Group. St. André's narrow lanes (some were mined) proved difficult. Personal correspondence Lt.Col. J. W. Powell. 1990-1991.

⁷⁵ Copp Brigade, 60 -62.

⁷⁶ Prein, 2.

⁷⁷ "Kampfgruppe Sterz was positioned south-southwest of May-sur-Orne with the mission to counter the enemy attacks expected." Prein Correspondance. See also, B von Franz Steiner, Die 2. Panzer-Division 1935-1945 (Friedberg: Podzun-Pallas Verlag, 1974), 214. The 25th was a clear day: "the enemy attacked on 25 July in fine and slightly cloudy weather." Schack, B-540, 12.

massacre. Sterz ordered his Panthers into May in a left hook, and the panzergrenadiers and Jagdpanzer IVs across the open ridge to the right. As they came into fire position, mostly hull down, Sterz's Kampfgruppe tore into the Watch with cannon and automatic fire while the Panthers engaged the 1st Hussar Squadron approaching May.

"B" Squadron arrived at the Factory just as the Black Watch was crossing the open wheat fields, halfway to the crest and already receiving heavy fire: "We noticed wounded men crawling back through the grain."⁷⁸ Powell ordered the squadron to immediately support with machine guns and sent two troops up the road into May-sur-Orne. The Shermans reached the town center at the same time as Sterz's Panthers. A quick fire fight knocked out two Shermans. The Squadron withdrew to the outskirts of May where they noticed the remnants of "C" Company, Calgary Highlanders, concealed in houses and ditches.⁷⁹ The westerners were most glad to see them. "B" Squadron deployed astride the road and gave what support it could as the Watch, which by now was reduced to about sixty men, and still led by Griffin, disappeared over the ridge.

General Simonds joined General Foulkes in the early morning of July 25th shortly before the Black Watch attack was to start. General Foulkes had his command post in the basement of a factory ... we were very close to the Black Watch when they received their worst dose of enemy fire. It was obviously overwhelming. We knew something dreadful had taken place.⁸⁰

The counter-attack by the 2nd Panzer stopped Powell cold and destroyed the Watch. In fact, Sterz's assault behaved exactly as predicted by Simonds in his Operational Policy published in February:

The way in which the Germans support their infantry in the counter-attack must be clearly understood. They move tanks or self-propelled guns to within close range of the objective they are trying to retake. These do not support by neutralizing fire, in the ordinary sense, but with aimed shell fire directed through telescopic sights at a range at which individual infantry

⁷⁸ RG24 Vol 20,275 Letter to Director DHist by Capt T. E. Williamson, Troop Leader with B Sqn 6 Cdn Armd Regt (1H) 25 Jul 44, dated 23 Jan 46, and correspondence Lt.Col Powell.

⁷⁹ RG24 10874, reports McGill, McLaughlin, RG24 Vol 20,275 Williamson and, Copp, 79.

⁸⁰ Stearns Papers, letter 23 Mar 81, 3. Foulkes HQ was in a Brewery in Fleury which he never left. Simonds drove forward when communications failed and probably watched the slaughter from his Staghound (armoured car), atop Hill 67. McGill also testified he was atop Hill 67 and observed the RHC attack. McGill Interview.

dispositions can be picked out. The moral and material effect on our troops of this type of fire is considerable.⁸¹

German Reaction

Operationally, *Spring* (specifically, the RHLI success), created a stir at 1st SS Pz Corps headquarters and soon drew the attention of von Kluge's staff. The heavy artillery bombardment and presence of two armoured divisions suggested this may be a follow up to *Goodwood*. Von Kluge disagreed. *Spring* was missing the signature hallmark of a major Allied operational effort. He demanded to know where the heavy bombers were. Although von Kluge did not believe this was another Montgomery breakout attempt, the large red arrow striking across Verrières pointing south toward Falaise worried him. He drove to Dietrich's Headquarters.⁸²

The Leibstandarte had reacted violently to Rockingham's victory. Its commander, SS General Theodor Wisch, began *Spring* with over 30 Panthers, his Pz IV Abt, and the seconded "101 Hy Tank Bn with about 20-25 tanks capable of running."⁸³ His battalion commander at Verrières, Sturmbannführer Becker, immediately launched counter-attacks. They attempted to envelop the Rhilies and cut them off. But Rockingham, who had a detachment of 17 pdrs from 2nd Anti-tank Regt RCA under command, had deployed them around Troteval to protect his flanks. Their fire drove off the first German thrusts.⁸⁴ Meanwhile, the tanks of 22nd British Armoured Brigade were poking through the tree line at the top of Verrières. The British behaved timidly. With four tank

⁸¹ Simonds Operational Policy, 2nd Corps.

⁸² Abendmeldung, 5 Pz Army WD 25 July 44, and, Martin Blumenson, Breakout and Pursuit – US Army in World War II (Washington: Office of the Chief of Military History, 1969), 239.

⁸³ RG24 10677 "Special Int Report: Brigad Führer Wisch, Comd I SS Panzer Div 'Adolf Hitler' (6 Jun 44 - 25 Aug 44)" 25 Aug 45, 3.

⁸⁴ Rockingham felt that too much credit had been given to supporting arms: "As for the counter-attack in the evening, by which time the tanks of the 7th Armoured Division had arrived, the artillery, mortar, bren, rifle, and even sten, grenade and PIAT fire was just as responsible for repelling the enemy as were the tanks and typhoons, which were, in any case, being directed by the RHLI ... Counter-attacks of equal strength were directed against the RHLI as well as other units involved, even before the arrival of the Armour." Rockingham letter to Stacey, 27 Oct 48.

regiments and five rifle battalions⁸⁵ at the ready, they could have struck for May, Fontenay or Rocquancourt. They did not. Auftragstaktik was not in the British doctrine.

They watched patiently, ducking 88 fire from across the Orne, and waited for Simonds to do something. The GOC, believing the initial optimistic reports from Keller and Foulkes that Tilly and May had been cleared, decided to wait for his last phase to work itself out – the capture of Fontenay and Rocquancourt by the Black Watch and Royal Regiment of Canada. His inactivity is curious. Since his attacks were running at least five hours late, the Corps Commander must have realized that all surprise had been lost and he was losing the initiative. However, if he was indeed attempting to conduct a holding battle, then he had partially succeeded. In fact, he now had an opportunity to fix all German reserves by attacking in strength and securing the entire ridge.

Instead, Simonds cancelled the armoured advance. He was going to wait for his infantry and artillery to capture May and Tilly, unsupported. In the interim, Simonds ordered the 22nd Armoured to assist the RHLI. The British interpreted this to mean feeding in one squadron at a time to help Rockingham. The remaining tanks assumed hull down positions on the north slope in the area of Beauvoir farm out of sight of any target save for Feuguerolles (four km west), and awaited either the official word to “go” or a German counter-attack. Eventually a squadron from 1st Royal Tanks winkled its way past Verrières and peeked over the ridge into Rocquancourt. It was met with anti-tank fire and quickly lost a troop of Shermans. Overhead, Typhoon pilots reported seeing “a shooting gallery” of about sixty enemy tanks on the reverse slope of Verrières ridge. 1 RTR promptly withdrew.⁸⁶ Despite this, there is no debate that British tank support helped Rockingham hang on. The RHLI was attacked seven times throughout the day.

⁸⁵ County of London Yeomanry and 1st Royal Tanks were on the ridge (near Beauvoir), 5th Royal Tanks were closer to Troteval, trading shots with German tanks near Tilly. The Queens Brigade (1st/5th, 1st/6th and 1st/7th Queens Royal Regiment) was north of Beauvoir, close to Ifs with 8th Hussars under command. RG24 10933 7 Armd Div Op Instr No. 1 20 Jul 44, RG24 10934 7 Armd Div Int Sum No. 45, 25 Jul 44 and Int Sum No. 46, 26 Jul 44. See also, MajGen G. L. Verney, DSO, MVO, The Desert Rats (London: Greenhill Books, 1990).

⁸⁶ Memories of Wittman at Villers Bocage and the burning tanks of *Goodwood* made them think twice. “The Desert Rats” were not the cocky scrappers of North Africa fame. They were tired and cautious - almost gun shy. Although individual squadrons were still pretty good, the division as a fighting force sagged. Eventually Montgomery was forced to replace their commander, although the 7th fought no differently for its new boss either. It was a spent unit. The best British tank division in Normandy was Robert’s novice 11th Armoured.

At about the same time as the Black Watch was being destroyed by Sterz, the Royal Regiment of Canada pushed past Verrières and advanced against Rocquancourt. As 1 RTR, they were stopped by a "hurricane of fire" from a classic reverse slope position. The supporting Canadian tank squadron never crossed the ridge. As it maneuvered around the eastern flank of Verrières village, it was met by long range tank fire from across the highway. The Fort Garry Horse and 1st Hussars reported they were being engaged by "an Elephant." It was, in fact, the first Canadian contact with the heaviest tank in Normandy: 503 schPzAbt had joined the Verrières battle.⁸⁷ Their presence would shut off any attempted movement south along Route 158. By noon all Canadian progress was halted across the entire front. The 9th and 5th Brigade attacks had met with tragic results and the only bright light was Rockingham determinedly holding onto Verrières. Simonds spent a good deal of time in 2nd Division's sector, conferring with both Foulkes and Maj General G. W. E. J. Erskine, Commander 7th Armoured. Around 1300 hr. Simonds decided that Tilly and May were to be secured before armour passed through. He ordered continued attacks against both objectives. Foulkes decided to use the Maisonneuves alone while Keller ordered Petch to go in again with the SDGs.⁸⁸

Panzer Gegenangriff: 9 SS Höhenstauffen

"Harzer, the Tommies have broken through in 272nd Division's sector. The axis of attack is Caen-Thury-Harcourt via Saint-Martin and May, as well as the Caen-Falaise route via Rocquancourt. The 9 SS Pz Division Höhenstauffen will attack north as soon as possible and reestablish the HKL. Engage with two regimental Kampfgruppen.

Any questions? No? Well then, move now. Speed is essential!"

Operational Order for 1 SS Corps Counter-attack, 25 Jul 44
Chief of Staff 1 SS Pz Korps, Oberführer Kramer,
to COS 9 SS Pz Div, SSLtCol W. Harzer, 25 July 1944

Simonds's plans were disrupted by Dietrich's corps counter-attack. The failure to recapture Verrières caused mounting concern in 1st SS Pz Corps HQ. The presence of a large tank formation had been reported and both May and Tilly were still threatened. A

⁸⁷ 6 CAR WD, 25 Jul 44; RG24 13711 2 Cdn Corps, Ops Log, 25 Jul 44, Sheet 8, erroneously reported contacts with JadgPzTiger / Ferdinand / Elephant this reappears in modern histories: "first disastrous confrontation with a German 'Ferdinand' or 'Elephant'..." Roy, 116. In fact the Elephant never deployed in the west; Kursk survivors were sent to Italy.

⁸⁸ Simonds also ordered Foulkes to attack Rocquancourt "with the support of the whole Corps artillery" by 1830 hrs. Stacey, Victory Campaign, 193.

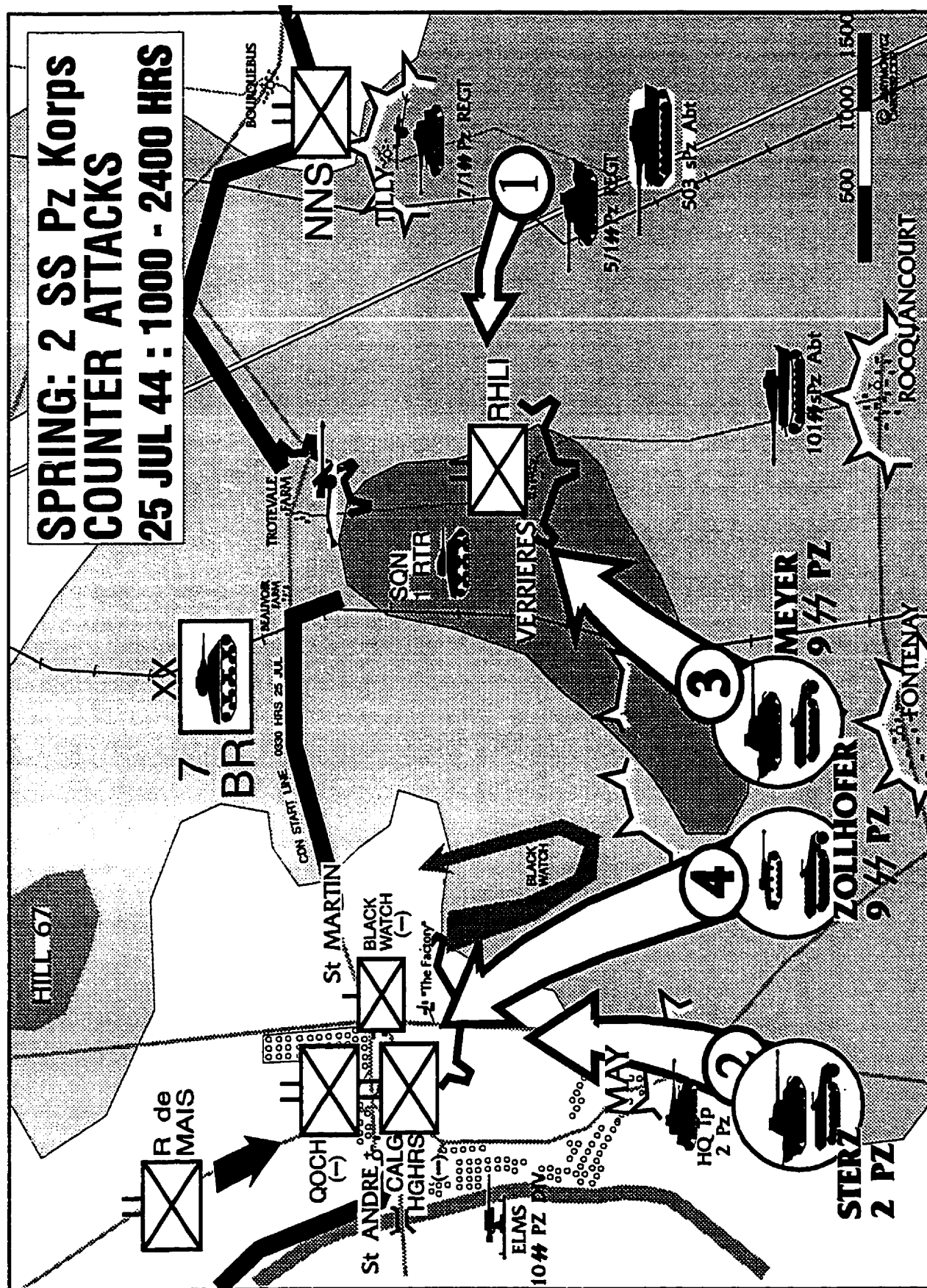


Figure 21

Canadian breakthrough, or simply securing the remaining villages on Verrières, would destroy Schack's 272nd Division and much of Wisch's infantry. Von Kluge gave Dietrich permission to use the 9th SS.⁸⁹ Dietrich called SS Oberführer Sylvester Stadler, Commander 9th SS, and announced "The Tommies have taken Verrières."⁹⁰ 9th SS was directed to strike north immediately and its objective was "Höhe 88,"⁹¹ the center of the ridge. Stadler had both of his battle groups ready. Kampfgruppe Meyer was the Gepanzerte Gruppe (armour heavy battlegroup) and held most of the 9 SS armour: all available tanks from the Panther battalion, the Pz IV battalion and the Stug battalion.⁹² Under command to Meyer were a Flak troop, engineers and possibly a panzergrenadier company. Kampfgruppe Zollhofer, comprised Pz Gren Regiment Höhenstauffen,⁹³ a Flak troop and a troop of Jagdpanzer IVs.⁹⁴

Stadler attacked two up. Zollhofer drove towards St. Martin, while Meyer headed for the ridge center. Meyer was met by the concentrated fire of a screen of Canadian 17pdr anti-tank guns and the tank guns from 22nd Armd Brigade. Reporting he had encountered a pakfront, Meyer advised his battlegroup that "Wer die Höhe überschreitet ist ein toter man" (whoever crosses this ridge is a dead man)⁹⁵ and side slipped west to support Zollhofer's attack. This was a classic example of Auftragstaktik and determination. Understanding his commander's intent, Meyer continued the battle in its

⁸⁹ 5 Pz Armee WD, 25 July 44 and, Blumenson: "Kluge spent 25 July inspecting the forward positions of Pz Group West. He was on hand to witness the reaction to an attack near Tilly launched by 2nd Canadian Corps. The Canadians gained a mile or two until 9 SS Pz Div was committed to stop the advance.", 239.

⁹⁰ Herbert Fürbringer 9.SS-Panzer-Division Höhenstauffen: 1944 Normandie (Osnabruck: Munin-Verlag GMBH, 1987), 339. See also, Otto Weidinger Kameraden bis zum Ende (Das SS PzGren Regt 4 "DF" (Oldendorf: Verlag K. W. Shintz, 1987).

⁹¹ RH19IX/9 Tagesmeldung 25.7 Heeresgruppe B, 267. Also, Fürbringer, 340.

⁹² USAETHINT P Series Manuscripts: SS Oberst W. Harzer, 9 SS Panzer Div "Höhenstauffen", 25 Jul-Nov 44, 162. And ETHINT MS B-407. SS General Sylvester Stadler. 9 SS Pz Div 20 June-24 July 44. Stadler rated his strength as: "Troops 88%; PzGren Bn 60% (few officers); Artillery 90%; Tanks 70%; the division did not receive any reinforcements either before or after the invasion.", 2. MS B-747 and MS B-748. 2 SS Pz Korps by SS General W. Bittrich, commander. 9th SS reached Normandy 14-20 June, initially without its Panther battalion. Concentration finally completed by 25 June.

⁹³ RG24 13712, Int Sum 2 Cdn Corps: 9 SS was reduced to one PzGren Regiment by 25 July: "Due to heavy losses on 18 July, 19 SS and 20 SS PGR amalgamated into 1 Regt of 4 bns." Herbert Fürbringer, 9.SS-Panzer-Division (Bayeaux: Editions Heimdal, 1990), 339-340.

⁹⁴ By 25 July, 9 SS Pz strength was 11 Stugs, 18 Pz IV and 18 Panthers. Fürbringer, 342.

⁹⁵ Fürbringer, 340.

most favourable sector.⁹⁶ Canadian battalions and brigades, products of British training, would have likely stopped when their phase of the attack was blocked.

The 9th SS left hook was late getting off the mark. The Höhenstauffen had considerable trouble crossing the crest near May. "Wo ist Zollhofer?" demanded Schack. By 1840 hours the Kampfgruppe had joined the battle. One reason for Zollhofer's delay was that he, like Sterz, was met by a Canadian attack.⁹⁷

Foulkes ordered Le Régiment de Maisonneuve, under command to 6th Brigade and still bruised after clearing Etavaux, to go forward and capture May. Alone and unsupported, the Maisies managed to push a few hundred yards south of their start line but soon took heavy flanking fire from the 272 defenders still in St. André as well as 10 SS and 102 SS Tiger fire from across the Orne ("Sturmpanzer und Tiger vom Westufer der Orne den Kampf von St. Martin"⁹⁸). Just as the Montrealers were making progress, they, like the Black Watch earlier, encountered a counter-attacking Kampfgruppe. The 9 SS cleared May, recaptured the Factory, and forced the Maisonneuves back into St. André.⁹⁹ The remainder of the evening and part of the next day was spent in fighting to keep the 9th SS from recapturing both St. André and the key terrain beyond.¹⁰⁰ Panthers penetrated as far north as the slopes of Hill 67.¹⁰¹ Höhenstauffen had reestablished the Hauptkampflinie.

⁹⁶ L. F. Ellis, Victory in the West Vol II (London: HMSO, 1968), 379. See also B-470 9 SS Panzer Division 20 Jun-25 Jul 44. That 9th SS arrived at Verrières, let alone attacked St. Martin, is amazing given the air activity over Spring: "... 1,700 sorties in order to support the attack and to limit the power of the enemy's counter-attacks. Rocket firing Typhoons alone flew over fifty missions in response to the Army's calls." Copp, Vogel Falaise, 18, and, Stacey, Victory Campaign, 193.

⁹⁷ RG24 14109. WD 5th Canadian Brigade, Fürbringer, 341, Schack B540, 13.

⁹⁸ RHIX 19/IX/M. Abendmeldung Okdo HeeresGruppeB. 25.7.44. This was noted at 1700 hrs.

⁹⁹ Copp Brigade, 83. "The 9 [SS] Pz Div counter-attacked at 17:30 with the object of recapturing the HKL and by fall of dark had regained 1-2 km ground.... The 9 SS Pz Div still reached the northern road of ST MARTIN on the same day." Schack, B-540, 13.

¹⁰⁰ "A 22h. le 25 juillet, le Maisonneuve lançait une deuxième attaque, sans plus de succès." Jacques Gouin Bon Coeur et Bon Bras - Histoire du Régiment de Maisonneuve (Montreal: Regimental Association, 1980), 103. Also: P. E. Schramm Kriegstagebuch des Oberkommandos der Wehrmacht Band IV (Frankfurt: Bernard und Graefe Verlag, 1961), 328.

¹⁰¹ The 9 SS attack petered out by the morning of 27 July, after they had recaptured May, St. Martin. 2CAB / 2 Corps logs on 26th July confirm "ko'd Panther at Grid 023615" - the southern slope of Hill 67.

Von Kluge, now with one eye on St. Lo, where this time there were reports of heavy bombers, was satisfied. Although Verrières village remained in Canadian hands, most of the ridge had been held or recaptured. The original HKL had been restored in 272nd's sector¹⁰² and both the corps and operational reserve were intact. The 9th SS counter-attack had not only restored the situation but dashed all prospects of Simonds saving *Spring*.¹⁰³ Simonds had been poorly supported by his divisional commanders who exhibited timid leadership. Schack observed: "Command on the British [Canadian] side was ... much too methodical and bent on security and this from the lowest to the highest command posts ... repeatedly favourable opportunities were not recognized and exploited fast enough by the command."¹⁰⁴ Foulkes in particular offered little helpful intelligence:

General Simonds could not get the information he needed especially from 2nd Division Headquarters and the Brigade Headquarters. This is why he spent so much time at or near 2nd Division trying to get the proper picture. It was most frustrating to him.¹⁰⁵

His already low opinion of Foulkes dropped considerably after *Spring*. Simonds decided "he must get rid of General Charles Foulkes, who in his opinion, did not have the right qualities to command ... on at least three occasions Guy Simonds confided in me that he was going to get rid of Charles Foulkes."¹⁰⁶ The dissatisfaction with his commanders was to continue; Foulkes stayed on.

Spring marked the second time Guy Simonds had confronted Sepp Dietrich. It was again an unsatisfactory conclusion for the Canadian general. This battle of Corps Commanders began with Simonds numerically disadvantaged operationally, but capable of local superiority. Had Simonds counter-attacked Höhenstauffen when Meyer and Zollhofer had reached their culminating point, *Spring* may have gone differently.¹⁰⁷

¹⁰² RG24 10677: Interrogation Report. Oberstgruppenführer Josef Dietrich. During his interrogation Dietrich stated "So much did 272 Inf Div suffer during this period ... that the division was finally pulled out on the 29 July...."

¹⁰³ Black Watch and Calgary WD 26 July: the battalions withdrew to Basse and Fleury-sur-Orne.

¹⁰⁴ Schack, B-540, 16.

¹⁰⁵ Stearns Papers, letter 23 Mar 81.

¹⁰⁶ Kitching, 189.

¹⁰⁷ "In verlauf der schweren kampf e sudlich Caen gelangte dem Feind; westlich der strasse Caen-Falaise in unsere Stellungen einzubrechen und weitere Infanterie und Panzerkräfte nachzuführen. Unsere fanatisch kämpfenden Truppen verhindern jedoch das Auswerten der feindlichen Einbrüche. Der Verluste

Spring - Analysis: Neither Holding Action nor Breakout

While General Simonds was well aware of the purpose of "Spring" and all the other heavy night attacks, it was most frustrating to him. I can remember tears coming to his eyes on one occasion when once again we were asked to put forth a "holding attack."

Captain Marshal Stearns

I am convinced that the Canadians could have brought about a much quicker decision if they had exploited our inferiority and their own overwhelming superiority in personnel and material in a more flexible command and if they had sooner recognized and more ruthlessly exploited our crises of often catastrophic dimensions.

Lt General F. A. Schack

Night attacks are complex at best – ad hoc night attacks (*Spring* was planned and ordered within two days of *Atlantic*) carry the seeds of their own destruction. Despite a superb fire plan to support the attacking troops, there were bound to be serious problems in moving formations in darkness through terrain that was under indirect and often direct defensive fire. For the Germans, *Spring* was a classic defensive battle. Dietrich's forward strongpoints, Tilly, Troteval and St. Martin, decimated Simonds's first echelon. The *dog fight* chewed up his second echelon. Dietrich launched Stadler at exactly the right moment and the Höhenstauffen did the rest: "In späten Abenstunden gelang I.SS Pz. Korps im Abschnitt Tilly-Orne die alte HKL trotz stärkster fdl. Gegenwehr zurückzugewinnen."¹⁰⁸ Dietrich, given free rein by von Kluge, reacted decisively and aggressively. Granted, he had little choice. Failure meant the end of the Normandy front. By the morning of 26 July, he presented von Kluge with a complete defensive victory. Operation *Spring* has been the subject of much study and debate. It is perhaps the most investigated Canadian Operation in the Western Campaign. No less than three official reports exist, including the controversial comments written by General Simonds himself.¹⁰⁹ The official study, Report No. 150, was ordered destroyed by the CGS, General Foulkes, allegedly because of disagreement between himself and Simonds over its contents. It nevertheless survived and is particularly informative on two accounts: Guy Simonds revealed that Operation *Spring* was actually intended to be a holding battle and

der Feindes sind hoc 18 Panzer warden abgeschossen." Erich Murawski Der Deutsche Wermachtbericht (Boppard am Rhein: Herald Boldt Verlag, 1962), 207.

¹⁰⁸ WD Armeegruppe B. Tagesmeldung 26.7.44., 267.

¹⁰⁹ Report 150 is a compendium of the official work prepared for the Minister of Defence. This file includes the Simonds report as well as statements by participants. It was ordered destroyed by General Foulkes as CGS but Stacey managed to protect one copy in the Directorate of History.

that its failure was not due to poor planning but minor tactics.¹¹⁰ This raises the question: if *Spring* was a holding battle, was it an operational success although a tactical failure?

The commander who surrounds himself with radios and a staff will not understand what is going on at the sharp end. The Dietrich approach was to go have a see. The Simonds technique was a little of both. The Commander of 2nd Corps was often further forward than his divisional or brigade commanders. He saw much but seems to have been unable to react decisively. His engineer-gunner mind searched for a technical solution. Simonds the soldier saw Griffin destroyed and became depressed. "When the news came over the communications system that 'the Black Watch have been wiped out', General Simonds did not say anything although he invariably reacted very violently to such negative information"¹¹¹ On the other hand, the RMC trained British gentleman calmly waited for his divisional commanders to sort things out. This finally ended with him losing his cool, having a public row with Foulkes, and then ordering a series of new attacks, some by first echelon battalions already bloodied by battle and thoroughly demoralized. Simonds's solution to *Spring* was to reinforce failure and even that came too late. He was already facing mutiny in 9 Brigade and something close to it from 6 Brigade and its GOC.¹¹² With the Corps deployed to resist another counter-attack, it would require pretty spectacular leadership to return to the offense. Finally, he just gave up and called the whole thing off.¹¹³

Canadian historical support for Simonds fails to consider the actual tactical evolution around 1st Cdn Army from 25 July to 5 August. C. P. Stacey defended Operation *Spring* as an operational attempt to prevent von Kluge from appreciating that the American attack launched west of St. Lo on this same day was to be the main Allied

¹¹⁰ DHist 112.HD.003 "Report on Operation Spring", 8. Conversely, German defenders left Verrières with higher opinions about Canadian infantry, see Schack, B-540, 16.

¹¹¹ Stearns 23 Mar 81.

¹¹² "The Bde Comd told this to the GOC and stated that he felt it was his duty to the men under his command and to the Div as a whole, and that it was his duty to present the picture to the Corps Comd to the end that this situation should be clarified before any further adv was attempted.... The GOC (Foulkes) said he agreed with Brig Young and that he would make arrangements to meet the Corps Comd immediately." RG24 14116 WD 6 CIB 1500 25 Jul 44.

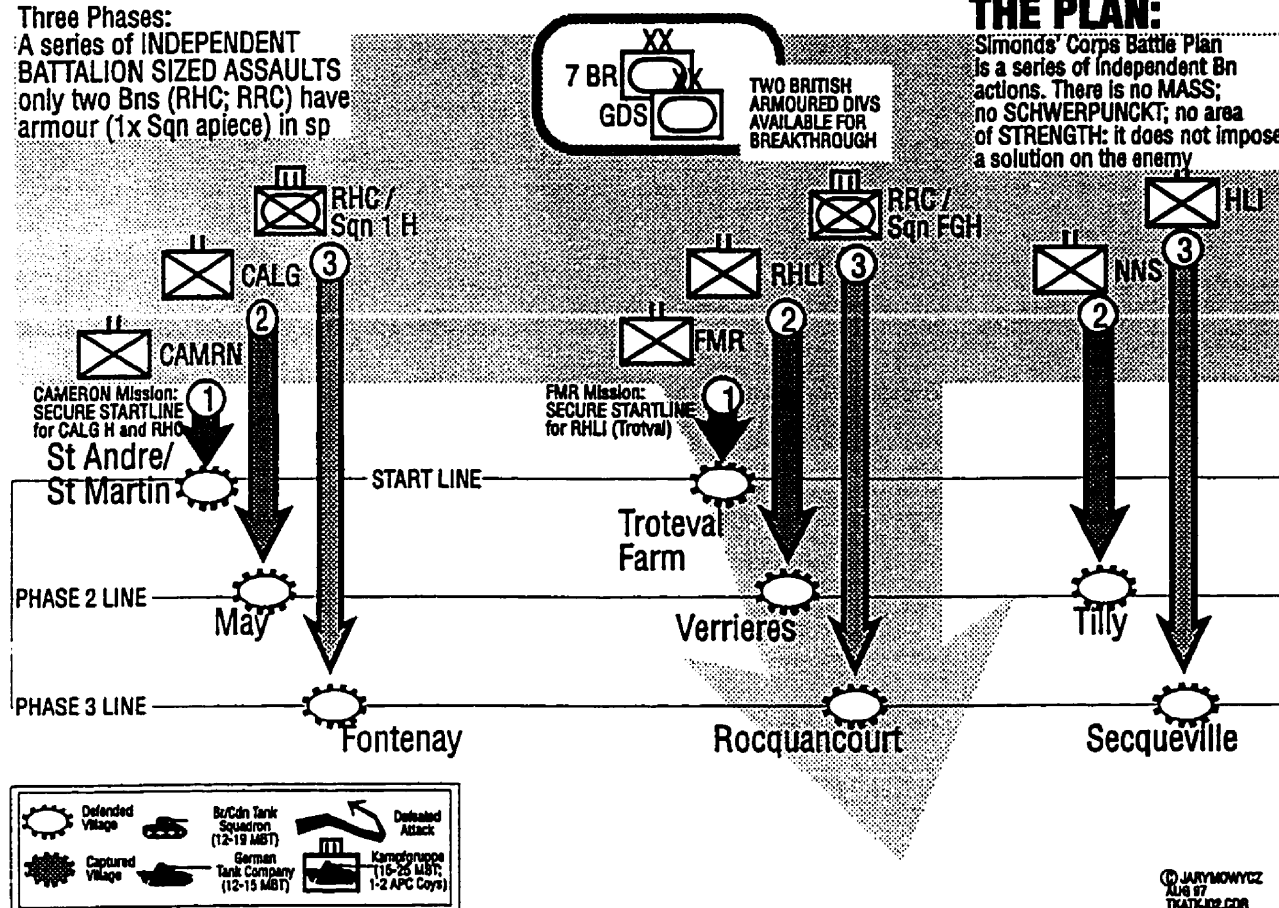
¹¹³ The Guards Armoured remained unused throughout the battle despite their operational forecast. RG24 1371 2 Cdn Corps, Ops Log, 25 Jul 44, and, RG24 10808: Gds Armd Div OO No.2, 24 Jul 44, 1,2. See also, The Earl of Rosse and Col. E. R. Hill The Story of the Guards Armoured Division - 1941-45 (London: Athenaeum, 1969).

SPRING 25 JUL 44 : TACTICAL ANALYSIS

Three Phases:
A series of INDEPENDENT
BATTALION SIZED ASSAULTS
only two Bns (RHC; RRC) have
armour (1x Sqn apiece) in sp

THE PLAN:

Simonds' Corps Battle Plan
is a series of Independent Bn
actions. There is no MASS;
no SCHWERPUNKT; no area
of STRENGTH: it does not impose
a solution on the enemy



THE BATTLE

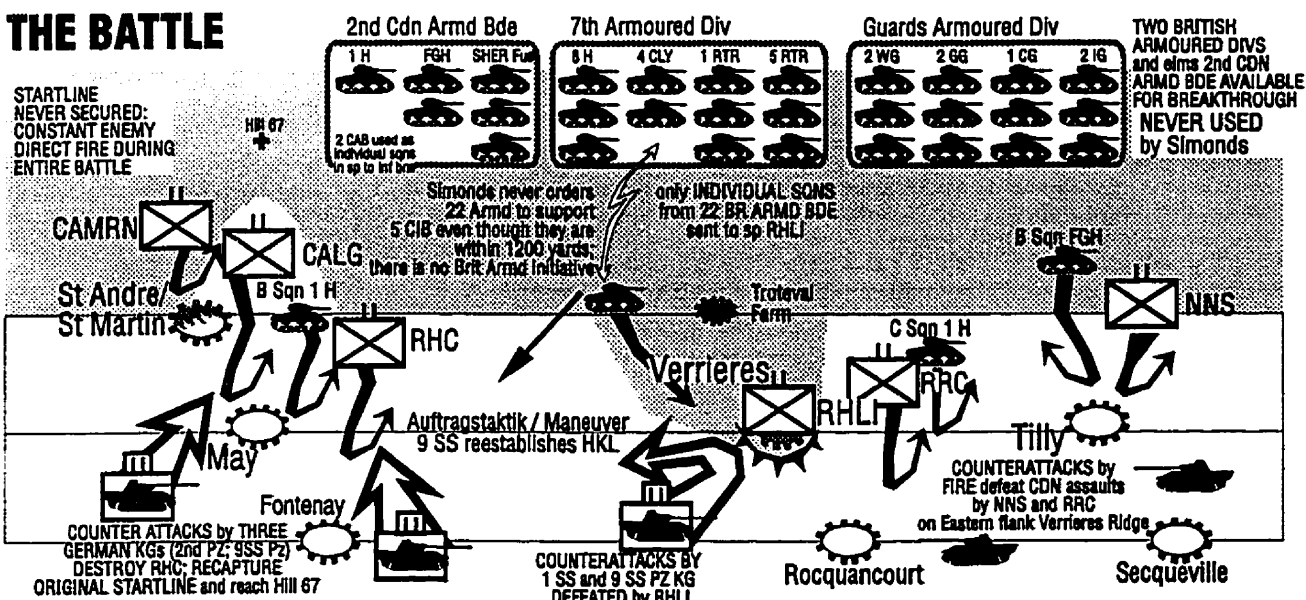


Figure 22

effort. It appears in this respect the operation was useful, although from the beginning the Germans recognized it as a limited attack. J. L. Granatstein and D. Morton avoid the issue. Col J. A. English prefers not to evaluate *Spring*, at least operationally, although he does point an accusing finger at Foulkes and Keller: "In a very large measure, responsibility for the relatively lacklustre showing of Canadian arms in Normandy must be laid at the feet of divisional commanders. Clearly, neither Keller nor Foulkes were as tactically competent as Simonds."¹¹⁴ Terry Copp believes "Operation *Spring* may not have been planned as a holding operation but it certainly became a very successful one."¹¹⁵ A study of the armoured operations, particularly German operational flexibility before and after the battle, suggests a different interpretation.

Had *Spring* lasted half as long as *Bluecoat*, the threat of a push to Paris would have shifted interest away from Bradley.¹¹⁶ If *Spring* was to be a successful holding action, it had to keep the panzers near Caen for at least four days. If he understood his Commander's intent Simonds must have appreciated that Montgomery didn't want the panzers on the east of the Vivre, where they could escape; he needed them west of Falaise. Nevertheless, both Dempsey and Simonds sought to break out. That is why two complete armoured divisions were allotted to 2nd Canadian Corps.

Spring failed operationally and tactically. The immediate lessons learned was the all too obvious absence of the "combat team" or battlegroup. Current doctrine permitted commanders to attach individual tank squadrons "in support" to a brigade. This did not create a symbiotic weapon capable of attack or defence in a tactical dog-fight. Petch, MacLauchlan and Cantlie went in alone. Even after delay forced attacks in clear daylight, there was no effort to form ad hoc combat teams. Senior commanders' ignorance of armour resulted in Foulkes (and Wyman - who should have known better) to allow one tank squadron to probe May and another to guide the RRC into Rocquancourt. Keller and Cunningham ordered a single FGH squadron to attack Tilly, well after it had been made clear all German village strongpoints were held by Kampfgruppen.

¹¹⁴ English, 306, 249-250.

¹¹⁵ Copp Brigade, 86.

¹¹⁶ "Armour came from Monty's front at the time of Mortain and caused trouble." Gen Omar N. Bradley, interview, Pogue, 14 Oct 1946.

The only combat teams and battlegroups taking part in *Spring* were German. Despite the apparent difficulties that Simonds and his commanders had with planning¹¹⁷ and conducting a corps/army level offensive, they were equally burdened with doctrinal failure at the tactical level. The grouping of all arms into a functional team was still beyond Allied expertise. Only three of nine available Sherman squadrons actively participated in *Spring*. British armour (7th Armoured Division with twelve squadrons) was introduced piecemeal at Verrières; the Guards Armoured Division, with another twelve squadrons, was not used at all. 7th Armoured's timidity, much like its earlier performance during *Atlantic*, was disappointing. Particularly unfortunate was their apparent refusal to support the Black Watch as it was being slaughtered by Sterz's counter-attack.¹¹⁸

The Mystery of Montgomery's Grand Tactics

Before 25 July there were eight panzer divisions around Caen. Within four days of Bradley's launching Operation *Cobra*, over half of them had disappeared.¹¹⁹ St. Lo is a half day's drive from Falaise and a Kampfgruppe could move to blocking positions within a day. A complete division and its trains might possibly take as long as a week, although 2 SS Korps required only two weeks to move from the Brody area in Russia to Caen in June. The 272nd left on the night of the 26th and relieved 12 SS HJ on the east side of the 1st Cdn Army front. 10 SS re-deployed on 26 July and headed west. 9th Panzer,¹²⁰ 21st Panzer and 116th Panzer withdrew on the 29th; 9th SS handed over to

¹¹⁷ Schack notes: "The enemy's way of fighting was very methodical and always intent on maintaining sufficient security. In defense, he held captured ground bravely and tenaciously." Schack, B-540, 16.

¹¹⁸ 22nd Armoured Brigade deployed its four armoured regiments and mechanized infantry battalion on the northern slope of Verrières near the road junction evacuated by the Black Watch before dawn. During the attack, the adjutant of the Watch, Capt Campbell Stuart, who lost wireless contact with Griffin desperately drove up trying to get help. "I climbed on the tracks of a well positioned tank and banged on the hatch. A head eventually appeared and told me to get my carrier out of there as it would draw 88 fire. I did so and queried him about the battalion. He disclaimed any knowledge and promptly closed the hatch." Capt Campbell Stuart, personal correspondence, 1990.

¹¹⁹ A Montgomery apologist argues: "If the Germans could have shifted even a single battered panzer division toward Bradley ... it would have made his breakout infinitely more difficult and costly – perhaps even impossible before August." Alistair Horne "In Defense of Montgomery" The Quarterly Journal of Military History. Autumn 1995, Vol 8, No. 1), 67. In fact, four, eventually six, shifted over.

¹²⁰ 9th Panzer arrived in Normandy after Operation *Spring*, via Falaise.

89th Infantry Division on 1st August. Finally, 1st SS LAH began to thin out on 3 August. On that day, eight days after *Spring* had ended, Simonds was faced with a single panzer division, the only German reserve on his front. It was the old Canadian nemesis, Kurt Meyer's 12th SS Hitlerjugend.¹²¹

Spring neither destroyed von Kluge's panzer reserves nor magnetized them to Simonds's sector. Von Kluge's ability to re-deploy his tanks would stop Dempsey cold.¹²² Operation *Bluecoat* was, in theory, a decoy to draw German attention and strength away from Bradley "Second British Army must hurl itself into the fight ... so as to make easier the task of the American armies fighting on the western flank."¹²³ It was a confusing strategy since Dempsey's objective was the communication center of Vive, south of St. Lo and southwest of Caen. Montgomery was attacking away from Simonds and towards Bradley. *Bluecoat*, if anything, hastened the departure of panzer divisions and threatened MajGeneral J. Lawton "Lightning Joe" Collins's VII Corps, the force responsible for *Cobra*'s initial phase: getting through the bocage.¹²⁴ If Dempsey

¹²¹ P. E. Schram, *OKW War Diary* (1 Apr-18 Dec 44) Historical Division, ETO MS B-034, 58-60, 77. See also, RG24 Vol 14046 WD 2 CAB Int Sum 5 Aug 44. Cdn Int confirmed 9 SS and 10 SS had left. 9 SS was identified at Caumont; "10 SS has during past three days gone west." For details of pz div redeployment, SS Panzer formations: MS 155, General der PzTruppen Krueger, "1 SS Pz Corps (16 Aug-6 Sep 44)" and, Gen der Waffen SS Bittrich, "II SS Pz Corps (14 Jun - 5 Jul 44)." MS B-358, Gen der Waffen SS Theodor Wisch, "Leibstandarte Adolf Hitler in Aug 44"; Maj.Gen. Stadler, "9 SS Pz Div (20 June - 31 Jul 44)." Wehrmacht Pz formations: MS A 904 Gen der Panzertruppen Frhr. von Luttwitz, Comd 2 Pz Div Interrogation. 1 Dec 1952, 4. B-631 Lt.Gen. Feuchtinger, "21 Pz (28 Jul-14 Aug 44)"; B-058, Maj.Gen Mueller, "116 Pz (21 Aug - 19Sept 44)." Head Quarters Reports: MS B-162, OKW War Diary "The West (1 Apr-18 Dec 44)." MHI.

¹²² After the 25th, von Kluge turned his full attention to Bradley and en passant, Dempsey. He was capable of operational maneuver but forbidden to employ it creatively. Hitler's order, "Starre Verteidigung" (rigid defence), forced him to hold everywhere. MS B 723 "breakthrough to Avranches: "27 Jul Fldm von Kluge [ordered] ... transfer XXXXVI Pz Korps - 2 Pz and 116 Pz to Seventh Army ... 116th Pz. Combat Team (1 Pz Bn, 1 PzGr Bn, 1 Arty Bn and elements Recce Bn) managed to reach the L'Epine area, 6 km southeast of Villedieu, in the morning of 31 July.", 13, 34. RH21-5/44, Kriegstagebuch Panzer-Armeeoberkommando 5. 10.6.44-8.8.44, "272.I.D. lost mit Infanterie-Teilen, in der nacht vom 26./27. beginnend, 21.Pz.Div. aus bisherigem Abschnitt heraus." Abendmeldung 27.7.44, 115. MS B 034, OKW War Diary (1 Apr-18 Dec 44) "Feuhrer approved the release of 116 Pz ... 0915, 28 July ... 116 Pz Div requested to St. Lo.", 58. 1st SS was the last pz div to leave Verrières, see, MS B 358 Wisch: "The division [LAH] was ordered to withdraw swiftly, after relief by an inf div to the combat area NE of Mortain ... Advanced units, Pz Bn I, Pz Gr Bn III/2, Eng Bn. The day for this march was 6 August.", 3. Also, RG 24 Vol. 10,680, trans of "Weekly Reports from Army Group B, July - August 44." 30.7.44:"9 SS launched an attack [against *Bluecoat*].", 2.

¹²³ Hamilton, 758.

¹²⁴ By early August, *Bluecoat* drew three panzer formations (21Pz, 9 SS Pz and 10 SS Pz) as well as all three Tiger battalions (101, 102 SS and 503 schPzAbt) west of the Orne. See Russell F. Weigley, Eisenhower's Lieutenants (Bloomington: Indiana University Press, 1990), 151-154, 168-169.

succeeded, he would either get involved in a nasty traffic jam with VII Corps or have to execute a sharp left turn in order to face east again. If this was part of Montgomery's master plan, it was awkward, launched late (30 July) and directly into the least favourable terrain imaginable: an expensive waste of precious British resources. Dempsey soon ran into mined bocage and was checked by counter-attacks made by 21st Panzer,¹²⁵ 9 SS and 10 SS Pz Divs, units that were supposed to have been "written down" in front of Caen by Simonds. Bradley would soon realize that the better part of another four panzer divisions were heading his way.

At the end of *Spring*, von Kluge had both restored his eastern front and retained freedom of action – operational maneuver. He had hurt 2nd Cdn Corps: "Hierbei hatte der Feind Höhe blutige Verluste"¹²⁶ (the enemy took high bloody casualties). He could deploy his panzers anywhere he wished, and he had panzers to send.

¹²⁵ "21st Panzer Division, being brought up from the east bank of the Orne except for Armd. Gp v. Oppeln which was committed south of Couvain...On 3 August 1944, 21st Pz Div, adjoining 10 SS Pz Div was holding against a much superior force...Adv elms of 9th SS Pz Div - reconnaissance bn, reinforced by tanks ...The attack was continued on 3 August 44, 21st Pz Div gained the Caen-Vire road. With that, the enemy break-through to Vire was prevented for the time being." MS B-748. II SS Pz Korps, 3-5.

¹²⁶ WD Heeresgruppe B, Morenmeldung 26.7. 44 RH19 IX/M.

CHAPTER FIVE

BREAKOUT 4: *OPERATION TOTALIZE* AUGUST 8 THE THIRD BATTLE FOR VERRIÈRES RIDGE Simonds Seeks Operational Maneuver

What looked good to [Simonds's] precise engineering mind on paper seldom worked in practice once the human element was added.

Brigadier Harry Foster

Timete et Interficimini¹

Motto for Canadian Armour, proposed by MajGen F. F. Worthington, November 1944

The fear of German armour forced Simonds into his second successive night attack. In his post-battle analysis of *Spring* the commander of 2nd Canadian Corps appeared to have been content with the essence of his failed plan: darkness and narrow fronts. Somehow Simonds also deduced that the Germans had, with superhuman effort, laid a minefield of enormous size under the same ground over which they had been counter-attacking just twelve days ago. Although there were no intelligence reports indicating new engineer activity and Allied interdiction made the sudden arrival of a quarter of a million mines remote, the new breakout offensive was built around the clearing of armoured lanes through minefields of the type last seen at El Alamein. Was it Montgomery's influence, or a creative mind let loose?² The greater probability is Simonds was alarmed by the failure of Operation *Bluecoat*

Despite the claims of Montgomery apologists, it is difficult to believe that *Totalize*, *Bluecoat* and *Tractable* were part of a strategic offensive designed to assure the

¹ "Be Afraid and you will Die."

² Appx "H" to CMHQ Trg Liaison Letter No. 12. LtCol Ealsh MC, RA SI Atk, School of Arty, Larkhill. Extracts from a Report on a Recent Visit to Normandy. July 1944. DHist 141.009 D116. "Very few mines have been encountered so far. Neither side appears to be using mines extensively at present." (Para 4). Also: "...one British or Soviet tank was immobilized for every 1900-2300 land mines originally laid. This figure accords with the British AORG..." Operations Research Office OPO T 117 Alvin D. Coox and L. Van Loan Naisawald, "SURVEY OF ALLIED TANK CASUALTIES IN WORLD WAR II", Operations Research Office, The Johns Hopkins University, Fort Leslie J. McNair, Washington, 31 March 1951, 68.

success of an American breakout and envelopment.³ But in fact, *Cobra* was launched on Bradley's initiative as a reaction to Montgomery's inactivity rather than as a part of the British commander's master plan:

The breakout came because Bradley and Patton got damned tired of waiting around for Monty and finally Ike gave direct permission to Bradley to go ahead.⁴

Montgomery's new directive (M515) was passed on 27 July and suddenly ordered "a big attack with six divisions from Caumont towards Vire and hope to get it launched not later than 2 August."⁵ This operation was ordered while Hodges was still stuck in the bocage. Bradley's armour would not break out at Avranches until 31 July. The Americans were fighting their way through thick hedgerows against determined rearguards – tough going for armour. As Martel liked to say: "The tank is not afraid of the gun; it is afraid of the concealed gun."⁶

Bluecoat was preceded by an air strike of seven hundred medium bombers. Dempsey attacked with six divisions west of the Noyers in the direction of the Vire. "The two were complementary – Montgomery the extrovert, who loved the headlines; Dempsey the introvert, who shunned publicity, but who got on with the job efficiently and without any fuss."⁷ Dempsey's 30,000 vehicles struck south through the Suisse Normande "but were soon caught in an inextricable mine field where tanks, Bren-carriers, half tracks became entangled and neutralized..."⁸ The British advanced further

³ The Americans proposed that the British / Canadians breakout east not south, in the direction of Lisieux and the Seine. There are no references to anything like a planned grand encirclement. It was proposed, however, "one corps to clear Brittany." See: 21 AGP/20721/G Plans. 27 June 44: Operation Lucky Strike - Clearance of Normandy. Colonel Harrison HD Heiberg. G3, Chief of Plans, 12 Army Group. Heiberg Papers. Patton Museum Library, Fort Knox.

⁴ Air Marshal Sir Arthur Coningham, Interviewed by Dr. Forrest C. Pogue, 14 Feb 47, Pogue Manuscripts. Patton Museum Library, Fort Knox, Ky. See: Operation Plan "Cobra" Dated 13 July 1944, HQ 12 Army Group, issued 16 July 1944. Chester B. Hansen Papers, "Documents and Reports on Operation 'Cobra' Folder." Bradley's Mission was conservative: "VII Corps with armored and motorized elements will seize COUTANCES and crossing of the SIENNE River to the Southwest. In addition, it will seize BREHAL and prevent any movement of enemy reinforcements to the North."

⁵ Hamilton, 757.

⁶ Martel, 216.

⁷ Sir Brian Horrocks, with Eversley Belfeld and MajGen H. Essame, Corps Commander (New York: Charles Scribner's Sons, 1977), 23.

⁸ "The hilly terrain proved both criss-crossed with exceptionally numerous hedgerows – except it was dry, it was some of the worst of the Bocage – and liberally sprinkled with mines." Russell F. Weigley,

than before but were stopped by a parsimonious German counter-attack that bled them dry and allowed von Kluge to build up his Mortain counter-attack force.

Operation *Bluecoat*, although it was supposed to break through to the Vire, endured savage closed terrain fighting from 30 July until 5 August and finally fizzled. *Bluecoat* may have been another disappointment, yet if one compares it to *Spring*, one can afford to be generous, and say that was a holding action. The British scrum locked in and pushed for seven days. *Spring* was cancelled by the evening of its first day.

Terry Copp, the only Canadian military historian to have produced a tactical study of Canadian operations in Normandy,⁹ suggests that the real problem in Normandy was manpower. Both the Canadian Army, an all-volunteer force whose well was near dry by August, and the British Army could not afford the casualties inflicted by the Germans. This may have influenced Montgomery's tactics. If this was true then he failed miserably. His left-right-left combinations show little skill in the ring.¹⁰ Sending Dempsey into the bocage in a fruitless breakout turned holding action, cost him thousands of irreplaceable infantry. Not reinforcing Simonds or continuing to hammer at Verrières suggests he lost the stomach for a true attrition battle – this was not the Montgomery of El Alamein fame.¹¹

Although *Bluecoat* was soon bogged, *Cobra* succeeded, perhaps well beyond Montgomery's expectations. By 29 July, Collins had sealed the Roncey pocket and MajGen Troy H. Middleton's VIII Corps (MajGen J. S. Wood's 4th Armored and

Eisenhower's Lieutenants - The Campaign of France and Germany, 1944-1945 (Bloomington: Indiana University Press, 1990), 169.

⁹ Copp, Brigade, 108-110, and also, Terry Copp and Bill McAndrew, Battle Exhaustion - Soldiers and Psychiatrists in the Canadian Army 1939-1945 (Montreal: McGill-Queen's University Press, 1990), 115-124. Copp's intimate knowledge of the Canadian soldier's mind makes him particularly competent to discuss whether the 2nd Cdn Corps was close to breaking by August. British casualties in the bocage fighting suggests the situation was about as bad in Dempsey's Army.

¹⁰ "Montgomery was not an unusual general. He was a competent general in positional warfare but he never exploited his victories...." Coningham, Pogue Manuscripts.

¹¹ This prompted the following observation from 5 Pz Army: "The English and even more so the Americans have been afraid of and avoided any large sacrifice of men ... even when they were forced to buy certain successes with heavy losses, they still shrank from the all-out, the true soldierly sacrifice." Quoted in G2 Periodic Report No. 130, 1st US Army, 18 Oct 1944. Martin M. Philipsborn Papers, MHI.

OPERATIONS COBRA / TOTALIZE NORMANDY FRONT SITUATION: 7 AUGUST 44

DEPLOYMENT ARMoured DIVISIONS

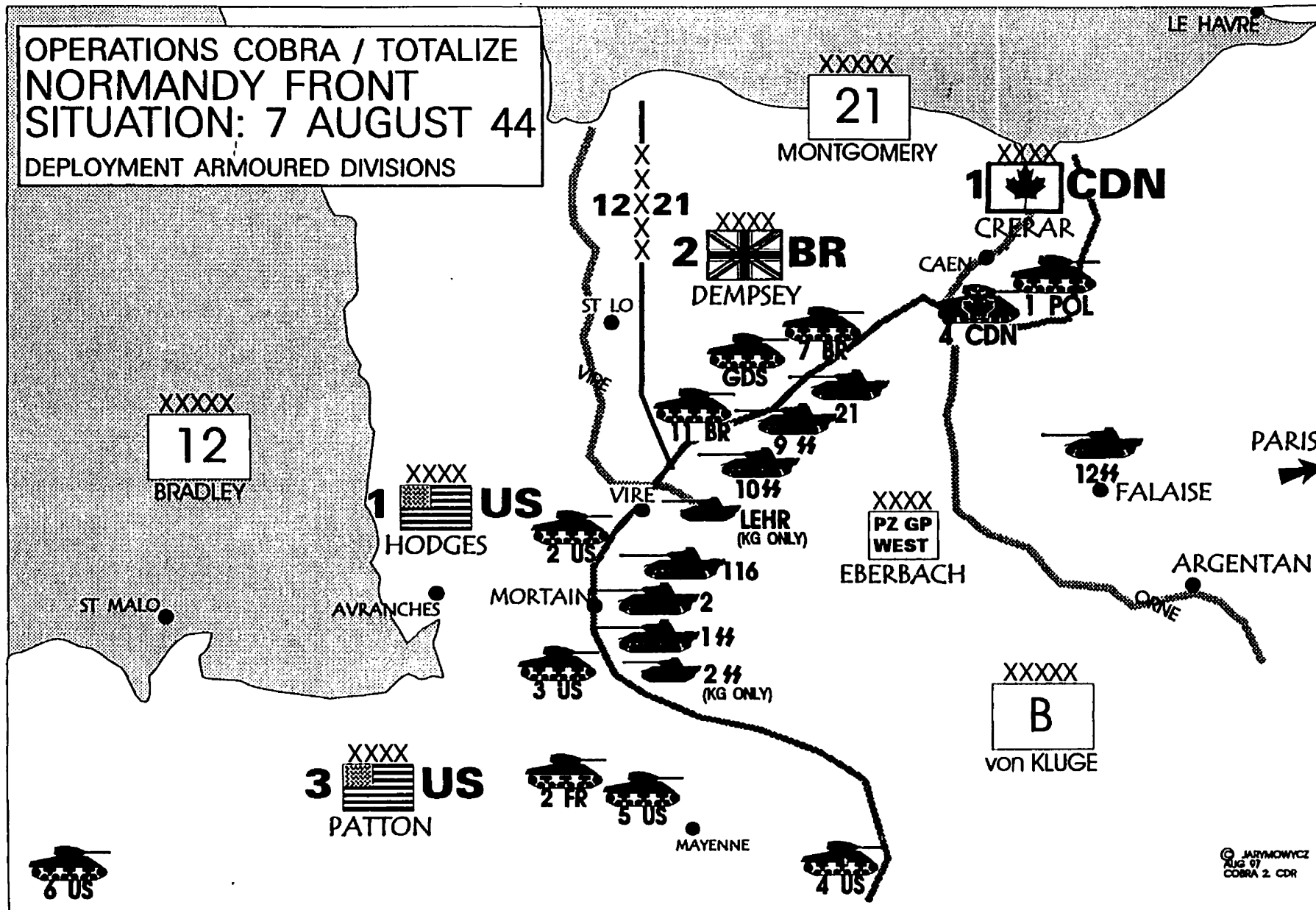


Figure 23

MajGen R. W. Grow's 6th Armored Divisions) had secured Avranches.¹² On 1 August, Patton's Third Army became operational and by that afternoon had sent Grow to capture Brest and launched Wood towards Rennes. It was no longer a tactical breakthrough, but a full sized operational breakout. Bradley had acquired operational maneuver in von Kluge's operational depth. By 3 August, Wood was in Rennes, to the absolute "shock" of von Kluge's senior staff, while Grow was half way to Brest. Patton had penetrated eighty miles into Brittany. That evening Montgomery telephoned Crerar and instructed him "... to launch a heavy attack from the Caen sector in the direction of Falaise."¹³ Montgomery ordered *Totalize* in direct reaction to Eisenhower's command to be bold – Crerar wouldn't get *Totalize* going until 8 August.

The Tactical Situation

The enemy's first objective, while continuing frontal breakthrough attacks, is to outflank and encircle the bulk of the 5th Panzer Armee and the 7th Army on two sides.

Secret Intelligence Report Armee Gruppe B: 7 August 44

I do not wish, or intend, to be a nuisance to anyone.

General Crerar to General Bradley, 30 June 1944

There is no evidence that Crerar tempered Simonds's tactical ideas. Montgomery could have, but was echelons above him, and Harry Crerar would not accept that sort of interference. Besides, Crerar did not enjoy a good relationship with his boss.¹⁴ Conversely, Simonds would not go to Crerar for help. The Commander of First Canadian Army did not have the tactical skills to rein in Simonds although he was smart enough to seek his council: "Crerar leaned on Simonds all the time. I don't think he ever issued an important order without first consulting Simonds, and most of these orders were inspired

¹² "VII Corps captured Avranches with 4 and 6 Armd Divs almost abreast; 6 Armd on the right followed by the 79th and 8th Inf, 79th on rt." G3 1st US Army Intsum, 280800B to 290800B Jul 44. Chester B. Hansen Papers. HMI. See Weigley, 173, 157-158.

¹³ Hamilton, 774.

¹⁴ Crerar took over 1st Cdn Army and had a row with his British Corps Commander, Lt.Gen Crocker. Crerar tried to fire Crocker but Montgomery stepped in. Montgomery's policy was made clear as to how to deal with Crocker: "An Army Commander should give his Corps Commanders a task, and leave it to them as to how they do it." MG30 E157 Crerar Papers Vol 8, 24 July 44. Later Montgomery wrote to Alanbrooke: "I fear he [Crerar] thinks he is a great soldier, and he was determined to show it the moment he took command at 1200 hrs on 23 July. He made his first mistake at 1205 hrs; and his second after lunch. MG30 E157 Vol 8. Montgomery correspondence to Field Marshal Alanbrooke, 26 Jul 44, 1.

by Simonds.”¹⁵ The 2nd Corps staff, all chosen for their youth and vigour, were cheerleaders, not advisors. Crerar reigned supreme, but Simonds ruled uncontrolled.

Operation *Totalize* was scheduled to be launched a full two weeks after *Cobra*. When it was ordered, Bradley’s armour was racing to encompass Normandy, Brittany and the Loire; the war in France appeared about over.¹⁶ But by 4 August Bradley became conservative. The reports of Hitler’s directives for counter-attack, as well as Ultra intercepts that indicated five panzer divisions were heading towards Mortain, made him cautious. These were the same outfits that Simonds didn’t fix to the Caen front and Dempsey failed to make an impression upon during *Bluecoat*.¹⁷

Given Bradley’s reluctance to allow Patton to continue to run loose,¹⁸ it was now Crerar’s turn to do something about Normandy from the eastern flank. He decided to give Simonds a second go at a Corps attack.¹⁹ *Totalize* would be launched 8 August, the legendary *black day* of the German Army and one day after von Kluge planned to launch the Mortain counteroffensive – Operation *Lüttich*.

It should have been easy as certainly the odds had changed. During *Spring* the combat ratio was decisively in the Germans’ favour. Now Simonds had resources of three infantry divisions, 2 CID, 3 CID, 51st British, and two armoured brigades (2 CAB and 33 British Armoured Brigade). More importantly, he now had two fresh armoured divisions, 4th Canadian Armoured Division and 1st Polish Armoured Division (4 CAD, 1 PAD). Facing him was the recently arrived 89th infantry division of LtGen Heinrich, just out of

¹⁵ Stearns Papers 23 Mar 81, 4.

¹⁶ M515, 27 Jul 44. Montgomery to Bradley, Dempsey, Patton and Crerar: “On the western flank, the First US Army has delivered the main blow of the whole Allied Plan and is making excellent progress.” See, “Letter of Instructions Number Two” (Bradley) 3 August 44, HQ 12 Army Group, Bradley Papers, MHI.

¹⁷ Of eight panzer divisions near Caen on 26 July, by 30th July only 1st SS LAH and 9th SS H remained. *Höhenstauffen* left on 1st August and 1 SS LAH began redeployment on the 3rd. 21 Pz, 9 SS Pz and 10 SS Pz took part in *Bluecoat*. The four remaining panzer divisions continued west.

¹⁸ “Letter of Instructions Number Four” (Bradley) 8 August 44, HQ 12 Army Group, Bradley Papers, MHI.

¹⁹ “This plan [to attack towards Falaise] already ‘drafted’, at least in Simonds mind and General Rodger well aware of principles to be involved.” Stearns Papers, 23 Mar 81, 5.

garrison duty in Norway and quite incapable of putting up effective resistance.²⁰ Behind them lay one panzer division, the only tactical or operational reserve on the eastern Normandy front, the 12th SS Hitlerjugend.²¹

The Germans still held Verrières Ridge, Tilly, Rocquancourt, Fontenay, May-sur-Orne, as well as St. Martin. Thanks to Rockingham, the depth of German defences had been somewhat reduced. The only heavy armour available, 101 SS sPzAbt, currently fighting Dempsey west of the Orne, was a half day's march away, but due to return under Kurt Meyer's aegis. Schack's 272nd Division had left Verrières ridge. The General took his battered regiments and slipped east to take over the sector held by 12 SS HJ astride the road to Paris. But Simonds would not bother Schack. He was going to butt his head against Verrières again, and this time he had acquired the missing ingredient of the Allied breakout formula – heavy bombers. This was going to be an offensive blessed at the highest levels. SHAEF was to expect much from the Canadians but they were to be disappointed.

²⁰ RG24 Vol. 10,811. 1st Cdn Army Int Sum No.38 6 Aug 44. and, Kriegstagbuch Panzer Armeeoberkommando 10.6.44-8.8.44. RH21-5/44. 89th Inf Div Comprised 1055, 1056 Gren Regts, Fusilier Company and 189 Arty Regt. It had more infantry than 1st SS LAH.

²¹ Simonds may have been fed misinformation by his Int staff. "During the night of 5/6 August, a soldier of 89. Inf.-Div. deserted to the enemy. In addition, an ambulance of that Division got lost and ended up in Canadian positions. This allowed the enemy to determine that the "LAH" Division had been relieved.... That impression was possibly reinforced by the fact that Kampfgruppe Wünsche had set up 65 dummy panzers in the area around Billy and Conteville (3.5 km north of St. Sylvain)." H. Meyer, 170. Wisch stated that by 6th August most of the division was co-located with 2nd Pz ready to attack Mortain. MS B-358. MGenderSS Theodor Wisch, "Stellungnahme zum Fragebogen ueber den Einsatz der Leibstandarte Adolf Hitler im August 1944.", 3. The strength of 1 SS Pz Korps had diminished considerably. "Gliederung I.SS PzKorps am 27.7.1944: SchArtAbt SS 101 7x10cm/175cm; schPzAbt SS 101 12x Tiger I; 272 ID 50%; 276 ID 50%; 12 SS Pz 50%, 20x PzIV/V; 1 SS Pz 60%, 60x PzIV/V." 9 SS and 2 Pz were at same strength as 1 SS while "116 Pz etwa 80% der Sollstaerke." MS C-048. SSGeneral Fritz Kraemer, "Das I. SS Pz. Korps im Westen 1944" (Part 2) Appx 2. MHI.

Totalize - The Plan

Two break-in Operations are required.

General Guy Simonds – before *Totalize*.

Like Montgomery, his approach to the problems of battle was that of a scientist. Both were military perfectionists, but, whereas Montgomery was primarily the expert implementer, Simonds was the radical innovator, forever seeking new solutions.

Chester Wilmot

Totalize was to be the last great offensive in the Normandy Campaign. It was Montgomery's final opportunity to wrest personal victory and publicity from Bradley. The presence of the heavy bombers sealed the contract; it was all or nothing. *Totalize* was Crerar's first "Army" battle and he may have been nervous about it.²² The weight could not have been all that heavy since the Commander turned everything over to Simonds. Nevertheless, Crerar recalled, post factum, that *Totalize* was his tactical inspiration made into technical reality by Simonds:

My basic tactical plan ... the attack should secure maximum of surprise as means and methods employed ... neutralize the long range and strength of the enemy's anti-tank defence and to ensure we get through and beyond the enemy zone of dense defensive fire, developed mainly by his mortars and machine guns.... With these principles before him, the detailed plan for the attack was drawn up with very great skill by Lt.Gen. Simonds.²³

Totalize was a grand corps battle, as 2nd Corps controlled every resource available to the First Canadian Army. If there was any pressure, the lion's share fell on Simonds's shoulders. He decided that the Germans were not going to be surprised as to the location and direction of the offensive, but he was capable of perplexing them "in respect to time and method."²⁴ It has been suggested²⁵ that ULTRA briefings from the Signals Liaison

²² Crerar had been busy writing congratulatory messages to Bradley. If *Totalize* succeeded he would meet him face to face at Argentan. Crerar had toadied up to 1st US Army Commander directly he arrived: "I would like to pay an occasional visit to the US Army sector and pick up such helpful ideas as I may ... I do not wish, or intend to be a nuisance to anyone – but, if in suitable circumstance I should meet up with Grow, Collins or any of your Div Commanders ... it might be helpful if you would issue me with any credentials required to identify me." Omar N. Bradley Papers: Correspondance 1936-1960, 30 June 44. MHI.

²³ RG24 10635. Crerar letter to J. L. Ralston (Min of Defence) 8 Sep 44.

²⁴ RG24 Vol. 10,811 2 Cdn Corps Gen G. G. Simonds "Planning Operation Totalize, A. Appreciation by the Corps Commander" 1 Aug 44, 9.

²⁵ McGill historian David O'Keefe suggests that Simonds's reading of ULTRA transcripts convinced him that 1 SS LAH was still in 2nd Corps' operational area of responsibility: "Without any other

Unit attached to 1st Cdn Army HQ convinced Simonds that 1 SS LAH was still south of Verrières and dug in astride the main Falaise highway on the high ground near Cintheaux. Certainly Simonds was unique as the only Allied Corps commander in Normandy cleared for ULTRA dissemination²⁶ but intelligence interpretation would have been stretched to report the Leibstandarte's presence south of Caen.

Simonds's own Intelligence Staff concluded that 89th Infantry Division had relieved 1 SS but "estimated that 1 SS Pz had left one anti-tank battalion deployed on the front."²⁷ An initial report admitted that the whereabouts of 1 SS and 12 SS Pz Divs were not so clear but subsequent intelligence made things clearer: "On 7 August news was received that large amounts of 1 SS and at least a battlegroup of 12 SS were fighting further West at VASSY and the FORET DE GRIMBOSQ respectively."²⁸ This suggests that Simonds, rather than being influenced by ULTRA²⁹ and his own Intelligence resources, chose to ignore most recent information and stuck to his original appreciation,

information to corroborate the Ultra decrypts, Crerar's Chief of Staff, Churchill Mann, phoned Brigadier Elliot Rodger (Simonds's Chief of Staff) to tell him that there were signs that 1 SS Panzer division was pulling away from the front.... After reviewing Ultra information which came to his attention on August 6, Simonds called Crerar to tell him he had changed Totalize ... Simonds appreciated that the second "break-in" might meet stronger resistance than originally anticipated but felt assured that the original Air plan would now be even more beneficial ... he scrapped the original idea of sending the 4th Canadian Armored and the 3rd Canadian Infantry to attack the second line and instead, put the Polish and 4th Canadian Armored division together." Unpublished manuscript: "Situating the Appreciation: Intelligence for operation Totalize", 2, and personal interview, 2 May 1997.

²⁶ "Canadian First Army recipients of ULTRA: Lt. General H. D. G. Crerar GOC, Lt. General G. G. Simonds, Bdr., C. C. Mann COS, Col G. E. Beament ColGS, LtCol W. B. T. Reynolds GSO 1 Air, LtCol E. D. Danby GSO 1 Ops, LtCol McDougall GSO (IB), LtCol P. Wright GSO 1, Major J. A. Apis GSO2.", G2 SHAEF Internal Memo "List of Recipients of Ultra." The Richard Collins Papers (G2 SHAEF), MHI. See also, "Reports by US Army ULTRA Representatives with Army Field Commands in the European Theatre of Operations 1945." SRH-023. HMI.

²⁷ RG24 10811 WD 2 Cdn Corps Report: Section III "Planning Operation Totalize – Section III, The Enemy. General Situation mid-July 1944." 15 August 44.

²⁸ WD 2 Cdn Corps, Totalize "The Enemy. General Situation mid-July 1944."

²⁹ ULTRA information was a mix of SigInt (Signals Intelligence) and eavesdropping. Raw ULTRA was generally garbled and subject to interpretation. Information was transmitted verbally by SLU officers or interpreted and written as data "from an excellent source ... a special source." Often ULTRA intercepts got lucky and this was generally during hectic operations: "it was found that the use of plain language by the Germans was, as expected, fairly common during any period when they were sustaining severe pressure and this practice became even more wide spread as war progressed. Artillery units talked in the clear quite frequently... 2 Pz [Div] radio contact began early, over a month before D-Day ... after 2 August [2 Pz] identified by intercept only rarely... It should be pointed out that information was chiefly drawn from low-grade traffic analysis ... much of the pertinent part of the [ULTRA] units' contribution to radio intelligence is contained in the decipherments of this medium grade traffic. ULTRA Third Army Radio Intelligence History in the Campaign of Western Europe. October 1945. SHRO 42 HMI, 28, 29.

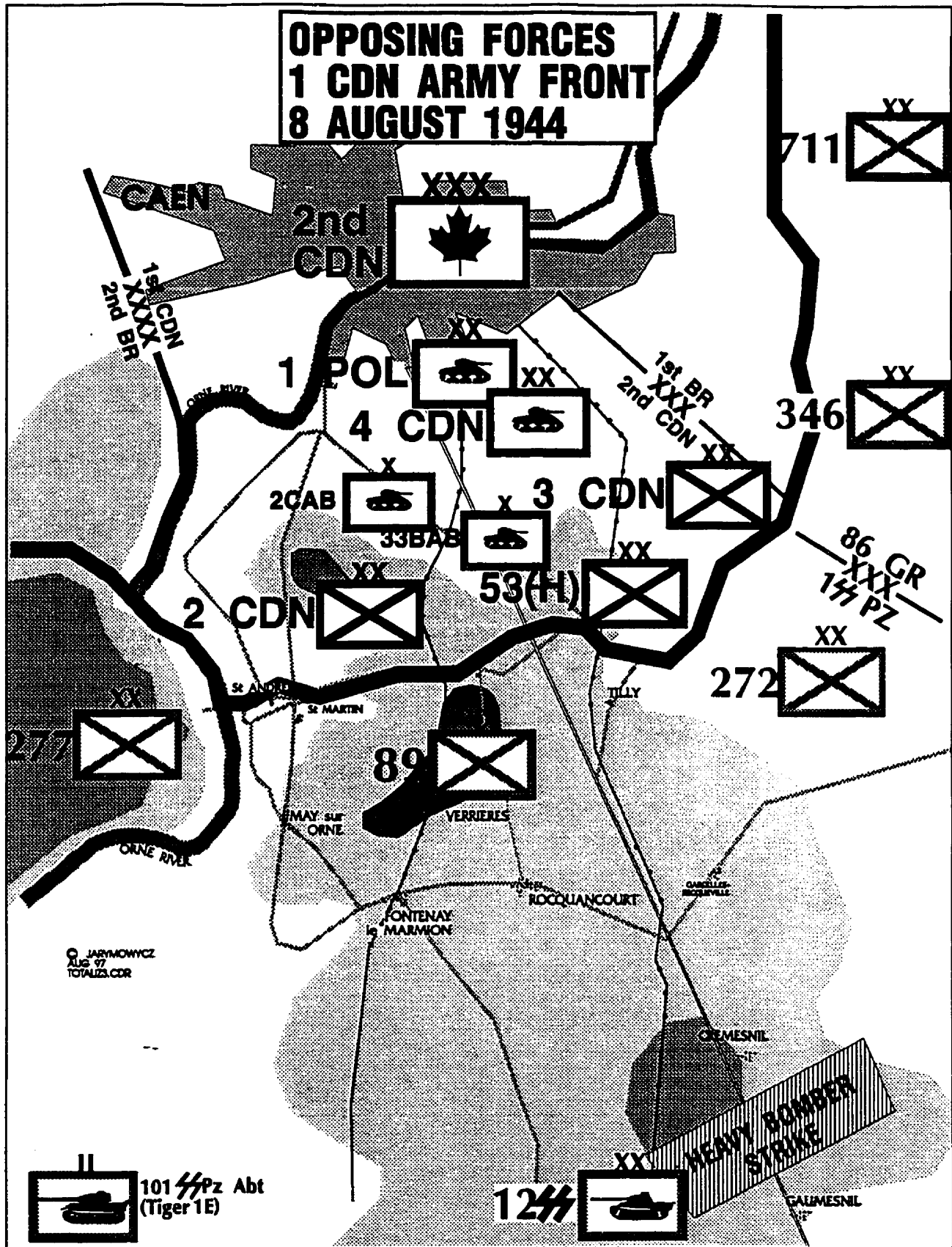


Figure 24

written on 1 August wherein he concluded, mostly based on *Spring* analysis that: "The position [May sur Orne to Tilly and south to Hautmesnil] is at present manned by 1 SS Right and 9 SS Left."³⁰ Faced with the latest ULTRA updates as well as his own Int Sums, Simonds was clearly not prepared to revise his estimate at this late date. He may have been overtaken by events.

Neo Classical Testudos – Evolution of the Simonds Doctrine

General Simonds decided to launch another frontal attack.³¹ As there was little option for maneuver before breakout, Simonds settled on technique. *Totalize* is often used to show Simonds's creative mind at its best. It is sometimes used to demonstrate his genius for planning and his engineer's precision. Simonds crafted a plan of attack unlike any other. Again he decided to go at night. Again he used artificial moonlight. Now came the changes, and they were doctrinally astounding. Armour was to lead. The spearhead of this night attack was not going to be infantry but a meat grinder of armoured columns. He drew up two armoured Testudos before the start line which consisted of an intricate parade of navigation tanks, mine clearing flail tanks, armoured bulldozers, flame throwing Churchills, and main battle tanks³² in a very cavalry column of fours. These were followed by "Simonds's APCs," Priest self propelled guns converted to armoured

³⁰ RG24 WD 2 Cdn Corps "Planning Operation Totalize - Appreciation by Corps Commander" 1 August 44. On 6th August Crerar had written to Crocker and Simonds: "As it is appreciated that 12 SS Pz Div is now concentrated in wooded area Valmany-Mezidon-Blay la Campagne, these c atks may be in some str and pressed with determination." RG24 10634 Crerar Papers 6 Aug 44. Simonds wrote back: "...it is possible that neither 1 SS or 12 SS may be involved in the fighting on the May-La Hogue position. Because this second 'breakthrough' operation has been foreseen in the original plan ... the weight of the air support has been disposed to deal with it during the second phase of Totalize." 6 Aug 44.

³¹ RG 2410808. WD 2 Cdn Corps. 5 Aug 44. Instr No. 4 Operation *Totalize*. "Intention: To Breakthrough the enemy positions astride the Caen Falaise Road. Method : 3 Phases: I. Breakthrough the Fontenay (0358) - La Hogue (0960) posn. II. Breakthrough the Hautmesnil (0852) - St. Sylvain (1354) position. III. Exploit as ordered by Comd 2 Cdn Corps."

³² *Totalize* contradicted accepted procedures, a daring experiment within British (see Brit FSRs: The Armd Div 1941 and, The Armd Div 1943.) as well as then current American armoured theories (see: FM 17-32 Armoured Force Field Manual Aug 1942; FM 17-100 Tentative Employment of the Armd Div. Sept 1943). See: Maj Pickett, "Armored Breakthrough" Armored Cavalry Journal (No. 5. Sept-Oct. 1949), 23. VP. Naib, "The Tank Versus Tank Battle" Armor (Nov-Dec. 1954), 32. Col. W. D. Duncan "Mass Employment of Armor" Armor (March-April 1954), 34.

personnel carriers (Kangaroos) at the Corps Commander's request.³³ Each armoured group was packed closer than Piccadilly Circus at rush hour: "I left my tank and walked back to the end of the regimental column, we were closed so tight that my feet never touched the ground, I just stepped from tank to tank."³⁴

The attack was to crawl along on compass bearing at a snail's pace while flails and dozers cleared the ground of mines. To ensure direction was maintained, Simonds had Bofors guns deployed on either side of the columns firing tracers down the axis of advance. Batteries of giant anti-aircraft search lights were used for both artificial moonlight as well as long distance beams that were fixed over the distant objective and served as a surreal guide. The Corps Signals Regiment set up radio homing beacons to guide the tank commanders.³⁵

This grand march was supported by a preparatory barrage and attacks by night bombers designed to obliterate the towns that eluded capture during *Atlantic* and *Spring*. *Totalize* was an extraordinary offensive, of such Cecil B. DeMille epic proportions that it overwhelmed senior officers in briefings:

I well recall his O Group before *Totalize* when the several div comds sat in a circle under the pine trees (all being much older than GGS and some with desert sand in their ears) to whom he opened, "Gentlemen we will do this attack at night with armour." Their jaws dropped noticeably.³⁶

Its sheer scope was so much larger than life that it ensured every participant was a share holder in its success. It was Simonds's masterpiece and it had everything, from flame breathing Crocodiles to electronic warfare. It was clearly bound to fail.

³³ The SP M7 Priest regiments (3rd Div: 12th, 13th, 14th, 19th Fd Regts RCA) armed with 105mm gun howitzers but outranged by 25 pounders, the standard gun in RCA Field Regiments. Sexton SPs (found in 4 CAD, 5 CAD and 1 PAD) carried 25 pounders. The decision to strip the infantry SP regiments was made to standardize artillery. "Defrocked Priests" did not come about because SPs were no longer required by 2 Cdn Corps. The infantry was supported by towed 25 pounders, the armoured brigades by Sextons. Simonds's attempt to secure a patent for "his APC" was not granted by the War Department. Fully tracked Kangaroos were superior cross country vehicles but had no overhead cover. Complaints were registered by RCN and Royal Navy that Simonds's had cannibalized beached landing craft, cutting out steel plate for "Kangaroo over head cover."

³⁴ Gen S. V. Radley Walters, personal interview, May 1990.

³⁵ RG 24 10456. Totalize Reports. "If you went too far left on your tiller your ear phones were filled with 'Dit-Daw...Dit-Daw'" - if you went too far right you heard 'Daw-Dit...Daw-Dit. If you were right on the center you heard a steady mushy sound." Gen S. V. Radley Walters, personal interview, May 1990.

³⁶ Elliot Rodger, quoted by Dominick Graham, The Price of Command - A Biography of General Guy Simonds (Toronto: Stoddart, 1993), 148.

TOTALIZE - Attack Formation

Lead Regimental Battle Group
All Troops in "Line Ahead"

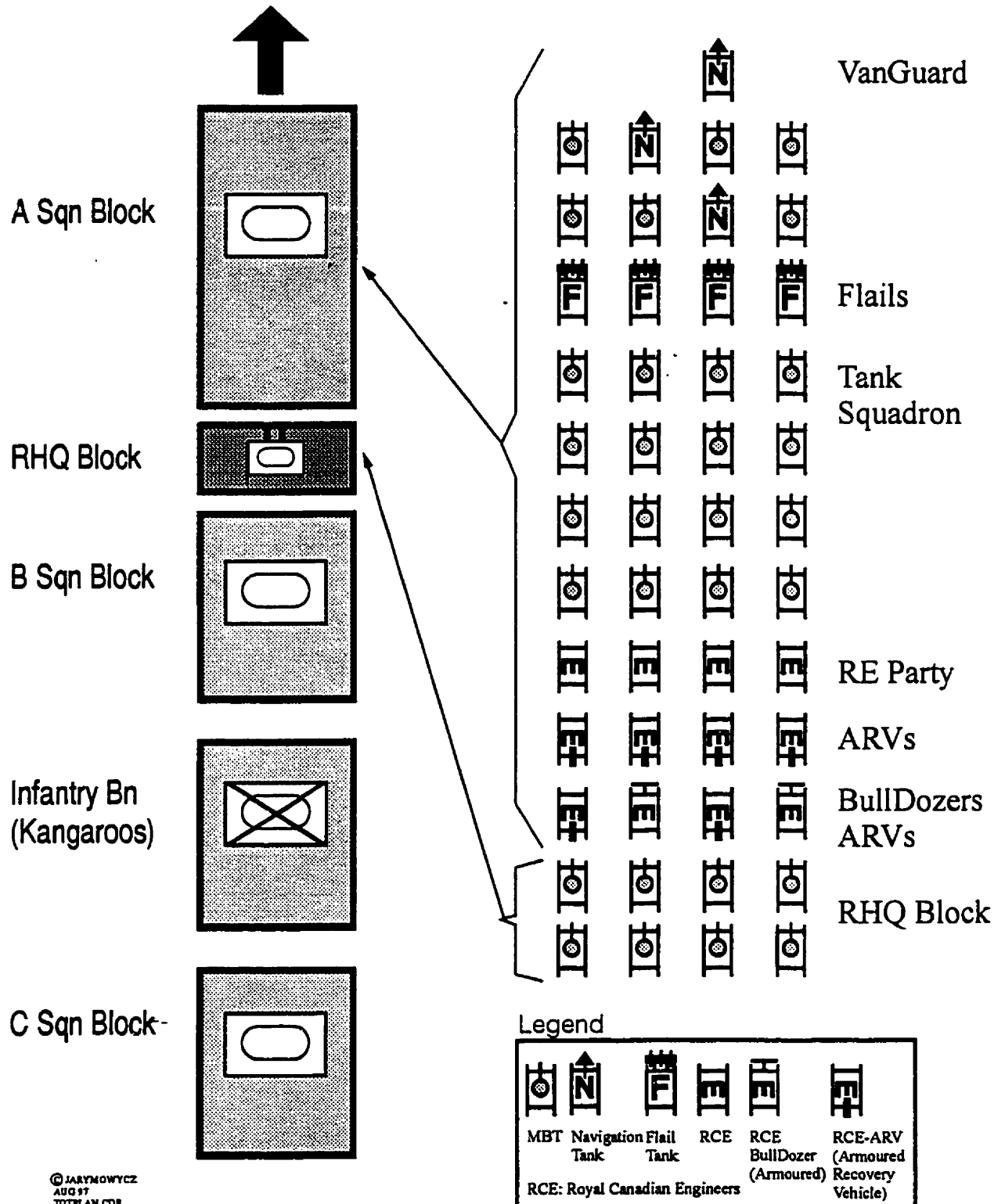


Figure 25

There were no doctrinal precedents, unless one decided that the classic was El Alamein, and the best way to win in Normandy was to launch a Montgomery style desert attack.³⁷ It was *Bluecoat's* terrible experience with mines that appears to have inspired Simonds to plan *Totalize's* armoured crawl. It is not recorded if any 2nd Corps staff officer suggested to Simonds that mines readily sown by German infantry in the closed country south of Villers-Bocage³⁸ were a near impossible task in the open country south of Caen. *Totalize* was too complex, and like *Spring* before it, based on untrained, unrehearsed troops. No one dared tell the emperor about his clothes. It is perhaps unfair to criticize Simonds. At least he tried. At least he attempted innovation. But the simple truth was that he was out of doctrinal ideas. He really did not know what to do with his infantry or armour. He was trying new combinations, gambling with lives to save lives.

Whereas tanks were used in hors d'oeuvres sized portions during *Spring* and *Atlantic*, this time there would be a surfeit of armour – two tank brigades in Phase 1 and two entire armoured divisions in Phase 2. The forthcoming traffic jam should have been predicted by the movement planning officers. It probably was. The road march to the form-up place for Phase 1 was “a dusty hell – you couldn't see much.”³⁹ Simonds planned to use the cab rank in the air for support during the advance; he also created an armoured cab rank at the *Totalize* start line. Attack along narrow fronts seems to have been the only option he could think of:

Put down a fog upon it and it is helpless. Introduce into that fog, not a long straggling line of tanks, striving to see each other and painfully keeping direction, but a mass, a “phalanx,” of tanks on a narrow front. What hope have the defenders got? Those in the path of the charge are overwhelmed from right, center and left. Those on the flanks hear the noise, but cannot

³⁷ See English, *The Canadian Army and the Normandy Campaign*, 266. Simonds was in North Africa and observed the battle of Wadi Akarit in April 1943. Colonel English, reviewing the influences on Simonds, noted that “El Hamma, Montgomery's suggested model for *Epsom*, may also have been the precursor of *Totalize*.”, 267.

³⁸ Allied Intelligence traced the removal of panzer divisions from the bocage throughout early July as Rommel tried to rebuild an operational reserve. As the armour left, it was replaced by second grade infantry divisions who sowed mines to increase protection. This was not the case in the area around Verrières. Cdn Int reports never reported extensive engineer activity. ORS data showed that only 9% of tank wastage was caused by mines vs. 89% from AP shot. See: RG24 Vol 10,460 2 CAB Papers: Report No. 12. “Analysis of 75mm Sherman Tank Casualties 6th June to 10th July 1944” (hereafter cited as ORS Report No. 12), 1, and, Report No. 17 “Analysis of German Tank Casualties in France 6th June to 31st August” (hereafter cited as ORS Report No. 17), 3.

³⁹ Interview Radley-Walters, May 1990.

see to interfere. The tanks, followed by (or carrying) their infantry, go through to their objective, consolidate it during darkness and wait for pick up in the morning.⁴⁰

The solution to his problem was found on the Russian front which used overwhelming artillery on a front wide enough to tear holes that could not be plugged or covered by fire. The Russian offensive tore out divisional sized sections of front, poured in armoured battlegroups and immediately did battle with panzer reserves which they overwhelmed. Simonds did not learn from the Russians, although ironically, a delegation from Stalin visited him on 27-29 July,⁴¹ just as *Totalize* was ordered.

... asking what the enemy strength opposite us was compared to our own. When we told them and that we were going to attack they were greatly surprised. They stated that they would not attack unless they outnumbered the enemy by at least 5 or 6 to 1.⁴²

Simonds and his staff smiled politely and ignored the Russians; they lacked style and it was quickly assumed they lacked credibility.⁴³ In fact, the Soviets were "echelons above"⁴⁴ the western allies and Soviet strategic offensives were launched on a level of sophistication unknown to 12 Army Group.⁴⁵ If one compared actual infantry strengths and tank-artillery superiority, Simonds was very close to the ideal Russian attack ratio of

⁴⁰ Current Reports from Overseas (CRFO) 6 (26 July 1943), 17-18. Quoted by English, 267.

⁴¹ They had just returned from Bradley's Headquarters (visit 13-26 July) where American wags cracked: "My god, the Russians have broken through to St. Lo!" The visitors frightened Russian PWs and unnerved Germans. "Young, black-haired, savage looking, inclined to glower a good deal, trim and neat and incredibly bright.... Russian asked a German paratroop captain what he thought might have to happen to Germany after we win the war. Capt was terrified, guessed, he said, that Germany would probably be broken up into little pieces. Without moving a muscle, Russian stiffened, 'Not Germany, captain - Germans.' He did not mean to be clever." Chester B. Hansen Papers, personal diary, 13, 26 Jul 44. The Russians saw Simonds on 27 July. The officers were: Maj.Gen. I. Skliarov, Maj.Gen. V. A. Vasiliev, Col. V. Gorbатов and Rear Adm. N. Kharlamov. Simonds received the Soviets with a Guard of Honour (12 Man D) and a band. The party lunched at Simonds's "A" Mess. RG24 10808 WD.2 Cdn Corps. 27 July 44.

⁴² Stearns Papers, 27 Apr 81, 2.

⁴³ "...young men in baggy trousers with tunics tightly belted and high leather boots, peaked hats. Shy and unsmiling. They greeted the general with few halting words of English in heavy boyish accent...." Hansen Diary, 13 July 44, and RG24, 2 Cdn Div HQ WD July 44. WD includes photos of grim faced, wiry men in loose summer tunics and well worn boots.

⁴⁴ W. C. Frank, Jr., and P. S. Gillette, Soviet Military Doctrine from Lenin to Gorbachev, 1915-1991. Greenwood. London.1992. P.135.

⁴⁵ One possible rebuttal was suggested by Brooke in a letter to Montgomery: "the German density in Normandy is 2 1/2 times that on the Russian front, whilst our superiority in strength was only in the nature of some 25% as compared to 300% Russian superiority on Eastern Front." Brooke did not point out that real Soviet superiority was also 25% and the overwhelming numbers were achieved because of STAVKA planning and a working doctrine. Hamilton, 767.

10:1. Here was a golden opportunity for victory, if he used mass and terrain correctly. *Totalize* required a classic artillery offensive. Instead, Simonds invented a monster mine field and then applied the principles that won *Lightfoot* for Montgomery and cost him *Spring*.

All Revved Up and No Place To Go

Totalize has been misrepresented as a masterpiece of planning. The battle is seen for the tinsel not the tree. The simple fact remains that *Totalize* was essentially a slower and more tightly controlled version of *Spring*. While the latter gave the brigades and divisions little room for creative maneuver, *Totalize* ensured there was none. Bombers were new, night was not. Simonds's mine phobia was new, although not a single *Spring* attack faltered because of mines, and the Germans paraded no less than eight panzer battlegroups across the open area behind Verrières throughout July 21-26. Tanks leading was new. Tanks leading at night was most certainly unusual. Simonds hoped to succeed on the narrow corridor he predicted was the key to success in his February Operational Guide, except that this time there were only two narrow fronts, not three, and each was exactly four tanks wide.

It must be remembered that there was no place to go. Once breakthrough had occurred, the entire offensive would stop and wait for a daylight attack by American B-17s to blast more Norman villages out of the ground. This imposed the initial delay on success. The attackers would then loiter at the start line until two armoured divisions completed a forward passage of lines and settled into the Phase Two line of departure. Only then could the armour break out. The criticisms are obvious and have already been made elsewhere.⁴⁶

A passage of lines exercise is always difficult, but was bound to be chaotic with two untried armoured divisions. To make it even tougher, Simonds had decided to attack two up; he squeezed 1st Polish AD beside 4th CAD and gave each a frontage of one thousand yards. The Poles' start line "was complicated by the fact that they had heavily

⁴⁶ But not with great resolve. Copp and Vogel, Morton and Granatstein, Roy and even English appear more fascinated with the intricacies of *Totalize* than with its strange obsession with mines and Simonds's considerable difficulty with massed armour.

wooded areas on their front.”⁴⁷ The armoured commanders did not like it. “Both General Maczek, who commanded the Poles, and I asked General Simonds to extend our frontage to give us room for maneuver, but he would not agree as it would mean changing the objectives of one of the assaulting divisions.”⁴⁸

Simonds was gambling. He “wanted to shoot the works” on the second phase of *Totalize*, “That is why he used two divisions, he thought that at least one would get through.”⁴⁹ It seemed like a calculated risk, but armoured divisions don’t function like AGRAs. Squeezing in more into less space does not result in overwhelming fire superiority, but instead, confusion and inviting targets for 88s.

Totalize: 7/8 August – The First Night Attack

The sense of nightmare unreality ... the feeling of detached horror at the sight of a man
being engulfed by the flames of a burning tank.

Yet there remains an atmosphere of romance about this Operation.

WD: 33 Br Armd Bde, *Totalize*

There were other difficulties.⁵⁰ 2 CAB and 33 BAB were required, as the force in place, to assist 4th Armoured and 1st Polish Armoured in their movement forward, secure the start line and allow them to launch into Phase 2 in an orderly fashion. But the lead tank brigades had their own problems. “Soon visibility literally nil ... hampered by large bomb craters ... tanks fell in ... recovery impossible.”⁵¹ Navigation tanks soon became ditched and communication problems mounted. The leading elements became “hopelessly intermingled and confusion was made worse by the flails who had not been

⁴⁷ Kitching, 193.

⁴⁸ Kitching, 193.

⁴⁹ Stearns interviewed by Dr. R. Roy, 14 July 1982, 3.

⁵⁰ *Totalize*’s first bombing was delivered by 660 heavy bombers. “Because the bombing ended early [called off by master bombers as tgts “became obscured”], the ground attack (which had been scheduled to begin half an hour *before* the last bombs fell on the distant targets) actually began half an hour *after* the bombardment had concluded. Dust and smoke from the bombing, combined with darkness (and sadly inadequate map- and compass-reading) led many of the attackers to lose direction.” Brereton Greenhous, Stephen J. Harris, William C. Johnston and William G. P. Rawling, The Crucible of War, 1939-1945 The Official History of the Royal Canadian Air Force - Volume III (Toronto: University of Toronto Press, 1994), 814.

⁵¹ RG24 10455 Report: “An Account of Ops by 2 Cdn Armd Bde, 14-16 Aug 44”, 4. “There were numerous halts, due to unavoidable delays by the leading tank ... though collisions were frequent, the work of the tank drivers was most commendable.” Vanguard, 52.

present at the rehearsal and who lost station very early in the proceedings.”⁵² Entire troops were lost, some for over 24 hours. Regiments lost direction and became involved in friendly firefights. Several squadrons actually steered a 180 degree course change in the dust, darkness and excitement of combat.

Head of column became split in individual parties led by officers who were attempting through the thick haze to pick up land marks ... officers were leading tanks on foot ... one party ... had gone so far off its line to get involved with a Canadian column on the right.... Charlie Charlie calls to follow Very lights ... normal channels of command ceased to function. No one knew where his troop or squadron leader was and many a good tank commander had little idea of where they were themselves.⁵³

Morning found them anything but a force-in-place; rather, scattered combat teams holding an area that ended at the bomb line for Phase 2. No mines had been encountered.

German defensive fire was scattered, panicky, and mostly ineffective. The dust and confusion hindered progress. Tilly did not fall until 0800 and Rocquancourt was not fully secured until after midday. The Canadian armour arrived steadily on the battlefield until both divisions had the bulk of their tank brigades formed up north of the start line, about 0830 on the morning of the 8th. Before them lay open country. Simonds had broken through.

The morgenmeldung sent a chill through von Kluge: “We have to risk everything. A breakthrough has occurred near Caen the like of which we have never seen.”⁵⁴ While all the criticism of *Totalize* may be valid – it was unnecessarily complex, confused and much too slow – nevertheless, 2nd Corps had muddled through. Despite himself, Simonds had broken past all three lines of the German defence in depth. Nothing lay between him and Falaise except scattered Kampfgruppen of 12 SS HJ which were slowly moving northwards preceded by their worried commander.

Would Simonds boldly drive to Falaise? No. He called for a halt to allow artillery to catch up and the heavy bombers to pulverize his imagined secondary defence zone. Simonds’s conviction that Von Kluge had created a Grosskampf HKL behind his HKL on Verrières is unfortunate, for there was no secondary area of defence. Every passing

⁵² 2 CAB, 5.

⁵³ RG24 10455 BRAC Battle Report No.2, “Armour Report: 144 RAC – 51 H Div *Totalize*.”

⁵⁴ RG24 Vol 10677, 2 SS Pz Korps WD. Von Kluge to Hausser, evening 8 Aug 44..

minute allowed Meyer and Dietrich to bring in more reserves into blocking positions to seal the break. It has been suggested that it was too late to call off the bombers. Crerar would probably have been reluctant to tell Harris "no thanks after all" following the difficult staff work and coordination required to switch them on in the first place. At first light all forward advance stopped as 2nd Cdn Corps waited on their start lines for the B-17s to arrive, something which would not happen for another six hours.⁵⁵

The Green Fields Beyond

I think this made Guy Simonds overly cautious; as a result we lost the momentum of the attack.

Maj.Gen George Kitching

They tended to go through all the phases. The Canadian Army never got over the staff college habit of following out every little part of the routine.

Brigadier E. T. Williams: G3 21 Army Group

I don't know the reason for the inactivity of the Cdn forces, after the first obj was gained, but I suspect that it was NOT entirely the fault of the front line tps but rather the result of too much planning by 2nd Cdn Corps

Generalmajor der Waffen SS Kurt Meyer

Kitching must have realized he had finally taken his division into the "green fields beyond,"⁵⁶ ahead of him lay golden wheat fields that stretched all the way to Patton and Paris. His opposite number, "Schnellemeyer"⁵⁷ responded in his traditionally aggressive style although he was momentarily shaken by the sight of the retreating 89th Infantry Division.⁵⁸ He got out of his kübelwagen and rallied the broken infantry.⁵⁹ Meyer quickly

⁵⁵ The armoured van guards were almost in position by 0600, the two armoured divisions would be in place by 1100. Time for bombs on target was 1255.

⁵⁶ Kitching had inherited not only 4 CAD but its heraldic devices as well. Worthington fixed his own family crest (a Ram) as the division's tactical symbol and had given it a green shoulder patch: "First it perpetuates the 4th Div of the last war. Secondly it perpetuates the third colour of the Royal Tank Corps, vis 'Through Mud and Blood to the Green Fields Beyond'. Keeping this motto in mind for our Div, it is inevitable that we must pass through mud and blood before we can reach those green fields." RG24 13788. Worthington writing in 4 Cdn Armd Div Trg Instr Number 16. 12 Aug 43.

⁵⁷ By now he was "Panzermeyer" to the Hitlerjugend but still known as "Schnellemeyer" to Von Kluge and Eberbach. H. Meyer, 162.

⁵⁸ "For the first time during these long and cruel years ... I see fleeing German soldiers.... Mesmerized, I stare at the leaderless soldiers. My uniform sticks to my skin. Cold sweat breaks from all pores. I know that the fate of the city of Falaise and thus the safety of the two German armies depends on my decision." quoted by H. Meyer, Hist 12 SS Pz Div., 172. See also: Kurt Meyer, Grenadiere (Munich: Schild Verlag, 1957) 281-282.

organized a blocking position around Cintheaux then drove north to see for himself. Auftragstaktik, the doctrine of ad hoc command, again saved the German army. Although this scene could have happened in the Canadian, British or American armies, it was more normal in the German. The British-Canadian Regimental system, tribal identity, "our officers" - "their officers," the "look-the-other-regiment-broke" mentality generally made ad lib regrouping difficult. Canadians and British lived in their solitudes. Regiments watched other regiments being shattered while waiting for orders. Brigade commanders watched brigades being decimated and waited for orders. Auftragstaktik doctrine allowed for tactical initiative; German discipline ensured that leaders of impromptu battlegroups followed orders without question. German senior headquarters reacted immediately to *Totalize*.⁶⁰ Sepp Dietrich, Commander 1 SS Pz Korps ordered 12 SS to stop the enemy breakthrough in a counter-attack. At the same time General Eberbach, the supreme commander of 5 Panzerarmee drove up to meet Meyer in Urville and "agreed with PanzerMeyer's assessment of the situation and supported his decisions for a counter-attack."⁶¹ Meyer decided to strike with two battlegroups: KG Waldmüller and KG Krause. He then deployed the remainder of his division.⁶²

Panzer Gegenangriff

With the cavalry attack it is not the size of the horse
but the impetuosity of the charge that turns the scales.

Frederick the Great

⁵⁹ Meyer, 281. Hans Siegel recalled that Meyer is supposed to have said: "What? Do you expect me to stop the Tommies all by myself?" Siegel, personal interview, Sept 1992.

⁶⁰ "Even before dawn on 8 August, the Divisional Commander, Oberführer Kurt Meyer, drove to the front with several messengers to establish a personal understanding of the development of events on the spot ... Meyer drove cross-country to Cintheaux..." Meyer, 171.

⁶¹ H. Meyer 175-176.

⁶² Meyer's reaction was quick: "Kampfgruppe Waldmüller, reinforced by II. Panzer-Abteilung and one Tigerkompanie is to capture the hills of St. Aignan in a counter-attack; the Korpsbegleitkompanie (escort company) is attached to KG Waldmüller ... the Divisionsbegleitkompanie with attached I. Kompanie of SS Panzerjägerabteilung 12 is to capture, advancing by way of Estrées, the hill west of St. Sylvain, and will be attached to KG Waldmüller; Kampfgruppe Wünsche is to immediately break off the counter-attack near Grimborq and Brioux, disengage from the [British] ... and will defend the narrow passage between Laison and Laize... the Flakabteilung is to establish an anti-tank barrier on both sides of the Route Nationale in line with Bretteville-le-Rabet; The Aufklärungsgruppe under the leadership of Untersturmführer Wienecke is to maintain contact with the left wing of 272.Inf.-Div, and reconnoitre into the gap assumed to exist from there to the west ... the Divisional commander will remain with Kampfgruppe Waldmüller." translated in H. Meyer, 172. See, K. Meyer, 282.

When Meyer arrived at the Canadian front line he was astounded: "Seeing these concentrations of tanks almost took our breath away."⁶³ There before him lay Simonds's armoured might. The strange thing was that no one moved. The blitz that should have swept forward and carried away the 89th stragglers, his own Kampfgruppen and indeed Meyer himself, sat fixed. "We could not comprehend the behavior of the Canadians. Why did these overwhelming tank forces not push on their attack?"⁶⁴ As Meyer surveyed the Canadian armour, he noticed the single B-17 overhead. "It flew across the terrain several times and then set a visual marker."⁶⁵ It was a Pathfinder, the "FOO" of the heavy bombers; an airborne forward air controller, leading the heavy bomber stream and marking the target. Meyer had seen it before the bombing of Caen and *Goodwood*. The puzzle of Simonds's inactivity was solved. He raced to his radio: "Get Closer! Get Closer!"⁶⁶ If his panzers remained on high ground, they would be destroyed. Safety lay near the Canadian start line. He directed his Kampfgruppen to attack immediately.⁶⁷

The counter-attacks ordered by Meyer were another "who's-who" of tank warfare in Normandy. The Hitlerjugend brought up the great warriors of the SS: Krause, Waldmüller, Wünsche and, the "Black Knight" himself, Michael Wittman. The highly decorated Wittman was already a legend on both German fronts and his most recent coup was the almost single handed thwarting of Operation *Perch* by counter-attacking 7th Armoured Div on 12 June and forcing 30th Br Corps back to its start line.⁶⁸

Waldmüller and Wittman arrived first and smartly went into the counter-attack. As they shook-out in the open fields leading to Point 122, the center of the Canadian start line, Waldmüller left his panzergrenadiers and Jagdpanzer IVs from JPzAbt 12 at

⁶³ RG 24 Vol. 10, 474 "Special Interrogation Report BdeFührer Kurt Meyer 12 SS Pz Div 'Hitler-Jugend' 24 Aug 45", "Operation Totalize", 6-7, Also, MS B 814. Interrogation Report: "12.SS.Pz. Division, 28.4.48", 2, Luther..232, H. Meyer, 173.

⁶⁴ "Operation Totalize", 7, Meyer, 173.

⁶⁵ Meyer, 173.

⁶⁶ Interview Siegel, Sept 1992.

⁶⁷ "I shook Michael Wittman's hand and mentioned the extremely critical situation. Our good Michael laughed his boyish laughter and climbed into his Tiger." K Meyer, quoted in H. Meyer, 173. Also, Special Interrogation Report Kurt Meyer, 24 Aug 45, 7.

⁶⁸ "Here was an opportunity which might be made the turning point in the bridgehead battle.... In meantime.... Out of the woods lumbered a Tiger tank which drove on to the road and proceeded right down the line [of 22nd Armd Bde]... 'brewing up' one vehicle after another ... the road was an inferno with 25 armoured vehicles blazing – all the victims of this lone Tiger." Wilmot, 309. Also, Lefebvre, 169-176.

Cintheaux, creating a block on the main road. His Pz IVs maneuvered northeast while Wittman's Tigers rumbled due north beside Route 158. Tigers always attacked if the opportunity presented itself. The benefit of creating elite schwerpanzer battalions was that they were well trained, highly motivated and exhibited a faith in the superiority of their machines that often ignored tactical reality. This time there was little choice. Wittman adjusted his throat mike and ordered "Panzer Marsch!"

2 CAB and 4 CAB were assaulted by Waldmüller's Kampfgruppe (thirty-nine PzIVs and four Tigers) as they jockeyed for fire positions north of Gaumesnil. The odds, forty-three tanks against six hundred, were ridiculous. However, because of the narrow frontage, the best Simonds's brigades could do was to each deploy two squadrons forward. That reduced the combat ratio to 1:2. With the advantage of high morale and unorthodox tactics, Waldmüller's KG used the scattered farmhouses for cover and closed the distance, firing as it moved from bound to bound.

Wittman, alone with a handful of Tigers, simply charged up the center: "raced right into enemy fire ... his tactic during such situations: Get through! Don't stop! Into the dirt and reach a free field of fire."⁶⁹ His Tigers advanced in "V" formation, stopping briefly near the hedge row at Gaumesnil, then rolled across the open fields, pausing now and then to fire and knock out a Sherman at long range. As the distance closed, 17pdrs from 2 CAB replied. "The attention of the attacking Tigers was concentrated on the Canadian tanks of the 2nd Canadian Armoured Brigade which were advancing on both sides of the Route Nationale."⁷⁰ Suddenly Wittman's Tiger exploded. The flash, then fireball, temporarily blinded the Allied tank gunners. The turret was lifted into the air and slammed into the ground behind Pzkw No. 007. The ace of aces was dead. The debate over who scored this most spectacular of tank kills still continues.⁷¹

⁶⁹ H. Meyer, 173, See, Special Interrogation Report 24 Aug 45, 7. Direct attack was not considered rash by German officers with Eastern Front experience: "One of the simplest methods of sealing off a break-through or eliminating a penetration is the frontal counter-attack." German Defense Tactics against Russian Break-Throughs US Army Trg Pam No. 20-233. Oct 1951, 63. "Tigers sometimes used almost recklessly; their crews taking risks to a degree which indicates the utmost confidence in the vehicle." RG24 141186, BRAC, 1st Cdn Army CAC Bulletin No.1 Appx F "Experience with Tiger Tanks."

⁷⁰ H. Meyer, 336.

⁷¹ Both 2 CAB and 33 BAB were in the area. For a while it was assumed that Wittman was hit by Typhoons. His body was not discovered until 1982. German War Graves Commission corroborated that an identification disc, fragments of a leather jacket and a pistol belonged to Wittman. Investigation of Canadian archives photographs confirmed Tiger 007 was hit by tank fire, see RH 24 Vol. 10,458, File

The attack by Wittman's Tigers and Waldmüller's tanks disrupted the entire Canadian front. Although the 12 SS attack was a mixed bag of Mark IVs and JagdPanzer IVs, the ferocity and aggressiveness of their thrust set 4th Armoured and 1st Polish back on their heels. Directly above the German attack flew the 492 Fortresses from 8th USAAF.⁷² A couple of lead bombers dropped short. The airborne OP desperately flew into the bomber stream wiggling his wings to signal the error, but the following squadrons followed suit and released their bombs. The 1st Polish Armoured was badly hit as were elements of 3rd Canadian Division, the main headquarters of 2 CAB, 2 Cdn AGRA and 9 AGRA. Shock and confusion followed. At 1330 Simonds's Headquarters demanded Crerar "Stop all bombing."⁷³ Simonds had considered calling off the bombers earlier, but it was too late. The 8th USAAF was already airborne and his communication chain stretched back to Canadian Army Headquarters "and from there to RAF Headquarters in England and from there to USAF Headquarters in England and from there to the leaders of the attacking formations,"⁷⁴ after which SHAEF would be advised

212cl.1009 (D37). See, Les Taylor, "Michael Wittman's Last Battle" *After the Battle*, No.48, 1985, 46-52. Taylor suggests the credit goes to Trooper Joe Ekins, Firefly gunner in "A" Squadron, 1st Northamptonshire Yeomanry. The unit WD records "Three Tigers reported moving towards "A" Sqn and were brewed at 1240, 1247, and 1252 hours." Another claimant is Canadian General S. V. Radley Walters whose squadron (A Sqn, 27 CAR) engaged the Wittman from the north west - his gunner knocked out a Tiger. Visits to the site have satisfied him that his claim may well be valid. Max Hastings notes Wittman "met his end in the thick of concentrated fire from a clutch of Canadian Shermans." Max Hastings, *Overlord* (New York: Simon and Shuster, 1984), 299. "Wittman spotted a number of Allied Shermans advancing towards Cintheaux and began firing at these machines...these tanks were from a Canadian armoured unit trying to take the high ground in the vicinity of Pt 112 from the West..." Gary L. Simpson, *Tiger Ace: The Story of Panzer Commander Michael Wittman* (Atglen: Schiffer, 1994), 304. Wittman was finally buried with his crew (grave No.120, R 3, B 47) in the German war cemetery at La Cambes.

⁷² "1,019 aircraft - 614 Lancasters, 392 Halifaxes, 13 Mosquitoes - attacked five aiming points in front of Allied troops." Middlebrook and Everitt, 557. The Heavy Bomber Phase of *Totalize* was actually rescheduled for 1226 am. Marker shells were fired by 23rd Field at 1255 hrs. The bombers may have started bombing early, mistaking the Cramesnil east-west road for the Bretteville-le-Rabet road that lead to St. Sylvain. Surprisingly there was laughter from the 12 SS. The tension had been broken by a young panzergrenadier ("a typical boy from Berlin") who shouted: "Welche Ehre, für jeden von uns schickt Churchill einen Bomber!" (What an honour. Churchill is sending one bomber for each of us!). K. Meyer, 286. The 12 SS counter-attack seems to have taken place during the bombing raid. 1st Northamptonshire WD records Tiger combat from 1220 to 1252 hrs. Taylor, 47.

⁷³ RG 24 10635. WD ; Ops Message Log. 2 Cdn Corps HQ, 8 Aug 44, Operational Report C. O. 1 Polish Armd Div "Fighting During The Period From 7-12 Aug 1944" 13 Aug 44, 2.

⁷⁴ "General Simonds had a constant complaint, and had already voiced it several times, that our contact with the Air Force was too remote. Toward the latter stages of operations in Europe we did get forward observation Air Force personnel who would be with the forward units and through wireless would contact the fighter bombers overhead and call them down on specific targets like a house or a tank, etc. But

and then Harris notified. Commander 2 Cdn Corps did not think he could call them back; perhaps he should have tried earlier. The bombing went in and it was a debacle. In typical style, Simonds pronounced: "From now on it will be the RAF."⁷⁵ The B-17s flattened the target villages but they disrupted more Canadian formations than German.⁷⁶ One Canadian casualty was General Rod Keller, last seen being carried into an ambulance shouting to his batman: "Roberts, bring me my pistol! I'm going to shoot the first American I see!"⁷⁷

Command and Control: Kitching's Kampfgruppen

Drive on whenever there is a gap. NO "waiting for George." Don't expect the battle to go quite to plan.
Simonds at Corps Comd's "O" GP "Totalize": 1000 Hrs, 23 , Jul 44

The enemy ... carried out all his attacks with tanks and without infantry.

General Eberbach reporting to Von Kluge: 2330 hrs, 8th Aug 44

The bombers cost Simonds time. As the 1st Polish Armoured Division and 4 CAD were trying to sort themselves out, they were attacked by Kampfgruppe Waldmüller: "It immediately engaged Polish infantry. The grim duels of panzers against tanks were fought by the fighting vehicles of the 4th Canadian Armoured Division and Michael Wittman's Tigers."⁷⁸ The attack disrupted H Hour. *Totalize's* second phase did not get going until 1530, two hours late.

At the time, my division was accused of being slow in getting to our start line ... because of our very restricted frontage, had only about five

the Air Force never trusted an army character to do this. They would never surrender to the Army the right to have authority to direct their actions." Stearns Papers 23 Mar 81, 7.

⁷⁵ Stearns 23 Mar 81, 7.

⁷⁶ 65 dead, 250 wounded, 55 vehicles destroyed. Most of the casualties were in Maczek's division. Stacey, Victory Campaign, 223. Oddly enough, the unit's Operational Report only refers to "part of the arty, but also amn dumped for AGRA." After *Totalize's* first day Maczek was optimistic: "Our own losses were insignificant." See: RG24 WD 1 Pol Armd Div: Operational Report, C. O. 1 Polish Arm Div "Fighting During the Period From 7-12 Aug 1944", 3.

⁷⁷ Tony Foster, Meeting of Generals (Toronto: Methuen, 1986), 360, and, Brigadier General McGill, personal interview, 15 January 1990.

⁷⁸ Meyer, 173, Interrogation Report, 7-8.

hundred yards in which to maneuver. This was the normal frontage for a squadron to operate in....⁷⁹

Kitching's grouping cannot be faulted. His vanguard was an armour/infantry battlegroup named, in German style, after their commander. By 1800, the lead attack by Halpenny Force (The Canadian Grenadier Guards and The Lake Superior Regiment) had bogged down a kilometre south of Cintheaux, still held by the ad hoc rear guard thrown together by Meyer. Maczek's lead brigade, attacking two regiments up with 2nd Pulk Pancerna and 24th Lancers, had forced Waldmüller's Pz IVs back but now ran into another counter-attack from the east by the Divisionbegleitkompanie (Divisional Escort Company) which had JPz IVs under command. The well armoured, low silhouetted tank destroyers brewed up twenty-six Shermans. "The Poles no longer dared to leave Cramenil forest."⁸⁰ Simonds, trying to control the battle by radio was not pleased: "Why don't the Poles get on?"⁸¹ Maczek tried to explain but it fell on deaf ears.

Les Allemandes avaient caché des canons anti-tank et quelques "Tigres" dans deux bosquets, séparés par une petite plaine. Le 2e Regt tomba dans un guet-apens quand il arriva entre ces taillis. Sa surprise fut totale. Mais on effectua aussitôt un regroupement de blindés et dans un bruit infernal l'avance continua lente et inexorable.⁸²

Although they faced mostly Mark IVs, the 1 PAD attack against Meyer's elastic defence could not make progress on the narrow front. Worse, *Totalize's* pause gave Lt General Wolfgang Pickert, commander 3rd Flak Corps, time to deploy his 88s to complement the anti-tank pak front 12 SS had formed with their own divisional flak in the Quesnay wood area.

The Canadian attacks went in unsupported and piecemeal. As Meyer noted: "We were unbelievably lucky – the opposite side did not carry out one single concentrated attack."⁸³ By 1510 the Poles reported they were regrouping. The Canadian Grenadier Guards conducted a series of squadron level attacks, trying to shoot infantry battalions into Cintheaux or attempting to maneuver past individual strong points. By last light, the

⁷⁹ Kitching, 194.

⁸⁰ Meyer, 173.

⁸¹ RG 24 10635. WD ; Ops Message Log. 2 Cdn Corps HQ. 1705 hrs, 8 Aug 44.

⁸² -----, La Première Division Blindé Polonaise (Brussels: Welfare Section of 1 PAD, 1945), 11.

⁸³ Meyer 173, Interrogation, 8.

regiment had lost seventeen tanks. 4 CAB had fought 40 tanks south to Langannerie, east of Route 158. There they were finally stopped by 88 fire from Pickert's guns and Flakab 12 in Quesnay Wood.

I constantly ordered these guns to stay forward and act in an anti-tank role against Allied armour. My orders were just as often countermanded by Pickert, who moved them back into the rear areas to protect administrative sites. I asked time and time again that these guns be put under my command, but I was always told by High Command that it was impossible.⁸⁴

This time Pickert followed orders and "in less than forty-eight hours the hulks of over 150 Sherman tanks dotted the rolling wheatfields north of the Laison River."⁸⁵

Despite exhortations throughout the day by Kitching, who was in turn being hounded by Simonds, the armoured regiments could not get going. Inexperienced, rattled by Waldmüller's counter-attack, and shaken by the friendly bombing, 4 CAB moved gingerly past the craters and reacted with undue tactical intent to any enemy salvo. This was their baptism of fire. The Commander of 4th Armoured Brigade, Brigadier R. A. Booth, proved a disappointment in that he behaved in the same indecisive manner as Wyman. He had been promoted from LtColonel directly to Brigadier and was given 4 CAB because of his alleged battle experience and tactical competence. He was a firm believer in the battlegroup and was convinced that the Fuller system (massed tanks alone had little chance of success) was wrong. Actually, "tanks alone," more correctly, a tank heavy battle group with little or no infantry but accompanied by FOOs, FACs and engineers, could do wondrous things against an armoured counter-attack force. Dynamic leadership was essential, but Booth had as little success with his regiments as Wyman.⁸⁶

When Halpenny Force approached Bretteville-le-Rabet, they were engaged by fire from Meyer's anti-tank battalion and 88s from Pickert's pak front. The tactical answer was maneuver by battlegroup, not tactics at the squadron level. Maneuver required a brigadier or GSO to point regiments in the right direction. The battlegroups were

⁸⁴ General Joseph "Sepp" Dietrich, commander 1st SS Pz Corps. Quoted by Shulman, 150.

⁸⁵ "I warned the Field Marshal," said Dietrich, "that the Canadians had only been stopped on the Laison River for a short period." Shulman, 151.

⁸⁶ Booth's frustration, and inability, is recorded in 4 CAB Ops Log: 1617: "You are reporting no opposition so push on. If there is opposition then I should know about it." 1702 "Fetch Sunray, what is hold up? Push on ... no opposition in front - yet the going is very slow. I am not waiting any longer..." 1736 "Put Sunray on set. Put Sunray on set. Get Sunray immediately!" From 1736 to 1830 4 CAB Logs records consist mostly of ignored commands from Booth to 22 and 28 CAR to "Put Sunray on set." RG24 14052 WD 4 CAB, 8 Aug 44.

overwhelmed by their first action. They either forgot about the supporting arms or were “not wholly aware of the capabilities of the gunners; we were never asked for smoke.”⁸⁷ Instead of using the team work to take out rear-guard positions, the squadrons tried to do it themselves and failed: “... during these actions we never received one request for fire support and we began to think we were just along for the ride.”⁸⁸ In its first battle, 4th Armoured tried to feel its way around the blocking force, looking for a hole. When it found an enemy strongpoint, its regiments attacked it. It has been suggested that the inexperience of 4 CAD and 1st Polish Arm'd resulted in the error of “pausing to deal with strongpoints rather than bypassing them.”⁸⁹ In fact, there was no room to do this as long as Corps held them to their boundaries. There were no open flanks in the narrow frontage Simonds gave to Kitching and Maczek. An armoured regiment bypasses an enemy strongpoint by saturating it with direct and indirect fire, then maneuvering around the open flank using its own smoke as protection. Any attempt to seek out un trou Normande would meet with the long reach of an 88 or super 75.⁹⁰ Eventually it was too late; the squadrons required fuel, ammunition, rest, and mostly a conference to sort everyone out. Kitching, pushed by Simonds, quite rightly wanted the breakout to keep going. Every hour lost meant more Tigers, more Panthers and more panzergrenadiers on the battlefield.

The Corps commander had ordered them to press on through the night. But they were not going to heed his requests. It was not in their doctrine. To Simonds's rage, the armoured regiments did exactly what all armoured regiments had been doing since 1939. To Simonds's fury and Kitching's exasperation⁹¹ the regimental COs fell back on their

⁸⁷ Lt.Col R. S. Lucas, FOO, 23rd Regt (SP) supporting 4 Cdn Arm'd Bde during *Totalize*. Correspondence with LCol J. A. English 12 Mar 90.

⁸⁸ Lucas, 12 Mar 90.

⁸⁹ Weigley, 204.

⁹⁰ The opposition amounted to a battalion's worth of anti-tank fire: “Die 12.SS PzDiv Hitlerjugend (Meyer) vertarkt durch 80 sturmgeschutz und 88 Flak, brachte die Polen bei St. Sylvain zum stehen und hinderte die Kanadieran Heraustreten aus Bretteville-sur-Laize.” Eddy Bauer *Der Panzerkrieg* (Bonn: Verlag Bodo Zimmerman, 1965), 135.

⁹¹ RG24 14052 OPs Log 4 CAB; 8 August. Brigadier Booth's and General Kitching's exhortations took on increasing annoyance and directness. By 1800, exchanges between HQ 4 CAB / 4 CAD and the armoured regiments were decidedly angry. The regimental commanders, either due to enemy action or to simply avoid confrontation, ignored most of the calls: “You can get cracking!...Are you moving? ... Push on! ... Fetch Sunray ... Put Sunray on set! ... Get Sunray immediately! What is hold up? ... If you have no opposition you must push on! Outflank and push on! No opposition in front yet the going is very slow. I'm not waiting any longer - I want you to move fast!”

Dorset training⁹² and went back to a “rear rally” and laagered.⁹³ “[A] momentous decision – which granted Brigadeführer Kurt Meyer a respite of seven hours to rally the 89th Division and deploy his 12th SS Panzer Division – vitiated Simonds’s intention ‘to press straight on steadily regardless.’ ”⁹⁴ This was combat refusal with dire future consequences both on the men of 4 CAB and their commander.

Nothing Booth could do would change things; indeed, he does not seem to have tried. He disappeared from the battlefield and had to be personally ferreted out by Kitching, who was so exasperated that he went forward to sort out Booth personally. He found him asleep in his tank:

I had the greatest difficulty in locating him and he would not answer calls on the radio. When I finally found him he was nearly two miles away from the battle and fast asleep in his tank. I personally had to climb up on the tank to wake him and tell him to go and see what was happening. I was so angry that I ordered him out of the tank and gave him a tongue-lashing for five minutes. He was almost in tears when he went forward.⁹⁵

By then it was too late for everyone. 4 CAB did not get going again until the next day and *Totalize* lost another eight hours.

Kitching or Maczek waited too long to sort things out when their brigade commanders began to lose their grip. Simonds tried to light a fire under his corps but wasn’t sure which division needed his attention most. 1st Canadian Army HQ watched patiently, hoping Simonds would find a solution. While Crerar stayed in his

⁹² Training by British / Canadian Officers fresh from the Desert and Italian Campaigns resulted in a “tanks only fight in day” mentality: “Unless there is some final objective there is no limit to the advance which must be pressed from first light until the light fails. As a matter of routine approximately one hour before dark comds automatically begin their night dispositions and if possible get themselves disengaged, secure and capable of being replenished. If this is done well a good start can be made at first light the next day.” DHIST. Royal Armoured Corps. Operational Circular No. 1. 7th Armd Div Ops. 26 Nov North Africa to Nov 43, Volturno River Italy. RG 24 BRAC files and TRG Files 4 CAD.

⁹³ “...went back to a regtl harbour at Gaumesnil. It was then 2000 hrs and it was considered that in view of the fact that darkness was rapidly approaching, the fact that some regrouping and proper tying up for the next advance was necessary.” RG24 14260 WD 22 CAR CGG, 8 August 44.

⁹⁴ H Meyer, 264.

⁹⁵ Kitching, 195. Booth realized Canadian/British Armoured Doctrine was flawed. During a TEWT, (Ex Iroquois, 1 July 44) he ordered his syndicates to use battlegroups (“designed to beat the enemy”). It is likely Booth not Kitching who created Halpenny and Worthington Force. RG24 Vol. 14051 and 15098. However, J. A. English notes that “Booth...delegated tactical responsibility down to battle groups with the result that artillery was never effectively brought to bear against pockets of resistance...” English, The Canadian Army and the Normandy Campaign, 290.

Headquarters,⁹⁶ his opposite number, SS General Eberbach, his face badly scarred from battle burns, a Ritterkreuz at his throat, drove forward to see *Totalize* and then went to von Kluge to discuss their dilemma: the "persönlichen Befehl des Führers" ordering continued efforts toward Avranches versus the very real threat of at least two Cdn arm'd divs about to breakthrough to Falaise. His sombre evaluation convinced the Fieldmarshal to release the Panther Abteilung of 9th Panzer Division and 102nd SS sPzAbt (Tigers) as reinforcements for Meyer: "I have no other forces left. If this keeps going the same way tomorrow, we shall be unable to stop it."⁹⁷

Simonds was still determined to make something of *Totalize*; he again would attack at night and would use searchlights to create "movement light."⁹⁸ Both battlegroups were given objectives astride Highway 158, the road to Falaise. The Grenadier Guards were told to clear Bretteville-le-Rabet. Aggressive leadership could push them past Quesnay woods. A brisk flanking maneuver would easily bring them to Point 140, highest of the bluffs overlooking the Laison River, and a springboard for Falaise. The BCRs were ordered to take Point 195, a knoll with the same characteristics as Hill 67 in that it resembled an open plain until the crest then fell away south overlooking the approaches to the Laison, the Laize and finally, Falaise. Point 195 was west of Highway 158. The arrival of two armoured battlegroups on the Laison would break down the door leading to Falaise, Chambois, and Argentan. The Hitlerjugend would not be able to cover a breakthrough six miles wide.

Totalize deserves some study. It was the first Canadian attack by a complete armoured corps. It was the first occasion since early June that balanced battlegroups were used in the attack and was also the first time that proper armoured battlegroups were created. Le Mesnil-Patry saw Wyman order the QORs to ride on tanks which entered the

⁹⁶ "Crerar...operated by very different methods...Weather permitting, he used to fly daily over the fighting area...in a light aircraft." Horrocks, 31. "When Guderian first tried to explain the concept [of commanding massed armour circa 1938]...General Fritsch asked him "And how do you intend to control this division?" and Guderian answered, "From the front using radiol!" Fritsch replied, "Nonsense. The only way to command a division is from a desk at the rear, using a telephone." "Translated Taped Conversation with General Hermann Balck, 12 January 1979", Battelle, Columbus Laboratories Tactical Technology Center, Columbus, 21.

⁹⁷ Quoted in Meyer, 174. See also: RH 21-5/52 Kriegstabuch des PanzerArmeeoberkommando 5.9.8.44 - 9.9.44: noch 9.8.44. Bundesarchiv, Freiburg.

⁹⁸ RG 24 WD 344 Independent Searchlight Battery RA. 8 August. "Troops remained deployed...Movement Light again provided throughout the night." And, Stacey, Victory Campaign, 225.

battlefield a squadron at a time. Wyman never used his brigade as a complete weapon, although it was available. Kitching gave Booth the reins.

The combat ratio finally favoured the attacking Canadians; Booth alone had 240 tanks against about 100 tanks available to Meyer. Further, Meyer, whose panzers were still arriving in the area, had to cover the entire front and maintain a reserve. The only reinforcements expected were the Panther battalion from 9 Pz, seconded to Meyer on von Kluge's order and the grenadiers of 85th Infantry Division, arriving on bicycles via Vimoutiers and Trun.

Attacking with two armoured divisions forward meant Meyer would be forced to divide his resources. At best, fifty German tanks would be capable of interfering with Booth's concentration of over two hundred Shermans. Further, Simonds had immediate access to Wyman's 2 CAB, which had already enjoyed a punch up with Waldmüller and Wittman. This allowed an attack ratio of roughly 425 Shermans and another 240 Polish tanks against Meyer's scattered zugs. The prospects of tactical victory was within realistic reach. In terms of Fireflies alone, the Canadian attackers held a decisive numerical advantage.

Armour Available to Simonds for Phase II Totalize

<u>4 Cdn Armd Div</u>	<u>1 Pol Armd Div</u>		
29 Armd Recce Regt	10 Chasseurs		
<u>4 Cdn Armd Bde</u>	<u>10 Pol Armd Bde</u>	<u>2 Cdn Armd Bde</u>	<u>33 Brit Armd Bde</u>
21 CAR (GG)	1 PAR	6 CAR (1 Hussars)	144th Bn Royal Armd Corps
22 CAR (GGFG)	2 PAR	10 CAR (FGH)	1st East Riding Yeomanry
28 CAR (BCR)	24 Lancers	27 CAR (SherFus)	Northamptonshire Yeomanry

Total: 14 Armoured Regiments (840 tanks)

Table 8

In the early hours of 9 August 4 CAD finally got its regiments going. Kitching had a rough idea of how to go about this armoured business. This was another opportunity to break out and achieve operational maneuver. All the bold things that were going on in *Cobra*, that had occurred in *Barbarossa* and France 1940, were there for the taking.

4 CAB deployed two-thirds of its armoured brigade as balanced Kampfgruppen: "Halpenny Force," and "Worthington Force" which was a second armoured battle group

based on the 28th CAR (the British Colombia Regiment) grouped with three companies of the Algonquin Regiment mounted in White half track armoured personnel carriers. However, as one military historian put it “the subsequent performance of this force in contrast with that of Halpenny’s illustrated the depth of the tactical schizophrenia that gripped the armoured corps of the British and Canadian armies.”⁹⁹

Armoured Breakthrough: The Death of Worthington Force - 9 August

The wild dash they had to make did not lend itself to calm ground appreciation ...

Maj L. C. Monk: The Algonquin Regiment

... and the officers like gallant gentlemen who bore no malice and knew no fear, made their military recognition, while the horsemen on each side watched with eager eyes for an opening to charge.

Sir William Napier The cavalry commander requires the rarest combination of talent. He must have the great prudence which is always required of an officer holding a responsible post; and at the same time he must possess extraordinary rashness and bravery, and combine the greatest calmness with the greatest impetuosity.

Colonel George T. Denison

Lt.Col Don Worthington (no relation to General F. F. Worthington), started out in darkness. The plan was simple: south beside Route 158, then cross the highway and head west to the highest piece of ground. It should have worked. However, a night approach through what had now become a German defensive zone instead of a rear area, was a risky challenge for a regiment in its first battle. The atmosphere, already electric with the excitement of first enemy contact, was heightened by the confused pace of the advance.

It was so dark I could only see the red back lights of the tank in front. Sometimes we crawled along. Finally we just stopped and waited for first light. There were break downs. My troop pulled out around a broken down Sherman and promptly got lost – there were too many tank tracks. The Regiment was being led by Lt “Wing Ding” Wilson – he made a right turn but everyone else turned left – didn’t believe “Wing Ding” could navigate ... that’s how we got lost.¹⁰⁰

The main body of Worthington Force turned east. They may have been confused by the hard surface road that ran east from Bretteville-le-Rabet and mistaken it for Highway

⁹⁹ English, 280.

¹⁰⁰ Account by Lt Harvey McDermott, Troop Leader BCRs, 9 August. BCR historical file, provided by adjutant, 1994.

158. Then, "high ground was sighted and we headed for it."¹⁰¹ They arrived in the area of Point 140, bluffs overlooking the Laison River, and stopped. "Without knowing it Worthington had captured one of the Polish armoured divisions' objectives."¹⁰² Tragically, they were on the wrong hill.

Worthington's force set off a real panic in 12 SS. The front had been penetrated. The only thing that stood between the BCRs and Falaise was Meyer's own HQ, about three kilometres away. He ordered KG Wünsche to counter-attack immediately. Using a Panther company from 1 Abt, 12 SS Pz Regt and a handful of recently arrived Tigers from the 102 SS sPzAbt, Wünsche ordered a double envelopment to hit the BCRs from north and south. This was more practicality than clever tactics. Each element served a double purpose. The southern hook of Tigers would engage Worthington's Shermans at long range while covering against an approach along Route 158. The northern hook blocked an advance by 1st Polish Armoured whose regiments were right behind Worthington.

The Poles' performance was not discernibly better on the 9th. Although they were operating on the eastern flank of Simonds's morning attack and thus faced considerably fewer anti-tank positions, their advance was quickly halted as was the Grenadier Guards' advance on Quesnay Wood. The real tragedy was their inability to close the distance to Worthington's BCR battlegroup as it was being steadily decimated on Hill 140. A determined drive would have not only rescued 27th CAR but probably crossed the Laison and completely turned Meyer's flank.

Maczek's leading squadrons could not have helped but notice the plight of the BCRs and Algonquins. Several times their tanks attempted to give support – 10th Chasseurs advanced to St. Sylvain but were forced back by a handful of Panthers. A second regiment, 1st Pulk Pancerna, commanded by Major Stefanowicz, attacked from the northeast and claimed to have reached the Laison River near Rouvres where they shot up a bicycle company from 85th German Infantry. They were immediately engaged by Wünsche. Stefanowicz, without infantry or FOOs, decided to retreat.¹⁰³

¹⁰¹ RG24 Vol. 10,800 WD 28th CAR, 9 Aug 44.

¹⁰² Kitching, 196.

¹⁰³ see: S. Maczek, *Avec Mes Blindés* (Paris: Presses de la Cite, 1961), 188, and Meyer, 178.

Meanwhile, around Point 140, 12 SS Pz Regiment counter-attacked by fire from long range. The remainder of SS schPzAbt 101's Tigers (reinforced with a zug from 102) approached from the southwest, crossed Highway 158, and took out 27 CAR's Shermans from an area south of Quesnay and the high ground across the Laison. Concurrently, Wünsche's Panthers drove northeast then circled to complete the envelopment. The Polish armoured regiments were taken on at long range by these Panthers supported by a few Mk IVs and JPz IVs left over from Waldmüller's 8 August attack. Again these were mistakenly reported as Tigers and the over cautious leading Pulks stopped short and withdrew from the disadvantage of a long-range gun duel. Although 12 SS Krieggesichte credits Maczek's attack with destroying two German combat teams,¹⁰⁴ Simonds was exasperated with both Kitching and Maczek and the "complete lack of communication."¹⁰⁵ His anger finally forced him forward, where he chewed out the first regimental commander he saw.¹⁰⁶ The Poles vexed Simonds and drew scorn from Kitching:

I don't know what went wrong with the Poles on those two days, 8 and 9 August, but they certainly were no help to us.... I formed a poor opinion of the Poles in that battle. If they had been as aggressive as Worthington had been they would have been there to relieve him of some of the fierce pressure....¹⁰⁷

In Maczek's defence, the inexperience and real fear of his men cannot be discounted. On their move to the *Totalize* FUP both the 4th CAD and 1st PAD drove through part of the *Goodwood* battlefield. Tank crews gaped at the sight of the sixty odd burned out hulks

¹⁰⁴ "The Korpsbegleitkompanie was wiped out by that attack, the Divisionbegleitkompanie was overrun from the south at approximately 1400 hours. However, it was able to hold on and withdraw to the woods 2 km southeast of St. Sylvain in the evening." H. Meyer, 178. This success seems to have been ignored by Simonds and subsequently, by modern Canadian Military Historians.

¹⁰⁵ Stearns 27 April 81, 2.

¹⁰⁶ The 4 CAB Radio Log 10 Aug 44, follows the BCR predicament and the less than determined Canadian response: 0937hrs. We are being fired on from rear...1228 hrs. Must have assistance, cannot hold posn...1236 hrs BM (Chubb) 4CAB: How does it look? 22 CAR: Damn Serious...1301hrs. Strongly attacked...severe cas, several tks brewed up...1305 Brig (Booth) 4 CAB to 21 CAR: Make a mad dash to help sit. Will give good results... To 22 CAR: Hold on to yr posn and gains you have made at all costs. 21 CAR will help you... 22 CAR: I have 15 tks left!...Inf still here. We are few in numbers...1652 hrs 22 CAR: Ambulance can come up all the way here. Rd clear....1712 hrs 22 CAR: Can you give us some suggestions about our tgts in ref to bombing...1828 hrs 22 CAR: Quite a bit of activity on right flank... " Rest unintelligible to operator.

¹⁰⁷ Kitching, 196.

that still littered the area. If that did not shake them up, it certainly created an attitude of serious caution. Aggressive leaders quickly overcame this as with the example of Cdn Grenadier Guards troop commander Lt. I. P. Phelan who knocked out eleven anti-tank guns "in as many minutes"¹⁰⁸ during *Totalize*. But the Poles, despite seeing the BCR's predicament decided not to rush the Panthers engaging Worthington. Whenever a Pulk advanced, it was savagely engaged by Wünsche. Maczek reported:

right flank held up by enemy anti-tank guns at 110485 ... can you do anything about it? ... 3 PW taken 1700 hrs ... ident 25 Gr Regt. 25 PzGr divided into 3 groups. First Waldmüller. Second Krause ... other battle group on their right flank. They have tanks Mk IV and VI estimate 10-20 strong. Enemy inf defending St. Sylvain. En making good use of mortars.¹⁰⁹

German aggressiveness, and the ever present fear of Tiger by inexperienced crews, saved Meyer but killed Worthington: "les Allemandes lancerent de fortes contre-attaques appuyées par des Tigres. Elles furent toutes brisées et nous infligeames des pertes très lourdes à l'ennemi ... les Allemandes contre-attaquerent farouchement."¹¹⁰ Despite strikes from RAF Typhoons and the presence of the Polish vanguard only two miles away, Worthington Force was left unsupported throughout the entire day as Wünsche's tanks picked them off one by one.

By evening the entire Regiment's tanks, the half tracks of the Algonquin Regiment, and most of the men had been killed or wounded.¹¹¹ Hill 140 was an armoured graveyard abandoned to the Germans. Among the dead was the gallant Lt.Col. Worthington.¹¹² Kitching's armoured assault was over, and for all intents and purposes, so was *Totalize*. Kurt Meyer's analysis bears repeating:

¹⁰⁸ Phelan was awarded the Military Cross See: Colonel A. Fortescue Duguid, History of the Canadian Grenadier Guards 1760-1964 (Montreal: Gazette Printing, 1965), 264.

¹⁰⁹ RG24 13712. WD 2 Cdn Corps. Msgs fm 1 Pol AD, 1800 and 2345 hrs 9 Aug 44. Despite the ragged, incomplete nature of the Sitrep, it was the most useful message sent by an armoured unit to 2nd Corps that day.

¹¹⁰ -----, La Première Division Blindée Polonaise (Bruxelles: Imprimerie Union Office, 1954), 12, 13.

¹¹¹ Forty-seven tanks, 250 men from BCR and Algonquins plus an undetermined number of half-tracks. 12 SS suffered no losses in this engagement: "Wir selbst haben nicht einen Panzer verloren." K. Meyer, 294.

¹¹² The destruction of the BCR unlike the destruction of The Black Watch during *Spring* - was given little official attention. The difference was the political clout of the Montreal Watch which forced an

Every opening phase of a Canadian Operation was a complete success and the staff work a mathematical masterpiece ... every Canadian Operation bore the mark of intensive planning and was built on sound principles. Canadians never followed up their opening success to reach a complete victory. Every one of the Canadian attacks lost its push and determination after a few miles. Armoured warfare is a matter of using opportunities on the battlefield, therefore the Divisional Commander belongs with the leading combat group.¹¹³

Much has been made about the BCR's arrival on the wrong objective: "This episode, with its tragic mixture of gallantry and ineptitude...."¹¹⁴ The BCRs may have been lost but 2nd Cdn Corps had also lost the BCRs. Worthington's attack has been seen as the glass half empty; the fact remains that a battlegroup had broken through and penetrated into Meyer's rear area. Nothing lay between Worthington and Falaise. What the BCRs (indeed, Kitching) desperately needed was to have success reinforced. In the full scope of an armoured breakthrough, particularly at the corps level, a matter of four miles is mere bagatelle. Maneuver warfare rapidly encompasses enemy positions. Had Worthington been followed immediately by a second regiment and then by a second armoured brigade, whether Canadian, British or Polish, the BCR breakthrough would have been the tale of Rommel's 7th Panzer on the Sedan. One difficulty was that Worthington did not know where he was, but conversely neither did Kitching or Simonds. To paraphrase Wilde, losing one's armoured regiment in the dark is unfortunate, but for a division to lose an entire battlegroup in clear daylight is sheer carelessness.¹¹⁵

There were attempts made to find them. The 4th Division CDA, Brigadier J. N. "Herm" Lane, frustrated at his guns' seeming inability to support the BCRs, flew his Moth spotter aircraft south along Route 158 searching for Worthington Force. His eyes fixed onto Hill 195; he reported no contact as he determinedly flew past that feature until

investigation by the Minister of Defence. As late as 19 August 44, correspondence from Stuart to Crerar about the 25th July action at Fontenay were listed "Top Secret. No Circulation": RG24 10635.

¹¹³ DHIST 81/104: Interview Kurt Meyer, Canadian Chaplain's Report. 3 Sep 50.

¹¹⁴ Stacey, Victory Campaign, 229.

¹¹⁵ Brig Booth, in a less than controlled manner, ordered 21 CAR "to make a mad dash forward to relieve it!" He had no idea where the BCRs were nor any practical solutions. RG24 14052 WD 4CAB. 10 Aug 44.

he could actually see Falaise. Had he glanced left¹¹⁶ he would have quickly spotted a regiment of Sherman tanks on high ground, mixed with half-tracks and infantry, with scores of vehicles burning black smoke. That he failed to see them is a mystery. The simplest explanation is he did look and because they weren't supposed to be there, he did not see them. What he did see, he decided, were the Shermans of Maczek's Polish Division.

Liaison between 2nd Corps and the supporting RAF headquarters was poor. Typhoons had been supporting the BCRs for hours. The information was not relayed to Kitching or Simonds. Finally, an armoured officer might ask the obvious question: where was the recce? With five reconnaissance regiments at their disposal, two of them armoured,¹¹⁷ Kitching and Simonds had the resources to find Worthington. Again the answer may lie in doctrinal evolution. By the summer of 1944 wise heads in the Armoured Corps decided that a better way to use the div recce regiment would be to ignore doctrine and use its tanks as another armoured unit, either as reserve or a supporting battlegroup.¹¹⁸

Simonds sent the Canadian Grenadier Guards south to look at 195. They were quickly turned back by Pickert's 88s.¹¹⁹ The rest of the day was spent in frustrating radio calls. Simonds:

was alarmed at the lack of information as to the whereabouts of some 4th Division units. He visited 4th Division Headquarters twice on the 9th hoping to find things straightened out. I knew he was disappointed but trying not to show it.¹²⁰

¹¹⁶ This flight was duplicated by a Kiowa helicopter in May 1991. The author flew the route simulating Moth speeds at varying heights along the described approach as well as one further west. At all times, both hills were clearly visible with very little effort. Pt 140 was particularly easy to identify. Pt 195 was more difficult because of its particular geography.

¹¹⁷ 18th Armd Car Regt (12 Manitoba Dragoons) - the 2nd Cdn Corps recce (Staghounds); 8th Recce regt (14th Cdn Hussars) - 2nd Cdn Inf Div recce; 7th Recce Regt (17th Duke of York's Royal Canadian Hussars) - 3rd Cdn Div recce; 29th Recce Regt (The South Alberta Regiment) - 4th Cdn Armd Div recce - equipped with Shermans; 10th Chasseurs - 1st Pol Armd Div recce (equipped with Cromwells).

¹¹⁸ The Corps recce 18th Armd Car Regt was screening the left flank, east of 1 PAD. The other recce regiments were not given recce tasks.

¹¹⁹ At 1305 Booth ordered the Guards to "Make a Mad Dash to help sit. Will give good results." By 1307 22 CAR reported to Booth: "I have 15 tks left! 3 robots exploded beside us, 88s to front and left flank - they have us covered from all directions." 4 CAB Log, 9 Aug 44.

¹²⁰ Stearns Papers, 23 Mar 81, 2.

2nd Canadian Corps (thirteen armoured regiments) simply stopped and waited for the BCRs to find themselves. Neither the Poles nor 4 CAB seemed to be capable of maneuvering past the handful of tanks Wünsche had holding the flanks. The determination of Maczek's division is in question. They were well past the shock of being bombed and now faced an open front where they could maneuver. The presence of a Canadian regiment on their objective seems to have made little impression:

There certainly was a tremendous difference between the aggressiveness of the leading armoured regiments – more particular the Canadian than the Polish.... Some seemed to turn away in face of comparatively minor opposition.¹²¹

The real mystery is Army communications. The Germans benefited from Canadian lapses in wireless and general security.¹²² If Maczek's rear link reported the action and contact with Canadian Shermans to 2nd Cdn Corps Headquarters, it does not appear to have reached Simonds.¹²³ The status of communications is one of the more serious difficulties that Simonds experienced both at *Totalize* and *Tractable*. Eventually this lack of control was to cost Kitching his job. It should be pointed out that neither Kitching nor Simonds had exercised their commands in England before Normandy.¹²⁴ 4 CAD and 1st Polish AD arrived in Normandy in time to shake out and get ready for *Totalize*. Simonds sent in a complete armoured corps into his greatest battle seemingly without testing tactics or communications.¹²⁵ Again, his plans were overtaken by events.

¹²¹ Stearns Papers, 23 Mar 81. Simonds's displeasure soon reached Montgomery's ears: "P. S. Latest reports are that 4 Canadian Division is well on. The Poles are still on their start line & still exposing the eastern flank of the Canadian spearhead. I have told Harry to give the Poles a kick up the fork." Monty to Brooke, 9 Aug 44, as in Hamilton, 782.

¹²² Meyer recalled that: "...most excellent documents were always to be found in captured Shermans." Wisch, 3.

¹²³ It is interesting to note that 4 CAB WD reported "Poles report 28 CAR badly shot up ... has only 7 tks left." RG24 14052 WD 4 CAB, Ops Log 9 Aug 44.

¹²⁴ The training in England lacked a certain vision. In *Ex Frost* (4 Dec 43), the aim was to "Practice Harbours by Day and Night" the emphasis was on "leaving harbours scrupulously clean." Subsequent exercises (*Flash*; *Sodamint*) did not emphasize maneuver: "restricted by use of roads." Stacey noted: "Kitching took over the division at the end of February 1944. He never had the opportunity of commanding it in a full-scale exercise before it went into action. During the spring months tank movement was kept to a minimum to conserve the tracks of the tanks that were used in operations." Stacey, *Victory Campaign*, 276.

¹²⁵ Although individual units from 4th CAD conducted a test "raid" before *Totalize* and participated in two unsuccessful attacks against Tilly-la-Campagne, the two armoured brigades were not tested.

Veteran Canadian and British armour had easily defeated the initial counter-attack by Waldmüller. Fireflies had Tiger's number. Old hands seemed capable of taking Tiger on while new crews still feared the Tiger bogeyman. Simonds briefly tasted operational maneuver then lost it. The fault for a failed army level breakthrough cannot be laid at the feet of one armoured regiment.¹²⁶

The 2nd Corps continued to butt its head against Meyer's front door for one more day. Simonds gained a couple of pieces of tactical real estate, but the battle was over. The actual end came with the failure to reinforce Worthington on Hill 140.

Totalize - Analysis

In the end it is the result of the manner in which cards are played or the battle fought that is put down on the score sheets of history. Therefore I rate the skillful tactician above the skilled strategist, especially him who plays bad cards well.

Wavell

The operational results of *Totalize* were a gain of over eight miles and the virtual destruction of one German infantry division. It was the deepest penetration made by either 1st Cdn or 2nd Br Army thus far in the campaign. The German forces were stretched to breaking point and Crerar was poised on an excellent jump-off place to attack Falaise. Strategically, the western front, to quote von Kluge, "had burst."¹²⁷ Patton had entered Le Mans, eighty miles due south of the Laison and the "Falaise pocket" had been formed. *Totalize's* tactical results were disappointing. Night moves for armour were dangerous and, one could argue, irresponsible. There was only the vaguest doctrine for a night attack by armoured divisions and it had not been practiced since El Alamein. *Totalize* demanded complex phases that would have sorely tested the most experienced armoured formations; to set them upon Kitching and Maczek was venturesome planning. Finally, as Meyer noted in his personal critique, "Stopping to water your horses in the

¹²⁶ At one point he seems to have considered blaming the 1st Polish Armoured Division. In correspondence to General Stuart, he wondered "If Poles not inclined for the battle" and proposed: "We take away their tanks to keep up the offensive strength...." RG 24 10634. Msg Simonds to COS 1130 hrs, 12 Aug 44. Simonds's second night attack certainly prompted an OKW response: "9 August 0300 hours to instruct the Panther battalion of 9 Pz Div to pivot toward I SS Pz Corps." OKW WD, 82.

¹²⁷ Hitler, seeing von Kluge's worried report snapped at Warlimont: "You tell Field Marshall von Kluge to keep on looking to his front, to keep his eyes on the enemy and not to look over his shoulder." Warlimont, 446.

middle of a cavalry charge"¹²⁸ is not maneuver warfare. There was no operational breakthrough, despite the fact that by the morning of the 8th a considerable gap had been created in 1 SS Pz Corps. A congregation of thirteen armoured regiments had been stopped by an equivalent of one. Again, a handful of Tigers rattled the Allied armoured force. While Bradley had successfully defeated the Mortain counteroffensive of four German panzer divisions, Crerar had been unable to crack one. *Totalize* was Simonds's battle. It should have become Crerar's battle directly penetration occurred.

1st Canadian Army was not directed with convincing operational skill. Both Army and Corps Headquarters were mesmerized by Falaise. Crerar should have considered his left flank and the Seine. The entire eastern front of Normandy, from the Caen-Paris highway, to the Laison River, was held by Schack's 272nd Infantry Division. Its three regiments could not scrape together more than the equivalent of two to three rifle battalions.¹²⁹ Behind Schack there was nothing, no panzer reserve, not even a single Tiger. Crerar continued to drive south where Meyer was being reinforced daily from Eberbach's panzer divisions inside the pocket.¹³⁰ It would have been most interesting to see Crerar behave like Patton and head for the Seine and Paris, via the shortest way.

Directing The Corps: Simonds as Chairman of the Board

The invaluable knowledge gained in our large scale training maneuvers in Louisiana and Carolina and the Desert Training Center crystallized thought to the tactical functions of our major units and so the Corps was accepted, and might be likened to a holding corporation.

LtGen A. C. Gillem Jr, Commander XIII Corps

Corps Commander is the highest grand tactical commander on the battlefield. He is the last man towards the rear and who directs tactical fire on the enemy. He is the commander who conducts the battle.

General Haislip, Commander XV Corps

¹²⁸ DHist 81/104 "Extracts Kurt Meyer Chaplain's Report of Interview 3 Sep 50", 1.

¹²⁹ RH26-272 / 5. Bundesarchiv. 272 Infanterie-Division, 28-34. Also, "By 29 July - all elements of 21st Panzer had been relieved except for 2d Coy of 192 Mtn Inf Regt and the 200th Assault Gun Bn [converted French tanks] which remained in the 272 sector for some time." MS B-702 Gen der Inf A. Schack, "272 Inf Div (26 July-12 Sept 44)", 3.

¹³⁰ Meyer was reinforced throughout *Totalize*: 101 SS sPzAbt, 102 SS sPzAbt; the Panther battalion from 9th SS and 85th Infantry Div arriving on bicycles (interesting target for recce armoured cars) via Vimoutiers.

While Bradley directed his two armies and Collins and Patton maneuvered their corps, Montgomery looked over both Dempsey's and Crerar's shoulders. Crerar let Simonds do pretty much as he liked. Simonds had enough to attempt to wreck a front line, but he couldn't break out – at least in the correct Soviet style. If he turned to his boss for help, Crerar could honestly say he had given him everything he had. There were no more tanks in the cupboard. Delay became embarrassing; by 9 August, 1st Cdn Army was still fighting "The Normandy Campaign" while the 12th American Army Group was sixteen days into "The Campaign for Northern France."¹³¹

The Corps is the heart of Operational Maneuver; it is the first permanent planning structure that guides operations. Dynamic corps win campaigns. American Doctrine stated that:

... the attack by a corps ordinarily is a matter of days and not of hours ... planning requires weeks, even months ahead of contemplated, probable or possible Operations ... all units are provided with operation overlays and objectives designated.¹³²

By those standards Simonds's hurried preparations for *Spring*, *Totalize* and *Tractable* show him to be a remarkably skilled technical, if not tactical, planner. Conversely, it says little for Crerar's or Montgomery's ability¹³³ to forecast operations. The time denied Simonds could have been better used to prepare divisions: "most important, subordinate commanders and their staffs, through conferences and war games, [should] become familiar with all plans and their variations."¹³⁴

American General Wade H. Haislip argued that the corps commander and his staff must have complete flexibility of thought and action and develop simple

¹³¹ American Operational Histories consider the Normandy Campaign over on 24th July (before *Spring* is launched); the Northern France Campaign (25 July-14 Sept) begins a month before Simonds closed the Gap.

¹³² FM 100-15 *Larger Units*. Para 173, see also, FM 101-10. (*The Corps*).

¹³³ "Monty, who has never won a battle since he left Africa and only El Alamein there. I won Mareth for him...I can outfight that little fart, Monty, anytime." Provinge, 115, 175. Wilmot's evaluation of Crerar's efforts also show the limits of Montgomery's operational planning: "the evidence suggests that the [Canadian] thrust from the north was not pressed with sufficient speed and strength." Wilmot, 424-425. See, "Letter of Instructions Number Three" and "Letter of Instructions Number Four" (Bradley) 6, 8 August 44.

¹³⁴ FM 100-15.

plans.¹³⁵ Simonds had remarkable freedom of action and it could be argued that he enjoyed too much. On 26 July Montgomery wrote a letter of advice to Crerar on how to handle Simonds: "When an Army Commander has only one corps in his army he will, unless he is careful, find that he is trying to command that corps himself in detail. He has to exercise great patience and restraint."¹³⁶ Bradley had to intervene and check Patton when, with impatient cavalry gusto, he countermanded or "adjusted" his own corps commander's orders.¹³⁷

Crerar took the advice too literally and evolved a hands-off policy that virtually gave Simonds command of the 1st Cdn Army until the end of the Falaise Campaign. Crerar's "Attack Doctrine" was finally published in July 1944 and dealt in generalities until he mentioned artillery. It was uninspiring.¹³⁸ Crerar had little concept of an armoured break-through attack. He felt more comfortable in issuing a "Tactical Directive" for his Army which was nothing more than aspects of a brigade level attack prepared by a gunner. Nevertheless, it may be argued in his defense that he had enough sense to let his corps commander do the thinking for him, even though Simonds, like Crerar, was learning through experimentation.

It is easy enough to go "Simonds bashing." But if 2nd Cdn Corps had achieved total success, what would Montgomery, or specifically, Dempsey, have done on 26 July? He was not organized to either reinforce or, more importantly, exploit, a Canadian breakthrough. Montgomery had not deployed 2nd British Army in anticipation of victory

¹³⁵ "...once you have made a decision, stick to it...always have a main effort and pour it down in front of the place you want to go." "Example of the Attack of a Fortified Zone" Wade H. Haislip Papers, 16. OCMH, MHI.

¹³⁶ MG30 E157 Vol 8. Crerar Papers. The incident with General Sir J. T. Crocker, Commander 1st British Corps, led to the infamous "I fear he thinks he is a great soldier...He made his first mistake at 1205 hrs and his second after lunch" crack by Monty to Brook re Crerar. Montgomery was wrong; Crocker behaved like a snot. Crerar was right to have wanted him disciplined. Patton would not have stood for it, but Crerar was too polite, too inexperienced and too insecure. See, Stacey, Victory Campaign, 196-197.

¹³⁷ Often necessary, but just as often led to confusion. Patton simply had no time for slow thinking generals, at any level. "I had to use the whip on both Middleton and Milliken today - they are both too cautious." Patton in Charles M. Provinge, The Unknown Patton (New York: Bonanza Books, 1983), 170.

¹³⁸ "The particular problem of the First Cdn Army will be the development of a "Break-In" and "Break-through" battle...A related, and most important, requirement - which must be thoroughly drilled into the minds of all those under command - is to resist the temptation to "go to ground" if, or when, their forward movement happens to come under heavy enemy fire...To press on is not only tactically sound, it is, for the individual, much safer." MG30 E157. Crerar Papers. Tactical Directive by Comd First Cdn Army. 22 Jul 44.

but rather in expectation of Canadian failure. It is unlikely Montgomery schemed against Crerar or Simonds, but he certainly failed to plan ahead.¹³⁹ The tactical deployment of 2nd Army could only lead to a *Bluecoat* type operation, an attack on the wrong side of the Orne and into the wrong terrain. The best Dempsey could do is send a corps east via Caen – a long trek. Montgomery's concept of future operations, despite his energetic claims to the contrary, was short-sighted.

There is another simpler possibility. In hindsight, the grand Cannae encirclement that was Falaise was brilliant. It was everything Montgomery was not. It is far more creative than dull tidy Montgomery who was simply sticking to the basic plan he laid out on 15 May.¹⁴⁰ His goal was to support Bradley, to push south, not to encircle the Germans. Montgomery wanted to accomplish his stated aim – clear Brittany and capture a decent port:

As to Caen, even General de Guingand didn't tell the truth about that. It is true there was a plan which showed the Americans coming up on the right towards the Seine while they [21st Army Group] swung at Caen. But that is far different from the decision to strike out on the right and pull quickly around. Monty undoubtedly intended to start the breakout on his front and then let the Americans come around as they could. He intended at first for Patton to spend his time cleaning up the few Germans in Brittany.¹⁴¹

¹³⁹ "Montgomery's decision not to reinforce the Canadians was made August 11..." Bradley, quoted by Carlo D'Este "Falaise: The Trap Not Sprung" *The Quarterly Journal of Military History*, Spring 1994, Vol 6 No.3, 61. "I could not understand why at so crucial a moment Monty had not reinforced the Canadians.... His unrealistic faith in the Canadians had cost us the golden opportunity." Omar N. Bradley and Clay Blair, *A General's Life* (New York: Simon and Schuster, 1983), 299.

¹⁴⁰ The scheme was an ever widening bridgehead that would eventually reach the Seine but only after Brittany and northern Bay of Biscay ports were seized. The intent was to push out in the southwest toward Vive and Avranches. The planned campaign as outlined by Montgomery had no "Cannae" strategy. See: Maps and schedules, First US Army Group: "Invasion of the Continent of Europe, Discussion, Planning and Operation, Land, Air and Sea, Initial Planning, December 1941 to Fall of Metz, November 1944", Numa A. Watson Papers, USAMHI. And, "Strategy of the Campaign in Western Europe 1944-1945" The General Board United States Forces, European Theatre, 1945, 30-31.

¹⁴¹ Wing Commander Leslie Scarman, Aide to Lord Tedder. Interview by Dr. Forrest C. Pogue, 8 Mar 47. The Naval Chief of Staff offered a different spin: "Monty's talk of his original plan to hinge on Caen is absolute balls. Monty's a great operational commander. When he was checked in his original intent of taking Caen he had the idea of doing the other op. I believe the second shows greater insight. I don't see why he doesn't tell the truth." Capt J. Hughes Hallet, Naval COS COSSAC. Interview by Dr. Forrest C. Pogue, 12 Feb 47, Pogue Manuscripts. Patton Museum Library, Fort Knox, Ky..

Minor Tactics

All too often the battle-pixies failed us; they always watch
for the chance of letting down the unskilled.

Tuker

Tactically, Simonds has and should be criticized for an inability to handle armour after phase two; this failure somehow mutated into official bewilderment, echoed even by Stacey, at the action of the BCRs. However, by 9 August, Crerar should have been well forward and directing the pursuit from Simonds's tactical HQ, if not from a tank. At this stage it was a question of coordination with British forces and the creative direction of operational level formations. Simonds was juggling the equivalent of two corps. He was controlling the largest armoured force yet available to a Canadian general.

Any tactical analysis must also note the conduct of Kitching and Maczek. From the outset, both were quite unable to get anything out of their divisions. Frustrated directives sent by radio were generally ignored. Both the Polish and Canadian armoured brigadiers had no practical effect on the battle.¹⁴² *Totalize* was fought at the battlegroup level by lieutenant colonels and majors.

Totalize's operational set backs – the decision to stop for a second bombing phase, the unfortunate bombing of friendly vanguards by 8th USAAF and finally, inability to get going against scrappy but inferior opposition – may be attributed to bad luck but the post mortem will find doctrinal inexperience as the probable cause of death. Kurt Meyer was unforgiving in his evaluation of *Totalize*:

British and Cdn planning was absolutely without risk; neither army employed its armd strength for (the job for) which it was created. In both armies, the tk was used, more or less, as an inf sp weapon.

– Armd warfare is a matter of using given opportunities on the battlefield, therefore the Div Comd belongs on the leading combat gp, to see for himself, to save precious time, and to make lightning decisions from his moving tank. He, and no one else must be the driving force of his div.... The Brit and Cdn forces executed the ops in an inflexible, time wasting, method. Never once did "Speed" as the most powerful weapon of Armd Warfare, appear.¹⁴³

¹⁴² Maczek didn't think they had done too badly: "La Division a bien passé son baptême du feu." La Première Division Blindée Polonaise, 13.

¹⁴³ Kurt Meyer Interview, 2.

Meyer's comments have been sniffed at by both veterans and historians. This may be sour grapes. His qualifications to criticize *Totalize* are the best imaginable – he won the battle.

CHAPTER SIX

BREAKOUT 5: OPERATION *TRACTABLE* AUGUST 14-21 Simonds Acquires Operational Maneuver

Tractable was certainly one of the strangest attack formations anyone ever dreamed up and without a hope ... of succeeding as planned.

Brigadier Harry Foster

He formed deep, massive columns, and put them in motion toward the point of attack.. Not one of the horsemen in these masses would have been able to give his horse another direction had he wished to do so.

Höhenlohe: Conversations Upon Cavalry.

Any debate over Simonds's purported genius will include as evidence his second attempt to break through to Falaise – Operation *Tractable*. One can imagine a weary Simonds surveying the debacle of the two evenings' worth of *Totalize* and thinking: "The *next* time my turn comes, we'll go in day...." Simonds's commitment to the Montgomery set piece battle remained undaunted. In fact, although *Tractable* was a day operation, it borrowed heavily from *Totalize*. The darkness was replaced by a thick smoke screen and the tank columns were replaced by an armoured phalanx but the operation still carried a heavy bomber attack, the SHAEF seal of approval for an official break out attempt.

By now the Allied offensive had been totally subverted by a dangerous dependence on air power as a doctrinal antithesis to the Soviet strategic offensive. Air Marshal Tedder noted later: "The Army having been drugged by bombs, it is going to be a difficult process to cure the drug addicts."¹ Despite the unity of command bestowed by Eisenhower, Montgomery resisted shifting the combined Allied AGRAs and their equivalents to support a breakout and conduct a *strategic artillery offensive*² - "one big

¹ John Terraine, The Right of the Line - The Royal Air Force in the European War 1939-1945 (London: Hodder and Stoughton, 1985), 645. *Totalize* and *Tractable* fratricide did not put Simonds off - Terraine notes Tedder was referring to Simond's request for air attack on Walcheren in October 44.

² Ardennes 44 included a German strategic artillery offensive. Control of indirect fire was in the hands of a single officer, der Artilleriekommandeur (Arko), who could group divisional and corps resources. . B. I. Gudmundson On Artillery (Westport: Praeger, 1993), 134-136. Soviet artillery was even more sophisticated ""The maneuver was carried out by rail and road over a distance of some 600 to 660 kms between 5 and 13 July [1944]...35,000 motor vehicles and 3500 artillery pieces ... strength was

strike”³ as the Stavka called it— far deadlier than the bomber “slam dunk.” Besides the quick fire planning and easy target swapping, artillery could “repeat” until a particularly difficult area had been obliterated. Once the bombers had made their pass, they were gone. There was no correction of error.

On the other side of the channel, “Bomber” Harris was not very keen about his Wings becoming a permanent part of army operations. Both Harris and Doolittle (Eighth US Air Force)⁴ harboured their wings for air offensives destroyed political⁵ centers like Berlin, eliminated strategic industries (chemicals, aircraft production, synthetic oil plants, etc.) and hastened the destruction of the Luftwaffe. The Allied air offensives savaged the German Air Force by forcing it to do battle against increasingly bigger and better American fighter squadrons. By the summer of 1944 the skies were full of improved P-47D Thunderbolts, and the best air superiority fighter of the war, the P-51D. With Mustang and Jug⁶ support, the heavy bombers not only pounded ground targets but watched as their “little friends” decimated the jaegergeschwader of the Luftwaffe.⁷

Nevertheless, the Harris lobby now found itself an integral part of the ground offensive. The operations were planned by the army and the Air Force filled in. It was almost like being under command. They didn’t like it.⁸ “They would never have

increased from 5500 to 9000 units and a density of 180 to 240 guns, mortars, and rocket launchers per km of front.” Chris Bellamy, 62.

³ J. Erickson, L. Hansen, W. Schneider, Soviet Ground Forces - An Operational Assessment. Westview. Boulder. 1986, 16. and, A. A. Sidorenko, The Offensive (Moscow: Voenizdat, 1970), 128.

⁴ Include Gen Curtis LeMay and other “Air Power” advocates. There was no single command for Allied air forces. The strategic bombers were put under Eisenhower’s operational control for *Overlord*. Subsequent Operations could be ordered but required considerable cooperation from the bomber chiefs.

⁵ One of the major concerns during July and August was the V1 rocket attack. The flying bombs were hitting London and morale was shattered (“alarm and despondency”- Churchill). The RAF was ordered to bomb the launch sites on the Normandy and Pas de Calais coast. If Montgomery couldn’t over run them then Harris would have to flatten them. Operation *Crossbow* (attack on V weapon sites) required all heavy bomber resources. The raids were costly - 3,000 aircrew. Terraine, 653.

⁶ The P47, almost as large as a B17, and heavy (“the gliding angle of a brick”), was dubbed “Jug” (as in Milk Jug) by crews. See: William Green, Famous Fighters of the Second World War (London: MacDonald, 1957), 84-90.

⁷ Adolf Galland: “ Between January and April 1944 our day fighter arm lost more than 1,00 pilots. They included our best Staffel, Gruppe and Geschwader commanders.” Alfrid Price Luftwaffe (London: Pan, 1969), 133 and, Adolf Galland, The First and the Last (New York: Ballantyne, 1957), 195; See also, Janus Bekker The Luftwaffe War Diaries (New York: Ballantyne, 1964), 522-523.

⁸ “Army Headquarters, however, was decidedly dissatisfied at this time with the arrangements in effect for obtaining air support within the theatre, particularly when requests involved resources beyond

surrendered to the Army the right to have authority to direct their actions.”⁹ Harris reviewed *Charnwood*, the first use of heavy bombers, and offered an acid critique: “The army unfortunately did not exploit its opportunities.”¹⁰ A subsequent failure at *Goodwood* and *Totalize* created and fed an angry anti-Montgomery lobby in the RAF, determined to get him sacked.¹¹ Sir Arthur Harris may have said “Don’t be shy of asking”¹² but there is reasonable doubt whether he actually meant it.

The bombers, used “improperly, as super heavy artillery,”¹³ were, despite the new bomb sight, an area weapon. Bombing radii could vary from one to ten miles. Sanitizing the start line at *Cobra* and *Totalize* was not the same thing as slamming Essen or Cologne. Mistakes were made and the Air Force got the bad press. Bombs often landed in wrong places and generally hindered the speed of the attack.¹⁴ During *Cobra*, *Totalize* and *Tractable*, the USAAF and RAF killed or wounded an impressive number of senior officers¹⁵ and hundreds of Allied troops. This was big time fratricide.

those of the tactical group immediately supporting the Army. Brigadier Mann reported to General Crerar that existing practice ‘in effect results in the Senior Air Staff Officer 83 Group RAF becoming the adjudicator of the military necessity or desirability of a particular attack upon a particular target’. no matter how strongly or urgently the Army had put the case; he particularly complained of the delays involved.” Stacey, *Victory Campaign*, 238.

⁹ Stearns 23 Mar 81, 7.

¹⁰ Turraine, 651.

¹¹ Tedder stated the RAF felt they had been “had for suckers. I do not believe there is the slightest indication of a clean breakthrough.” Turraine, 653-656, Nigel Hamilton 733, 745 and, Carlo D’Este, 310.

¹² Harris to Crerar, 7 August, quoted in Stacey, *Victory Campaign*, 218.

¹³ “When the use of heavy bombers in the battlefield, very close to our own troops, was first put to forward I expressed doubts; it seemed to me that the army had no idea what risks the troops would be running.” Sir Arthur Harris, *Bomber Offensive* (London: Collins, 1947), 211, 213 and, Hamilton, 733.

¹⁴ “The margin of safety is 500 yards ... but a few bombs may fall within the local bomblines (an ‘Army Bomblines’ and a ‘Local Bomblines’ are designated.... Originator of the request will give a Local Bomblines ... and define the times during which attack will take place).” Appx A to *Operational Memorandum No. 34*, 30 Aug 44. Col S. E. Edwards, G3 Air, 12 Army Group. The ETO Board Survey (Questionnaire prepared by R. H. George of Brown University, June, 1949) reported US Army opinion on heavy bomber support. HQ XIX Corps: “The heavy bomber effort at St. Lo is believed to be ineffective ... disorganizing troops to such an extent that full advantage could not be taken of the carpet bombing attack.” HQ 2nd Armd Div: “Results of bombing were devastating but certain shortcomings reduced its effectiveness considerably. The necessity to withdraw our troops from the front lines caused initial loss of 1500 yds which had to be regained by fighting because the enemy followed our retrograde movement closely.” The Sheffield Edwards Papers. MHI.

¹⁵ In a horrid irony, the advent of *Cobra* and the triumph of American armour brought about the death of Armor’s nemesis, General Leslie McNair “The first three star general in our history to die on a battlefield.” E. J. Kahn Jr, *McNair: Educator of An Army* (Washington: The Infantry Journal, 1945), 1. His

At any rate, thanks to Montgomery's approval and Crerar's diplomatic skills, the bombers were back again for *Tractable*. This time Simonds would use the RAF which was a peculiar choice since the British were committed to "area bombing." The USAAF, with the faults it did have, was most practiced at daylight bombing and committed to putting all the bombs "in the pickle barrel." The RAF attacked at night and anything within ten miles of the bombing point appears to have been a wizard prang, judging by Berlin, Nuremberg and Dresden. Given the results at St. Lo and his own experience at *Totalize*, Simonds's decision to use heavy bombers a second time further illustrates his doctrinal bankruptcy.

Tractable's aim, again, was to complete the encirclement of German armies in Normandy. Montgomery's August 11 directive stated:

10. Canadian Army will capture Falaise. This is a first priority, and it is vital it should be done quickly.
11. The Army will then operate with strong armoured and mobile forces to secure Argentan.¹⁶

Crerar again deferred to Simonds by issuing his own directive on 13 August that pretended to push corps around but basically ordered Simonds to perform the main task. The mission was then changed: 2nd British Army would now capture Falaise. The object of *Tractable* was to "dominate" Falaise "in order that no enemy may escape by the roads which pass through or near it."¹⁷ What Montgomery meant is not clear, but a successful British capture of Falaise could close the gap and give Dempsey some much needed recognition in the campaign.

Operation *Bluecoat*, had been a costly disappointment. The fighting had been savage; much British blood had been spilled and even though Mont Pinçon, the German "wedge to stop their defensive door opening any further,"¹⁸ had been captured, the

death caused a tremendous flap and angered Marshall. McNair had recently been "appointed" (via the "BodyGuard" deception) to replace Patton as Commander FUSAG. He visited Bradley before the St. Lo attack and insisted on observing the bombing from a slit trench with the forward battalion of the 30th Infantry: "Some person had said: 'The troops sure like to see you up front'." The bombs landed right on top of him: "threw his body 60 feet and mangled it beyond recognition except for the three stars on his collar." Hansen Diary, and documents, 12 Army Group HQ, 25-27 July 44.

¹⁶ RG 24, 10811 WD 2nd Cdn Corps, 21st Army Group Directive 11 August 44.

¹⁷ RG 24 10811 WD 2nd Cdn Corps, "Ops First Cdn Army", August 44: Memo "Operation Tractable", 13 Aug 44, and, Stacey, *Victory Campaign*, 237.

¹⁸ Wilmot, 409.

THE ALLIED STRATEGIC OFFENSIVE - OPERATIONAL EVOLUTION

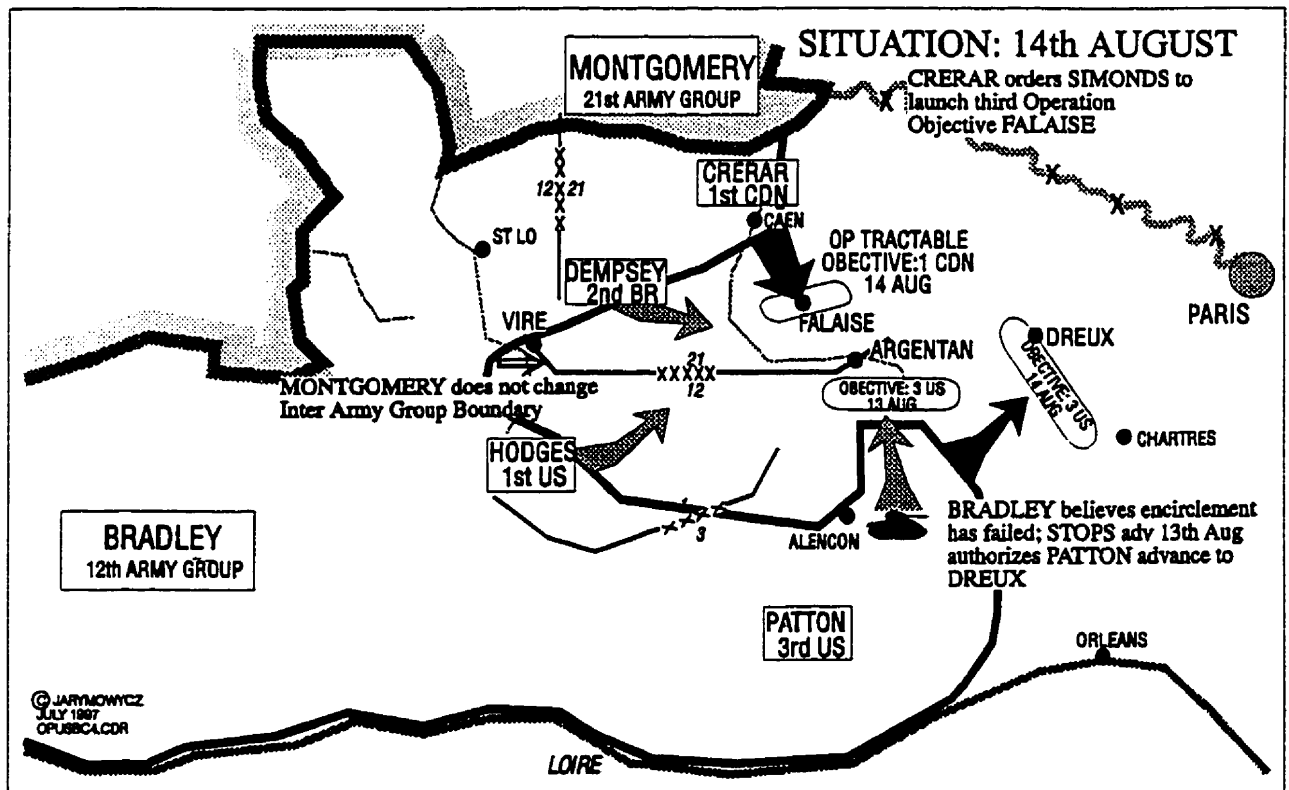
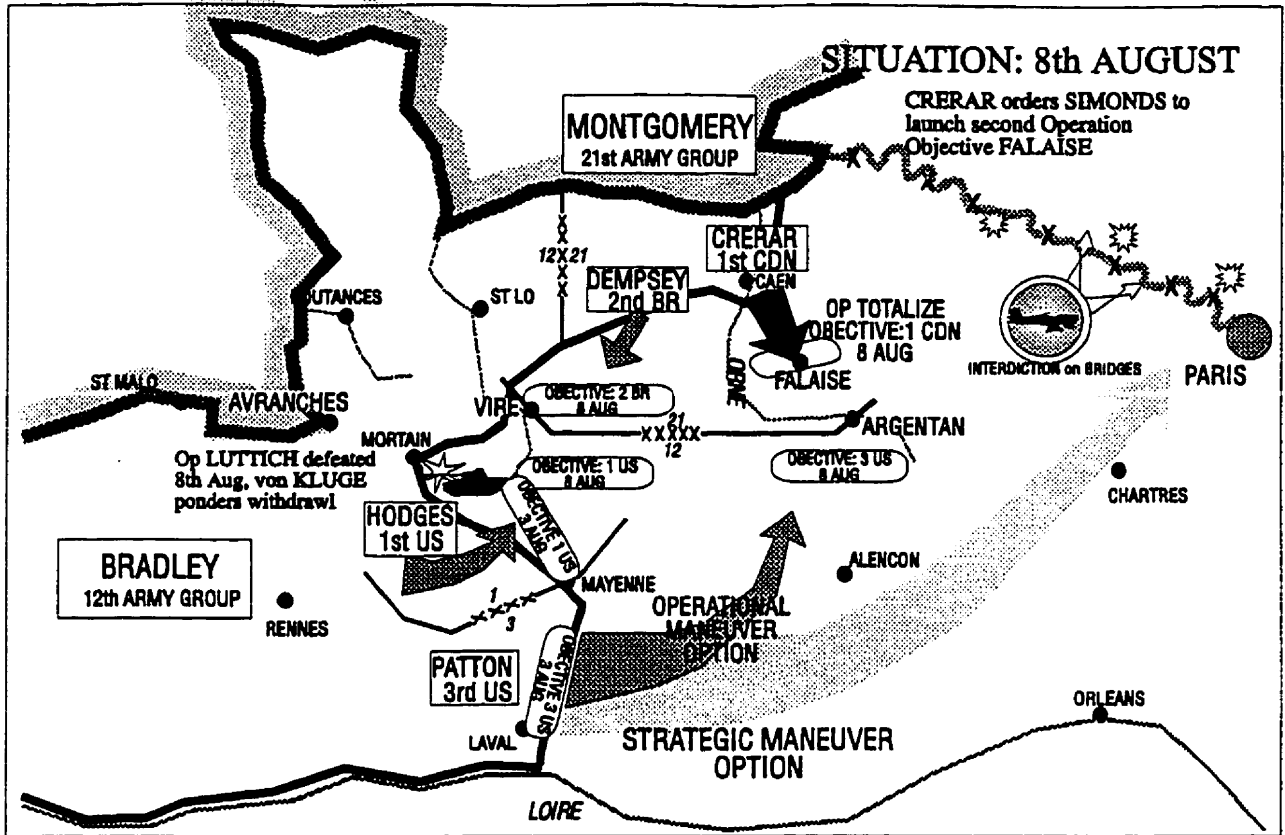


Figure 26

operational results were unspectacular and costly in both morale and commanders. Lt.Gen. Bucknell, GOC 2nd British Corps, had failed to perform after being ordered by Montgomery to “get on or get out” and paid the price. He was followed by a virtual blood-letting of senior officers: “Bullen-Smith (51st Highland Div) ... had to go.... I removed Bobbie Erskine (7th Armd Div).... I also had to remove Loony Hinde (23 Armd Bde).”¹⁹ Meanwhile, Bradley had won an impressive victory at Mortain and the attention of the world’s press as American armour ran unchecked through Brittany and the Loire Valley.

Montgomery continued to ignore the German eastern flank, stretched thin as a party balloon, and held by tired, unsupported infantry divisions. A viable operational solution was to look beyond Falaise-Argentan and strike directly for the Seine and Paris. It is what Patton wanted to do. But both Montgomery and Bradley seemed to be content with more conservative objectives.²⁰ Tasked by Crerar to dominate Falaise, Simonds decided to try another frontal set piece attack. He again placed his faith in the heavy bomber attack.

In daylight, with massive smoke screens forward, 2nd Corps would attack in two columns, each comprising an armoured brigade followed by two infantry brigades. The forward brigade would be borne in armoured carriers, the rearward would march. The attack was a smorgasbord of Blitzkrieg principles. The tanks were to secure the high ground and establish the pivot. Simonds maneuvered armour at the tactical, not operational, level. Finally, the mechanized infantry would mop up the Laison valley while the marching infantry brigades “would be in readiness to pass through and hold the high ground seized by the tanks.”²¹ A German commander would use his panzergrenadiers to join the tanks in a massed exploitation and pursuit. Simonds may have intended to use the Polish armoured brigade for this role.

The western “box” was based on 3rd Cdn Inf Div less 8th Brigade but included 2 CAB under command; the eastern “box” comprised 4th Cdn Armd Div plus 8th Bde.

¹⁹ Montgomery to General Sir Oliver Leese, 21 August 44, quoted in Hamilton, 804.

²⁰ See Martin Blumenson The Battle of the Generals. The Untold Story of the Falaise Pocket (New York: William Morrow and Company, Inc. 1993), 211, 213. Hamilton 786, also: “Letter of Instructions Number Four” Bradley, 8 August 44.

²¹ Stacey, Victory Campaign, 237.

Simonds, still smarting from *Totalize*'s failure, laid down the law to his tank commanders: "He stressed the necessity for pushing armour to the very limits of its endurance and that any thought of the armour requiring infantry protection for harbouring at night or not being able to move at night was to be dismissed immediately."²² The armour was formed up as for the changing of the guard on Parliament Hill:

Each armoured brigade had about 150 tanks drawn up in three ranks of about 50 in each rank and only fifteen yards between tanks. Each of the two blocks of 150 tanks represented a solid phalanx of armour one thousand yards wide and two hundred yards deep.²³

The van was composed of armoured engineers and recce, then the main body of massed tanks, followed by armoured infantry.²⁴ Marching brigades brought up the rear. The Corps' open flank was screened by 18 CAR (12th Manitoba Dragoons). Medium bombers would bash the villages, artillery smoke would mask the flanks and the mine sweeping flails²⁵ would lead. It was again, an engineering solution. If Simonds had lost control of the armoured regiments during darkness, he now had them in day, well in front, formed up and literally, "on parade." He shouldn't lose track of them now.

The front was about 800 yds, GGFGs on the right, ourselves on the left, the BCRs and Bde HQ behind, the total depth being 120 meters. Our formation was three sqns up, each sqn being 2 troops up - we were to move off at 1140 hours, speed 12 mph. The air was electric.²⁶

Military historians are torn between the plausibility that *Tractable* was a clever bit of work that demonstrated Simonds's inventiveness or the "suggestion even of an unfamiliarity with basic armoured vehicular movement."²⁷ Was this the way to use

²² RG24 13789 WD HQ 4 Armd Div. 13 Aug 44. Simonds also decided to enlarge his Tac HQ: "living from slit trenches and mess tins should come to an end and the caravans, messes and other adm vehs would not move with Main Div HQ. The news was received with great rejoicing by all pers."

²³ Kitching, 197. and, RG 24 14260 22 CAR CGG. 8 Aug 44. Each regimental front was apx 270 yds - about three football fields. Basically, the same area of maneuver that *Totalize* presented.

²⁴ Wasps (flame throwers on Bren gun carriers) used for the first time. A terrifying weapon - Wasp crews, like the Churchill-Crocodile crews were generally shot if captured.

²⁵ Simonds again attributed superhuman logistic and engineering skills to the 12 HJ by convincing himself there were serious mine fields in his path. His Intelligence certainly did not suggest there were. Failure was by Airforce photo interpreters to advise Simonds that the Laison was a tank obstacle was key. Missions flown in late July/August (see: 1st Cdn Army Air Phot Int Collection, Terry Copp, Wilfrid Laurier) should have led topographical engineers to realize this.

²⁶ RG24 14260 WD 22 CAR CGG, 14 August 44.

²⁷ Stacey prefers to concentrate on the killing of an officer from 8th Recce Regt (discussed below) whose captured papers were "containing the gist of General Simonds's orders." R. Roy felt "It was a sound

massed armour? Some military historians were curt: "The result was a scheme few coffee-table strategists would use – even in desperation."²⁸

If Simonds thought that the Laison line was lightly held then his ideas make some sense; however, Simonds presented *Tractable* as an attack against a prepared main defence position – not a task for armoured divisions. He got it exactly backwards:

The armored division is the basic large armored unit of the combined arms.... In general the role of the infantry division operating with armored divisions is to create the opportunity and the role of the armored division is to exploit it.²⁹

The British opinion was:

There are two main roles for armoured components in an army. These are:
a. in conjunction with infantry to effect the 'breakin' or breaching of main enemy defensive position. b. Exploit, strike deep in the enemy's rear installations either through gaps or around the flank.³⁰

The issue isn't which current doctrine was correct – the point is Simonds made things up as he went along.

Rather than create customized groupings, Simonds ordered the tanks to go in alone. Battlegroups tried during *Totalize* were now abandoned. The set piece had all Simonds's elements, like playing pieces on a chess board. No complicated packaging to confuse staffs or letting armoured commanders run wild, just a good old fashioned 1916

plan - imaginative, well thought out, and carrying a powerful blow." Keegan ducks the issue completely and settles for nostalgia by quoting *Tractable*'s "unforgettable sight of hundreds of armoured vehicles massed on the plains of rolling corn..."; John Keegan *Six Armies in Normandy* (New York: The Viking Press, 1982), 254, 256. Copp and Vogel note it was "an operation of considerable complexity...one of the most remarkable assault operations of the Second World War" Their analysis for failure noted the difficulty with Simonds's smoke plan, the bombing and the 8th Recce incident but conclude with "The reality is that no Allied armoured formation, British, American, Polish or Canadian, proved capable of breaking through organized German defences...without the assistance of the most elaborate air and artillery support." Terry Copp and Robert Vogel *Maple Leaf Route: Falaise* (Alma: Maple Leaf Route, 1985), 116; J. A. English, an experienced Staff College instructor, offers Simonds mild criticism: "Not to have expected huge amounts of dust to generate mass confusion and associated control problems, however, seems an extraordinary oversight, suggestive even of an unfamiliarity with basic armored vehicular movement. This, coupled with a misreading of the Laison was the fatal flaw of 'Tractable'." English, 299.

²⁸ J. L. Granatstein and Desmond Morton, *Bloody Victory*, 173.

²⁹ FM17-100 "Employment of the Armored Division." 29 Sept 1943. (Washington: Dept of the Army, 1943), 9. FM17-100 had its roots in the practical doctrinal sweat shop of Louisiana. See MGen B Magruder "The Armored Division" US Army Trg Pam, Fort Knox, 4 Mar 1941. See, FM100-5, 24 Jan 1941 and the original draft, FM17-10, 21 Jan 1941 "Doctrine and Organization of the Armored Division." MHI.

³⁰ "The Cooperation of Tanks with Infantry Divisions" Military Trg Pam No.63, War Office, May 1944, 6.

assault with tanks forward. Replacing artillery by Lancasters and Halifaxes had a modern touch but basically it was a series of rucks and mauls towards the opponent's goal.

Simonds may have been influenced by the British armoured doctrine:

The work of a "rucker" scrum may be aptly compared with the operation of an armoured division. The vast majority of the players at first employ all their strength and energy to hold and push back their opponents. Once this is done, the "wing forward" may break away in order to penetrate the defence, and the remainder of the forwards will back up this attempt to score.³¹

The battle began badly before the first shot was fired. An officer from 8th Recce Regiment got lost and was killed inside 12 SS lines. His maps were taken to Meyer. They contained the entire *Tractable* plan. Meyer adjusted his meagre resources to meet the onslaught: "During the night from 13 to 14 August, Kampfgruppe Krause (1.26 and Divisionbegleitkompanie) was moved from Olendon (eight km north-northeast of Falaise) to Villers-Canivet (six km northwest of Falaise)."³² Bad luck for Simonds but realistically, there was little the Germans could have done anyway. They were bound to defend the approaches onto Falaise, and Simonds, obligingly, was going through the front door again. If there were adjustments to the HJ defence, they were cosmetic.

Simonds's decision to attack with two divisions forward was carried out by his armoured commanders, who in turn, deployed two-up using as much ground as they could squeeze out of the boundaries. It was all very much the standard attack of cuirassiers³³ - but this was 1944, not 1870. Simonds's understanding of tank tactics appears to be based on his experience with a troop of Canadian Horse Artillery. Like many of his peers he associated the tank assault with the charge. The technical difference was that tanks "charged" *operationally*; tactically, they maneuvered into killing range and destroyed the enemy with direct high velocity gun fire.³⁴ Like German or French heavy cavalry at Sedan, Kitching's armour was being sent on a Todritt.

³¹ Mil Trg Pam No. 41. The Tactical Handling of the Armoured Division and its Components. The War Office, July 1943, 6.

³² H. Meyer, 184.

³³ "The cuirassiers laid special stress upon riding boot to boot, and never moved at a faster pace than the trot" Ellis, 139.

³⁴ "The 'rush to battle' idea is WRONG. Here we creep up. Each tank should overwatch another tank; each section should overwatch another section, each platoon another platoon." Perkins, "Combat Lessons CL 1- 1944, 32.

Kitching's deployment has been criticized by J. A. English for countermanding Simonds's own operational policy.³⁵ The problem was doctrinal. There was no clear proven Allied breakthrough formula. Simonds was attempting a "break in" by forces designed for a "break out." The real estate battle would have been better handled had the Canadian Army understood the alchemy for the tankovii udar. Having given them a bit more room, Simonds promptly drew them up as straight lines in tight boxes. The "Simonds Doctrine" was most regularly betrayed by Simonds himself.

It is not difficult to find fault in Kitching's deployment; still, he attempted mass. He learned his lessons during *Totalize*: Schwerpunkt works when Stukas keep the defenders' heads down. Canadian armour, frustrated by the narrow frontages, demanded room to maneuver. Each brigade commander tried to give his regiments the ground they required to skirt or to overwhelm any surviving pak positions. Brigadier Booth was going in without his stablemate, Wyman, who had been wounded during *Totalize*. It was to be Booth's last battle.

RAF and Yellow Smoke

It was a sort of 'draw swords and charge' affair.

Major R. White, 1st Hussars

Like *Totalize*, *Tractable* began with a bombing attack. As in *Totalize*, the bombers again pounded Simonds's troops as they waited on the start line. Simonds watched the attack from Hautmesnil Quarry accompanied by Air Marshal Coningham who had come forward assuring 2nd Cdn Corps that the RAF, unlike the USAAF, would get it right. As the bombs began to fall short,³⁶ Captain Marshall Stearns remarked "Here we go again" and Simonds

³⁵ English, 290: "Kitching's reaction, however, was to attack with two brigades up, instead of in depth as per Simonds's operational policy, leaving them pretty much to their own devices."

³⁶ "805 aircraft ... a careful plan was prepared with Oboe and visual marking, and with a Master Bomber and a deputy at each of the 7 targets. Most of the bombing was accurate and effective but, about half-way through the raid, some a/c started to bomb a large quarry which may have been caused by the yellow identification flares which were ignited by the Canadians. It was unfortunate that the tgt indicator being used by the Pathfinders were also yellow ... apx 70 a/c bombed the quarry and nearby Allied positions over a 70 min period ... this was believed to have been the first occasion on which Bomber Command a/c had hit friendly troops during the Battle of Normandy." Middlebrook and Everitt, 562.

...spun around on me and said 'It's only enemy mortars or counter battery.' I will always remember Jarvis (the driver) in the rear view mirror raise his eyebrows in a most revealing gesture. I think General Simonds also knew the RAF had made a similar mistake to the USAF but he just could not, for the moment, accept it and all its grave consequences. Then on looking up, there could be no mistake. The bombers were very low (less than 100 feet) and we could see the bomb bay doors open and the bombs drop out....³⁷

Simonds was immediately recalled to Crerar's Headquarters for a conference. He left the Air Marshal's party to find his way back through a very angry 2nd Corps.³⁸ After the dust had settled, the order was given: "Move now!"³⁹ The phalanxes surged forward. The initial mounted rush was in the great tradition of Wagram, the heavy cavalry led into the smoke and dust, aiming for the red sun:

The advance began in good order for the first 100 yds some of the formation was maintained. But then the dust came in billowing clouds. Distant aiming marks were obliterated, tanks were held up getting through minor bottlenecks, Foot Guards tanks came in our midst then blind running Churchills with Fascines. But though the formation was lost, the advance went on.⁴⁰

³⁷ The recognition problems persisted. Army and Air liaison officers seem to have misunderstood smoke and flare recognition codes: "I can remember the path finders before the first wave of heavy bombers came over, dropping their markers right on target. I have no idea what went wrong. I also remember a piper Cub, used by our artillery observation officers, flying right into the bomber formations and releasing red flares to warn of some mistake. Apparently this meant to the bombers "you're on target, hit them again." Stearns papers 5 Oct 81, 3. Harris' reaction was stern: "Disciplinary action was taken against individuals whose responsibility could be established. Two Pathfinder crews were re-posted to ordinary crew duties, squadron and flight commanders personally involved relinquished their commands and acting ranks were re-posted to ordinary crew duty, and all crews implicated were 'starred' so as not to be employed upon duties within 30 miles forward of the bomb line until reassessed after further experience." Stacey, Victory Campaign, 243-244. A reason for this prompt discipline must have been Air Marshal Coningham's personal embarrassment - ("furious but cool as a cucumber...") he left the *Tractable* area to visit RAF headquarters. Stearns papers 5 Oct 81, 3.

³⁸ "just over 800 hundred aircraft from Nos 1, 4, 6 and 8 Groups hit at enemy concentrations and strongpoints about a mile in front of the start line ... the master bomber 'was heard to stop some crews from bombing a quarry short of the target...' The army's curious request that, notwithstanding unfavourable winds, the bombing should take place from north to south, perpendicular (rather than parallel) to the front, 'in order to conform to the ground movement' was in part responsible for the accident. Such subordination of Bomber Command's effort to army requirements bothered Harris when he first saw the plan for Totalize, but Sir Arthur had also been nervous because, persuaded that they would not show up in daylight, the army had chosen not to fire coloured marker shells to identify the target." Greenhous, Harris et al, The Official History of the Royal Canadian Air Force Vol III, 815.

³⁹ "The first bombs dropped on us at 1430 hours and at 1540 we had our last." Captain T. J. Bell, 12 Field Regiment, quoted by Greenhous, Harris et al, 818.

⁴⁰ RG24 74260 WD CGG 14 Aug 44.

The initial German outposts⁴¹ were quickly overrun and suddenly the Shermans were confronted with the prospects of the Laison river. The mighty Laison was more of a ditch - in some places a soldier could leap to the other side. But its banks were difficult enough to create a tank obstacle. Canadian armour sniffed around the approaches looking for a spot that would not risk a thrown track. The advance paused.

Immediately behind were the recce troops of the 17th Duke of York's Royal Canadian Hussars.⁴² While the armour waited for the Churchills to come up with fascines, their armoured cars searched for a crossing. Eventually two were found⁴³ and the Hussars surged out of the smoke and onto the high ground dominating the river, the last feature protecting Falaise.

Both squadrons now found themselves, instead of in a mopping-up role, taking the bridgehead over the river and coming under heavy anti-tank and machine-gun fire. Col Lewis, realizing that his two squadrons were now in front of the armour, crossed the river and found them digging in on the south bank.⁴⁴

The advance stalled and broke up into troop and patrol-sized actions as individual pak 75s, 88s and JPz IVs unmasked. Finally, tanks crossed. Squadron sized goummes winkled up the high ground. They could do no better than the Hussars. As bold troop leaders pushed forward, they were knocked out by Meyer's pak 'n panzers. The advance sputtered, then stopped. *Tractable* was over.

Although Kitching had two armoured brigades under command (2 CAB as well as his own 4 CAB) he again could not get the tanks moving. The grouping for *Tractable* had divided the attackers into separate commands – infantry, recce and armour – each with a specific task. Control quickly slipped away and there was so little information on the

⁴¹ Although pieces of 271st and 85th Wehrmacht Infantry Divisions were in the area, the principle defence rested on the Hitlerjugend, now nearly spent after counter-attacks during *Totalize* and the Clair Tizon bridgehead.

⁴² 7th Recce Regt's tasks were: "Mop up area between river line and 2 CAB, then join 2 CAB on OBJ." The unit was under command to 2 CAB along with 2 sqns 22 Dragoons (Flails); 80 Aslt Sqn RE (AVREs); detachment RCE (2 Bulldozers).

⁴³ Lt. D. Ayer found a crossing site for tanks. Meanwhile Sgt G. Routley found a passable bridge in Rouvres. Personal interview, Colonels George Routley and James Domville, 1988. See, Pavey, 47, 53.

⁴⁴ "He got the two Squadron Commanders, Majs. E. R. Allen and C. W. MacLean, went forward with them, recce'd for a commanding piece of ground and issued orders for an immediate advance and consolidation of points 160 and 165, covering the river crossing." Pavey, 53.

brigade and divisional radio nets, that Simonds was "appalled at communications of 4th Armoured Div."⁴⁵ Added to this confusion was the loss of Leslie Booth.⁴⁶

Brigadier Booth had arrived in Normandy unprepared for his task. His previous experience in Italy had taught him to take on rear guards in very difficult terrain. There was no maneuver since the ground prevented it. Now he was faced with the prospects of directing three regiments across open country. Like his counterparts in the "Desert Rats," his heart sagged. He was lost in Normandy and totally ineffective. Kitching smelled death on him "... I became convinced that Boothie had a premonition he would be killed. He certainly was not the same keen and cheerful man of the year before in Sicily."⁴⁷ He had abandoned control during *Totalize* whilst in the most crucial part of the offensive.

During *Tractable* Booth watched mesmerized as his regiments rattled in and out of smoke, engaging distant targets which were all invariably reported as Tigers. Suddenly his own tank came under fire. Booth's Brigade-Major, A. G. Chubb, was right behind:

...saw him half sitting on the ground behind his tank. I dropped through the escape hatch and I ran forward to him. He was conscious and spoke to me. His right leg was shot off at the ankle and he appeared to be wounded in the chest. I dragged him by his belt towards my tank which finally moved and Lt McLaughlin and I threw him on the back of my tank.⁴⁸

The mortally wounded Booth was then put by the side of the road beside dead and dying troops and left for the medics. Kitching did not know he was dead until hours later.⁴⁹

The armour went uncontrolled and leaderless during *Tractable's* most critical period. Kitching asked Simonds to give him Lt.Col. Bob Moncel, the Corps GS01; they had discussed this earlier, but the jeune dauphin (at 26, Moncel would be the youngest brigadier in the Canadian Army) would take most of the day to arrive. Simonds's choice

⁴⁵ Stearns, interviewed by Roy, 14 Jul 82, 3.

⁴⁶ The Commander of 12 SS Pz Abt II, Sturmabführer Karl-Heinz Prinz, veteran of Buron and victor of Le Mesnil-Patry was killed during *Tractable*. He died on 14 August near Torps, 2 Km west of Soulangy.

⁴⁷ Kitching, 195.

⁴⁸ RG24 14052 WD 4 CAB. August. Appx 7. "Account for Day 14 Aug 44" by Major A. G. Chubb.

⁴⁹ Booth's performance has not been examined in detail save for Roy who sees his loss as a tragedy for 4 CAB: "Booth, had he continued in action, might have organized even part of his brigade...One might speculate that had Booth not been killed at the outset of the battle, even the final objective might have been seized..." 263, 280. Copp / Vogel and Granatstein / Morton note Booth en passant. J. A. English is mildly critical., 290, 312.

for alternate brigade commander would have been Don Worthington⁵⁰ but after 9 August that was no longer an option. Interim command went to Lt.Col. Murray Scott of the Governor General's Footguards who was attempting to fight his regiment through German lines while handicapped by a broken ankle. Being a good soldier, he saluted and carried on. He should have told Kitching. Directly Kitching discovered Scott was hurt, he considered going forward and taking over personally. The armoured breakout was his raison d'être and things were not going well at the sharp end. It was to haunt Kitching later:

If I had known that Murray Scott had been injured before I appointed him to replace Booth, I would not have bothered with him at all. I would have taken over the armoured brigade myself rather than have it go through three commanders in thirty-six hours.⁵¹

Despite the confusion, the tanks and recce troops secured the high ground leading to Falaise. Meyer directed his meagre reserves into blocking positions and held on while his Kampfgruppe commanders counter-attacked for each piece of ground lost: "The enemy was able to penetrate deeply into the village. However, with the support of a Tiger, he was thrown back again...."⁵² *Tractable* did not formally end but continued in a series of phases (mini *Tractables*) until the Falaise gap was closed.

Simonds would not accept failure. After a month of frustration he finally caught the scent and began to move like an armoured corps commander rather than a gunner. His frontal attacks had been directed into the only area that Meyer must defend. He now began to use ground. Simonds shifted Kitching and Maczek southeast and ordered them to cross the Dives. It was the beginning of Maczek's, and Simonds's, golden hour.

At 0900 15 August Simonds met Kitching at Foulkes's 3rd Div Headquarters and ordered him to cross the Ante river, northeast of Falaise and "strike down the west side of

⁵⁰ Stearns Papers 27 Apr 81, 2.

⁵¹ "Perhaps I should have taken over the armoured brigade in spite of General Simonds's objections. Certainly I would have done so if I had known that Moncel would not be available for those five hectic days. With the 20/20 vision of hindsight, I realize now that my commander of artillery, Brigadier Lane, could have done the job well. I should have sent him forward to take over the brigade on a permanent basis. I am sorry I didn't." Kitching, 200, 206.

⁵² Report from zug commander 102 SS sPzAbt. 15 Aug. H. Meyer, 186.

the River Dives and capture Trun.”⁵³ 4th Canadian Armoured got stuck crossing the Ante but Maczek got lucky. His leading troops secured a crossing and he quickly brought up his divisional engineers to throw a second bridge across the river. He was suddenly where every armoured commander had dreamed of being – in the pursuit. 1st Polish Armoured had broken through. Simonds had acquired operational maneuver. He did all the right things: he gave Maczek his reins and hauled back on Kitching’s bit.

Maczek and 1 Polska Dywizja Pancerna

Pija piwa pelne dzbanki - Kochaja ich Lublinianski
Lance gubi malo warty - To jest pulk dwacziesty czwarty

24th Polish Lancers⁵⁴

The proper study, perhaps the only operational study, of Canadian armour is the period 9 to 21 August 1944. During this month Simonds controlled a tank force of fourteen regiments consisting of two divisions and two independent brigades. By the time he crossed the Ante he still had most of this force (less 33 BAB) intact. Operational analysis of Canadian armour is best based on the actions of 1st Polish and 4th Canadian Armoured Divisions. Both were equipped with the same fighting tanks,⁵⁵ the same artillery, the same number of infantry battalions, the same command structure and support organization. Save for the regimental badges, they wore the same uniforms and had surprisingly similar traditions. By the time the 10th Polish Dragoons arrived in Normandy they even had a regimental tartan and dudziarz (pipers).⁵⁶

⁵³ RG24 WD Ops 1st Cdn Army HQ, Aug 44, Stacey, Victory Campaign, 249, Hamilton, 794, Kitching, 200.

⁵⁴ “Drinking beer from full tankards, being loved by Lublin girls, still they stand with lances ready, that’s the 24th Regiment”: Regimental mantra.

⁵⁵ The only difference being that Maczek’s Recce Regiment (The 10th Chasseurs) were not equipped with Shermans but with the faster British Cromwell. 1 PAD div tac symbol was the “Winged Hussar” - a feathered crest that traced its origins to the great Polish Kingdoms of the Middle Ages.

⁵⁶ The 10 Pulk Dragonow (10th Regiment Polish Dragoons) became quasi-Scottish during their stay in the UK “w szkockim tartanie, przyznanym przez lorda Hamiltona” and adopted the Hamilton tartan and trained its own pipers. Each unit had its own traditional mantra, some dating back to the Napoleonic wars: “10 Pulk Strzelcow Konnych / W jednym lapciu w jednym bucie / Cholzi strzelec po Lancucie”: *Tenth Regiment of Chasseurs a Cheval, some in slippers, others in boots, they promenade in Lancuci*. See Henryk Smaczny Ksiega Kawalerii Polskiej 1914 - 1947, (Warszawa: Tesco Przedsiębiorstwo Zgraniczne, 1989), 156; Stanisław Komornicki, Wojsko Polskie 1939-1945 (Warszawa: Wypawnictwo Interprises, 1990), 253-255; Marian Zebrowski Polska Bron Pancerna (London: White Eagle Press, 1971), 422-423.

Simonds's Armoured Corps: Normandy 44

<u>4th Canadian Armoured Division</u>	<u>1st Polish Armoured Division</u>
Maj.-Gen. G. Kitching	Maj.-Gen. S. Maczek
Recce Regiment (Shermans)	Recce Regiment (Cromwells)
29 Recce Regt (The South Alberta Regt)	10 Pulk Strzelcow Konnych (10 Chasseurs)
4th Cdn Armoured Brigade (Shermans)	10 Pol Armoured Cavalry Brigade (Shermans)
21 CAR (Governor General's Foot Guards)	1 Pulk Pancernego (1st Polish Armd Regt - PAR) ⁵⁷
22 CAR (The Cdn Grenadier Guards)	2 Pulk Pancernego (2nd PAR)
28 CAR (The British Columbia Regt)	24 Pulk Ulanow (24th Polish Lancers)
Mech Inf Battalion	Mech Inf Battalion
The Lake Superior Regiment	10 Pulk Dragonow (10th Polish Dragoons) ⁵⁸
10th Infantry Brigade	3 Polish Rifle Brigade
The Lincoln and Welland Regiment	Podhale Rifles
The Algonquin Regiment	8th Rifles
The Argyll and Sutherland Highlanders	9th Rifles
Anti-tank Regt	Anti-tank Regt
5th Anti-tank regiment	1 Pancerna Artilleria Proti Pancer (1st Anti-tank Regt)
Divisional Artillery	Divisional Artillery
23rd Field Regiment (SP)	1 Pancerna Artilleria Pulk (Armd Arty Regt - SP)
15th Field Regiment (Towed)	2 Pancerna Artilleria Pulk (Towed)
<u>Total</u> 240 Main Battle Tanks	<u>Total</u> 240 MBT

Table 9

Although some of the senior Poles, including Maczek himself, had seen action in the '20s against the Soviets⁵⁹ as well as the '39 Polish and '40 French Campaigns, the bulk of the officers and men were as new to combat as their Canadian counterparts.⁶⁰ Their initial performance, much like 4th Armoured Brigade, was disappointing. In some aspects it was worse. The 1st Polish commanders were criticized for showing little aggressiveness or tactical skill. Faced by PzIVs from Waldmüller's Kampfgruppe, they

⁵⁷ "Pulk": Regiment; "Pancerna": Armoured, "Ulanow": Lancers (as in German Uhlans); "Strzelcow": Marksmen, musketeers - combine with "Konnych" (horses) to make Chasseurs a Cheval. The Napoleonic influence on the Polish army is considerable (beside a half dozen line regiments in the Grande Armee, the elite lancer regiment of the Imperial Guard was le Lancier Polonaise). "10 Chasseurs a Cheval" reads better than "mounted rifles" since they were a recce regiment in the French tradition.

⁵⁸ Dragoons in the traditional Napoleonic sense of "mounted infantry."

⁵⁹ It has been argued that the motorized and cavalry actions of 1920- gave the Poles a broader insight into mechanized maneuver than their western counterparts. Polish GOC Marshal Pilsudski called himself "an open air strategist." Polish forces used Cavalry and airplanes for recce and strikes: "...this was decidedly a war of movement. It was open warfare.." Maj O. H. Saunders, "The Polish Campaign of 1920" (Lectures delivered at US Army War College, Washington DC, 12 Feb 1933), 16.

⁶⁰ The 1st Polish Division was built from veterans of the Russian War and the '39 Bzura encirclement who arrived in England via the Baltic, the Balkans, and France. They were joined by volunteer Polish cadres from North America, Latin America and even Africa. 1 PAD was largely built through General Sikorski's energy and political contacts in America.

reported contact with Tigers and made no progress past their second phase start line. In rebuttal it may be noted they were heavily hit by USAAF bombers and the resulting confusion, coupled with the smart counter-attack delivered by Waldmüller and Wittman's Tigers, created a reluctant and perhaps demoralized group of tankers. During both *Totalize* and *Tractable* the Poles found themselves victims of friendly fire. On both occasions they were hit by heavy bombers which caused them to be disorganized.

Simonds was not very impressed with Maczek after *Totalize*.⁶¹ He considered disbanding the division altogether but was persuaded by Crerar and Stuart to give Maczek another chance. By 16 August their faith was finally rewarded – Maczek and his crews seemed to find their pace. Their progress from the Dives to Chambois and Coudehard, despite the decidedly poor tank country, is a text book example of an armoured division in action. The Polish Division became the antithesis of its former self. In the next five days it was to conduct a series of brilliant operations that were to close the Falaise gap and allow Crerar, although Montgomery would eventually take the credit, to trap two German armies.

Falaise Ping-Pong: Montgomery's Indecision vs. Maczek's Action

By the time the *Tractable-Falaise* Operation had ended Simonds had been jerked around like a puppet on a string. Crerar's operational directives changed almost daily but Crerar himself was a victim of Montgomery's indecision. Torn between the covert desire to achieve a flashy grand finale that restored the limelight, and his main job to direct the operations of both 21st and 12th Army Groups, Montgomery failed miserably. He did not know what to do with Bradley. At first he let him range far and wide, well away from the Falaise front. When Dempsey and Crerar floundered, he called him back. There were no fewer than five different operational instructions regarding the technical procedure to capture Falaise and close the pocket:

On August 4, he assigned the place to Crerar, on August 6 to Dempsey, on August 11 to Crerar or Dempsey, on August 13 to Dempsey, and finally

⁶¹ Nevertheless, by the end of the Falaise Campaign, "General Simonds thought very highly of General Maczek" Stearns Papers 27 Apr 81, 3.

on August 14, to Crerar. His inconsistency on Falaise paralleled his lack of firm decision on how to trap the Germans in Normandy.⁶²

Bradley lost faith in Montgomery and Simonds. On 13 August after ordering Patton into Falaise, he changed his mind. Convinced that the Cannae maneuver had failed, he cast a larger net and ordered Patton to strike for Dreux, northwest of Vimoutiers. MajGen W. H. Haislip's 15th Corps was ordered to hold at Argentan.⁶³ This was Bradley's famous "halt" order. If the Falaise Gap was going to be closed, then Simonds would have to do it.

Montgomery did nothing to countermand this. Throughout the battle he was the antithesis of his legendary 'Well I've given my orders there is nothing left to do but go to bed' style.⁶⁴ Although he left the Americans alone, he interfered regularly with 21st Army Group commanders, changing missions and practically hounded Crerar until he secured his personal objective that someone, anyone, finally made contact with Bradley. The lucky fellow turned out to be Stanislaw Maczek.

Maczek was Austro-Hungarian by birth and won his spurs as a Kaiserjaeger in the Hapsburg cavalry. He commanded one of Poland's two armoured brigades in 1938. He was a modern tank officer à la Fuller, Guderian, and deGaulle, and fought determinedly in the '39 campaign – one of the few Polish formations to successfully counter-attack. He eventually escaped to France and reformed the 10th Polish Armoured Brigade. After the debacle of 1940, he reached Scotland via Algeria and Morocco. He raised the 10th PAB for a third time, based on the British pattern, although it was not a British Legionne Étranger but a "constituent element of the army of the Republic of Poland."⁶⁵

Simonds's initial *Tractable* grouping, aimed at "a real blitz,"⁶⁶ was based on brigade sized echelons (10 PAB was separate from 3 PIB). Maczek began *Tractable* as the depth armoured division. Simonds either took some of his *Totalize* errors to heart or perhaps still did not trust the Poles. As *Tractable* wound down in the center, Crerar

⁶² Blumenson, 217.

⁶³ "XV Corps Operations August 44" The Wade H. Haislip Papers, MHI "I believe they were sound [orders]... The Decision was mine and mine alone." Bradley Papers, 301 MHI. See: Stacey, Victory Campaign, 245, Blumenson, 213, 220; Weigley, 206.

⁶⁴ B. L. M. Montgomery, The Memoirs of Field-Marshal The Viscount Montgomery of Alamein (London: Collins, 1958), 128.

⁶⁵ See: Keegan, 264, Maczek, 235.

⁶⁶ Stearns Papers 11 Mar 81.

ordered Simonds to change his principal objective and leave Falaise to the infantry and 2 CAB. 2nd Corps was now to capture Trun with its two armoured divisions. The Poles were in the right place but Simonds had to order Kitching to side step along his front and reposition his division to strike towards Trun. This was no easy feat for a new division, but Kitching was in position by the 16th. That day Simonds ordered both divisions to strike south; 4 CAD was to cross the Ante and 1 PAD was to cross the Dives while 3rd Cdn Inf Div continued the attack against Falaise. Whether it was simply a matter of time to settle down or finally wearing out Meyer's meagre resources, General Maczek found himself with both room to maneuver and a mission that seemed tailored to his division's heretofore frustrated élan. The Polish commander took off like a bat out of hell.

1st Polish Armoured broke out on Kitching's eastern flank. Maczek's own flank was covered by the Corps Recce Regiment. He soon reached the Dives.⁶⁷ "Les lanciers polonais parviennent à traverser la rivière plus à l'est, à Jort, et la 1er DB polonaise s'enfonce vers les collines du Pays d'Auge."⁶⁸ Maczek's force, consisting of 10th Armd Brigade, followed in turn by 3 Pol Inf Brigade,⁶⁹ was deployed as per the '43 British training pamphlet on the armoured division in the breakout, but with a touch of the German – a reinforced vanguard based on 10 Pulk Strzelcow Konnych (10th Chasseurs or 10 PSK) with an extra infantry battalion grouped with a tank squadron. The van was followed by his armoured mass comprised of 10 Armd Bde less 24 Armd (L) Regt (1st and 2nd Pulk Pancerna and 10th Dragoons, the brigade mechanized battalion). The 3rd Inf Brigade, two battalions plus the 24th Lancers, was en profondeur.

Maczek quickly pushed past his Dives bridgehead and penetrated deeply into 1 SS Pz Korps rear areas. He advanced his Kampfgruppen like the bull's horns of a Zulu impi: preliminary thrusts on the flanks while the head drove for Chambois. Meanwhile, 4 CAD fought its way past traffic jams and minor but stubborn rearguards. Instead of 3rd US Army's cavalry romp, both armoured divisions had run out of tank country. Their vanguards had entered le Suisse Normande.

⁶⁷ RG24 13712 WD 2 Cdn Corps. 15 Aug 44: "Pol Mtd Rifles Regt crosses R. Dives apx 1530 at 225427 and 235463."

⁶⁸ George Bernage, Normandie (Bayeux: Editions Heimdal, 1989), 459.

⁶⁹ RG24 10942 WD Polish Armoured Division. Rozkaz do Natarcia Nr.1. Confirmatory Orders issued 16 Aug 44.

Maczek, flanking wide, pushed past Meyer's rear guards; Kitching, striking into the Dives valley, soon got bogged down. It finally became clear to Montgomery that waiting for Crerar to take Falaise while Dempsey and Hodges bashed forward through the bocage was simply squeezing German toothpaste out of the tube. The center of the gap was Trun. After having agreed upon Argentan as the inter army group boundary on the 13th, Montgomery now ordered Bradley and Crerar to strike for Trun and Chambois.⁷⁰ It was too late. Patton was already nearing Paris – XVth Corps reached the Seine on the fifteenth of August.

Only three American divisions were available at Argentan: 80th and 90th Infantry supported by 2nd French Armoured Division. Bradley had previously forbidden Third Army to advance north when they could have easily reached Falaise. He now ordered Patton to have Haislip capture Trun. The earliest American H Hour would be 0630, 18 August. Montgomery had lost operational control of the Falaise battle.

That same day, 16 August, Field Marshal von Kluge⁷¹ accepted defeat and had ordered a general withdrawal of German forces from the Falaise pocket. It was to be his last operational order: "... he was a good leader of troops, but he was no armoured general, and was a rather petty type of Junker."⁷² Bayerlein's curt portrayal of "der Kluge Hans" (Clever Hans) could easily describe Montgomery.

Closing the Gap

The best news I can give you tonight is that the gap has now been closed and the Polish Armoured Division has reached TRUN and is pushing on to CHAMBOIS.

Montgomery to Brooke. 17 August 44

By midday, 17 August: "Simonds decided to move the whole 4 Cdn Armd Div north and across the River Dives at Couliboeuf. It had been found abandoned by the

⁷⁰ "At 2030 Army Gp Comd General Bradley called General Patton on the phone and stated in substance that he wanted General Patton to alert 90th Div and the French 2nd Armoured which were to be backed up by the 80th Infantry Division, to attack, take and hold the line Argentan-Trun. He further stated that the Canadians were being ordered to push forward and close the gap from Falaise to Trun." WD HQ 3 US Army 16 Aug 44. The Hobart R. Gay Papers (BGen, D/COS 3rd Army). MHI. Up to 16th August, 3rd US Army WD had demonstrated a curious lack of interest in Canadian Operations.

⁷¹ ETHINT 67, WD 5 Pz Army, 14; and, Bundersarchiv RH19IX/20 Heeres Gruppe B "Meldungen & Unterlagen Ic von der zeit 1.7.44 - 31.8.44": 16.8.44. This was reinforced the next day by Model.

armoured cars of the 12th Manitoba Dragoons, whom Simonds had ordered to find ways ahead."⁷³ Meanwhile, Maczek was well beyond the Dives. He had reorganized his force into three battlegroups and had boldly advanced south, southeast and east.⁷⁴ He had totally outmaneuvered Meyer and reached not only Kitching's objective⁷⁵ but created an expanded bridgehead that allowed for corps maneuver. In a series of chess moves, a Polish armoured battlegroup struck southwest to cut off Trun and positioned itself on the high ground dominating the town and the Dives valley.⁷⁶ Having established a pivot and an anchor on his flank above Trun, Maczek again reorganized and sent his left battle group in wider enveloping maneuver that covered his open flank and center, securing an outward divisional perimeter against counter-attacks. This was pursuit and operational maneuver.

Simonds began to visit Maczek regularly; his own Corps Tactical Headquarters was Spartan, "two vehicles against a fence."⁷⁷ The Commander liked what he saw but remained wary. This was not the armoured warfare as he had predicted or tried to practice, but it produced results. He did not wait to bring up Corps artillery and he did not force the Poles to tarry at safe phase lines while he tidied up. He became a decisive commander working with a panzer leader who quickly gave him what he wanted. They

⁷² ETHINT 66 ML 1079 "Interview GenLt Fritz Bayerlein", 7-9 Aug 45, 17, also, Wilmot, 347.

⁷³ William Hutchinson "Test of a Corps Commander" MA Thesis, University of Victoria, 231. and RG24 1372 2 Cdn Corps WD/Ops Log. Aug 44. RG24 10811 At 1015 hrs on 17 August Simonds issued orders from Main HQ 4 CAD: "link up with US Forces and hold the line of the River Dives" WD 2nd Cdn Corps G Ops Main, 17 Aug 44.

⁷⁴ RG24 Vol 10,811 WD 2nd Cdn Corps G Ops Main Aug 44: "10 Pol Mtd Rifles on wide front...en resistance weak. Chief hindrance rd blocked by retreating south civilians." Most French civilians moved away from the Canadian advance which heralded destruction by air and artillery. As late as the summer of 1984 the mayor of Falaise refused to host a reunion for RAF Typhoon pilots. He stated the Germans had always behaved "correctly" in Falaise but the Allied air force destroyed his town. Interview, Wing Commander Henry Ambrose, RAF. Normandy, May 1991.

⁷⁵ 4 CAD actually withdrew from the Trun area on the 16th: "Obj could not be held due to hy atk screen...main enemy opposition has been atk...PW reports tk force under comd of battle gp Wünsche and est str at 45 Tigers." They were right about Wünsche but exaggerated the armour: there were not 45 Tigers in all of France on 16 Aug, let alone in 12 SS HJ. Meanwhile, Maczek "surprised enemy...many PW and much booty include 6 guns 105mm in area 1847." By last light Kitching signalled: "Div wdr to conc areas for maintenance...." RG 24 13712. 2 Cdn Corps WD and Ops Log. 16 Aug 44. "General Simonds changed our orders again. Instead of the armour going for Trun, it was now to deploy in an area about two miles north of it." Maczek, 203.

⁷⁶ One of its combat teams may have entered the town center, beating 4 CAD van guards. See: Eddy Florentin Battle of the Falaise Gap (London: Elek Books, 1965), 177.

⁷⁷ Stearns 23 Mar 81, 6.

worked well together: a tactical discussion, a quick agreement and then Simonds would leave, allowing Maczek to carry on. The important thing was Maczek continued the advance, relentlessly playing the center game towards Chambois and the Americans. His second armoured battlegroup maneuvered southeast and drove towards Champeaux, anchoring the envelopment and establishing a six mile front, the center of which was four miles from Chambois. Simonds passed the good news to Crerar.

Montgomery was both pleased and excited. He ordered that it was essential that the 1st Polish Armoured strike past Trun to Chambois. Simonds gave the appropriate new orders; Maczek called another quick Orders Group and again reorganized his division for the last phase. 1st Polish Armoured Division: Maczek's Grouping 17 Aug 44.












10 PSK 	1 Pol 	2 Pol 	24 Ulans 
Podhale 	9 	8 	10 Drag 
			

Figure 27: Four Battle Groups

Four Battle Groups with the following Tasks:

- 10 PSK BG: Secure Chambois; make contact with American forces
- 1 PAR BG: Hold in str area of height 259
- 2 PAR BG: Block Chambois 406513
- 24 PAR BG: Hold in str high ground between 259 and Trun

Maczek's organization for the final phase was simple: four balanced groupement tactiques. Each comprised an armoured regiment (10 PSK was equipped with Cromwells) and a mechanized infantry battalion.⁷⁸ Each Polish battlegroup also had a squadron of tank destroyers attached – a “standard Normandy grouping” as practiced by the Wehrmacht.

This was not the sort of doctrine with which the British-trained Canadian staffs may have felt comfortable. It probably gave Simonds a nagging headache and certainly would have rattled Crerar had he been forward enough to see. But Maczek was not to be denied as long as he produced results and brought Montgomery's blessings upon the 1st

Canadian Army. The attempt to capture Chambois by last light, 17 August, miscarried when Koszutski's 2nd PAR battlegroup, a victim of linguistic confusion,⁷⁹ captured Champeaux by mistake. "During the night of 17/18 August one Polish tank regiment in a misdirected night march, aimed at Chambois which arrived at Les Champeaux, encountered elements of 2 (SS) Pz Corps, an ominous sign."⁸⁰

By 0900 of the 18th, 4 CAB's Canadian Grenadier Guards reached Trun, which they found abandoned. Kitching had closed the northern part of the gap. 2nd Div had cleared Falaise and the new commander of 3 CID, Maj.Gen. D. G. Spry, had moved his brigades down toward the Dives to cover the northern bank from Morteaux-Couliboef to Trun. "For the first time since the div arrived in Normandy it is now in country which has not been ravaged by war. Houses are intact, fields are greener and not littered with wrecked enemy eqpt. Even the air smells fresh."⁸¹

The Polish battlegroups resumed their advance early on the 18th, but by now the Germans were also moving by day through open terrain offering Allied tactical air targets undreamed of. On 17 August, American, British and Canadian air squadrons had flown 2029 sorties into the Falaise Pocket; on the 18th it was 2057 and on the next day, 19 August, they would fly an additional 3856 sorties. Maczek's advancing battlegroups were both supported and attacked by their own air forces; everything from Typhoons to Thunderbolts had a crack at the Polish vanguards and support echelons.⁸² That afternoon Simonds held his third Orders Group and again ordered Kitching and Maczek to take Chambois and link up with the Americans. He went forward with Maczek and "arrived to

⁷⁸ 10th Dragoons were mounted in White half-tracks, the remaining three carried their riflemen in Bren Gun Carriers.

⁷⁹ "son guide civil, interpretant mal l'accent polonais, a confondu cette localité avec Chambois." Georges Bernage, La Retraite Allemande - Normandie: Août 1944 (Bayeux: Editions Heimdal, 1957), 85, Maczek, 205.

⁸⁰ Hutchinson, 232. By 15th August Ultra intercepts had, despite the quality of transmissions, determined that considerable panzer forces were heading toward Chambois: "2 Pz Div Fomental/Falaise Road...9 SS Pz Div S. Falaise." SRH-049 Technical Signal Intelligence Transmitted Directly to G-2 12th Army Group, ETO From 14 August to May 1945, 15 Aug, 17 Aug 44. MHI.

⁸¹ RG 24 13789 WD 4 CAD 17 Aug 44. There were also clouds of mosquitoes: "They are definitely organized. In the day flies and yellow jackets work from dawn till dusk. They fly at low level and never miss." Besides the bugs, there was "Dysentery. We all have it now."

⁸² By last light 18 August, 1 Polish Armoured Division, fighting both friendly air strikes and German rear guards, had received 50% of 2nd Cdn Corps' entire casualties: 263 as compared with 286 for the remaining three divisions and two brigades. WD 2 Cdn Corps. 18 Aug 44; WD 1 PAD.

witness an attack on the Polish divisional headquarters by Typhoons of the RAF, one of many such air attacks the Poles were to suffer that day.”⁸³

At 1100 a.m. 19 August, Simonds held yet another conference⁸⁴ with his four division commanders. The Poles were to leave the Trun area to 4 CAD and concentrate on securing Chambois. 4 CAD would then hand Trun over to 3rd Div and advance southeast to capture Vimoutiers. 3 CID would advance along the north bank of the Dives valley and follow Maczek into Chambois.⁸⁵ Somewhere behind, from the southwest, would appear the vanguards of Dempsey’s army, driving the Germans before them onto the Canadian gun line on the Dives, much like shooting grouse. The meeting broke up and Maczek left quickly to catch up with his vanguard commanders. Simonds was not to see him for another two days.

Despite air attacks and increasingly stubborn German rear guards, by the evening of the 18th Maczek’s leading elements had cut the German line of escape. He had a battle group outside Chambois, another on the ground of tactical dominance northeast of Coudehard near Vimoutiers, and two battlegroups in his hip pocket. By the 19th, he had closed the gap: “La Première Division avait atteint tout ses objectifs.”⁸⁶

The presence of the Polish Armoured Division in the mouth of the gap alerted the new German theatre Commander, Field Marshal Walter Model –“at fifty four he had attained a field marshal’s baton ... youngest in the Wehrmacht ... ruthless energy and an intimate relationship with the Nazi Party.”⁸⁷ The “Führer’s Fireman” had replaced von Kluge on the 17th; by the next day he was planning both a fighting withdrawal⁸⁸ and a

⁸³ RG24 13712. WD 2 Cdn Corps. 18 Aug 44 and, Hutchinson, 235.

⁸⁴ Simonds’s almost daily conferences were not a good example of “mission driven” operations. Part of the blame was Montgomery’s (and thus Crerar’s) changing directives; the other was doctrinal.

⁸⁵ Foulkes’s 2 CID would follow 3 CID and protect the flank of 2nd Corps. RG24 13 712. WD 2 Cdn Corps. 19 Aug 44.

⁸⁶ S. Maczek, La Première Division Blindée Polonaise (Bruxelles: Imprimerie Union Office, 1948), 15 and, Maczek Avec Mes Blindés, 211. The Polish presence on the heights above was discovered by the Germans late Friday, 18 August. A mixed column marching up the D-16 was suddenly engaged by concentrated fire from the wooded hills. It was destroyed in 15 minutes: “The Germans, to their stupefaction and fright, discovered that their retreat is henceforth cut off.” They began to engage Hill 262 with mortar fire. This steadily increasing bombardment was to last four full days. Bernage, 490.

⁸⁷ See Shulman, 170. and Carlo D’Este in Barnett, Hitler’s Generals, 319.

⁸⁸ At 1915 Model met with Dietrich, Eberbach, Kuntzen, Gause and von Gerstorff. Surprisingly, he confirmed von Kluge’s directive and ordered a hurried withdrawal from the tightening pocket: “so

rescuing counter-attack. Maczek had forced the Germans into desperate reaction; the 2nd SS Panzer Corps, now composed of 2nd SS Das Reich, 9th SS Höhenstauffen, 9th Panzer and elements of 116th Pz,⁸⁹ were ordered to stop, regroup, and attack back into the pocket.

Simonds must now make fast the Polish cork with Canadian glue. He was again vexed by Foulkes and Kitching who had not succeeded as he would have liked. Kitching's regiments were advancing cautiously and continued to suffer a nightmare of communications problems. 4 CAD's progress was particularly annoying, considering the difference in battle losses between the two groups, and Maczek's units were taking the bulk of 2nd Corp's casualties. Kitching drove against the 12 SS rear guards, a generous term as by now Meyer's three remaining Kampfgruppen resembled squadron sized combat teams, often based on a single pair of tanks.⁹⁰

The boundary problem continued. Montgomery did not adjust the battle real-estate to conform to the changing situation.⁹¹ Bradley refused to exercise initiative, despite Patton's alleged offer to "drive the British into the sea for another Dunkirk."⁹²

schnell als möglich aus dem Frontbogen herauszuziehen." WD 5 Pz Army, noch 18.8.44. His objective was nothing less than the Seine: "Meine absicht ist Rueckzug hinter die Seine." See: MS A 922 General der Panzertruppe Eberbach, "Panzergruppe Eberbach bei Alencon und beim Durchbruch aus dem Kessel von Falaise." Quoted by Eberbruch, 7 Feb 46, 31.

⁸⁹ 116 Pz acquitted itself well in the "Hexenkessel" or "Kessel" ("witch's cauldron" - standard German term for the Falaise Gap) despite the bad reputation it gained earlier: "Commanding General 47 Pz Corps requests that Div Commander 116 Pz Div (von Schwerin) be relieved. This division always mucks up the job." CG 47 Pz Corps to CG 7 Army, 2200 hrs, 6 Aug. Extracts from Telephone Journal 7 German Army (files captured by 1 PAD, now in US archives). Martin M. Philipsborn Papers. Also, B-162 116th Pz Div (11-24 Aug 44), B-058 GenMaj H. Voigtsberger, 116 Pz Div, Falaise and, B-155 SS OberGruppenführer Georg Keppler I. SS Panzer-Korps 16.8-18.10.44., 2.

⁹⁰ H. Meyer, 207-208.

⁹¹ "Monty is supposed to have done a great job at Falaise. Really helped the Germans get away. Still wanted to do the job himself.... And then he brought in his damned Inter-Army Group division again. Jealous of Patton - little man." Air Marshal Sir Arthur Coningham, Interviewed by Dr. Forrest C. Pogue, 14 Feb 47, Pogue Manuscripts. Patton Museum Library, Fort Knox, Ky.

⁹² There is debate whether Patton actually said this, see Blumenson, 207-208, and Weigley, 206. On 16th August "at 2030 Army Gp Comd, Gen Bradley called Gen Patton on the phone and stated in substance that he wanted Gen Patton to alert 90th Div and Fr 2nd Armd Div which were to be backed up by the 80th Inf Div to attack, take and hold the line Argentan-Trun. He further stated that the Canadians were being ordered to push forward and close the gap from Falaise to Trun." extract WD 3rd US Army, The Hobart R. Gay Papers (D/COS 3rd US Army) 16 Aug 44. HMI. "The decision to turn XV Corps north from LeMans was made by me and approved by General Montgomery, who also approved our advance as far north as Argentan. Dempsey knew of this move and jokingly stated he was going to beat us to Argentan.... Several days later, 21 Army Group urged us to push on still further north to Chambois and Trun. We did advance as far north as Chambois, where we joined up with the Polish Division." Omar N. Bradley Papers:

With Bradley's stubbornness and Montgomery's indecisiveness, the gap was shut but not bolted. The Americans stayed put at Argentan.⁹³ Crerar actually sent a liaison officer into Patton's Headquarters to coordinate the two advancing armies. He was sent back; direct liaison with 1st Cdn Army was refused. Bradley would only deal with Montgomery.⁹⁴

Maczuga: "A Polish Battlefield"

... la providence nous offre ainsi la joie d'une revanche sur cette unité combattue en Pologne en 1939, mais cette fois, les rôles en sont inversés.

Maczek, on being attacked by 2 SS Das Reich 19 August

Model ordered 2 SS Pz Korps to begin their counter-attack on the afternoon of the 19th. They soon pushed 1st PAR's patrols away from Vimoutiers. Maczek's northern battlegroup fell back onto his center, the highest terrain in the gap – Hills 262, 252 and 240. In the valley below, 10 PSK penetrated into Chambois and met the vanguard of 90th US Infantry Division.⁹⁵

Major W. Zgorzelski of the 10th Polish Dragoons, spearheading for the Canadians ...pronounced that our meeting was the first time American and Polish soldiers had ever met on the field of battle. Neither of us

Correspondance with Major Historical Figures 1936-1960. MHI. Correspondance with D. D. Eisenhower, 10 Sept 44.

⁹³ Although on 17th August a message was delivered from 12th Army Group, signed by Bradley which ordered the: "...mission of seizing Chambois, Trun and continue to advance to the North until contact is gained with the British." extract WD 3 US Army, The Hobart R. Gay Papers, 17 Aug 44. MHI.

⁹⁴ "A British Liaison Officer by the name of — [name not given in entry] reported as Liaison Officer from the Canadian Army. He was told that unfortunately the Army Commander could not accept Liaison Officers from the Canadian Army, but that the liaison between the two would have to be through Commanding General, Twelfth US Army Group; that he, the Army Commander, was very sorry that this was true, but it was the policy of the Army Group Commander, therefore would have to be carried out." The Hobart R. Gay Papers, extract WD HQ 3 US Army, 17 Aug 44. MHI. The exception was artillery. Bradley permitted communication between Corps Artillery Headquarters. Commander of 6th US Armd Division had a more enlightened view of corps/army boundaries: "not impenetrable barriers ... quite the contrary such a line constitutes an invitation to a commander to seek out his neighbour across the boundary and arrange with him their adjoining operations to ensure mutual advantages." HIS 314.7 MGen R. W. Grow, "Black Lines on a Map" 31 Oct 1952. The Robert W. Grow Papers, Hoffman Collection. MHI.

⁹⁵ Simonds advised Crerar who responded with undisguised delight: Crerar to Simonds, 19 Aug 44, 2140 hrs: "Desire you transmit to GOC Pol Armd Div my congratulations concerning the important and gallant part all under his command have played in recent fighting. The First Cdn Army is very proud to count the Polish Armd Div amongst its formations." RG24 13712 1 Cdn Army WD. "...made first contact with another of their Allies, the Poles, when Co. L, 359th Inf reached a position W of Chambois and was blocking the road to Trun and was passed through by reconnaissance elements of a Polish armored brigade." MGen J. A. Van Fleet, Tough Hombres – The Story of the 90th Infantry Division (Paris: Defossés- Neogravure, 1945), 25. The 90th referred to the gap battles as the "Chambois Shambles."

appreciated that this was another historic moment – the closing of the Falaise Gap.⁹⁶

Soon, they too were under attack. 1 Polish Division had closed the gap as an armoured division in the pursuit – divided into maneuver elements and securing ground of tactical, indeed strategical, importance. It now had to hold ground in closed terrain. This was not the accepted operational doctrine for an armoured division: “Armd Div is not suitable for defensive action and, as such, should be relieved of this type of mission as soon as possible.”⁹⁷ It would have been understandable if he withdrew.

But Maczek was made of sterner stuff. Realizing he was about to be surrounded, Maczek organized his force into two strongpoints. Chambois would be held by 10 PSK reinforced with the 24th Lancers battlegroup supported by “Tough Hombres.”⁹⁸ The Coudehard - Bojois feature, dominating the Dives valley, would be held by the 1st and 2nd Polish Armoured Regiment’s battlegroups. The battle position resembled a cudgel or mace and Maczek, who hated using grid references, christened it Maczuga, a symbol of sovereign power for Poles.⁹⁹

The Polish commander was alone. He had outrun Kitching.¹⁰⁰ 4 CAD did not strike for Vimoutiers; rather, it pushed slowly past Trun, along the north bank of the Dives. Armoured regiments had rough going in the hills and wooded ground. They naturally gravitated toward the Dives valley which was wider and easier for tanks. The valley quickly swallowed up 4th Brigade’s tank squadrons. Often, Simonds did not know where Kitching’s troops were, and he seems to have doubted whether Kitching did.

⁹⁶ John Colby, War from the Ground Up – The 90th Division in WWII (Austin: Nortex Press, 1979) Recollections by Capt. Laughlin E. Waters, CO G Coy, 359th Inf., 229.

⁹⁷ FM17-100 “Employment of the Armored Division.”, 9 and, “The Cooperation of Tanks with Infantry Divisions” Military Trg Pam No.63, 6.

⁹⁸ The 90th Inf was formed from Texas and Oklahoma cadres – hence their red shoulder patch “TO” – by 1944 this had prompted the division’s nick name: “Tough Hombres.”

⁹⁹ Maczek, 210-218. The position was based on two heights that dominated the Dives Valley: Bosjois and Coudehard (which was just north east of Mont Ormel - often confused with Maczuga). The third element was a point just north of Coudehard. It was wooded but covered the approach from Vimoutiers. It was against this flank that the 2 SS Pz Korps attack struck first. Maczuga (“la massue”) turned out to be prophetic when, on the 22nd of August, the van guard of 2nd French Armoured Division arrived at position 262 “commandée par un officier, plus tard general, portant le nom de Massu.”

¹⁰⁰ Maczek, 217-218.

Moncel was late in arriving at 4th Brigade. Kitching did his best¹⁰¹ in the meantime, but his division had become probing fingers rather than an armoured fist.

Military history has been kind to Maczek. Professor Terry Copp argues that Kitching may have been cheated out of his just rewards¹⁰² since 4 CAD captured Trun, Crerar's first objective and the center of the gap. This is technically correct, although there is some evidence the Poles were there first.¹⁰³ It may be noted that Maczek, by arriving in the area earlier and securing the high ground north of Trun, made Kitching's task easier. Therefore, Simonds had two operational objectives: Trun and Chambois. Maczek grabbed one, Kitching finally grabbed the other. Since the gap was not completely closed until after the 21st, it may appear that to single out Maczek for this praise is excessive. However, operationally, the Poles did take the last objective. It may not have been tidy, but it did the job. The 21st Army Group's blue boundary line finally merged with 12th Army Group's blue line. Maczek's accomplishment was noted by both Bradley and Montgomery. That they chose to overlook Kitching is unfortunate, but it is not totally unfair.

Ordered to reach Chambois and help 1 PAD plug Model's escape route, Kitching threw in a battlegroup formed on his armoured reconnaissance unit, The South Alberta Regiment (SAR), coupled with The Argyll and Sutherland Highlanders (AGSH). By the time this force reached the middle of the gap, St. Lambert-sur-Dives, they were no more than a combat team consisting of "C" Squadron SAR, supported by "B" Company, AGSH.¹⁰⁴ The Shermans were led by Major D. V. Currie. The Falaise gap¹⁰⁵ was now an

¹⁰¹ WD 2 Cdn Corps; 3 CID: "some troops spent the day accumulating loot"; "two armoured regiments appear to have sat idle awaiting orders": Hutchinson, 240.

¹⁰² Discussion with Terry Copp, May 1996.

¹⁰³ Maczek certainly thought so and apparently so did the British: "Freddie (de Guingand) thought Bradley should have joined the Poles at Trun." Interview, Brigadier Sir Edgar Williams, Pogue Papers. John Keegan agrees: "...the 10th Cavalry Brigade departed from its start line near Trun in early afternoon (17th August)." Keegan, 274 and 272. "... the 24th Polish Lancers crossed Louvières-en-Auge; the Poles could have descended on Trun which they could see as if from a balcony, three kilometres lower down the slope." Florentin, 177.

¹⁰⁴ Currie was soon to be reinforced by "C" Coy, Argyle and Sutherland Highlanders and "C" Coy from The Lincoln and Welland Regiment.

¹⁰⁵ The Falaise Pocket was "9 km in width and 12 in depth" on 18 August. Inside were Generals Hausser (7th Armee), General Eberbach (Pz Gruppe Eberbach), Generals von Funck (LXXIV Corps), Elfeld (LXXXIV Corps), Staube (XXXXVII Pz Corps) and Meindl (IInd Parachute Corps). The units in the pocket comprised: 7 infantry divisions (84th, 226th, 227th, 326th, 353rd, 363rd, and the elite 3rd

area approximately three miles wide with two poor roads that made up the remaining escape routes for the two trapped German armies. One road led through St. Lambert; this eventually became the "corridor of death" as it wound its way up to the heights of Coudehard and the Polish battlegroups. The second route skirted Chambois. The Germans were determined to do several things: destroy the Polish-American force in Chambois, control St. Lambert, and break the two Polish battlegroups blocking D-16.¹⁰⁶ This would allow them to execute their last and most important aim, the extraction of the forces within the pocket.

Currie attacked St. Lambert-sur-Dives; his force entered the village but was stopped by a savage German counter-attack. Currie did not close the gap but his presence forced the Germans to continue attacking throughout the day to keep an escape route open. These desperate assaults, put in as all-or-nothing actions, were defeated by Currie's dwindling force.¹⁰⁷ His stand at St. Lambert won him a VC and allowed Simonds time to bring up his brigades. Meanwhile, the Germans continued to seep through the St. Lambert fissure, "a real valve through which the whole pocket was deflated."¹⁰⁸

The Poles and Americans hung on to Chambois and were eventually given less trouble as the Germans concentrated on escape past them. The key to the puzzle was Maczuga. Maczek's men were surrounded and running low on food, medicine, and ammunition. By now the pocket had become a Kafkaesque nightmare filled with

Fallschirmjaeger); 5 armoured divisions (1 SS LAH, 10 SS F, 2nd Pz, 116th Pz) and the remnants of 12 SS HJ. Though some units caught "Encirclement Fever", most remained surprisingly calm and orderly during the withdrawal operation.

¹⁰⁶ "During the entire time we were in Chambois, the fighting was so fluid that many times we were cut off from our lines of supply. The Poles were cut off from theirs even more ... the Poles would turn their prisoners over to us." Colby, 232.

¹⁰⁷ Participants in the fight recalled Currie "barely hung on ... low on ammunition and always being flanked." LCol D. McLean MC, SALH, personal interview 23 July 1994. "Seven enemy tanks, twelve 88mm guns and forty vehicles were destroyed, 300 Germans were killed, 500 wounded and 2100 captured ... We knew at one stage that it was a fight to the finish but he [Currie] was so cool about it, it was impossible for us to get excited." Extract from Currie's VC citation: Surgeon Commander F. J. Blatherwick, 1000 Brave Canadians – The Canadian Gallantry Awards 1854-1989 (Toronto: Unitrade Press, 1991), 72. "They had been unable to seize the bridges but without their valiant stand ... many more Germans would have escaped." D'Este "Falaise: The Trap Not Sprung.", 62, and, Stacey, Victory Campaign, 260, 262, 264.

¹⁰⁸ RG24 13712. 2 Cdn Corps Ops log: 19 Aug 44, 1145 hrs, fm 18 CACR: "En breaking through at St. Lambert sur Dives 3326." OKW War Diary, 21 August 44, 118: "Inasmuch as the British refrained from pushing hard from the north, the retreating movements could be carried out according to schedule. The Americans, however, continued to press hard."

retreating German units, skeletons of the divisions that tried to attack Mortain and hold the line against Patton and Dempsey. Model's troops were under the harassing fire of over 3000 guns – American, British and Canadian. The sky was filled with Allied fighters and ground attack aircraft¹⁰⁹ which savaged the withdrawing columns as they approached the gap. Allied air did not, however, attack Germans inside the gap.¹¹⁰ The real fear of hitting their own troops, which they had been doing throughout *Tractable*, resulted in the imposition of a “restricted fire line” for corps artillery and air. German columns quickly realized that as they approached the St. Lambert-Chambois area, they were granted a respite from rocket firing “Typhies” and “Jugs.” The slaughter inside the gap, from St. Lambert to Maczuga, was caused by direct fire from Poles, Canadians, and the 359th US Inf Regiment, as well as battalion mortars and regimental artillery batteries firing over open sights.

Kitching Relieved: “Kesselfieber”

Nor was the Canadian attack as vigorous and venturesome as the occasion demanded.

Chester Wilmot

Rain late on August 19 was more than an omen – it warned that weather would ground the fighter-bombers on August 20. The climax of the Normandy campaign had come. It would be a soldiers battle.

J. L. Granatstein and Desmond Morton

The 20th of August was Maczek's fiercest day. Hammered from two sides, the 1st Polish Armoured was near to being overrun.¹¹¹ The Germans attacked all along the Dives. Groups tried to break through at Trun and the crossings between it and St. Lambert. The heaviest fighting continued around Currie's block and Maczuga. The Germans hammered the position with mortars, artillery, Nebelwerfers and direct tank fire.

¹⁰⁹ The effect of air attacks was considerable although the effective kill ratio against armour was much exaggerated and gave birth to a air attack legend that was mostly fiction. See, Ian Gooderson, 217.

¹¹⁰ See: General Richard Rhomer Patton's Gap (Markham: General Publishing Co, 1981), 224-226. Rhomer's Air Force spin is both supported and attacked by military historians.

¹¹¹ RG24 13712. WD 2 Cdn Corps. 1 Pol Armd Div to Corps: “Amn sit grave.” 1830 20 Aug 44.

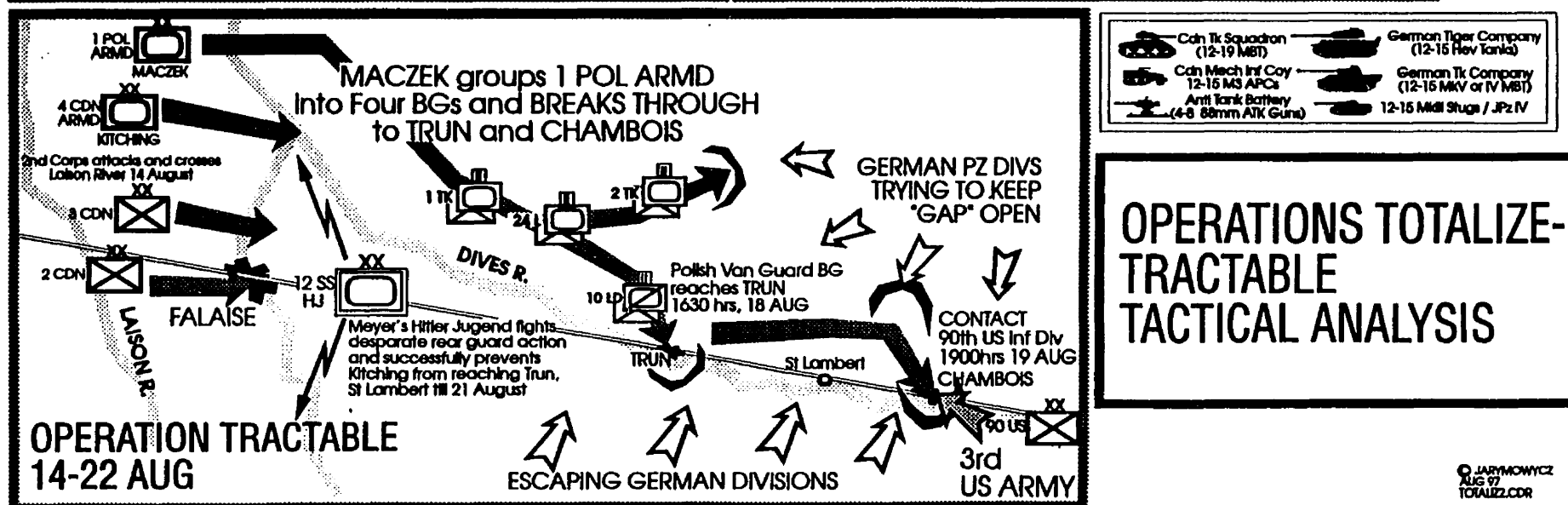
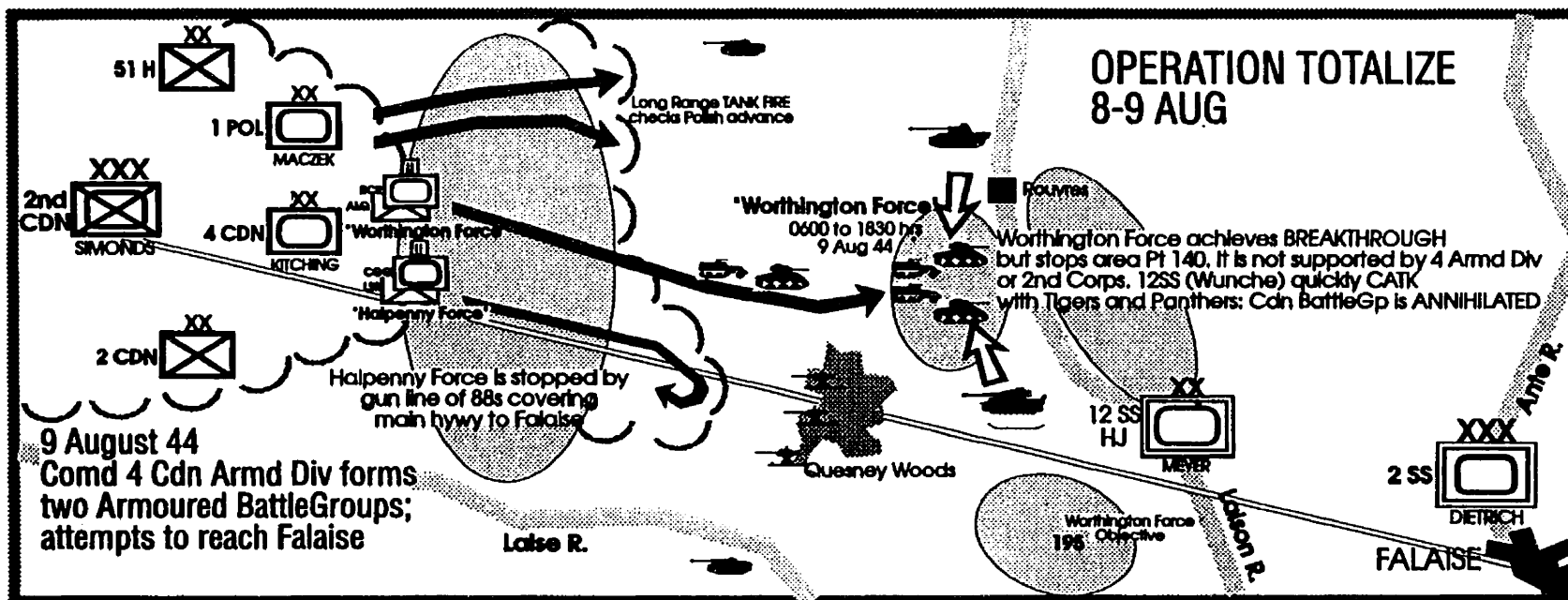


Figure 28

Combat team-sized attacks from 2 SS Pz Corps, basically, Das Reich and 9th Panzer,¹¹² began to penetrate the outer perimeters of Maczuga from the north. Maczek's battlegroups were in serious trouble; these were dogged attacks by experienced German troops.

At first 2nd Corps did not appreciate the seriousness of the Polish situation. Finally, the GOC decided to see for himself: "L'arrivée à mon P. C. du commandant de corps canadien, le general Simonds, fait finalement changer d'opinion l'état-major canadien."¹¹³ Realizing that the Poles were in very real danger of being over run, Simonds ordered Kitching to save them.¹¹⁴ Kitching dragged his feet. He didn't like Maczek and was in no hurry to rescue him from what Kitching felt was a self imposed untenable position.

I said to General Simonds words to this effect: 'To hell with them. They have run out of food and ammunition because of the inefficiency of their organization; our people have been fighting just as hard but we have managed to keep up our supply system.'¹¹⁵

Simonds was again made furious,¹¹⁶ particularly when "l'attaque canadienne ne se produit pas."¹¹⁷ On the morning of the 21st, to Kitching's displeasure, Simonds took over personally: "... he peremptorily ordered 4th Armoured Brigade to rescue the Poles immediately."¹¹⁸ He then turned to Kitching and fired him on the spot.¹¹⁹

¹¹² "In the night of 17/18 August Corps received the order to withdraw before the pocket was closed...Direction of thrust and attack objective for 9th Panzer Div was Trun; for 2d SS Panzer Div, Chambois...9th SS Panzer was able to push...only to the Les Cosniers area...2d SS Pz Div at first gained ground unhindered until it ran into a heavy tank engagement north of Coudehard."B-748. Wilhelm Bittrich, II SS Pz Corps (15 Jul-21 Aug). MHI.

¹¹³ Maczek, 218.

¹¹⁴ Simonds had reinforced Kitching with 2 CAB and 9 CIB. Koszutski held a final Orders Group: "Gentlemen, all is lost. I do not think the Canadians can come to our rescue. We have...no food and very little ammunition...Fight all the same. There is no question of surrender. I speak as a Pole. Tonight we shall die." See: Keegan 281 and Eddy Florentin, 261 for different versions of this speech.

¹¹⁵ Kitching, 205.

¹¹⁶ The radio conversation between Simonds and Kitching was witnessed by Maczek, who, although he could not hear what Kitching said, guessed he was being difficult: "Je n'entends pas les reponses du commandant de la division blindée canadien, mais le ton et les repliques du general Simonds me les laissent deviner." Maczek, 219.

¹¹⁷ Maczek, 219.

¹¹⁸ Kitching, 205. "General Simonds has ordered the following action: 4 Armd Bde (4258) to c. attack axis Pt. 240 (4259) Coudehard and to reorganize a position now held by Poles. 2 Cdn Armd Bde to

It was the most difficult thing he had ever had to do ... he had tremendous confidence in him because of their close association in Sicily and Italy and almost loved him as he would a brother, and admired his great courage and personal ability; that he found it almost impossible to understand how things had got so out of control.¹²⁰

The Canadian Grenadier Guards, followed by the Governor General's Foot Guards, attacked with determination and bashed through to Maczuga. They were much welcome: "the Poles cried with joy when we arrived...."¹²¹ Although past performance had caused Simonds to lose faith in Kitching, the sluggishness in dealing with an order to rescue Maczek may well have been the last straw.¹²²

The Victory Numbers

The Allied Intelligence had seriously underestimated the ability of the German leaders to form effective battlegroups out of the more fanatical of their men who were determined to escape or die in the attempt.

Lt. General Sir Brian Horrocks; 30th British Corps

The Normandy campaign was over. The Germans eventually withdrew 157,800 men from the Falaise pocket itself as well as the bulk of their rear echelon troops and service equipment for a total of 165,800 troops¹²³ safely evacuated north of the Seine.

seal off line Pt.240 (Village 3431). 10 Inf Bde, 9 Inf Bde (latter under 4 Cdn A. Div.) to strike to the axis Trun-Chambois and close gap." RG24 10634 Message Log 2 Cdn Corps, 1930 hrs, 20 Aug 44.

¹¹⁹ "Le 21 août, tot dans la matinee, le commandant du corps vient me voir de nouveau pour declarer qu'en raison d'evenements complexes l'operation ne sera declenchée qu'a present. Avant de repartir il ajoute en passant que depuis ce matin la 4e division blindée canadienne est placée sous les ordres du colonel T., chef d'etat-major du corps." Maczek now knew Kitching had paid the price.

¹²⁰ Stearns Papers 27 April 81.

¹²¹ RG24: WD 22 CAR 22 August 1944. "The picture at Point 262 was the grimmest the regiment had so far come up against...unburied dead and parts of them were strewn about by the score...they had several hundred prisoners of war loosely guarded in the field."

¹²² Hutchinson suggests another possibility as "the last straw": "Simonds went forward to HQ 4 Cdn Armd Div at about 1500 hrs (20th August) to get to see for himself and obtain more accurate information. Told by Maj-Gen Kitching that Trun and St. Lambert were in Canadian hands, Simonds worked his way forward, in the Staghound, to the high ground about one mile east of Trun and two miles from St. Lambert to see the battle. Brought under machine gun fire by a party of Germans about 300 yards off the main road on his return journey, Simonds came back into Kitching's headquarters extremely angry. Though Kitching never claimed the road between the two towns was clear, Simonds berated him for his failure to give accurate information and then left. In retrospect, Kitching believes this may have been the critical incident in his relationship with Simonds." Hutchinson, 241. Kitching does not mention the incident.

¹²³ See: Meyer, Kriegsgeschichte der 12.SS Panzer Division, 354. Georges Bernage La Retraite Allemande (Bayeux: Editions Heimdal, 1988), 36, 87. Michel Dufresne: "Normandie: Août 1944 Heurs et malheurs d'une fin de campagne. Les décisions des commandements allies et allemands." Revue Historique des Armées. No.3 (Vincennes: Château de Vincennes, 1987), 114-115.

Although the divisions were dismembered¹²⁴ and the panzer force all but shattered, there were enough left over to destroy Operation *Market Garden*, cause the Americans serious worry in Lorraine, garrison Calais, defend the Scheldt, and form the core of another Strategic Offensive. The Order of Battle for German forces in France and Belgium still totaled well over 250,000 troops.¹²⁵

Historically, Falaise has produced a minor statistics kampf. There are varying accounts and numbers. Recent studies suggest that only 44,800 troops got out of the pocket.¹²⁶ Grand totals for German Normandy losses appear to include total casualties from the entire campaign – D-Day to Falaise. Further, statisticians appear to confuse the actual fighting elements with the A and B echelon elements of the two armies. Throughout the campaign, German rear areas (reforming Kampfgruppen, logistics and administrative personnel, or troops in hospitals) were thinned out and steadily evacuated. A good example is 12 SS HJ whose alleged reduction from 20,000 men to a battlegroup of 500 is often cited as evidence of the Normandy bloodbath. Hitlerjugend did suffer and many of its commanders and panzergrenadiers died in Normandy but a surprising number were captured or killed after the Kessel, during the Rücksmarsch through France and Belgium. For example, Kurt Meyer, the COS, Hubert Meyer, all three Regimental commanders (Wünsche, Waldmüller and Mohnke), the bulk of the Divisional Headquarters and most of the rear echelon escaped the Falaise pocket despite the supposed tight net created by Allied armour and tactical air: 12,000 Hitlerjugend and ten

¹²⁴ Some units, through discipline and *esprit de corps* maintained morale. The Das Reich was “greatly impressed” when Meidel’s 3rd Fallschirmjaegers marched out of the gap “in cadence”, singing their lied. German discipline remained tight throughout the August battles, 10 Polish Armd Bde found, included in captured enemy documents “3 sheets of very poor quality note paper on which was written no less than 200 times in an uneducated Gothic fist: ‘I must look at the training syllabus three times a day.’” RG24 13712 2nd Cdn Corps IntSum No. 20, Aug 1944.

¹²⁵ Broken down: 165,800 escaping from Normandy, 72,000 from 15th Army north of the Seine, plus training and support cadres. Dufresne claims “un effectif nominal de 371,000 hommes.” Dufresne, 119. “On 29 September OB West reported his losses since 6 June as follows: Army [total] 363,000...Navy appx. 60,000...Luftwaffe: 29,000...total (less fortresses) 460,900 (sic).” MS B-034, OKW War Diary, 29 Sept 44, 151.

¹²⁶ “44,800 hommes sortis de la Poche, 60,000 hommes entre le mer et Gace, 15,500 hommes entre Gace et Nonancourt, 25,500 hommes entre Nonancourt et la Seine, 12,000 hommes a l’est de Vimoutiers.” Bernage, 114.

tanks assembled at Verneuil-sur-Avre after the battle.¹²⁷ Enough that the 12 SS HJ remained a formidable force for the Ardennes offensive three months later. The SS divisions in general seem to have got out of the Falaise pocket surprisingly well.¹²⁸ The real loss was the “small change” of armies – the infantry battalions – combat experienced units that were either overrun or trapped within the pocket. The German army was still 65% horse drawn. Although there was no mass surrender and the bulk of the trapped forces escaped, the battle has nevertheless been dubbed the “Stalingrad of the West” by Western writers. The entire campaign was a long, slow bloodletting for the best formations in the Reich¹²⁹ that ended with a impressive tour de force by Allied armour.

Paying The Piper

Montgomery’s “get on or get out” style had finally appeared in 2nd Cdn Corps. The understanding and forgiving Simonds who had kept Keller and Foulkes in July now ordered extensive decapitations. By the end of August 1944, among the nine infantry or armoured brigades, three brigades retained their original commanders. Of the twenty-four infantry battalions only seven commands had not changed. Five battalions and two armoured regiments lost their commanders because they were considered unsuitable.¹³⁰

¹²⁷ “The total losses to 22 August amounted to approximately 8,000 men. The existing strength of the Division on that day was approximately 12,500 men and not 500 men, as repeatedly reported in relevant literature.” H. Meyer, 204.

¹²⁸ 1st SS LAH Pz Div: 10,000 all ranks; 2nd SS DR Pz Div: 12,000; 9th SS H Pz Div: 15,000; 10th SS H Pz Div: 10,000; 12th SS HJ: 12,000; 17th SS PzGren Div: 6000; Pz Div Lehr: 8,000; 2nd Pz Div: 8,000; 9th Pz Div: 1000; 116th Pz Div: 8,300; 3rd Fallschirmjager: 5,000; 2,000 each for 276th, 277th and 353rd Inf Divs; 1,000 each for 84th, 326th, and 363rd Inf Divs. Bayerlein (PzLehr) reported: “...20 tanks and tank destroyers...four batteries of artillery...one and one half batteries of anti-aircraft...about 100 half-tracks, and about 100 motor vehicles.” Impressive totals for a division that endured the initial bombing at St. Lo on 25 July. Bernage, 87 and Dufresne, 114, 119. See also: MS B-631, Feuchtinger: “21 Pz Div.”

¹²⁹ Estimates have include a grand total of 460,900 German casualties, including naval and air forces. “Et cette erreur est devenue un cliche reproduit a l’infini.” Dufresne 119. Allied losses were high: 206,703 American; 124,394 British and Canadian. First Cdn Army suffered 18,444 casualties by 23 August (5021 were fatal). The Falaise Campaign cost total 5,679 casualties. Stacey, Victory Campaign, 271.

¹³⁰ Stacey, Victory Campaign, 275, see: Crerar Papers. “Personal and Secret to Simonds 29 Aug 44 re ‘Demotion of Commanding Offrs’.” By the end of the campaign the surfeit of Artillery officers in command was finally noticed by Crerar. In his instructions to Simonds regarding a replacement for A/Brig Ganong, Crerar wrote: “to be replaced by a suitable nominee (not a Gunner officer).” Underlining is Crerar’s.

The American performance in the Normandy breakout has been both praised and criticized. The argument may be made that Bradley was not perfect. But to deny the brilliance of his corps' operations would be unfair and petty. Having acquired Operational Maneuver, the Americans performed in a grand style that was as creative and effective as Manstein's 1940 Campaign in France. The Canadian Army did its job, albeit at great, perhaps too great, a cost. Canadian losses per capita of their male population were the heaviest of the western Allies. Crerar appeared content to follow orders rather than to read the battle and seize any initiative with his army. At a time when Patton was both taking Brittany and stretching the envelope east toward Dreux, Crerar continued to bash south towards Argentan.¹³¹

The performance of Canadian armour is another story. The armoured divisions were ill prepared for combat in Normandy at the operational or brigade level, however, the exploits of individual regiments troops and squadrons were in the finest traditions of any army. The difficulties lay in command and control. Simonds had two months to perfect his art, Kitching and Maczek had three weeks. Normandy was a "learning experience"; it turned out to be the only experience.

¹³¹ Crerar was highly regarded by at least one of his British Corps commanders: "General Crerar, who in my opinion, has always been underrated, largely because he was the exact opposite of Montgomery. He hated publicity, but was full of common sense and always prepared to listen to the views of his subordinate commanders." Horrocks, 182.

CHAPTER SEVEN

CANADIAN ARMOUR IN NORMANDY Out-Gunned, Out-Armoured, and Out-Numbered

The outstanding lesson of the campaign as far as the units we have visited are concerned is the fact that Sherman 75mm is out-gunned and out-armoured by the Germans.

Operational Report First Cdn Army 2 Aug 44

Valentines to Russia - The Canadian Tank Scandal

The Canadian Armoured Corps was an enthusiastic national response to Blitzkrieg. The young Dominion fielded four independent armoured brigades and two armoured divisions. As a symbol of its new strength and technical ability, they were to be equipped with an advanced Canadian tank. The Ram I¹ was a rival of the American Sherman and a serious contender for the North American main battle tank crown. It was an advanced vehicle for its time, designed with a turret ring large enough to accept heavier calibre guns.² The original plans called for the installation of a six pounder, which gave it immediate superiority over all existing tanks; however, the guns were not immediately available and a two pounder interim was installed. As the war continued, Canadian industry caught up with demands. The Ram II was finally introduced, fitted out with the six pounder gun and built in sufficient numbers so each Canadian armoured regiment would be completely equipped for the invasion of Europe. It was not to happen.

As the war continued, armoured warfare mutated to monstrous proportions. Yet, while the Germans and Russians were desperately augmenting armour and gun calibre, the Western Allies continued to produce medium tanks. The requirements for the

¹ Ram weighed 25 tons, nine feet high, nine feet wide and about 8.5 feet long; it could clear an eight foot trench. Capacity was 150 gallons of petrol for a range of 125 miles. Top speed was 25 mph. Communication was provided by a No. 24 wireless. See: Chamberlain / Ellis, 172-174, William Gregg, Canadian Military Vehicle Profiles Vol 2 (Rockwood: Canadian Military Historical Society, 1981), Profile No. 2.

² Chamberlain / Ellis, 172, Grove, 100, Gregg, Profile No. 2.

Sherman (successor to the M3 Grant with a 75mm gun in a fully traversing turret) had been drawn up by the Armored Force Board in 1940. A pilot vehicle (T6) was completed at Aberdeen Proving Grounds on September 19, 1941: "It is tempting to suggest that the T6 was influenced, if not copied to some extent, from the Canadian Ram in view of its similarity."³ An early production Ram, named for the device on General Worthington's coat of arms, left the Montreal Locomotive works in July 1941 for five months of trials at U. S. Army Proving Grounds in Aberdeen, Maryland. In the end, the Americans adopted the M4 (soon to be christened "Sherman" by the British), while Canada mass produced enough Rams to equip a full armoured corps.⁴

Regular use of Ram II in the UK uncovered flaws. Vehicle trials were ordered in 1942 and finally a committee was formed to evaluate the Ram vis à vis the Sherman, which was being introduced into selected British armoured regiments in England. Its findings were harsh.⁵ It was decided to totally convert the Canadian Armoured Corps from Ram II to Sherman.⁶ The formal announcement was made on 1 June 43.⁷ DND ordered the Canadian Armoured Corps to "reclassify Ram as a target tank and adopt the M4A4 for the CAO."⁸ Initial plans called for a mix of Canadian produced Shermans

³ "Documentary evidence, and the chronology of events, disprove this however." Chamberlain and Ellis, 114. "Instead of waiting for the redesigned vehicle which would eventually emerge as the M4, the British Tank Mission in collaboration with the Canadian General Staff designed a modified M3 for production in Canada. The new tank was to use the standard M3 power train and running gear, but the hull and turret would be a Canadian design." R. P. Hunnicutt, Sherman - A History of the American Medium Tank (Belmont: Taurus, 1978), 108, Chamberlain and Ellis, 113, William Gregg, Canadian Military Vehicle Profiles Vol 1 (Rockwood: Canadian Military Historical Society, 1981), 14-15.

⁴ Grove, 99, "The APG's report on the Ram was concerned only with its comparison to the M4 and offered no comment on its relevance to the T6 design." Chamberlain and Ellis, 114.

⁵ "Ram II does not meet the requirements of a first line operational tank...6 pdr does not penetrate enemy tanks at more than 800 yards ... navigates obstacles better, steering and braking superior ...[Sherman is] ... less fatiguing ... fire hazard less ... the hull of the Ram is cast steel whereas the hull of the Sherman is armour plate ... cast steel is more easily penetrated." RG24 12 291 HQ 1 Cdn Army Tk Bde. Minutes of Comparison Ram and Sherman Tanks. Committee headed by Brig. R. A. Wyman. 31 May 43. See: WD 9 CAR., 5 Armd Div, Italy. 15 Dec 44. The decision was hastened on 22 May 43 when Stuart advised McNaughton of "Serious Ram spare parts shortages.... General McNaughton referred to Ram I conversion to recovery and engineer tank...Ram IIs would be used for armoured OPs and Command tanks..." RG24 12183 1/ARMD OPS File. 19 Mar 43. RG24 12290. Stuart to McNaughton 22 May 1943.

⁶ RG24 12290. Memo Stuart to McNaughton 22 May 1943. RG24 12290 Cdn Tank Policy. Memo 1 June 43.

⁷ RG24 12290 Cdn Tank Policy. Memo 1 June 43.

⁸ Cdn Tank Policy. Memo 1 June 43.

augmented by purchases from Washington. However, the American production could not meet the Canadian requirements. By the end of June the British War Office "confirmed they will provide M4 ... 1000 M4A4 from UK."⁹ Subsequent agreements resulted in the decision to reorganize three Canadian armoured brigades from War Office resources, and equip one brigade with M4A1 from Canadian production.

Despite the clear requirement for a new tank, the Canadian tank industry was not turned around. Obsolete British Valentines¹⁰ continued to be built for Lend Lease by Henry Blaine Bowen at CPR's Montreal Angus Shops.¹¹ Useless in a modern armoured battle, the vehicles ended up as "infantry tanks" in Russian second category assault divisions. By the fall of 1943 it was patently clear that the Third Reich was in retreat in Russia, pursued by factory fresh T34/85s and the first Stalin tanks. Sending Valentines to Russia had negligible effect on the Soviet war effort but robbed Canadian regiments of badly needed Shermans, or ideally, Fireflies.

Canadian production was restructured to produce 150 x 25 pounder Sexton¹² SP (Self Propelled) guns, and fifty Shermans per month while the War Office promised to equip the 4th and 5th Canadian Armoured Brigades with M4A4, the 2nd Cdn Armd Bde with M4A2, and the 1st Cdn Armd Bde was to be given M4A1 from Canadian production lines.¹³ The TOE (Table of Equipment) listed 490 tanks per Canadian Armoured Division

⁹ The Canadian plans were to convert production "100% to 25 pdr artillery ... accept M4A4 from WO ... arrange with WO re disposal of 600 Ram II." RG24 12290 Cdn Tank Policy. Memo 26 June 43.

¹⁰ Britain ordered 300 Valentines from the Canadian Pacific Railway Company on 13 August 1940. Initially they were to equip army tank brigades but the decision to build a Canadian Cruiser tank based on the American M3 Medium resulted in another production order for Ram Is. Grove, 98.

¹¹ Stalin had already forced the Americans to promise the Red Army all production of Diesel powered Shermans despite British pleas. Diesels were less likely to "brew up." Despite their tactical inferiority, Canadian Valentines were well constructed and appreciated by Soviet infantry: "Only the first 30 Valentines of the 1,420 finally produced by the CPR by May 1943 saw service in Canada, where they were used for training. The rest went to Russia where they were some of the most popular western tanks used by the Red Army." Grove, 98. Also, Chamberlain / Ellis, 116.

¹² "25 pr. S. P. Tracked, Sexton" was armed with the 25 pdr and eventually replaced 105mm SP "Priests" initially distributed as SPs. Some Priests landed with 3 CID on 6 June. "Sexton entered production at Montreal Locomotive Works early in 1943 and by the end of production in 1945, 2150 had been produced." Greeg, Profile No. 3., Grove, 100.

¹³ Decision taken at the end of August: RG24 12183 1/ARMD OPS File Secret Memo 21 Aug 43. The Sherman series included the following types:

- | | |
|-------------|---|
| <u>M4</u> | Wright-Continental R-975 Whirlwind radial aircraft engine;
British designation Sherman I: 75mm gun |
| <u>M4A1</u> | Wright-Continental (in some Cdn Armd Regts); |

and 193 main battle tanks (MBT) per independent Cdn Armd Brigade,¹⁴ but the net result was the smörgåsbord of equipment found in 2nd and 4th Cdn Armoured Brigades.¹⁵ It was not unusual to have a squadron's tank state include "twin Jimmies" (GM engines), Chrysler A-57 multi-banks, and even the Wright-Continental R-975 Whirlwind radial aircraft engines. This created difficulties in supply and maintenance. Although delivery was less than satisfactory, in the final review the decision to accept the M4 made good sense. Although the British¹⁶ stubbornly stuck to their doctrine of Cruiser and Infantry tanks, a clear appreciation of Canadian requirements, the realities of the battlefield, and production capabilities suggested that one tank, not two or three, was the logical solution. There was no Allied main battle tank ready to meet Tiger. The Churchill was slow and clumsy while the Pershing was still delayed by internecine disputes. The immediate choices were Sherman, Cromwell or Churchill. British tanks were praised for their Christie type suspension, electrical fittings, gear boxes and steering brakes. British tank engineering, in general, was poor. The engine compartment design, location of cooling system, and other accessories made engine removal very difficult.¹⁷ Of the Allied MBTs available, only the Sherman was battle proven in 1943 and, when evaluated against available British kit, a far better tank. The Sherman's engine mounting was designed for

	British designation Sherman II: 75mm, last series - 76mm gun
<u>M4A2</u>	Diesel powered GM Twin 6-71 (found in some Cdn units; mostly in USMC and Red Army fmns); Sherman III 75mmgun; Sherman IIIA 76mm gun
<u>M4A3</u>	Ford GAA (mostly US Army Tk Bns) Sherman IV all 75mm gun
<u>M4A4</u>	Chrysler A-57 multi-bank: five automobile engines mated together - lengthened rear hull (manufactured almost exclusively for British / Cdn Regiments); Sherman V: 75mm gun
<u>M4A5</u>	Designation for Canadian Ram Tank: only in Cdn units; one Ram I tested by US Army
<u>Firefly:</u>	17 pdr gun. (Brit / Cdn Armd Regts only): nearly all marks of Shermans were converted to Firefly but most numerous was Sherman V. When fitted with 17pdr the suffix C was added, i.e. Sherman IC, IIC, IIIC, IVC and Sherman VC (most numerous).

¹⁴ RG24 12183 I/ARMD OPS File: Armoured Recce Regt received 43 MBT; Armd Regt 61. HQ Armd Division 13 mixed tanks (8 cruiser, 5 Comd / AA); HQ Armd Bde got 12 mixed MBT (8 cruisers, 4 Comd / AA). By "cruiser" tanks was meant Sherman. A "Command tank" was a Sherman with the gun removed to allow for more radios and maps.

¹⁵ Total US production of tanks was 88,410 of which the British got 25,600. Total British tank production to December 1944 was 24,843. German tank production was 24,360. The M4A4 Sherman tank comprised 4,537 individual parts - of these only 1,269 were manufactured by Chrysler, the remaining 3,268 were supplied by sub-contractors.

¹⁶ British Army fielded 11 armoured divisions and 12 independent armoured brigades by 1945: Crawford, 36-48.

¹⁷ "British tanks are not made to take the engine out...British tanks are generally harder to start." Cletrac Questionnaire, 2, 3.

easy service and quick removal. The turret and hull had more room for crews and maintenance was relatively simple. "Better vision for both driver and bow gunner ... power traverse ... spares were more readily available."¹⁸ The most beloved feature of the Sherman was the power traverse. It gave the crews a fair chance, indeed, an edge, over German armour in a close quarter melee.

The Canadian Shortages

Briefly therefore, we are short of Shermans, and we are likely to be shorter.

MajGen Richards, RAC, Main HQ 21 Army Group, 15 Aug 44

Allied armoured doctrine, side-tracked by myopic squabbles and erroneous analysis, failed to produce a tank capable of meeting German armour on anything approaching an equal footing until 1945. Allied inability to build a main battle tank, despite extensive experience and a wealth of technical data from two theatres, resulted in horrendous casualties to both its armoured forces and their accompanying infantry. Capitalist industry's failure to forge what the Soviets and Nazis had accomplished by 1942 has been called "The Great Tank Scandal."¹⁹ The Canadian compromise to keep the tank industry "ticking over" with limited Sherman production and concentrate on the Sexton SP was to prove deadly by the summer of '44.²⁰ Totally dependent on British supply, the Canadian Armoured Corps found itself without the 17pdr Fireflies it required to survive in battle. Worse, the Replacement and Conversion Units had no modern tanks on which to train crews – every production model was sucked into the Normandy maelstrom. This was Canada's private "tank scandal": tying up assembly lines to crank out hundreds of third-rate lend lease tanks to a country that was already producing the best tanks of the war. Worse, remaining production concentrated on manufacturing self

¹⁸ The engineering bad points were minor: position of batteries below turret basket on some Sherman marks, long work required to change steering brake drums, and the "volute-spring-and-lever type suspension." RG 24 10457 WD 2 CAB June-July 44. RG 24 10457 WD 2 CAB June-July 44.

¹⁹ See: David Fletcher The Great Tank Scandal (London: HM Stationery Office, 1989), 1-2.

²⁰ Chamberlain and Ellis note that: "Australia and Canada, which actually got as far as producing tanks of their own in the war years, have always received less than their fair share of recognition for the tremendous effort and initiative involved. In each case their indigenous design started off based on the American M3 Medium tank...Both the Canadian and Australian vehicles ended up vastly superior to the original M3...In the event of the Canadian tank, the Ram, still managed to play a most important part in the war, but as a special purpose vehicle in several essential but unglamorous roles." Chamberlain / Ellis, 14.

propelled artillery while the tank crews were pleading for Fireflies. Particularly galling was the revelation that shortly after the Normandy landings, 3rd CID scrapped its SP guns and re-equipped with towed 25 pdrs. The tracked SPs were left to rust – eventually mutating into Simonds's "Kangaroos."²¹ Complaints from both 2 CAB and the Conversion Units harassed CMHQ, which in turn badgered Ottawa :

Some concern over the inadequacy of training of CAC reinforcements on the Sherman tank mounting the 17 pdr ... all available Sherman 17 pr tanks are urgently required for operational theatre ... not possible to release even one for CRU training purposes.²²

By the time *Atlantic* was over, both Recruiting Units reported serious shortages and finally, nil returns on Sherman VC Firefly and even Sherman IIIs:

Secret. To Chief of Staff CMHQ from DRAC. 25 Jul 44. At present there is no pool of spare Shermans, either new or part worn ... the current Sherman shortage precludes the use of more than an absolute minimum of substitute vehicles.²³

Canadian repair crews (CEME) finally resorted to cannibalization. Eventually, returned Shermans resembled Panther hulls arriving at the Henschel Werks from the eastern front, stripped bare to the metal. This resulted in stiff warnings from Main HQ First Army.²⁴ Over-confidence and a refusal to listen to advice from the British military mission resulted in Yankee hubris. Facing Normandy panzers and panzerfausts, Bradley's Corps were confronted with sky rocketing tank casualties. By July, the impossible happened; the American Army began to run out of tanks.

²¹ SPs ("Priests") were built on M4 chassis and mounted a 105mm gun-howitzer. Canadian CDAs decided to reequip RCHA regiments with towed 25 pdrs because of the latter's superior range.

²² 2 CACRU trained replacements for 1st and 2nd Cdn Armd Bdes while 3 CACRU provided for 4th and 5th CABs. RG 24 Vol. 10, 457 BRAC File 30-7. 5 July 44.

²³ RG24 Vol. 10, 457 BM/RAC/443(RAC2) 25 Jul 44.

²⁴ RG24 10457 Secret 97-2-2: Main HQ First Cdn Army 4 Aug 44. By 17 Aug First Cdn Army allotments for field units were: Sherman III x1; VC x66; V x44; Cromwell x34; Challenger x8 and Stuart x93. Total deficiencies: 217 Shermans (equal to 2nd Br Army's 217 for three Armd divs and two Tk Bdes) and 259 other MBT and Stuart vs. 2 Br Army's 168. RG24 14186 BRAC First Cdn Army 15 Aug 44.

Origins of the Scandal

The individual superiority of Matilda in 1939, a superiority diminished by lack of numerical strength, once lost was not regained until four years later with the 17-pounder up-gunned Sherman in Normandy.

G. MacLeod Ross

Why is it that I am always the last to hear about this stuff: Ordnance told me this 76 would take care of anything the Germans had. Now I find you can't knock out a damn thing with it.

General D. D. Eisenhower

By the summer of 1944, western armour had evolved, in theory, in direct reaction to German armament. In fact, it reflected the personal biases of general officers in key positions who, rather than answer clear calls from the battlefield, ensured their personal philosophies were implemented. In England, Fuller-Liddell Hart disciples and RTC zealots directed tank development.

In these lotus years until the outbreak of the Second World War, J. F. C. Fuller and B. H. Liddell Hart began to prod authority from inside and outside the War Office respectively, though they never tackled the many technical problems which had to be resolved before the tank really supplanted the horse on the battlefield.... In retrospect it becomes clear that no one in authority was giving any thought to either the technics or the tactics of the tank.²⁵

In the United States, General Leslie McNair operated behind the support and approval of George Marshall. While it may be argued that Russian and German armies were even more under the aegis of their political bosses (in particular Hitler, whose meddling in the most trivial of technical decisions hamstrung both the Panzer Arm and the Luftwaffe²⁶), it must be noted that dictatorships managed superb tank parks. Western expertise focused on their air forces, yet even here they failed to produce an operational jet aircraft like the Me 262. The Allies had aimed to develop an operational doctrine for their own Blitzkrieg, but could not exercise it while saddled with inferior weapons whose tactics are based on the parry rather than the lunge. By the summer of 1944, Western creativity in operational warfare appeared stymied. After five years of battle, Allied armoured

²⁵ G. MacLeod Ross with Maj Gen Sir Campbell Clarke The Business of Tanks 1933 to 1945 (Devon: Arthur H. Stockwell, 1976), 38-39.

²⁶ Walter Warlimont, trans., R. H. Barry Inside Hitler's Headquarters (New York: Praeger, 1964, 528-533.

doctrine had not appreciably changed; there were still two types of AFVs: the Infantry Tank and the Cavalry (or "Cruiser") tank. There were two types of formations: Tank Brigades, which operated with or under command of an infantry division, and Armoured Divisions, capable of operational maneuver. In practice, the letter of the dual tank doctrine was not religiously followed and the Americans and Canadians relied on one battle tank, the M4 Sherman. The British, who could least afford it, deployed three main battle tanks: the Churchill Infantry Tank and two Cruiser Tanks, the Sherman and the Cromwell.

The Allies had defeated Tigers in North Africa in the early months of 1943. By D Day, Tigers had been living in British captivity for well over a year. Why was German superiority such a surprise in Normandy? A flawed appreciation, based on incomplete evidence was the reason. Initial contact with Tiger suggested that it could be knocked out by available anti-tank artillery, and although a trial was ordered to test these theories, it was never completed.²⁷ Accordingly, after final victory in Africa, it was decided that the Sherman could do the job and the American heavy tank programme was stalled. The T7, ready for production in 1943, was cancelled. The Sherman was the more logical choice if one's priorities were transportation: "... it was preferable to use the available shipping for two 30-ton medium tanks rather than one 60-ton heavy tank."²⁸ Early reports, expressing undue optimism and nationalistic self-satisfaction from Alamein and Tunisia, had been encouraging. The American heavy tank was placed on the back burner as McNair decided to go into Europe with the Sherman and his Tank Destroyers.²⁹

²⁷ See: RG24 10596. Report by Col J. A. Barlow (DDG of A) and LtCol Neville, Weapons Tech Staff Field Force, regarding initial attempted test at Robaaba Pont du Fahs on the only Tigers killed in Africa. An RCE officer was present and took first photos. Test was cancelled when British RA officer supporting the scientific team decided to withdraw his anti-tank guns because of sporadic mortar fire.

²⁸ R. P. Hunnicutt Firepower - A History of the American Heavy Tank (Novato: Presidio, 1988), 49. The decision was damned later by combat troops: "The fact that our equipment must be shipped over long distances does not, in the opinion of our tankers, justify our inferiority. The M4 has proven inferior to the German Mark VI in Africa before the invasion of Sicily, 10 July 1943." BGen J. H. Collier, Comd CC"A." Exhibit No. 1. P. 1. from: Maj.Gen. I. D. White, Commander 2nd Armored Division, A Report on United States vs. German Armour - Prepared for General of the Army Dwight D. Eisenhower, Supreme Commander Allied Expeditionary Force 20 March 1945, USAMHI. Exhibit No. 3. Hereafter cited as White Report.

²⁹ Continued production of M4A3 (76mm) and its brawny cousin (178mm mantlet, 140mm nose armour, 102mm frontal plating), the M4A3E2 - appropriately dubbed "Cobra King", first used in Operation *Cobra* but was better known as "Jumbo." This was the US interim version of an Infantry Tank.

While the Americans procrastinated, British industry was both not competent and too extended by the war to give tank design any sort of priority; as a result the least skilled men ended up at the tank design bureau.

... the D of M who steadfastly refused to stir the apathy of the General Staff in this respect, refusing to up-gun his tanks because the General Staff had not asked for bigger and better guns. Thus it came about that ignorance interposed one more obstacle in the essential liaison between those whose duty it was to decide WHAT to build and those whose responsibility was HOW to build it.³⁰

The result was the alarming state of British Armour: under-armoured, under-gunned and mechanically unreliable nightmares ("... with the cooling system installed backwards to suck in hot air from the engine and roast the crew ... it took forever to perform the simplest repairs").³¹ The best the British could do was come up with the excellent 17 pounder and agree that the only decent tank to mount it on was the American Sherman.

American attempts to create an interim battle tank were blocked from within by McNair's preference for the tank destroyer and the bias of American Industry and Ordnance against the simple logical solution of the Firefly.³² The 1943 AGF policy statement (issued after the North African campaign) concluded:

Both British and American battle experience has demonstrated that the anti-tank gun in suitable numbers is the master of the tank.... There has been no indication that the 76mm anti-tank gun is inadequate against German Mark VI tank.³³

³⁰ Correlli Barnett, *The Audit of War* (London: Collins, 1986), 255, see also Hancock and Cowing *British War Economy* (London: Collins, 1969), 145.

³¹ Barnett, 263.

³² "American tank development policy seems to have been just as moribund as the British, though with more excuse due to their isolation.... Between 1919 and 1938 no less than 18 types of tank were built as pilots, with none ever going to production, a record which parallels the British." Ross, 255. The British Director General of Artillery, General Campbell Clarke, sent a sample 17pdr to the British Inspector General of Armament in Canada; the British Technical Mission in Detroit was able to obtain dimensions and confirmed that the Chrysler Sherman turret could be made to accept it.

³³ McNair ignored Devers' other recommendations regarding the TD programme and immediately cancelled the main battle tank. "The recommendation of a limited proportion of tanks carrying a 90mm gun is not concurred in for the following reasons: The M4 tank has been hailed widely as the best tank on the battlefield today.... There appears to be fear on the part of our forces of the German Mark VI (Tiger) tank. There can be no basis for the T26 tank other than the conception of a tank-vs.-tank duel – which is believed to be unsound and unnecessary." Rg 337 (HQ, AGF) 320 "AGF Policy Statement", Chief of Staff AGF. Nov 43. USAMHI.

The report was premature and served to further General McNair's personal bias against Armor and a contemptuous reaction to British battlefield lessons as well as his own staff's report. Meanwhile, RAC Liaison Letters, issued throughout British, Canadian and American headquarters, continued to send storm warnings.³⁴ Despite the cautionary advice given by ordnance experts, the British could not convince the Americans to build Fireflies. The 17pdr was not considered sufficiently superior to the 76mm tank gun to warrant American production. General Devers actually refused to attend a shooting demonstration that compared the 17pdr to the 76mm and 90mm guns. Rejected in Detroit and Washington, the British Technical Mission advised Whitehall that if the British wanted Fireflies (the 17pdr M4), they would have to build them themselves.³⁵

There were two reasons which prevented the Americans from accepting British advice: the suspicion that the Machiavellian British had so advised because they had some ulterior and probably sinister motive, or, the fear that if an American accepted our advice he would be told by the isolationists that he had sold out to the Limeys.³⁶

The Americans dug in their heels. The only reason the British won in the desert, American tank designers said in private, was because American Grants and Shermans arrived in time. It was American armor, not British, that won in Africa. Although exaggerated, the theory was not altogether untrue. American faith in the 76mm gun and the tank destroyer would not be shaken until Normandy, when it was too late, and Bradley was reduced to begging Montgomery for Fireflies.³⁷

³⁴ See: Information on PzKw VI from 30 Military Mission, Moscow. 30 April, 1943. From: David Fletcher, editor Tiger! The Tiger Tank: A British View (London: Her Majesty's Stationary Office, 1986), 27. See also RAC reports: DHist 171.009 D116, RAC Liaison Letter, April 1943.

³⁵ The 17 pdr was a surrogate solution and seen as such by tank experts. The British Mission continued to lobby for a new heavy tank: "Armoured Board recommends ... hy tk T26A1 on a large scale, development and correction of defects must be pushed with the greatest possible vigour...greatest possible urgency." RG24 10455 RAC Branch 21 Army Group. Brigadier G. MacLeod Ross: "Report British Army Staff / British Min of Supply Mission." 18 July 44. "US would refuse to fit 17 pdr on the grounds of production, necessity and lack of time...[even though]...17 pdr was superior to US 3" comparative ballistics were 14.4 lbs at 2600 metres for 3"US and 17 lbs at 3000 metres for 17 pdr." RG24 10597 Memo: "Washington Tank Meeting No. 69. Re: Fitting 17 Pdr/3" into Vehs" 30 June 42.

³⁶ Vivian Dykes, quoted by Ross, 193.

³⁷ Mayo, 331, 388, and, Ross, 288, 290.

Although Tiger had been defeated, technical analysis was misinterpreted and incomplete and Panther had not been evaluated at all.³⁸ The first Panther knocked out by the Allies in Europe was killed in Italy, during the attack on the Hitler Line on 24 May 44 by a Canadian crew from the British Columbia Dragoons.³⁹ The first detailed Panther reports read by Eisenhower's staff would be from Normandy.

Even more frustrating for Bradley was the realization that Montgomery's armoured units, equipped with 17 pdr converted American M4s, owned the better main battle tank. The Allied armoured force was in a complete muddle. A certain bitterness was directed at the British-Canadian Armies from 12th Army Group. This resentment was resurrected in the US Official History of Ordnance which noted that while Shermans were desperately needed by American troops, "There was one resource within the theatre; the plentiful Shermans held in reserve by Field-Marshal Montgomery's 21st Army Group."⁴⁰ This raised a bitter protest from British pundits⁴¹ but the question was fair. If Montgomery really meant to adhere to his strategy, why not feed Bradley the extra tanks for the breakout?

2 CAB Out-gunned, Out-numbered

The dichotomy within the Canadian "tank scandal" was that, despite an impressive industrial base in Canada, the army was totally dependant on British stocks for Shermans. Canadian tanks were built in the United States, shipped to England where they went into a common pot, and were redistributed by the British Army.

³⁸ "US Army had accurate knowledge of the Panther's characteristics [August 1943] although Dean [MajGen. William F. Dean, head of Requirements Section, AGF] believed that the German production would emphasize Tigers. Yet there is no evidence that anyone in AGF wondered whether their guns were adequate to cope with the Panther" Bailey, 91.

³⁹ M4 Sherman, commanded by Lt. N. C. Taylor; Gunner was Tpr C. D. Shears. See: RG 24 WD HQ 5 Cdn Armd Div. 24 May 1944. See also: Roy, Sinews of Steel, 250-251 for a detailed account of this engagement by Taylor himself taken from BCD Archives.

⁴⁰ Lida Mayo, The Ordnance Department: On Beachhead and Battlefront (Washington: Office of the Chief of Military History, 1968), 312.

⁴¹ Brigadier MacLeod Ross (1942-1945 British Technical Liaison Officer to the U. S. Army Ordnance in Detroit - the "Arsenal of Democracy") takes issue with Lida Mayo's "ambiguous comments" regarding tank shortage, particularly her assertion that American replacement shortages in Normandy continued despite heavier casualties while Montgomery was permitted to maintain a generous reserve of 1,900 tanks for British and Canadian armoured battalions. Ross blames American short-sightedness and refusal to accept practical advice. Ross, 280.

Canadian military historians have been careful to point out the high casualty rates in Normandy.⁴² American, British and Canadian infantry battalions reported serious shortages by the end of July, however, a review of tank returns confirms that there was also an equipment shortage. The slow unloading rate at the Mulberry harbours added to difficulties. British production attempted to answer immediate, albeit reduced, requirements of British Armoured Divisions. Independent Infantry Tank Brigades took second priority to the arm of decision. There was no favoritism; simply, there were not enough Sherman VCs to go around. From June through early August, the maximum number of Fireflies in the entire 2nd Canadian Armoured Brigade never exceeded twenty-three tanks.

The plight of 2 CAB has been overlooked in the accounts of the great battles that took place in July and August. Canadian attacks never enjoyed tactical superiority in armour – indeed, they seldom had parity.⁴³ The situation would not be redressed until August when the cumulative effects of four Allied offensives and the virtually non-existent replacement programme had reduced German panzers to mere shadows of their D Day strengths.

⁴² "Field Marshal Montgomery has published figures indicating that down to 1 October the 3rd Canadian Infantry Division had more casualties than any other division in the army group, and the 2nd Canadian Division was next." Stacey, Victory Campaign, 271; "After 29 June the 3rd Division's NP rate skyrocketed and during July more than one in every three casualties was due to battle exhaustion.... By 21 July the division had been in combat for six weeks and had casualties almost equal to its total strength in riflemen. Indeed, 75 per cent or more of these casualties had occurred in rifle companies of the division and the losses of officers and NCOs had been, as expected, proportionately very high." Copp / McAndrew, 115, 117.

⁴³ **Table 10: Strength for German tank forces in the west:**

Date	Pz III (%)	Pz IV (%)	Pz V (%)	Assault Guns and TDs	Total / % of overall Str
30 Apr 44	145 (16)	674 (32)	514 (31)	101 (18) 219 (7)	1622 (19)
10 June 44	39 (5)	748 (32)	683 (35)	102 (16) 310 (8)	1862 (20)

See: MS#P-059 US Army Historical Section. 9 June 1950, 10-13.OCMH, USAMHI.

GERMAN PANZER BNS versus CANADIAN TANK "BNS" ⁴⁴					
	8 JUNE	19 JULY	21 JULY	25 JULY	8 AUG
TIGER BN	0	1	1	3	0.25
JAGDPANTHER BN	0	0	0	1	0
PANTHER BN	1	2	3	3	0.25
MARK IV BN	1	2	3	3	0.50
JPZ/STUG BN	1	2	3	4	0.25
GER. BN TOTALS	3	7	10	11	1.25
CDN BN TOTALS	3	3	3	6	14
Note: 25 July includes the 3 tank battalions of 22nd British Armoured Brigade (7th Armd Div) that supported <i>Spring</i> and actually engaged German armour. Canadian / British tank "regiments" were in fact, battalion sized formations.					

Table 11

The most serious problems were Fireflies and replacement crews.⁴⁵ If a squadron lost 50-65% tanks, which was not unusual for tanks in Normandy engagements, the crews generally suffered 15-25% casualties. Replacement MBTs were stocked by the Replacement Squadron, or Tank Delivery Squadron, often formed from a unit that had been broken up. Their mission was to bring up new tanks from the beaches, fitting them for action and filling them with new crews sent over from the training depots in England. The tanks were then delivered to the fighting regiments. The reality of operations changed this. Tanks were placed in forward tank parks and simply picked up and driven away, often directly into battle by veteran crews. Replacement crews were regularly dumped off at RHQ and sent forward with the rations. Despite the large training cadres in the schools and depots⁴⁶ most new troopers arrived with only a rudimentary knowledge of driving, mechanics or gunnery. Few were cross trained and many had only a brief introduction to the Sherman itself.⁴⁷

⁴⁴ RH21-5/44, "Kriegstagebuch Panzer-Armeeoberkommando 5.", Abendmeldungen 23.7.44 - 25.7.44MS B-162, OKW WD 1.6.44-14.8.44. and, RG24 WDs 2 CAB, 4 CAB, 4 CAD, 2 Cdn Corps.

⁴⁵ By 8 June, immediately after the battle for Buron, 27 CAR's tank states report reorganization from four to three 2 CAB squadrons: "The unit has now been organized on a 49 fighting tank basis, Regtl HQ 4 tks, each sqn HQ 3 tks, 3 tps of 4 tks each." DHist. War Diary 27 CAR. 141.4A27013(D2). 17 July 1944. P. 3.

⁴⁶ See MajGen E. L. M. Burns Manpower in the Canadian Army 1939-1945 (Toronto: Clarke Irwin, 1956), 91.

⁴⁷ "I expected about 25 replacements, I got 10 and when I looked at them closely, I realized that half of them were Second Lieutenants. I gathered them around the back of a tank, took a flashlight, picked up some stones and showed them how we operated - basic tactics. Then I mixed them up in the crews, trying to make sure there were veterans with the new comers. I didn't break up old crews if I could. At dawn I took them into battle. The lucky ones survived." LtGen Radley-Walters, personal interview, 1991.

Sherman vs. Panther: Small Unit Tactics and Gunnery Complaints

Stout-hearted, calm and deliberate crew comds who make haste slowly will in every engagement best the enemy's ponderous tanks.

"After Action Report on Atlantic by A Sqn." 23 Jul 44

Aggressive Squadron commanders did triumph in tactical contests. Although they had fought a half dozen engagements and two major battles (Buron and Carpiquet), the Sherbrooke Fusiliers learned important lessons from their three day contest for St. André and Hill 67. In the after action report the squadron commander stressed three key points: prevention of enemy tank recovery, smoke screens, and tactics:

It was found that ... Disadvantages were soon turned into advantages by the bold use of those tactics. Stout-hearted, calm and deliberate crew comds who make haste slowly will in every engagement best the enemy's ponderous tanks.⁴⁸

One "lesson learned" tactical adjustment capitalized on a Panther design fault:

One round, which struck the lower half of the curved gun mantlet and being deflected downwards went through the top decking (5/8" thick) behind the driver. This exploded the amn, It appears that this can be done every time by hitting the lower part of the gun mantlet.⁴⁹

This required exacting gunnery but gave Shermans a fighting chance against Panther.

During June and early July comprehensive studies were conducted throughout 2 CAB regarding gunnery and tank survival. The most numerous and consistent crew complaints were, in order of priority: "1. Armour 2. muzzle flash on the 17 Pdr VC Firefly 3. observation and hatches."⁵⁰ Insufficient armour protection was the great nemesis. Frontal hits on Panther were defeated by German armoured plate at ranges well

⁴⁸ "Recovery: Every effort must be made to burn enemy tanks when the possibility exists of recovering them, otherwise they live to fight another day. Smoke: The practical use of smoke must never be forgotten particularly in attack. A sqn shoot produces a most effective screen. Serious consideration to the installing of rear emission smoke on tks should be considered." DHist 141.4A 27013 WD 27 CAR; "After Action Report on Atlantic by A Sqn." 23 Jul 44.

⁴⁹ RG24 14287 27 Cdn Armd Regt (Sher Fus) After Action Report. 17 Jul 44, 15. This technique had evidently been discovered by the Russians earlier because by the late summer new models of Panther with an improved, deflecting gun mantlet began to arrive on the Normandy front. See: T. L. Jentz, Germany's Panther Tank - The Quest for Combat Supremacy, (Atglen: Schiffer Military, 1995) "Chin Gun Mantlet" "was introduced in September 44" on the Panther Ausf. G, 96.

⁵⁰ RG24 2 CAB. Gunnery and Crew Questionnaires. Appx D. Reports from all units in 2 CAB June-July re "Sherman II, V, VC and Stuart V. The other "top peeves" were seats that prevented access or escape and ammo misfires.

under 500m while the MkVs L/70 gun could take out Shermans at will.⁵¹ The high penetration rate to Sherman forced ad hoc measures on the battlefield:

The system used is to tack weld track links to the hull and the turret just strong enough to avoid being shaken off by the vibration and the motion of the tank. On top of the welded links additional loose links are either hooked in by means of the end connectors or wired loosely into posn. Under these circumstances a shot hitting one of these links breaks the weld and allows one or a group of links to slip. These links also act as a burster course for HE and have the effect of spaced armour in combating HC or PIAT.⁵²

The acknowledged innovator was Major S. V. Radley-Walters of "A" Squadron whose technique was soon copied by the rest of the Regiment and 6th CAR. The method spread throughout Normandy.⁵³

On interviewing tk crews in the tk harbor they were unanimous on this point and most of the crew commanders quoted numerous occasions where both the 88mm and 75mm HV AP shot had hit their tanks at close range without penetrating. Maj Radley-Walters stated that Churchill track links loosely welded on his glacis plate deflected an 88mm AP shot fired from a range of 100 yds.... Every available type of track link is being used and in "A" Sqn every tk was plastered all over with Sherman, Churchill, Panther and Tiger track links.⁵⁴

While there may have been concurrent, 27th CAR's solution was the first officially considered by the War Office who promptly sent down an RAC team accompanied by London engineers to evaluate the battlefield

⁵¹ "A single shot from a Panther knocking out two Shermans before finally stopping in the driving sprocket of a third." Radley-Walters personal interview, 1990.

⁵² RG24 2 CAB. Appx D: "Fighting Equipment Division D.T.D. to 21 A.C. A.F.V. (Tech)." Report and interviews with 6th, 10th, 27th CAR tank crews. 27 July 1944 (Hereafter cited as D.T.D. Report).

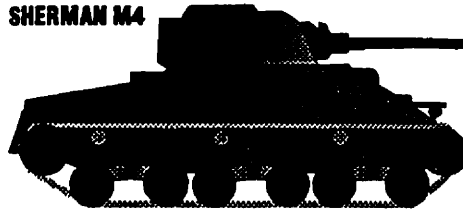
⁵³ British units appeared to dislike "Quick Fix Armour" because it was Canadian. "Tk crews state that the preset Quick Fix plates are being removed by en shells ... from Cdn sources ... thought to be little good ... Cdn units [should] understand that this does not provide armour protection in the true sense of the word." RG24 10458 21 Army Group AFV Tech Report No. 14 30 Aug 44. "It would appear wiser to use the extra weight-carrying of the Sherman to take a better gun; i.e., to make German tanks more vulnerable rather than to attempt to decrease our own vulnerability." No. 2 Section ORS, Report No. 12, 2.

⁵⁴ D.T.D. Report

CANADIAN and GERMAN MAIN BATTLE TANKS FRANCE 1944

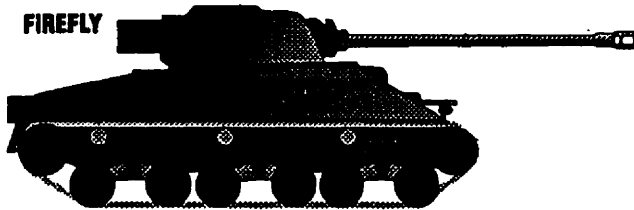
279

SHERMAN M4



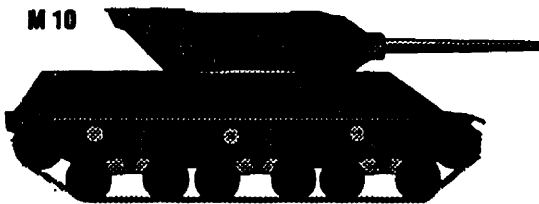
Medium Tank "Sherman" M4 A1-A4
 Gun: 75mm (75 Caliber Length)
 Range (Eff Frontal Penetration): M4 IV to 1000m; Panther/Tiger: nil
 Best Armour Penetration at 500m: 3.5"
 Armour Piercing Shell Velocity m/sec: 2030fps
 Armour (max): 3"
 Combat Weight 31 tons
 Height: 287cm
 Speed: 25 mph (road); 20 (xcountry)
 Crew: 5

FIREFLY



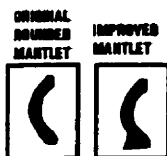
Medium Tank "Firefly" M4 A2
 Gun: 76.2mm
 Range (Eff Frontal Penetration): M4 IV to 2000m; Panther 1200; Tiger 500
 Best Armour Penetration at 500m: over 6"
 Armour Piercing Shell Velocity m/sec: 2030fps
 Armour (max): 81mm
 Combat Weight 33 tons
 Height: 287cm
 Speed: 25 mph (road); 15 (xcountry)
 Crew: 5

M 10



Tank Destroyer M 10
 Gun: 76mm
 Range (Eff Frontal Penetration): M4 IV to 1500m ; Panther/Tiger: nil
 Best Armour Penetration at 500m: 3.5"
 Armour Piercing Shell Velocity m/sec: 870
 Armour: 59mm
 Combat Weight: 30 tons
 Height: 287cm
 Speed: 26 mph (road); 15 (xcountry)
 Crew: 5

**SHOT VERSUS MANTLET ON
PANTHER Ausf D, A:
DEFLECTED ONTO HULL OVER
DRIVER'S COMPARTMENT: KILL**

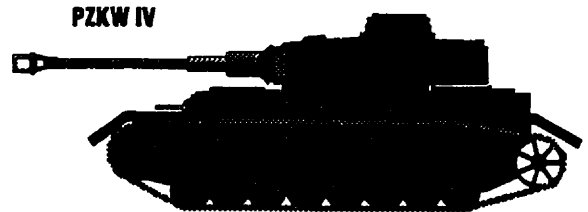


**SHOT VERSUS MANTLET ON
PANTHER Ausf G:
DEFLECTED AWAY FROM TURRET:
NO PENETRATION**

**KILLING PANTHER
AIM : LOWER GUN MANTLET**

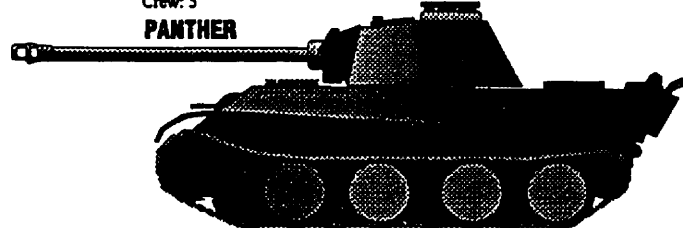


PZKW IV



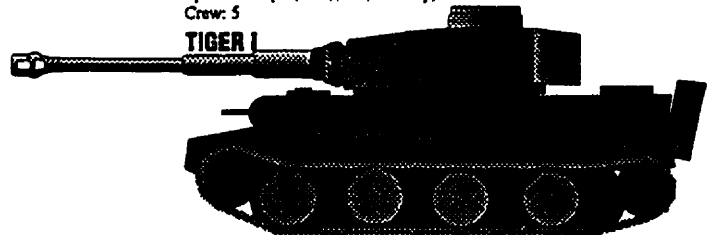
PanzerKampfWagen IV Sd Kfz 161/2 Ausf. H
 Gun: 75mm KwK 40 (48 Caliber Length)
 Range (Eff Frontal Penetration): all Allied MBT to 1500m
 Best Armour Penetration at 500m: 5.5"
 Armour Piercing Shell Velocity m/sec: 750-930
 Armour (min-max): 50-78 mm
 Combat Weight 25 tons
 Height: 268 cm
 Speed: 38 mph (road); 25 (xcountry)
 Crew: 5

PANTHER



PanzerKampfWagen V "Panther" Sd Kfz 171 Ausf. G
 Gun: 75mm KwK 42 (70 Caliber Length)
 Range (Eff Frontal Penetration): all Allied MBT to 2000m
 Best Armour Penetration at 500m: 5.5"
 Armour Piercing Shell Velocity m/sec: 935-1120
 Armour (min-max): 80-120 mm
 Combat Weight 44.8 tons
 Height: 300 cm
 Speed: 46 mph (road); 24 (xcountry)
 Crew: 5

TIGER I



PanzerKampfWagen VI "Tiger I" Sd Kfz 181 Ausf. E
 Gun: 88mm KwK 36 (56 Caliber Length)
 Range (Eff Frontal Penetration): all Allied MBT to 2500+m
 Best Armour Penetration at 500m: over 6"
 Armour Piercing Shell Velocity m/sec: 810
 Armour (min-max): 100-110 mm
 Combat Weight 55 tons
 Height: 286 cm
 Speed: 38 mph (road); 20 (xcountry)
 Crew: 5

TIGER II KING TIGER



PanzerKampfWagen VI "Tiger II" Sd Kfz 182 Ausf. B
 Gun: 88mm KwK 43 (71 Caliber Length)
 Range (Eff Frontal Penetration): all Allied MBT to 2500+m
 Best Armour Penetration at 500m: 6"plus
 Armour Piercing Shell Velocity m/sec: 1000-1130
 Armour (min-max): 100-150 mm
 Combat Weight 69.7 tons
 Height: 309 cm
 Speed: 38 mph (road); 17 (xcountry)
 Crew: 5

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 AUG 97
 CONGERTK.COR

Figure 29

expedient. They complained about the additional weight and engine stress.⁵⁵

Notwithstanding official recommendations, crews continued to weld tracks onto their tanks. If the angle was greater than 10 degrees and the range over 1000 "Quick Fix armour" often saved the crew's lives.⁵⁶ In essence, it was "appliqué armour," now standard throughout NATO and former Warsaw Pact armoured forces.

The Sherman VC Firefly

The weakness of the 17 pdr was its good gun but thin armour. The gun had a bright muzzle flash and a small puff of smoke remained at the muzzle. This gave the position away when the 17 pdr was firing beside 75mm tanks.

WD 27 CAR

The Firefly was both a godsend and a curse. It was the only tank capable of taking on the Panther and Tiger. This was quickly recognized by the panzer battalions and soon Fireflies were singled out for special attention: "these are always hotly engaged by the enemy as soon as they are seen so that cas in them are high."⁵⁷ The Firefly's long 17 pounder gave it a distinctive profile which crews tried to disguise: "17 pr [barrel] should be painted black for four ft from the muzzle."⁵⁸ The Sherman VC had recurring problems: main gun misfires, engine stoppages, and very high petrol consumption. Besides the constant complaint over armour, muzzle flash caused the most concern.

⁵⁵ Reports from D.T.D, BRAC and 2 CAB contain photographs, descriptions and crew comments. See also: DHist 141.4A27013 27 Armd Regt (SHER FUS), RG 24 Vol 14,287 27 CAR "Operation Atlantic" and, D.T.D. Report. "We carried 3.5 tons of extra track welded on our tanks!" The chief engineer counselled Radley-Walters: "Why, with all this extra weight, you'll be lucky if this tank goes another 300 kilometres." The battle-scarred Major, weary after three days of hard fighting around St. André, pointed to Verrières Ridge, one kilometre away, and still held by the Germans despite three Canadian assaults: "If she gets me to the top of that – she's paid for herself!" LT.Gen. S. V. Radley-Walters, correspondence and interview April, 1992.

⁵⁶ By October even BRAC admitted that appliqué armour was not a bad idea: "Instrs issued ... extra track may be fastened to turrets and hulls at the discretion of Armd fmn comds ... addit 1000 lbs on turret and 3000 lbs on hull is suggested as reasonable maximum." RG24 14186 BRAC, First Cdn Army, CAC Int Bulletin No.1, 15 Oct 44. Other crews used sand bags, wood planks, chicken wire cages filled with ration boxes and road wheels. Germans used the same principle. Stugs even applied concrete around the gun mantlet and the driver visor. Bruce Culver, Sherman in Action (Warren: Squadron/Signal, 1977), 9, 37, 45 and, Bruce Culver, Sturmgeschütz III in Action (Warren: Squadron/Signal, 1976), 49.

⁵⁷ RG24 10460 2 CAB papers: Appx B. "6 Cdn Armd Regt. Answers to Tk Gunnery Questionnaire."

⁵⁸ RG24 10460 2 CAB papers: Appx C. "Reply to DTD Tk Gunnery Questionnaire. By 10 Cdn Armd Regt. Eqpt Sherman III and VC and Stuart V."

"There is no difficulty with the 75mm but with the 17 pr it is impossible to observe under 1000 yds."⁵⁹

The 17 pr full charge amn has such a high velocity that by the time the dust has settled enough to observe fire, there is no indication of strike. This prevents accurate observation of fire and reduces the efficiency and amn economy of the weapon.⁶⁰

The high velocity 17 pounder produced a bright flash that momentarily blinded the gunner and announced to the watching world exactly where the Firefly was, soliciting a prompt reply from hidden SP, anti-tank or tank guns, if not the target itself.⁶¹ It was recommended that the bow gunner or driver could often help indicating "fall of shot." Normal wind dissipated the pollutants and allowed the gunner to identify fall of shot and make the minute corrections that permitted the all important second round hit; otherwise, the Germans had enough time to respond.

The crew commander could try to help by sticking his head out the hatch and follow the engagement with binoculars. At distances over 1500 meters the trajectory was high enough and the time of flight long enough to allow gunners to regain 20-20 vision. Engagements under 1000meters, the area where the majority of tank actions took place, meant that precious seconds were lost: "It is desirable eventually to have two Sherman VCs per tp thus to maintain constant fire which cannot be done now because tank must withdraw to get fresh amn."⁶² To add to Canadian ire, German smokeless/low-flash

⁵⁹ RG24 10460 2 CAB papers: Para. 8. This is supported by all Canadian reports as well as supporting documentation from 144 RAC, 33 Armd Bde (British) included in the report. Comments are all similar: "Gun flash interferes with observation on Sherman VC...firing the 17 pr the flash seriously interfered with observation." See Tk Questionnaires throughout.

⁶⁰ RG24 10457. 1 Cdn Field Research Section, Main HQ First Cdn Army. 14 Jan 45. Report on RAC weapons: Answer to WTSFF Questionnaire No. 1. The tracer burn on 17pdr ammo was not considered satisfactory: "not bright enough...burns out too quickly." Other ammo types were also criticized: "APDS was not liked by those who used it because of unpredictable accuracy at ranges over 800 yards. At short range, it is considered very effective...HEAT was not considered very accurate at long range." The Tank Gunnery Questionnaire (Apx A WTSFF) contained 27 specific questions answered by regtl offrs and NCOs.

⁶¹ The main gun also produced a tremendous report accompanied by a violent blast that created large dust clouds. The tremor and blast annoyed accompanying infantry and momentarily obscured the target. RG24 10457. 1 Cdn Field Research Section, Main HQ First Cdn Army. 14 Jan 45. Report on RAC weapons. Apx A WTSFF.

⁶² RG24 Vol. 10925, G3 3 Cdn Inf Div Jul 44. Lessons Learned - 3 Cdn Inf Div Questionnaire. Appx "D." Other problems emerged -- gunnery misfires and some tanks' electric circuits caused engine failure: "Quite frequently the engine will stop." 3 Cdn Inf Div Questionnaire. Appx "D." In addition,

powder meant that the signature from a firing Panther or Tiger was considerably less making acquisition more difficult. Only the dust from the cannon blast allowed detection by the most alert Firefly gunners.

There was unanimous demand for a proper cupola to allow safe observation. German tanks had commanders' cupolas fitted with episcopes that allowed all around observation and, when opened, protected the head of the crew commander. Canadian Shermans and VCs' hatches opened upwards. German cupola hatches popped up a few inches and then could be swung to the side: this gave the crew commander four inches of clear observation yet shielded him from shrapnel, air burst and machine gun bursts. Canadian crews had no such protection yet most tank commanders chose to have hatches open since spotting the enemy first was another life or death matter. Further, it allowed the crew to breathe fresh air.⁶³

Crews are exhausted and have headaches after long engagements but this is not known whether this is normal or due to fumes. Fumes are not noticed in the excitement of battle.⁶⁴

Determined soldiers were prepared to take the risks and the results were predictable; the highest percentage of tank crew casualties were the vehicle commanders.⁶⁵ Regimental requests were persistent :

The all around vision cupola is very much wanted; crew commanders consider that the present observation through the periscopes in the cupola

"Petrol consumption of this veh is high..." Tank Questionnaires, throughout. 6 CAR: Paras 14; 10 CAR Para 15; 27 CAR: Paras 14,15, 33 Armd Bde: Para 8; 21.

⁶³ Other adjustments were the universal dumping of the 50 Cal HMG mounted on Shermans. The firing position (crew commander had expose his upper torso) was much disliked. The gun constantly hit low branches or got entangled in wire. They ended up on reconnaissance Bren Gun Carriers. Commander of A Sqn, 7th Recce Regt recalled: "We stripped the knocked out tanks found the ordinance tank parks or were given 50s by crews. By the end of June, every Bren Gun Carrier had its own 50 calibre machine gun. Quite a lot of fire power for a recce troop." Colonel James Domville, personal interview, 1988.

⁶⁴ 6 CAR answers to Questionnaire Para. 3.c. "Homelite fumes, however, are distressing. In one case a gnr was knocked by Carbon Monoxide from the Homelite while firing with the Tk engine stopped." 33 BAB answers to Questionnaire Para 4. "Convoy driving most unpleasant, especially in view of the diesel fumes given off by the Sherman III. If there is a following wind, particularly when the tank is stationary, the dust cloud moves forward interfering with observation and the suction through the oil cooler draws the dust through the fighting and driving compartments, through the periscope, turret ring and any joint that is not dust tight." 27 CAR answers to Questionnaire Para 15. ii.

⁶⁵ "Casualties to tank commanders through head wounds when a tank is not penetrated are a serious problem, as they take longer to train and are more difficult to replace." RG 24 Vol. 10,554 Appx "J" to 21 Army Group RAC Liaison Letter No. 5, "Extract From Report by Medical Research Section on the Distribution of Casualties Amongst The Crews of Cromwell and Sherman Tanks" 28 August 1945, 2.

is entirely inadequate and experience proves there should be at least a part of the hatch open so they can stick their heads out to observe. As a result the cas to crew comds have been very heavy from snipers and ordinary rifle and MG fire. Crew comds once more demand that they have an adjustable seat so that they can see out of the cupola without having to stand in an awkward posn. They point out that in the prolonged actions that have taken place, comds have to stand for as long as 18 hrs on end.⁶⁶

Veteran tankers simply wanted Allied engineers to simply reproduce the Tiger cupola but there was no response from the factories. Commanding a tank continued to be a very dangerous and unarmoured occupation.

During the winter of 1943, while formal tests were being conducted at Chobham, a captured Tiger was put on public display at a Horse Guards Parade.⁶⁷ American and Canadian armoured officers joined British school kids in climbing over the tank and were relieved to find out it was a sitting duck for any 6 pounder. The truth was the exact opposite. Controlled trials quickly proved that although Tiger could be killed via short range flank fire, should it choose a less aggressive tactic and select to fight it out at long range, the Royal Ordnance scientists discovered, to their horror, there wasn't an Allied tank in the inventory that could defeat its armour. Point blank engagements at under 100 meters proved that 6 pounder and 75mm tank guns could not defeat Tiger's armour. The rounds simply bounced off.

There was more bad news: controlled tests⁶⁸ with standard Sherman and the new A4 armed with the highly touted 76mm M1A1 gun (just being delivered to American

⁶⁶ 10 CAR answers to Questionnaire Para 5. "Until the ARV cupola appears in the service, crew commanders will continue to put their heads out when searching for targets or observing fire." 27 CAR answers to Questionnaire Apx D. Para 5. "The Comd still prefers to put his head out while searching for targets and observing fire.... There is a great demand for the commander's cupola. The present practice has been to leave half of the hatch open and observe with the head out of the opening. Many crew commanders have been lost this way due to mortar fire and snipers but the feeling is still that the chance must be taken." 33 BAB answers to Questionnaire Para 5.

⁶⁷ "Brig A. Granelli visited the School of Tank Technology and returned to report he had seen the 'Tiger' PzKw VI, and had been impressed by its overall size, of which, the Bdr said, 'no very accurate idea was conveyed by photographs.'" RG 24, 14045 WD 2 CAB 3 Dec 43. Tigers had been at the School of Tank Technology at Chertsey since October. A Tiger was then placed in Horse Guards Parade for general public inspection in November 1943. December's London Illustrated News (4 Dec 43 issue) shows Army officers and children climbing over the tank. It was returned to Chertsey and Lullworth Camp, Dorset for gunnery trials.

⁶⁸ German tests recorded performance of KwK (tank gun) and Pak (AT gun): "Calibre Muzzle Armour-piercing capacity in mm with armor piercing shell 39 at MM Length Velocity m/sec angle of 60 degrees" at ranges to 3000 m. Both 75 and 88 mm regularly penetrated Sherman Armour equivalents to 2000 m. 88mm penetrated at 3000 m. MS#P-059, German Tank Strength and Loss Statistics (US Army Historical

select tank battalions) produced disturbing results. The standard Sherman 75mm, which formed the bulk of American, British and Canadian⁶⁹ tank battalions, had no chance against Tiger⁷⁰ unless they maneuvered within 100 meters and hit the rear turret or vertical side plates. This was particularly risky business for US and British tankers since Tigers were always protected by a silent partner⁷¹ and hedgerows were defended by German infantry armed with panzerfaust. Canadian Shermans had to cross the open velds that characterized the country between Caen and Falaise.

Penetration Table: Tiger versus Sherman A2 (75mm M3 Gun) and Sherman A4 (76mm M1A1 Gun)⁷²

		<u>Tiger I vs. Sherman A2</u>	<u>Sherman A2 vs. Tiger I</u>	<u>Tiger I vs. Sherman A4</u>	<u>Sherman A4 vs. Tiger I</u>
<u>Front:</u>	Turret	1800 m	0 m	1800 m	700 m
	Mantle	200 m	0 m	200 m	100 m
	DFP	0 m	0 m	0 m	600 m
	Nose	2100 m	0 m	2100 m	400 m
<u>Side:</u>	Turret	3500 m+	100 m	3500 m+	1800 m
	Super	3500 m+	100 m	3500 m+	1800 m
	Hull	3500 m+	900 m	3500 m+	3200 m
<u>Rear:</u>	Turret	3500 m+	100 m	3500 m+	1800 m
	Hull	3500 m+	0 m	3500 m+	1700 m ⁷³

Table 12

The 76mm M4 M1A4 stood a better chance however, A4 Shermans were in short supply. Not a single 76mm was available on 6 June. By 6 September only 250, out of the 1913 tanks in 12 Army Group, were A4 Shermans. The British 76mm gun - the 17 pdr

Division, 9 June 1950). The statistics provided by German experts (Professor Porsche, Hermann Burkhart Mueller-Hillebrand, and Generalobst Franz Halder), 7.

⁶⁹ British/Canadian Regiments were variously equipped but primarily with the A4: "the decision of the US Service of Supply to allocate to the British the entire Chrysler output of Sherman (M4A4) tanks for the first quarter of 1943." Ross, 239. Ross insisted on "standardizing the engine" but was not totally successful. Canadian Shermans were driven by aircraft engines, Chrysler and Ford V-8s. See: R. P. Hunnicutt, SHERMAN A History of the American Medium Tank (Belmont: Taurus, 1978), throughout, and, Konrad F Schreir Jr, The Classic Sherman (Conga Park: Grenadier, 1969), 77, Chamberlain and Ellis, 116-118, Crow, 56-60.

⁷⁰ Early versions of the Sherman had a periscopic sight, the British Tank team visiting Washington insisted that "British" Shermans be equipped with a telescope. American engines were all superior to British models. Ross, 241-242.

⁷¹ "Almost invariably, the sp of at least one other tk or sp gun, which remained silent until or unless needed." RG24 14186 BRAC, 1st Cdn Army CAC Bulletin No.1, Apx F "Experience with Tiger Tanks." 15 Oct 44.

⁷² Tom Jentz and Hilary Doyle, Tiger 1 Heavy Tank 1942-1945 (London: Osprey Military, 1993), 17, 19-20. also, Tom Jentz and Hilary Doyle, Kingtiger (London: Osprey Military, 1993), 23, 34.

⁷³ British tanks fared the worse. Cromwell and Churchill were easy kills; while their 75mm guns had little effect on Tiger's tough skin, see: Jentz / Doyle, 19.

mounted on the converted Sherman VC firing APCBC (self discarding sabot) soon proved to be the only MBT that could defeat Tiger in a frontal engagement at ranges of 1700-1900 meters – and the tank crews loved it: “Without doubt the Sherman Firefly was the best Allied tank of World War Two.”⁷⁴

The Enemy's Cats

If we had a tank like that Tiger, we would all be home today.

Sgt. Clyde D. Brunson, Tank Commander, 2nd Armored Division

Der Tiger ist, wenn man's bedenkt, Ein Wagen, der sich prima lenkt.⁷⁵

Tigerfibel (The Tiger Primer)

By July 1944, after three weeks of Normandy combat, Allied armoured doctrine had undergone drastic mutation. In the bocage country, American and British infantry preceded assaults in order to clear out tank hunting teams and lurking assault guns. In the Caen sector every operational offensive that pushed into open country was savagely hurled back despite overwhelming Allied artillery and air superiority. The German defence so altered Allied doctrine that heavy bombers were pressed into service on four separate army level breakthrough attempts and the Commander of 2nd Canadian Corps was forced to resort to complex night attack in August despite the fact that his opposition had been reduced to one emasculated SS division. It was not until Bradley had achieved operational maneuver that “traditional” armoured doctrine returned. There were many reasons for the stalemate from 6 June to mid August; some of these include the Allied inexperience, dynamic German leadership employing a proven doctrine, and defence in depth. The list is long, but one could also simply say, “Tigers and Panthers.” They stopped the Allies cold. Nothing could knock them out and nothing could withstand their firepower.

⁷⁴ See: RG24 Vol. 10,457 2 CAB “Tank Questionnaire - Gunnery” 27 July 44 Appx B. Firefly firing “super APDS 17pdr shot” could not penetrate frontal armour on Tiger II but could defeat side and rear armour on hull and turret. “...6 Mk V's were observed moving from ST ANDRE ... which we engaged together with B Sqn. Due to the range the 75mm had no AP effect.... The Fireflies were brought up and these two were brewed up.” RG24 14287 27 CAR After action report, 17 Jul 44, 16.

⁷⁵ “When one thinks of the Tiger Tank, the vehicle is in the first rank” Tiger crews were given a maintenance manual (Tigerfibel “The Tiger Primer”) that included cartoons, maxims and mottoes: Tigerfibel. Inspector General of Tank Troops 01.08.1943 (Wehrmacht Service Regulations D656/27). Motorbuch Verlag. Stuttgart.

The technological superiority of Tiger and the aggressive, almost reckless way it was employed by its confident crews, created a powerful legend that mesmerized Allied commands and agonized Allied armoured troops. British and American armies first encountered the new German heavy tank, the PanzerKampfWagen VI "Tiger I," during the North African Campaign. It outclassed anything in the Allied inventory. It weighed 54.1 tons, carried 100mm frontal armour plate that defeated every gun in the Western inventory, and mounted the 88mm KwK 36 L/56 cannon which killed every Western tank it could find, at any range. Normandy introduced the Allies to the newest main battle tank in the Wehrmacht arsenal: the PanzerKampfWagen V "Panther": crew of five, combat weight 44.8 tons, managed 45 kph on roads and 30 kph cross-country, which was 5 kph faster than the Sherman, a much lighter tank. It carried the very deadly Rheinmetal 75mm KWK 42 L/70. "The German guns have a much higher muzzle velocity and no tell-tale flash. The resulting flat trajectory gives great penetration and is very accurate."⁷⁶

Panther, like Tiger, was produced as a German reaction to Soviet armour. In 1941, when General Guderian discovered the Soviet T-34 and KV tanks were superior to German main battle tanks, he urgently requested a special commission to design a new main battle tank as quickly as possible to "restore German superiority."⁷⁷ Suggestions included outright copies of the T-34. The final decision reached was to base the panzer arm on two new all-German designed tanks: Tiger and Panther. Rushed production had its drawbacks. By 28 June 44, the Inspector General Panzer Troops, Heinz Guderian, reported on the state of German AFVs:

The PzKpfW IV, V and VI have proven to be successful..[but]... The Panther appears to catch fire quickly. The life span of the Panther's motors (1400 to 1500 kilometres) is significantly higher than the Panther's final drives. A solution to the final drive problem is urgently needed.⁷⁸

⁷⁶ Exhibit No. 1. Report: BGen J. H. Collier, CC "A", 1, White Report.

⁷⁷ General Heinz Guderian, Panzer Leader (London: Michael Joseph, 1952), 276.

⁷⁸ MkV engines were unpredictable: "27 July-5 Aug the [Panther] coy changed HQ three times, always moving at night ... new engines after 435 miles." RG24 13712, Maintenance Log 1 SS Pz Div 4 Coy, 1 SS Pz Regt. 1 Jul-30 Aug 44.

Despite the complexity⁷⁹ and high manufacturing cost, Panther became the main battle tank for the Wehrmacht and dominated battle, particularly in the West. Although it dwarfed Sherman, Panther outperformed the American tank in wet and muddy terrain. By the fall of 1944, there were bitter complaints from battalion commanders and crew commanders alike.

It has been claimed that our tank is more maneuverable. In recent tests we put a captured German Mk V against all models of our own. The German tank was the faster, both across country and on the highway and could make sharper turns. It was also the better hill climber.⁸⁰

The Panther had six distinct advantages over Sherman:

- a. smokeless, low flash powder
- b. better gun: higher muzzle velocity, greater accuracy, defeated all Allied armour: "The Jerries' guns didn't fail, they knocked out three of our Tank Destroyers and one Sherman tank at 2800 to 3000 yards. If our tanks had been as good as the German tanks they would never have scored a hit I have actually seen ricochets go through a M4 at 3000 yards."⁸¹
- c. better armour defeated all allied guns above 500 meters in frontal engagement : "... I saw a 90mm TD shell bounce off a Mark V at approximately 1200 yards.... I have seen HEAT fired from a 105mm Howitzer at a Mark V at 400 yards. The track was hit and damaged and a direct hit on the turret which only chipped the paint."⁸²
- d. superior sights : "German sights caused us much concern ... more magnifying power and clearness than our own ... they are able to choose their power between 2 and 6 power, where ours is a stationary 3 power. The German sights have lighted graduations and can lay on a target at night...."⁸³

⁷⁹ "...a tremendous variety of spare parts was required...cannibalization by crews was so thorough that the manufacturer would rarely receive more than an empty hull." German Tank Maintenance in World War II. Dept of the Army. No. 20-202. Washington 1954. German reports noted: "... large fuel consumption ...arrangements must always be made for Panthers to be protected by other troops at night ... less suitable than Mk III or Mk IV or assault guns for supporting PzGrens in mopping up/overrunning the enemy." WD 3 US Army, G2 Periodic Report No.5, Appx No. 2, 30 July 44. Hansen Papers.

⁸⁰ Exhibit No. 2. Lt.Col W. M. Hawkins, 11, "Sgt Frederick H. Wilson, Tank Commander: "The German Mark V, which is much heavier than our M4, beat ours around a large sized field. Made a sharp swerve or reverse of direction in a shorter space than ours can possibly do." Exhibit No.3 Sgt F. H. Wilson, 41. White Report.

⁸¹ Exhibit 3, Sgt Leo Anderson, 13, White Report.

⁸² Exhibit No.3, S/Sgt Clarence W. Pennington, 22. And, Exhibit No.2, Lt.Col John A. Beall, Comd, 702d Tank Destroyer Bn., 19. White Report.

⁸³ "For shooting into the sun they just flip a lever which just lets down a coloured lens, reducing the glare." Exhibit 3, Pte Howard A. Wood, T-5, Gunner, 6. and, RG24 Vol. 10460 2 CAB "Answers to Tank Gunnery Questionnaire" A lengthy report with returns from the three Arm'd Regts in 2 CAB. 27 July 44. Appx B, Para 15. Also, Vol. 10, 457, 1 CAC June 1945, "Tank Questionnaire" Para 25.

e. superior flotation: "... before the addition of track extensions, our medium tanks sank 6 to 8 inches while the MkV tracks were not over 4 inches."⁸⁴

f. greater speed

Although it weighed less than Tiger, Panther was physically larger (68cm wider and 34cm higher) but it was always portrayed as a subordinate tank. Its presence created less panic. It was one of the curiosities of the war. There were only three weak Tiger battalions in all of France yet they were reported everywhere. Panthers outnumbered Tigers by at least four to one, knocked out more armour and infantry but never inspired quite the same terror.

Tank Killing: The Facts

Some things I have seen in combat that were disturbing and disgusting to any tanker. Many times I've seen our tanks engage German tanks in tank duels. Their tanks have the ups on us.... I am a tank commander and a veteran of Africa, Sicily, France, Belgium, Holland and Germany. I have been wounded once and have seen most of the action that my unit has been in. I guess I am just lucky.

Sgt Leo Anderson. Platoon Leader, 2nd Armd Div⁸⁵

Field studies based on actual engagements were gathered at the direction of American, British and Canadian armoured headquarters to permit clearer doctrinal analysis of tank engagements in the ETO and tender a vast amount of valuable evidence for the resolute military historian. The highest number of Allied war casualties occurred in the three months of the Normandy Campaign, and there were clear differences between the British-Canadian and American wastage. American tank casualties peaked during the winter of 44-45, reflecting Lorraine and the Battle of the Bulge. During the same period, wastage for 21st Army Group was virtually nil. British-Canadian armour losses reached their zenith during the Norman summer. By the time *Cobra* was in full slither, Patton's

⁸⁴ Exhibit No.2, Col. Paul A. Disney, Comd 67th Armd Regt, 2, and, Exhibit No.2, Lt.Col Wilson M. Hawkins, Comd 3rd Bn. 67th Armd Inf., 10. Exhibit No.3, 1st Lt. Harold A. Shields, Co "A", 66th Armd Regt: "...I noticed that the German tank had sunk into the soft ground about 3.5 to 4 inches. I also noticed the impressions left by an M4 medium tank and noticed that it had sunk about 5 or 6 inches. This was very interesting to me, as the German Mark V tank, weighing approximately 45 ton, was three times heavier than my own tank, weighing 15 ton. Our own M4 medium tank weighs 30 ton." and, "I saw where some MkV (Panther) tanks crossed a muddy field without sinking the tracks over five inches, where we in the M4 started across the same field the same day and bogged down." Exhibit No.3, Cpl Henry J. Fazzini. White Report.

⁸⁵ German Tanks Destroyed by XIX Corps. 15 Dec 44. Booklet Tank and SP Gun Identification. Tech Int Bulletin #8. 20 Feb 1945. ETO.

Third Army faced little armoured opposition, yet enjoyed the lion's share of the attention, while Hodges, Dempsey and Crerar struggled against the bulk of 5 Panzer Armee.

The AGF commissioned a series of reports from the Aberdeen Proving Grounds and independent university scholars. DND Ottawa tasked serving staff officers familiar with the armoured operations in France. Among the most complete efforts were two surveys by Professors Coox and Naisawald, a Canadian study, exclusive to Normandy, conducted by two veteran cavalry officers, Majors N. A. Shackleton and R. P. Bourne⁸⁶ and a comprehensive study by David C. Hardison for Ballistic Research Laboratories, Aberdeen Proving Grounds.

Shackleton and Bourne studied twelve key Normandy battles featuring Canadian forces at division level and below. The report's most important findings were:

- a. An average of three to one superiority, in sub-units and weapons, of attacker over defender was only achieved in two actions, No.5 at Carpiquet (4 July) which failed, and No. 6 at Buron-Gruchy-Authie (8 July) which succeeded.
- b. In two of the successful attacks the defenders had no artillery support and in a third the defenders had no tanks.
- f. In the successful attacks the value of attacking artillery and mortar fire exceeded that of the defence by more than 50%.
- g. Except in one instance in the successful attacks (Pt 140, the destruction of BCRs by Kg Wünsche on 9 Aug) the value of attacking infantry exceeded that of the defence.
- h. Except in one instance, in the successful attacks the value of the attacking armour was at least 30% less than that of the defence.⁸⁷

The Hardison study gathered data from 136 separate tank engagements (part of 98 Battalion or Combat Command actions) covering the period 15 August 1944 to 30 December 1944. Seven unit actions featured the battalions of 3rd Armored Div (MGen I. D. White) and 4th Armored Div (MGen J. Wood) from the Breakout and Pursuit in

⁸⁶ Operations Research Office ORO T 117 Alvin D. Coox and L. Van Loan Naisawald, "SURVEY OF ALLIED TANK CASUALTIES IN WORLD WAR II"; Major R. P. Bourne and Major N. A. Shackleton, "Analysis of Firepower in Normandy Operations in 1944" NDHQ Operational Research and Analysis Establishment (Hereafter cited as Analysis Firepower Normandy Ops 44). And, David C. Hardison, "Data on WWII Tank Engagements Involving the US Third and Fourth Armored Divisions", BRLM Report No. 798 Ballistic Research Laboratories Aberdeen Proving Ground, Maryland, 1947 (Hereafter cited as BRLM 798), and, BRLM Report No. 702, "Terrain and Ranges of Tank Engagement", Research Laboratories Aberdeen Proving Ground, Maryland, 1946.

⁸⁷ Bourne / Shackleton, 2-3. BRLM 798.

Normandy, through to the Arracourt Battles and the Relief of Bastogne.⁸⁸ The participating armour was primarily M4 Sherman although Tank Destroyers (M10 and M18) participated in eight engagements. The four significant findings were:

a. Range was the determining factor and exclusively favoured the Germans.

b. The Local Advantage of the Defense:

In the 86 engagements in which the numbers of weapons and casualties are known, the allies employed a total of 797 weapons, lost 149. The enemy used 327 weapons, lost 158 "... In the 40 considered engagements in which they were on the attack, the allies lost 100 of 437 employed weapons while the defending enemy lost 45 of 135. In the 37 engagements in which the enemy were attacking, they lost 83 of 138 weapons while the allied defenders lost 14 of 205."

c. The Advantage of First Fire:

"Of 11 engagements in which they fired first, the attackers lost 12 of 88 weapons while destroying 30 of 64 defending weapons. Of 57 engagements in which they fired first, the defenders lost 22 of 238 weapons while destroying 154 of 397 weapons. Thus in 68 engagements 34 of 326 weapons were lost by the side which fired first while destroying 184 of 461 opposing weapons."

d. The Advantage of Mass:

"Of the 81 cases where a force of 3 or less weapons was employed, that force, in 37 cases, was annihilated. Of 91 cases in which a force of over 3 weapons was used, the force was annihilated in only 10 cases.... It is interesting to note that in 100 of the considered 129 engagements, one force had no losses ... in a majority of engagements, one force tended to possess an overwhelming immediate advantage."⁸⁹

The study further identified two critical factors in tank combat: Locating the enemy (target acquisition), and, the Advantage of first fired AIMED rounds (77% of engagements resulted with NO casualties to one force).⁹⁰ Above all, distance and armour decided tank combat results: "in a head-on one tank against one tank fight ours almost always comes out as a casualty."⁹¹ Of 136 tank engagements investigated, wastage was equally distributed in the three main range categories: 0-500 meters, 501-1000 meters, and 1001-3500 meters. Each range group accounted for approximately one third tank

⁸⁸ "Data on WWII Tank Engagements Involving the US Third and Fourth Armored Divisions" and, White, "A Report on United States vs. German Armour."

⁸⁹ BRLM 798, 9, 10, 25.

⁹⁰ BRLM 798, 25.

⁹¹ Exhibit No.2 Col I. S. Hinds, Comd CCB, 2d Armd: "Comparison of US Equipment with Similar German Equipment", 1.

kills whereas German losses dropped by 50% at distances over 1000 meters: "The higher muzzle velocity increases their trajectory, as range estimations are of less importance with such a flat trajectory."⁹² The immediate battlefield effects of the "tank scandal" were that German guns could kill at any distance but the superior armour on German tanks made them twice as safe at long range.

Tank Losses from 136 Engagements⁹³

Range	<u>Allied</u> Tank Losses per Action: out of Total 215 AFVs KO'D	<u>German</u> Tank Losses per Action out of Total 175 AFVs KO'D
0-500 meters	75 - 35%	57 - 33%
501 - 1000 meters	65 - 30%	76 - 44%
1001 - 3500 meters	75 - 35%	41 - 23%

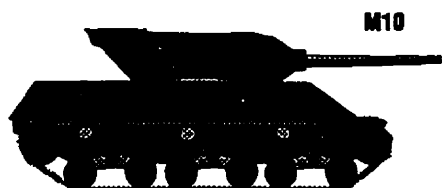
Table 13

A continued series of corps level tank battles like *Goodwood* or *Totalize* would have reduced the Allied tank arm to near impotence despite the aggregate attrition to German armour. Notwithstanding overwhelming air and tank superiority, total Allied casualties were almost three times that of the Wehrmacht. If not for the arrival of another half dozen American tank divisions, there would have been no appreciable Allied armoured mass capable of both continued breakthrough operations and follow-through maneuver. In operational contests, the old lesson was repeated and relearned: attrition precedes maneuver.

Given the technological reality of the battlefield, the art of killing German panzers en masse had less to do with gunnery than operational maneuver. The Soviets had discovered this by 1943; the western Allies adopted a "we'll learn from our own mistakes" approach. It took Montgomery at least four tries before one of his armies broke through and by then he had decimated his armour and fired most of its leaders.

⁹² White: LtCol W. M. Hawkins, Comd 3rd Bn, 67th Armored Regt.

⁹³ This graph represents results from data included in Hardison, BRL MR-798 "Data on W.W. II Tank Engagements Involving the U. S. Third and Fourth Armored Divisions" which comprises detailed accounts of 136 tank engagements circa 1944-45 in the ETO. The final statistics have been compiled by the author.



Tank Destroyer M 10
 Gun: 76mm (Caliber Length)
 Range (Eff Frontal Penetration): Mk IV to 1500m ; Panther/Tiger: nil
 Best Armour Penetration at 500m: 3.5"
 Armour Piercing Shell Velocity m/sec: 870
 Armour: 59mm
 Combat Weight: 30 tons
 Height: 287cm
 Speed: 26 mph (road); 20 (xcountry)
 Crew: 5



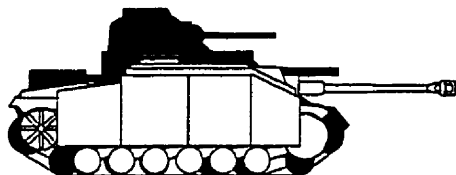
JagdPanzer "JagdPanther" Jgd Pz V Sd Kfz 173
 Gun: 88mm PaK 43/3 (71 Caliber Length)
 Range (Eff Frontal Penetration): all Allied MBT 2000+m
 Best Frontal Penetration at 500m: 6" plus
 Armour Piercing Shell Velocity m/sec: 1000-1130
 Armour (min-max): 60-90 mm
 Combat Weight: 45.5 tons
 Height: 272cm
 Speed: 46 mph (road); 24 (xcountry)
 Crew: 5

JagdPanzer IV

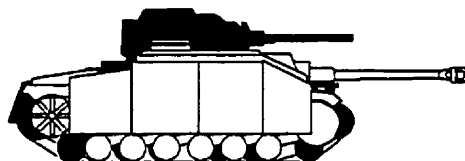


JagdPanzer Pz IV Sd Kfz 162/1
 Gun: 75mm StuK 42 (70 Caliber Length)
 Range (Eff Frontal Penetration): all Allied MBT 1500m
 Best Armour Penetration at 500m: 3.5"
 Armour Piercing Shell Velocity m/sec: 935-1120
 Armour (min-max): 45-90 mm
 Combat Weight: 25.8 tons
 Height: 185cm
 Speed: 40 mph (road); 16 (xcountry)
 Crew: 4

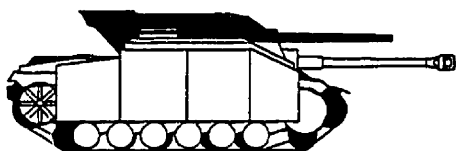
GERMAN TD ADVANTAGE



StuG III compared to Grant



StuG III compared to Sherman



StuG III compared to M10 Tank Destroyer

Although both vehicles are "tank Destroyers" and both are built on the chassis of an MBT, the M10 still has its turret. Trade off: flexibility vs armour and high target profile. StuG III can hide in small depressions and behind low walls.

StuG III



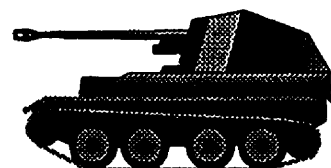
Tank Destroyer StuG III Sd Kfz 142 Ausf B
 Gun: 75mm StuK 37 (24 Caliber Length)
 Range (Eff Frontal Penetration): all Allied MBT 1500m
 Best Armour Penetration at 500m: 3.5"
 Armour Piercing Shell Velocity m/sec: 385
 Armour (min-max): 50-90 mm
 Combat Weight: 22 tons
 Height: 194cm
 Speed: 40 mph (road); 24 (xcountry)
 Crew: 4

HETZER



JagdPanzer "Hetzer" Pz 38 t
 Gun: 75mm (48 Caliber Length)
 Range (Eff Frontal Penetration): all Allied MBT 1500m
 Best Armour Penetration at 500m: 3.5"
 Armour Piercing Shell Velocity m/sec: 750-930
 Armour (min-max): 20-75 mm
 Combat Weight: 18 tons
 Height: 210cm
 Speed: 40 mph (road); 14 (xcountry)
 Crew: 4

MARDER III



Tank Destroyer "Marder III" Ausf M
 Gun: 75mm PaK 40/3 (46 Caliber Length)
 Range (Eff Frontal Penetration): all Allied MBT 1500m
 Best Armour Penetration at 500m: 5.5"
 Armour Piercing Shell Velocity m/sec: 795-933
 Armour (min-max): 15-20 mm
 Combat Weight: 10.5 tons
 Height: 248cm
 Speed: 42 mph (road); 15 (xcountry)
 Crew: 4

"Who Killed Tiger?"

It has been stated that our tanks are supposed to attack infantry and should not be used tank vs. tank. It has been my experience that we have never found this ideal situation for in all our attacks we must of necessity fight German tanks.

LtCol W. M. Hawkins, CO 3/67th Armd Bn.

In my opinion the reason our armor has engaged the German tanks as successfully as it has is not due to any means to a superior tank but to our superior numbers of tanks on the battlefield and the willingness of our tankers to take their losses while maneuvering to a position from which a penetrating shot can be put through a weak spot of the enemy tank.

Colonel S. R. Hinds, CC "B", 2nd Armored Div

On 24 May 1945 the three principal German operational commanders in the Normandy campaign, Generals von Geyr (Panzer Gruppe West), Sepp Dietrich (1 SS Pz Korps) and Paul Hausser (2 SS Pz Korps), joined General Heinz Guderian at the Seventh Army Interrogation Center in Bavaria. During the session, this crème de la crème of panzer leaders was posed the following question: "To what do you attribute German tank losses by percentage – air, anti-tank, and mechanical? Which was most feared by tank crews?"⁹⁴ Except for Guderian who was very hesitant about answering this question, the replies were direct and revealing. Obergruppenführer Paul "Papa" Hausser,⁹⁵ whose divisions were most victimized by Allied air and Naval gunnery, noted:

During long movements to the zone of action, 20-30 percent of all tanks en route fall out due to mechanical failures. Considering the remainder as 100 percent, 15 percent are lost through mechanical failures; 20 percent through air attacks; 50 percent through A/T defense; and 15 percent are knocked out by artillery. Tanks and TDs are feared most by German tank crew.⁹⁶

Guderian is quoted as saying that "60-70 percent through mechanical failures (Eastern Front); 15 percent A/T; 5 percent artillery; 5 percent mines; 5 percent others."⁹⁷ Dietrich did not agree completely, "Mechanical failures, 30 percent; air 10 percent; A/T, 15

⁹⁴ Appx E, Annex 2 "GERMAN ESTIMATES AND COMMENTS ON THEIR OWN TANK CASUALTIES", 92, taken from Coox and Naisawald, ORO 117.

⁹⁵ "unser papa Hausser" (our papa Hausser): Otto Weidinger, Kameraden bis zum Ende (Das SS PzGren Regt 4 "DF") (Oldendorf: Verlag, K. W. Schitz, 1987), 145.

⁹⁶ von Geyr could not give even approximate figures. "He thinks air-tank cooperation the most deadly combination." ORO-T-117 German Estimates and Comments on Their Own Tank Casualties. Annex 2 to Appendix E. Seventh Army Interrogation Center, ETO, 24 May 1945. MHI.

⁹⁷ ORO T 117, Appx E, Annex 2, 92.

percent; tanks, 45 percent. Losses due to artillery were negligible. Most feared by crews: Allied tanks and TDs.”⁹⁸

Von Geyr, who, mostly through inexperience and arrogance, lost his entire Headquarters to an air strike by fighter ground attack in mid June, was understandably impressed with air power. Those who suffered through the full three months knew better: tanks kill tanks. The most interesting information is the rate of mechanical breakdown.

The Generals’ recollections were backed up by Allied ground survey teams who examined every tank or AFV hulk found in the Normandy battlefield. They concurred that wastage was, in fact, caused by mechanical breakdown or crew abandonment and supported Dietrich’s and Hausser’s indifference toward the allied fighter ground attack threat. Extensive American interrogation and battlefield inspection concluded that the vast number of German tanks were killed by direct gun fire, the overwhelming majority from tanks and TDs. The remaining losses were caused by air, mines, and miscellaneous enemy action. Again, the highest single cause of German tank losses was from miscellaneous, non-enemy, action:

German Tank Losses by Causation 1944-1945 ⁹⁹

Cause of Immobilization	No. of Sampled Tanks	Percent of Total Known
Gunfire (75,76,90,TD)	520	43.2%
Hollow charge	53	4.4%
Air	91	7.5%
Mine	3	0.2%
Misc, enemy action	9	0.7%
Misc, non enemy action	522	43.8%

Table 14

Normandy ended German industry’s recovery in the face of increasing strategic bomber attacks and Soviet offensives. The Speer reforms could keep pace with Eastern Front wastage but were eventually overwhelmed by the drain from the Normandy

⁹⁸ ORO T 117, Appx E, Annex 2, 92-93.

⁹⁹ ORO-T-117. Appx E, Table XXXV. 252 panzers were destroyed by their own crews, 222 were simply abandoned because of lack of spare parts, gas, recovery or while under attack.

battlefield.¹⁰⁰ Interestingly, during this period Allied tank production actually dropped. This was understandable in the UK where the War Department decreased tank manufacture, preferring to concentrate on Firefly conversion and depend on American lend lease M4s to equip its armoured divisions. American production began to decrease after Normandy and fell immediately before the Ardennes. The price for hubris was the shock of the Bulge and slapdash M26 heavy tank which did not reach troops until well into 1945.¹⁰¹

The American Army commissioned supplementary studies to extend the initial surveys submitted by 2nd and 3rd Armored Divisions. Professors Coox and Naisawald, working, as fate would have it, out of the Operations Research Office in Fort Lesley J. McNair, provided a conclusive analysis of allied armour in battle. Their findings concluded:

1. Gunfire, both numerically and percentagewise, exacted the highest over-all toll of tank casualties....
2. Hollow charge weapons fluctuated at a very low level of effectiveness.... Toward the end of the war the incidence of tanks immobilized by panzerfaust weapons, during offensive and pursuit operations, reached the toll of 25 to 35 percent of all tank casualties....
3. Land mine warfare indicated an increased number of mines employed by Axis powers.... The decreased tank casualties to mines in the final stages of the Western European campaign seemed to indicate that the enemy could not lay mines because so many of his troops were attempting to get out.

¹⁰⁰ During the first five months of 1944, production kept pace with losses: Tanks - 3,571, Assault Guns - 2,550 for a total of 6,121. For the same period Department JN6 recorded accepting 5,212 units from the manufacturer against a battlefield wastage of 3,119. This gave the Wehrmacht a net gain of 2,093 units. Before D Day, total holdings for OKH had been increased by 36%.

	1 Jan 44	6 June 44
Pz Mk VI	437	698
Pz Mk V	1,386	2,234
Pz Mk IV	1,558	2,048
75mm Stug	<u>2,439</u>	<u>2,933</u>
Total	5,820	7,913

see: F. M. von Senger und Etterlin, *Die deutschen Panzer 1926-1945* (München: J. F. Lehmanns Verlag, 1965), 342-345.

¹⁰¹ AFV Production totals:

	1943	1944
GERMANY	12,063	19,002
USSR	24,000	30,000
UK	7,476	2,474
USA	29,497	17,565

MS#P-059 "German Tank Strength and Loss Statistics", Appendix 3 "Production", and ORO T 117, 77 Appx D. See also: v. Senger u. Etterlin, 346, Wilmot, 147, 150.

4. The Canadian sample provided the only detailed data from which conclusions may be drawn concerning the toll exacted by non-enemy causation. The figures show the very high proportion immobilized by this factor, in relation to all other causes, during offensive and pursuit operations; thus, during the breaching of the Gustav Line in Italy, terrain and mechanical failures accounted for twice the toll exacted by the usually highest causative agent, gunfire.¹⁰²

Coox and Naisawald site 785 yards as the average ETO range for tank engagement; this is lower than the average range from Normandy-Western France which is 902 yards, based primarily on British-Canadian engagements in the area around and south of Caen.¹⁰³

Although Americans lost more tanks than the British and Canadians, the British and Canadians did it with more style. Few defeats could equal the grandeur of 500 burning hulks at *Goodwood* or the destruction of the BCRs during *Totalize*. The Americans were bled slowly and methodically by Stugs, Paks and panzerfausts. Bocage engagements were at point blank distance. Although the American tank battalion samples total 2579, half were victims of gunfire and only about 30% of this was tank fire. The British and Canadian losses to gun fire were 60% of which 55% were kills by tanks.

Armour vulnerability forced the Sherman to try to close quickly but it was generally quickly discovered: "The silhouette of the Sherman is such that it is easily spotted 200-3500 yards away."¹⁰⁴ German armour, openly contemptuous of the Allied 75mm gun,¹⁰⁵ tempted Shermans, daring them to come forward and joust: "the enemy showed tendency to put his tanks on forward slopes and hold that position counting on the extreme range as a safety factor."¹⁰⁶ Sherman's only advantage was the quick draw in a short range gunfight:

¹⁰² ORO T 117 "Conclusions", 2-3.

¹⁰³ Based on study of BRL MR-798. Author selected 136 tank actions (August to December) with an average Allied to German tank numbers of 12 tanks to 4 panzers. Average range of intervisibility was 1229 yards, a distance that would have been unusual in the Italian Theatre for unit/sub unit action. Most tank gun hits were on the hull (52%).

¹⁰⁴ Exhibit No.3, Capt Henry W. Johnson, Co "F", 66th Armd Regt. 5, White Report.

¹⁰⁵ Although the British Armament Research Establishment produced an Armour Piercing Discarding Sabot (APDS) round for the 6pdr in late 1943, an APDS round for the 17pdr was not available until the summer of 1944; it immediately became the mainstay for Firefly and anti-tank troops.

¹⁰⁶ D Hist 141.4A27013 LD2. 27 Cdn Armd Regt (Sher Fus). After action report, Lt. P. W. Ayriss 31 Jul 44.

... the Oilgear traversing, which gave hair-line laying of the gun ... its high speed in traversing from target to target was so much faster than the gear on the German 'Tiger' tank that it was possible to catch the enemy tank off line.¹⁰⁷

The great German bugbear was maintenance. Both Panther and Tiger were difficult to keep running. Because most abandoned panzers were recovered at night by German mechanical engineers, there are few records of serviceable Panthers being overrun by Allied forces until the retreat from Mortain in late August.¹⁰⁸ German tank maintenance and repair was carried out as far forward as possible. Maintenance crews accompanied the troops "as enemy fire permitted."¹⁰⁹ Mechanical Engineer officers of the tank battalions accompanied the maintenance crews to the combat area and personally directed their work.

Damaged tanks which could not be repaired with the available means by combat units were collected by recovery vehicles and turned over to the maintenance companies of the tank regiments or to other maintenance shops. By evening, battalions or regiments had a clear picture as to the number of operational tanks, the number in need of minor repairs, the number in need of major repairs and total losses. These figures were reported through command channels.¹¹⁰

Without normal first line repair support, Panther and Tiger could not keep pace with Sherman: "Many a Panther was lost because of shortage of some elementary spare

¹⁰⁷ Ross, 248. "...report that a Sherman had been knocked out with the German 75mm round going through the transmission, through the ammunition rack on the hull floor, through the engine and out the rear!" Sherman's gun could not return the favour: "Ordering my gunner to fire at the closest tank, which was approximately 800 yards away, he placed one right in the side, which was completely visible to me. To my amazement and disgust, I watched the shell bounce off the side. My gunner fired at least six more rounds at the vehicle hitting it from the turret to the track...I was completely surprised to see it moving after receiving seven hits from my gun. Sgt F. W. Baker, 2nd Armd Div." Zaloga, 33, 35-36.

¹⁰⁸ One Mk V captured near Vimoutiers produced a log book that showed some impressive track mileage; the vehicle had road marched from Paris to Verrières, then to Mortain and back again to the Falaise area. If this Panther was typical, then Panthers could keep going and trade maneuver for maneuver with Sherman for considerable periods but only so long as the battlefield remained stable and normal maintenance and repair took place. Coox and Naisawald samplings indicate 79% per armoured brigade per 79.4 days in Pursuit. The average per 100 miles was 79% of tank losses and was attributed to Mechanical Failure. Italian statistics for this period using 1200 Canadian and US tank casualties are 35% tank wastage due to Mechanical Failure. Overall ETO figures for AFVs immobilized by drowning, accident, bogging and mechanical failure, based on US and Cdn sample of 6200 casualties is 21%.

¹⁰⁹ RG24 10553 CMF Info Letter No. 10; Jentz, 97.

¹¹⁰ P-059, 15.

part or because it could not be repaired in time.”¹¹¹ Repair by tank crews was next to impossible; the Mkv and Mk VI were too complex a machine and, by 1944, most crews did not have the training or mechanical skills for anything except rudimentary maintenance.

In conclusion, despite claims by RAF Typhoons,¹¹² the most accomplished German tank killer in Normandy was German engineering. An astounding 48%¹¹³ of German tank wastage was due to abandonment or destruction by their own crews. In some cases it was lack of fuel but mainly the cause was mechanical breakdown. The best way to kill the big cats was to march them to death. Maneuver warfare was the kiss of death to the panzer arm in 1944.

The final word on German technology was nailed into the last paragraph of the New Zealand Division study which concluded: “Who Killed Tiger? – Tiger Killed Himself.”¹¹⁴

¹¹¹ Publication No. 20-202 “German Tank Maintenance in World War II” US War Office, Department of the Army, June 1954, 23-26.

¹¹² See data from BRL MR-798, ORO T 117, ORS Report No. 12 and, ORS Report No. 17, indicate Air Force claims were wildly exaggerated – no more than 9% of panzers were knocked out by air strike. The number rose after Mortain to 25% of tanks attacked were destroyed by Rocket Projectiles from Aircraft, Air Cannon and Bombs vs. 63% tanks Kao’s by AP shot. See: Ian Gooderson “Allied Fighter-Bombers versus German Armour in North-West Europe 1944-45: Myths and Realities”, The Journal of Strategic Studies Vol 14 No.2 June 1991, 210.

¹¹³ ORO T 117 claims 48% abandoned / destroyed by crews, Coox and Naisawald give 43.2% abandoned. ORS Report No. 17 states that in the grand total of German tank wastage, airstrikes accounted for 4.4% vs. 11% from AP shot and 76% destroyed or abandoned by crews. ORS No. 17, 1-3.

¹¹⁴ During the summer of ’44 as the Germans withdrew from Rome, a New Zealand Division technical team set about examining the Tiger tanks found along the retreat. To their surprise, there were twelve Tigers found “on or alongside the road.” Seven had no battle damage, three were blown up by their crews, and only two were actually hit by Allied guns. Close inspection showed that most Tigers simply broke down. Tigers were “not sufficiently reliable for long marches” The specialization required for maintenance were more than the already hard pressed German support system could keep up with. The experiment’s conclusion was simple: “Push him ... make him run.” RG24 14186 (BRAC) 1st Cdn Army CAC Info Bulletin No.1, Apx F “Experience with Tiger Tanks” (2nd NZ Div Int Sum 334) 15 Oct 44.

CHAPTER EIGHT

THE OPERATIONAL ART IN NORMANDY: *SHAEF* vs. *STAVKA*

Penetrating and merciless analysis and criticism of our military experience is needed if our armed services are to grow better rather than worse. We cannot afford to have any protected heroes.

Major P. E. Appleton, Cavalry

Tactics are the material of Operational Art

A. A. Svechin

As we maneuver in Louisiana, so shall we fight

Maj. General W. D. Crittenberger

Cavalry and Mechanization

The introduction of armour in World War I signalled the end of cavalry operations. Although mounted formations fought spirited campaigns during the Russian Civil War and the Polish campaigns, the future lay in mechanization. The Fuller-Liddell Hart solutions to future war ("all-tank armies") were debated by military professionals and initially rejected because of the mechanical unreliability of the tank and a parochial reaction against young Turks who threatened to dominate the military establishment. Despite the efforts of armour pioneers, mechanization succeeded primarily because of politicians. The support of both Fascist and Communist despots created vast tank parks and forced the west to create parallel organizations. Notwithstanding experimentation in Spain and Manchuria, mechanization was totally accepted only after the invasion of Poland. France and England did not organize armoured divisions until 1940 and the Canadian and American armoured corps were created after the German invasion of France.

Initially, both Infantry and Cavalry attempted to absorb the tank. The Cavalry wanted to bring it under control as a stable hand to the horse while the Infantry intended to use armour as a mobile machine gun platform moving at a soldier's pace. Tank

fanatics' demand for a separate arm was successfully resisted in the USA but not in Russia, Germany, and England. The creation of the RTC was a half step forward for armour; it identified and concentrated the zealots, making them easier targets. Both European and American cavalry attempted to subvert mechanization. As late as 1939 the cavalry still refused to recognize the capabilities of armour.¹ Opposition came principally from senior commanders rather than the regiments who were, in fact, quite prepared to mechanize. The horse, ever the devoted comrade, was better off patrolling the frontier and playing polo than advancing against shrapnel or maxim fire – no cavalier wanted to see his faithful steed slaughtered.

Blitzkrieg made the transition both necessary and clear: Armour was cavalry. Better still, the armoured division was the resurrection of heavy cavalry. The panzer brought promise of tactical dominance to the arme blanche. The US Cavalry, perhaps because it continued to perform operational missions and developed a “modern” doctrine for horses in the post war period, refused to accept any conversion. This refusal to accept reality led to a break between “cavalry” and “armor” that should never have occurred. The US Cavalry would never recapture its former stature. Mechanization affected no other arm in the same savage way.

The “Louisiana Maneuvers” served to both assay the intended doctrine and to convince the doubtful. The American mechanized jeune école finally had the opportunity to test current Branch doctrines. The results were conclusive: in any tactical problem where armour was pitted against horsed or partially mechanized formations, the armoured force succeeded hands down. The maneuvers put the old-school opponents in their place and allowed Armor to find its legs: “(Louisiana) indicated a definite change in policy in so far as Infantry Tank units were concerned. Prior to this time we had separate tank

¹ “Cavalry generals, and they were many, denied all their recent experiences and continued to extol the power of the well-bred horse.” A. J. Smithers, Rude Mechanicals - An Account of Tank Maturity During the Second World War (London: Leo Cooper, 1987), xii and 7. As late as November 1940 both Generals J. K. Herr and G. A. Lynch (Chiefs of US Cavalry and Infantry) opposed MGen F. M. Andrews (Army G3) when he recommended to General Marshall that “the Armored Force be created as a separate combat arm.” Their argument was that it “violated” the terms of the National Defence Act of 1920 in creating “non-infantry and non-cavalry armored units.” Cavalry Journal (May-June, 1946), 38. For Herr's side, see: MGen J. K. Herr, and E. S. Wallace, The Story of the US Cavalry (Boston: Little Brown, 1953), 248-262. See also, Maj Gen R. W. Grow “The Ten Lean Years: From the Mechanized Force (1930) to the Armored Force (1940)” Armor Jan-Feb, March-April, May-June, July-August 1987 and, Robert Allan Doughty, The Seeds of Disaster - The Development of French Army Doctrine 1919-1939 (Hamden: Archon, 1985).

platoons, companies and battalions widely dispersed over the country.”² Yankee common sense, with a little help from Military Attaché reports and the spectre of France 1940, embraced both Fuller and the essence of Tukhachevsky while Canadian doctrinal thinking remained docile and subservient to current British opinion.

Doctrine

There were two basic problems in the formation of an “Armored Force”: doctrine and organization. Doctrine is simply a clear explanation of “how we fight”. Ultra sophisticated doctrines are useless if they are not understood by the troops who must carry them out. Still, new doctrines cannot be simplistic if they are to produce results in the battlefield. A three-part system is necessary.

The first stage is the formulation of a new doctrine by the General Staff. It should be founded on basic tactical principles readily understood by soldiers but decisive at the operational or strategic level. At the minimum, doctrine meets operational requirements. If totally new, it requires modern equipment as well as effective control techniques. The art is then perfected through war gaming. Thus an experimental formation is vital for any army in order to remain intellectually and tactically alive.

In the 1930s, western nations produced experimental tank outfits and conducted trial maneuvers in Grafenwöhr, the Salisbury Plain, Verdun, Kiev, and Louisiana. These allowed the officers responsible to test before they began to teach. Since philosophes differ in experience and paths to conversion, there is always a bit of Luther versus Zwingli in the officer corps. The challenge in developing a “perfect doctrine” is to have it function effectively at two levels. The difference between the Western philosophes and the Soviet Union was that liberal democracy insisted on an egalitarian doctrine that forced the staff to consider the welfare of the soldier. Although western generals wasted their men as uselessly as totalitarian powers, General Staffs were concerned with unity of doctrine and prepared to entertain debate. This cost time. Totalitarian regimes imposed doctrinal solutions with exacting discipline. The Russians, and to some extent the Germans, developed an operational doctrine that, to the untrained observer, was barbaric:

² Lessons Drawn from a Concentration of the Provisional Tank Brigade. Presented to Officers of 2nd Armored Div 7 Oct 1940. Alvan C. Gillem Papers, MHI.

overwhelming numbers wearing down a gallant but spent foe. Instead, the zenith of doctrinal accomplishment was the Eastern front where doctrine featured common sense and simplicity for the soldier and intricate chess moves for the grandmasters in the Red Army's General Staff.

Once the academic staffs at War Colleges understand doctrine, it is ready to enter the second phase, education. There are two subsets: revising the curriculum and educating the officers who in turn will indoctrinate the masses and purge anyone who does not profess the faith. Then formations must practice the new principles in what Francis Tüker called the "approach to battle", the better the training, the easier the battle ("Train hard, fight easy" - Savarov). The last, perhaps most important requirement is teaching the doctrine to combat troops: "How we fight" primers.

Adopting an armoured doctrine is impossible without an industry and a generous budget capable of equipping the force. Tank divisions need tanks. The Americans and Russians had both. The British and Germans didn't. The German Army's tank development programme looked good on paper, but it was, in some ways, bogus. The industry that produced the Volkswagen³ could not manufacture a main battle tank able to move around the battlefield without a coterie of mechanics and spare parts. The Panther and Tiger were deadly armoured killing machines but mechanical nightmares invented by engineers with a surprising inability to correct breakdown. Worse, they arrived late as a response to the Red Army armour. Russian tanks were simple. They worked, and they had big guns.⁴ The fact that when they finally reached the battlefield, the individual Panther and Tiger was marginally superior to the T-34 or KV, is a moot point. The Red Army was not jousting. The Soviet Strategic Offensive conducted operational maneuver at the army group level and called for masses of fast tanks that could attack deep and required little maintenance.

Effective Main Battle Tanks required both clever design and enlightened development. The Americans, despite the acknowledged success of the Sherman, failed

³ In fact, German industry couldn't even manage sufficient transport - hence the nearly one million horses in the Wehrmacht.

⁴ As late as 1990s T34s confronted Canadian Cougar squadrons in Somalia. The third world's armies and revolutionary armies are mostly equipped with T55-T62 or their copies. The Afghani rebels traded in sheep herding for tank fighting. Only robust armour could survive both the Himalayas and peasant hands.

in this respect. Their inability to produce an effective battle tank was not as complete a disaster as Britain's, but it was serious. The US Armored Force did not have a tank that could meet the enemy on relatively equal terms until 1945, despite the fact that the AGF quickly realized they required a dependable main battle tank to engage in Blitzkrieg:

... culminating phase of 3rd Army maneuvers was designed to illustrate the action of a large contingent of tanks to execute a breakthrough ... the attack area was drenched by heavy rain storm ... the tank attack was launched with disastrous results. Not over 20% of the tanks reached their objectives.... They were impotent, faulty in design of questionable military value.⁵

The M4 was an interim solution. The mechanically reliable Sherman eventually won campaigns, but at considerable cost to men and machines. The Americans have been prepared to learn from the Germans and are not ashamed to admit it. Wehrmacht dictums fit Yankee style and temperament: "War is not normal. It cannot therefore be won by rules that apply in peacetime. Situations in war change rapidly and changing situations cannot be saved by rules."⁶

Basics: What is a Tank?

While western engineering fiddled with heavy armour, there were parallel forces still at work; for even as "Armor" wrestled with tank doctrine, the Infantry and Artillery Generals, who now were responsible for the creation of a modern army, continued to question the tank as a viable battle system. The issue was definition: what is a tank? More importantly, what are tanks? The armoured division could not fight as an infantry division nor support an infantry division. It had its own doctrine. The result was an identified requirement for "Infantry Tanks" and "Cavalry Tanks." The British and French convinced themselves this meant a requirement for two different types of tanks and promptly went about developing them. But the West failed to completely analyze the problem. The answer to "What is a tank?" was that a tank represented a tracked, armoured vehicle that could fight in any terrain, in any conditions, in any climate, singly

⁵ Lessons Drawn from a Concentration of the Provisional Tank Brigade. Presented to Officers of 2nd Armored Div 7 Oct 1940 J. R. Gillem Papers, USAWC, Carlisle.

⁶ "Lecture, Captain Bechtolsheim, US Artillery School 1932", Brig.Gen. Henry C. Newton Papers, MHI.

or in small groups. The tank excelled in the attack, and was also deadly in the defence. It best supported the infantry, but could fight independently or work with artillery and air. There was simply nothing the tank, accepting its utter dependability on petrol, oil, and logistic support, could not accomplish.⁷

However, massed armour (tanks) was a totally different matter. Chedéville's observation "Le char est très délicat"⁸ is best applied to the armoured division or tank army. Massed tanks are not capable of defending ground; they do not attack prepared defenses and are severely limited by terrain and logistics.⁹ Used in the Breakout and Pursuit, tanks fight tanks but specifically, they maneuver. Massed armour, conducting operational maneuver in deep battle, is capable of achieving strategic results, and is therefore a strategic arm.

This was realized in principle by most general staffs but, until August 1944 (*Cobra*), only effectively practiced by the Germans and Russians. Given an orthodox tank design, the issue was employment. The same tank could perform either Infantry or Cavalry roles as long as it could survive on the battlefield against enemy MBTs. By 1945, even Montgomery was convinced: "We require one tank which will do both jobs."¹⁰

⁷ The psychological effect of armour often exceeded its actual ability: "...both German and our own [tanks] have, in my opinion on our own infantry exaggerated out of all proportion ... eventually one German tank was heard approaching. Our inf had resisted German inf c/ats all night but the approach of the German tank was the deciding factor, and our infantry withdrew from the bridgehead." RG24 12185 BRAC 1st Cdn Army, Brig G. R. Bradbrooke Second Periodical Report. Sect 18. "The Moral Effect of Tanks." 6 Nov 44.

⁸ General Charles Chedéville, "Les Chars de combat actuels et le haut commandement", Revue Militaire Française III February-March 1922, translated, Fort Leavenworth: General Service Schools, 46.

⁹ "Proper Missions" for the Armored Division were confirmed by the US Army ETO General Board (June-November 1945) "Armored Divisions Committee" (Hereafter cited as: ETO Armored Board). The primary role was "offensive Operations in the enemy rear." The remaining missions, presented in order are: 2. Breakthrough screen, establish contact, 3. Seize essential ground, 4. Regain initiative, 5. Restore impetus of an attack, 6. Spearhead attack against an enemy "not prepared for full defence." 7. Attack on narrow front against a prepared position, 8. Breakthrough on a wide front against a demoralized enemy, 9. Exploit success, 10. Pursue, 11. Strategic Envelopment, 12. Destroy enemy armored units, 13. Operate against lightly armored formations, 14. Counter-attack in a withdrawal, 15. Delay as the Covering Force. ETHINT Study Number 48, File R 322.2/3. 7 Nov 45, 7.

¹⁰ Address to Royal United Service Institution, Nov 1945. Quoted in Cavalry Journal, Jan 46.

The Evolution of Armoured Doctrine: the American and Canadian Armies

To make war always means attacking.

Frederick the Great

The Canadian Cavalry was too small to effectively participate in the mechanization debate. Canadian mechanized and tank battalions were disbanded after World War I and the cavalry reverted to a decentralized mounted force. Debate was exclusively intellectual and conducted principally by non-cavalry officers (Simonds and Burns). The transition to armour was effortless since the European campaigns had de facto refuted any possible objections. The Canadian Armoured Corps quickly evolved as an efficient fighting force but its leadership was not developed in other theatres. Canadian armour went to battle under the direction of artillery, engineer, and infantry-trained divisional and corps commanders.

The American Tank Corps experienced combat in France during the Great War and enjoyed an established industrial base with the expertise to develop and mass produce tanks. The mechanization debate was bitter in the United States although the pioneering efforts by Van Voorhis and Adna Chaffee ensured that both experimentation and cross fertilization of officers occurred. The negativism and resistance of the American Cavalry was ill conceived and eliminated the Corps from a decisive role in World War II. The War Department accepted the easiest solution to the problem in 1940, and, rather than award control of armour to the Infantry or the Cavalry, it gave it to neither and created the Armored Corps.

My firm belief is that had General Herr, from the beginning, taken a strong stand for the mechanization of the Cavalry Branch, the Armored Force would never have been created.¹¹

The Cavalry was reduced to reconnaissance duties at the squadron level. The AGF, having garrotted the US arme blanche, and its grand traditions, was forced to create a new armoured ethos. The GHQ and Armored Divisions' tank battalions could not invoke the spirits of battles past. Save for the few battalions that fought under Patton in 1918, American armour had to redefine itself. Far younger than the RTC, not as brassy or

¹¹ Grow, Armor April-Aug 1987, 38.

confident, but with the better equipment and a home grown doctrine,¹² the US tank force was a working class host experimenting with the tenets of mechanized war. In some ways, the Canadian Armoured Corps mirrored the American Armoured Force more than its British brothers. In combat, American armour endured the same teething troubles that Canadian armour did, but it performed better at the Divisional and Corps level. This can be traced directly to doctrine, leadership and experience.

European and American experiments with divisional balance represented the particular convictions of their General Staffs. In their respective armoured divisions, the French tanks outnumbered infantry two to one and the British six to one. Pre-war experiments, heavily influenced by Fuller, suffocated balance. The "all arms team" solution was marginalized in the new all-tanks doctrinal catechisms. But by mid war, the German ideal panzer division had been reduced to a reconnaissance battalion, two tank battalions, four Panzergrenadier Battalions (mounted in APCs if possible), an attached heavy tank battalion plus a Jagdpanzer battalion of Stug IIIs or Panzerjaegers. However, their secret was not armour-infantry balance, but doctrinal balance:

The main point I would like to emphasize is that the overwhelming success of the German Army was not due to the air corps, was not due to motorized troops alone, but was due to a balanced field army, with balanced organization and balanced equipment, executing a plan under almost perfect leadership¹³

The British, and therefore the Canadian, solution divided the Armoured Division into two solitudes: an Armoured Brigade and an Infantry Brigade. The Americans began operations with balanced triplicates consisting of three tank battalions, three armoured infantry battalions, and three self-propelled artillery battalions. Both versions survived the war; however, the final solution, set by the ETO Armored Division Committee (7 Nov 45), was a battle proven US Armored Division that was based on imbalance: three regiments, each with one tank battalion and two infantry battalions supported by five

¹² Jean R. Moenk, A History of Large-Scale Army Maneuvers in the United States, 1935-1964 (Virginia: Headquarters United States Continental Army Command, Fort Monroe, 1969), 27. See also, "Lessons Drawn from a Concentration of the Provisional Tank Brigade." Presented to officers 2nd Armored Div on 7 October, 1940. Alvin C. Gillem Papers, MHI and, "Report on Supply of Armoured Units based on experience in Louisiana and Carolina Maneuvers, 9 Dec 1941", Lt.Col. Henry C. Newton Papers, MHI and, Carlo D'Este, Patton - A Genius for War (New York: Harper Collins, 1995), 394.

¹³ Major Percy Black, Attaché at Berlin 6 Dec 39.

battalions of self propelled artillery (three medium and two heavy). The final solution had infantry outnumbering tanks three to two.¹⁴ So much for Fuller and Liddell Hart.

The mutations that occurred in American armoured organizations were considerably less drastic than the British; although there were two "heavy" armoured divisions (the 2nd and the 3rd), the internal organization was not really tampered with. Chaffee was even suspicious of relatively modern US Infantry terminology:

I do not like the words 'Combat Team' applied to armoured for in the Army at large, it refers primarily to the infantry Regiment and its associated battalion of artillery in the Triangular Division.¹⁵

In the end, massed armour in an average tank division really meant about 250 tanks. The American Army's principal doctrinal evolution centered on combat team tactics in the bocage. They never quite developed a Soviet-style strategic or operational level of armoured warfare; "Deep Battle" was to remain a Russian art until discovered by the Pentagon in the late 1970s. But then, the Americans could argue, they didn't have to. Yankee doctrinal independence began in Louisiana and matured in North Africa: "The British suggested that American upstarts didn't know a thing about desert warfare. Well we didn't; but we did know how tanks worked..."¹⁶ Commander of 1st US Armored Division was more blunt:

...the British officer seems to know very little about defense, liaison, contact between units and mutually supporting units. He covers this ignorance by a studied nonchalance and indifference.¹⁷

Despite Major General John S. Wood's comment ("Fuller and Liddell Hart are contrary to the US Army tradition set by Grant: attrition - wear the enemy down."¹⁸), the

¹⁴ ETO Armored Board, 7, 8.

¹⁵ 13 Sept 1940: Unrevised Copy of Lecture given by MajGen Adna R. Chaffee to the Officers of the Armoured Force at Fort Knox Ky on 13 Sept 1940. Crittenberger documents on 2nd Div. MGen W. D. Crittenberger Papers. Nevertheless, terms like "Combat Team", "Task Force" and "Frag Orders" began to be used with regularity in the Armor Force as early as 1940 and 1941.

¹⁶ Col G. B. Jarrett Papers, MHI.

¹⁷ Letter to LGen Mark W. Clark, 29 Sept 1943. Harmon went on to say: "If we should lose this bridgehead [Salerno] which might happen - it will be because the German breaks through on the British side." The Ernest Nason Harmon Papers, MHI.

¹⁸ Clarke Papers Vol 2, 265. The commanders in 4th Armored carried mixed pedigrees: Baird was the only Cavalry officer. Wood and Gaffey were Artillery while Clarke and Hoge were Engineers. Clarke noted that Liddell Hart called Wood: "The Rommel of the American Armoured Force ... more conscious of possibilities of deep exploitation and importance of speed than anyone else."

American Army was quite comfortable with far ranging operations. In fact, it was bred on them. Sherman's march to the sea, or Lee's attack into Pennsylvania were classic examples of operational maneuver and the "Deep Battle." With traditions like that in their saddlebags, American cavalry generals would naturally conduct a devastating and exacting pursuit, given the chance. The American Army, perhaps because their argument over armor centered on custody rather than doctrine, approached the armored division with a more open mind.

While operational maneuver was practiced in Africa and reached competence at corps levels by both sides, German maneuver (the Rommel effect) was the more creative. Unfortunately, Montgomery's "set piece battle" and new faith in defensive victories overshadowed armoured operations and deep battle. Success at El Alamein and Medenine deflected criticism of Montgomery's handling of armour in the pursuit. Montgomery became the doctrinal imperatur for British and Canadian Armies and he would have a devastating influence on the Allied operational art.

Early fighting confirmed the superiority of Auftragstaktik,¹⁹ the Kampfgruppe system, and the all-arms team. German officers prided themselves on their "Fingerspitzengefuehl ... an instinctive sixth sense for terrain and tactics - a masterful touch in the art of war."²⁰ The key lessons, dominance of armour and the big gun, were quickly understood by the Empire's army, but British industry failed to respond to the challenge with an efficient, let alone effective, main battle tank. The Allies, in the delirium of final victory in Tunisia, put the development of the heavy tank on the back burner.

The tactical lessons of North Africa forced a reorganization of the British, and therefore, Canadian, Armored Division. The desert tactics ("the defensive box," "brigade fortress," and the "pivot") were taught to Allied armoured divisions preparing for Normandy, but turned out to be a waste of time. In general, both armies were close in basic principles, although the Germans were better led at Divisional and Corps level.

¹⁹ General von Mellenthin, quoted in Generals Balck and von Mellenthin on Tactics: Implications for NATO Military Doctrine. BDM Corporation. Virginia. 19 Dec 1980, 22.

²⁰ When challenged by US General DePuy "Out of every one hundred German generals, (how many) had Fingerspitzengefuehl?", General Balck replied, "Three or four, but they were unrecognized." Generals Balck and von Mellenthin on Tactics, 21.

Technology: Tank Scandals

The impact of Tiger was misinterpreted and incompetently reported after Tunisia. Tests were incomplete and lengthy. By the time a complete analysis of Tiger's dangerous potential was published by Aberdeen and Bovington, there was no time to act. The premature conviction that Sherman would do the job nicely eventually led to the Allied "tank scandal." Allied development of heavy tanks was lax. Lessons from the Russian Front had little effect. Parochial infighting, interdepartmental competition, and stubborn bureaucracy delayed the appearance of a suitable heavy tank until the last year of the war. Chauvinism (little more than "our" 76mm gun is better than "their" 76mm gun) prevented the American Army from mounting the British 17 pounder²¹ on their own Shermans. Embarrassing, since the only effective tank killer in Normandy turned out to be the British "VC Firefly." Shaken awake by the reality of the battlefield, Bradley urgently requested Fireflies; there were none to be had. Hopes placed in the American 76mm gun were disappointed; Allied tanks were out-gunned, out-armoured, and out-maneuvered by German tanks.

American (and therefore, Allied) tank development had been side-tracked. The Tank Destroyer principle was imposed by General L. McNair and soon was proven inadequate. The M10 was only effective at short range against Panther-Tiger and so inadequately armoured that both Pz IIIs and mortars could stop them. Guns and armour dominated fighting in Normandy and throughout Europe. Allied tankers were forced to conduct engagements at very close ranges. This was not an immediate disadvantage in the bocage but became crucial in the open plains south of the Orne. Panther's, Tiger's and Pak 75/88's extensive ranges dominated the Caen sector. The Allies eventually survived two serious scandals. The Normandy lessons were hastily overlooked because there were no large scale American-German tank vs. tank contests, and at the end, the Allies were successful. The Ardennes again spotlighted allied inadequacy when Tiger IIs ripped through American units.

²¹ The 17 pounder was basically a high velocity 76mm gun.

The Tank in the Attack: Valour Denied

Intimate co-op between inf and tks. If armour has to go into villages it must be preceded by inf to deal with hidden enemy Atk weapons since the tk has lost one of its main weapons, i.e. its maneuverability..

Lessons Learned 3 Cdn Inf July 1944

There has been some grumbling about armour's hesitation to lead during the Normandy battles: "Without question the tank arm remained the weakest link in the Anglo-Canadian order of battle."²² Yet armour cannot both be the excuse for tactical deficiency as well as the reason for final operational victory in Normandy. The battlefield commanders have been called to task: "... the buck must be passed back to higher command for not insisting, as Montgomery did, on making armor conform even against its will."²³ but modern criticism rarely rises above the division headquarters.²⁴ Like General Simonds himself, historians often find fault in regiments, brigades and the divisions: "Frustration with their tactical shortcomings demonstrably drove Simonds to assume more rigid control, possibly with a view to showing them how all-arms operations should be conducted."²⁵ This suggests a false premise – that Simonds's initial operational plans gave commanders extensive freedom of action, which they squandered. This is certainly not the case in *Spring*, *Totalize*, or *Tractable*.

If the argument is that divisional commanders failed to impose their personality and give direction during battle, the same may easily be said of Simonds. *Spring* and *Totalize* are not examples of dynamic leadership. Simonds's personal input during

²² English, 312.

²³ English, 230.

²⁴ Although Stacey has been stern with regimental officers, he avoided comments about Foulkes, and Simonds. Stacey, *Victory Campaign*, 275-276. Steven Harris has noted reluctance in Canadian military history ranks: "Taking their lead from Stacey, the popular historians of First Canadian Army's battle in Normandy have been altogether upbeat. They acknowledge that it had teething problems but suggest that this was somehow all right, especially when (beginning, now, to drift into inaccuracy) we were fighting battle-hardened fanatics. Besides, they conclude, everything was under control and had shaken itself out by the end of August." Steven Harris' review of English: *The Canadian Army and the Normandy Campaign*. "The Normandy Campaign", *Forum* Vol.6 No.3 Oct 1991, 27. Harris intended this for "R. H. Roy.. Desmond Morton and J. L. Granatstein" and perhaps Copp and Vogel. Morton and Granatstein are, however unique in their criticism of Simonds at his most dangerous: *Totalize* and *Tractable*. See *Bloody Victory*, 167, 173. English is exempted for having noted Keller's, Foulkes's, Kitching's and Crerar's shortcomings. Dr. Harris does, in the end, join the popular front in its praise of Simonds.

²⁵ English, 313.

Totalize and *Tractable* consisted of irritated exhortations to "Get cracking."²⁶ Simonds's tactical isolation ("Simonds stood alone. Too little staff or tactical depth existed either above or below to adequately support him, or even save him from his foibles...."²⁷) has been well described but ought to include the fact that it was self imposed. Canadian Corps and Army staffs were easily the match of any Allied or German counterparts. He often ignored (*Spring*, *Totalize* and *Tractable*) the intelligence provided.²⁸ The Canadian problem was operational, not administrative.

Simonds escapes criticism because, as English, Granatstein and Graham note, he was our best corps commander, indeed, our only Corps Commander in Normandy. Since his character and resolution are beyond doubt, his ability has been granted a bye while generals below him are given unsympathetic criticism. The tactical cases against Keller and Foulkes are virtual *nolle contendere*; the verdict on Kitching was pronounced by Simonds himself during *Tractable*. The remaining targets are found at the battlegroup level (Lt.Col. Donald Worthington)²⁹ or in the two armoured brigades (Brigadiers Booth and Wyman). The latter merit reproach but are hardly the sole culprits.

Colonel English's final evaluation is particularly disturbing "... the infantry nevertheless performed better than Canadian armor."³⁰ This may be an exaggeration. Apart from the actual invasion, and even here the decisive value of Hobart's "Funnies" and the DD tanks cannot be overlooked, there were no infantry – only victories. Armour is best judged via its *métier* – operational decision at the division and corps level.

²⁶ RG24 14052 OPs Log 4 CAB; 8 August 44.

²⁷ English, 312.

²⁸ Simonds's alleged hamstringing with inept staff should be balanced with the fact that the one consistent compliment given to Canadian operations by German commanders was the high standard of staff work: "Every Canadian op bore the mark of intensive planning.... Every opening phase of a Cdn op was a complete success and the staff work a mathematical masterpiece." DHIST 81/104: Interview Kurt Meyer; Canadian Chaplain's Report. 3 Sep 50.

²⁹ Neither Stacey nor English - indeed most Canadian military historians, are overly sympathetic to Worthington and certainly don't damn the corps commander for having a breakthrough slip through his fingers: "This episode, with its tragic mixture of gallantry and ineptitude." Stacey, *Victory Campaign*, 228, "Tragically lost.." English, 280, "Much has been made of the faulty navigation of the BCR-Algonquin force, but it is clear from the day's events that nothing much would have changed." Copp / Vogel, 100, "an epic of courage and sacrifice, it yielded no redeeming tactical gains." Granatstein / Morton, 172.

³⁰ English, 312.

Operational maneuver eluded all 21st Army tank formations until Simonds's armour drove past the Ante and linked with Haislip to close the Falaise Gap.

Both arms had their share of bunglers. The rout of an infantry brigade, indeed, the withdrawal of Foulkes's entire division from Verrières Ridge during *Atlantic*, cannot be singularly laid at the feet of the 27th CAR: "... the Sherbrookes were slow to dispatch their reserve squadron forward."³¹ *Atlantic*'s woes began with the Corps plan and continued through the Divisional Headquarters' grouping instructions. Mel Gordon is no more responsible for *Atlantic*'s failure than Don Worthington was for *Totalize*'s. Simonds's own verdict against the Calgary Highlanders and Black Watch was ruthless: "failure was not due to poor planning but minor tactics."³² Outside of individual examples of splendid leadership and grit (Rockingham in Verrières and Stewart taking Hill 195 during *Totalize*) the infantry seems no more successful than the tanks.

There was little cross training and combined arms-combat team training before Normandy and this was quickly demonstrated in combat: "The inf comd should NOT try and place tks on the ground any more than he would try to place arty guns. He should state only where he wants the fire of the tks."³³ The 2nd Canadian Armoured Brigade regularly complained against "Lack of understanding by Inf Comds of the capabilities and methods...."³⁴ After a month of combat, 2 CAB reported "an armored corps perception that other arms failed to understand the limitations of armor, that tanks should not be expected to lead attacks against prepared enemy anti-tank positions."³⁵ The infantry often had no idea what the tanks were doing or even if they were actually being

³¹ English, 229.

³² RG24. Crerar Papers. Report No. 150.

³³ G3 3rd CID Jul 44, 2.

³⁴ D Hist 141.4A27013 LD2. 27 Cdn Armd Regt (Sher Fus). After action report, Lt. P. W. Ayriess 31 Jul 44. The Infantry's tactical confusion or desperate initiative, embraced TDs and artillery: "... some Inf fmns regard them [SPs] as tks and use them as such when there are no real tks allotted to them." DHist 141.009. D116 Appx "H" to CMHQ Trg Liaison Letter No. 12 (Hereafter cited as Liaison 12). LtCol Ealsh MC, RA SI Atk, School of Arty, Larkhill. Extracts from a Report on a Recent Visit to Normandy. July 1944. Also, "The inf seemed to get their A tk guns and 17 prs up fast; but then the bn comd didn't seem to realize that they could release us.... The 17 pr det, once having got their guns in posn did not seem to keep an adequate watch. They were very much afraid of firing their guns." RG24 14287, 27 CAR afteraction report, 17 July 44, 17.

³⁵ RG24; 2 CAB Papers and Documents: Report No. 12: "Analysis of 75mm Sherman Tank Casualties 6th June to 10th July 1944."

supported: "Inf should be taught to realize that even though their co-op tks may NOT be in their immediate view the tks are probably in a fire posn from which they, when called upon, can give supporting fire."³⁶

The Infantry's want of proficiency with armour was doubly frustrating because it became clear that infantry could not advance or defend without tank support:

... the infantry man considers tanks are vital and indispensable to his successful advance.... One tank even though it does not fire at all, will restore impulse to an infantry advance which has broken down under enemy fire. When the tank moves ahead, the infantry will invariably regain heart for the combat. On the other hand an infantry attack accompanied by tanks, which has been going forward with confidence and efficient action will begin to flag and then fail if the tanks withdraw.³⁷

This issue was not the utter dependence on armour by infantry³⁸ but the need for combined arms tactics at the combat team and battlegroup level. Armour's dual tasks – to use both "Infantry Tanks" as well as "Cavalry Tanks" has been dubbed "the tactical schizophrenia that gripped the armoured corps of the British and Canadian armies."³⁹

Montgomery's early instructions on grouping attempted to address command relationships but ended up extending the confusion:

Tk bdes may be placed under comd of divs but regts not under comd of bdes. Regts should be placed in sp. Armd Bdes should not be placed under comd of inf bde. When an armd regt is placed in sp of an inf bde, the armd bde comd should do planning with the inf bde comd and not leave the planning insofar as it affects the armour to the OC of the unit. Most important - all planning on Brig's level. When planning, ensure it is a combined plan for all arms and not just an inf plan with tanks added on.⁴⁰

³⁶ G3 3rd CID Jul 44, 2. Many infantry commanders were not familiar with tank tactics: tanks were regularly sent forward as simple targets to draw enemy fire. LtCol Perkins, Tank Battalion commander in Italy, 1944. "Combat Lessons: Rank and File in Combat: What They're doing. How They Do It" from S. L. A. Marshal: CL#1. US Army Publication 1944, 32.

³⁷ D Hist CCCR Bulletin: Notes on Battlefield Experience. 19 July 44. "The 'morale' value of an AFV, whatever its nature, to the infantryman going fwd to attack.... In one or two extreme cases, even SPs have been used as rallying pts for Inf who would not adv without them." Appx "H" to CMHQ Trg Liaison Letter No. 12. LtCol E Walsh MC, RA SI Atk, School of Arty, Larkhill. Extracts from a Report on a Recent Visit to Normandy. July 1944. DHist 141.009 D116. See also, DHist 171.009 (D160) 19 Aug 44 "Notes on Battlefield Experience Affecting Training."

³⁸ "Our sp by armour has been very helpful." G3 3rd CID Jul 44, 2.

³⁹ English, 280.

⁴⁰ Montgomery Trg Conf 14 Jan 44, 2.

Sampling of Allied Tank Wastage

On several occasions tanks were asked to lead in attacks on manned A Tk defences. This they did, in order to maintain the momentum of the assault and suffered unduly high cas in consequence⁴¹

The question of wastage or casualty rates ("It seems incredible, in short, that the tank arm with a significantly lower casualty rate often remained behind while forlorn hopes of infantry, torn by enemy and friendly fire alike, plodded ever onward."⁴²) deserves some review. The notion that armour held back ("Unquestionably, they should have been intimately supported by tanks that far better than infantry chests could lean into a barrage and take a hit."⁴³) while a steadily reduced Canadian infantry conquered Normandy is exaggerated. Often, the opposite was the case: "The enemy [4th CAB] seems to be reorganizing his units. He carried out all his attacks with tanks and without infantry."⁴⁴

The number one personnel killer in Normandy was the mortar (70%).⁴⁵ By definition, it did not affect most tanks. Conversely, panzerfausts and pak 88s were not aimed at individual soldiers. Of the five tank actions before *Totalize* and the fifteen Canadian assaults that included two or more squadrons of tanks – from Buron (7th June) to the closing of the Falaise Gap (22 August) – only one, the initial struggle for Verrières during *Atlantic*, saw the infantry precede the armour onto the objective.⁴⁶

⁴¹ RG 24 14260 WD 2 CAB. Report: Lessons from Operations. 26 June 44.

⁴² English, 313.

⁴³ English, 230.

⁴⁴ General Eberbach reporting to von Kluge; 2330 hrs, 8th Aug 44, quoted in Meyer, 176.

⁴⁵ RG 24 10554 BRA 2nd Army. Secret. RA 2 Army Arty Notes. (Pd 19 Jun - 6 Aug 44). "By far the highest number of our casualties (about 70%) are from mortars. The problem of mortar location is therefore as, or more, acute here than in other fronts."

⁴⁶ The fifteen Canadian armoured, armoured heavy or infantry cum armour attacks are: 1. Buron – 7th June: 27 CAR. 2. Le Mesnil Patry – 11th June: 6 CAR. 3. Buron – 8th July: 27 CAR, 7th Recce. 4. Carpiquet – 4th July: 10 CAR, 27 CAR. 5. Atlantic: 19th July: 2 CAB. 6. St André – 20th-22nd July: 27th CAR. 7. Spring 25 July: 2 CAB. 8. Totalize Break-in – 7/8th August: 2 CAB, 33 BAB. 9. Totalize Counter attack by 12 SS – 8th Aug: 2 CAB, 33 BAB, elms 1 PAD, 4 CAD. 10. Totalize Breakout I – 8th Aug: 1 CAD, 1 PAD. 11. Totalize Breakout II – Aug 9th: 22 CAR, 28 CAR. 12. Tractable Breakout – 14th Aug: 2 CAB, 33 BAB, 1 PAD, 4 CAD. 13. Tractable II – 18-19 Aug: 1 PAD to Trun, Chambois. 14. Tractable II Closing the Gap – 18 August: 1 PAD stand at Maczuga / 19 August: 29th Recce at St Lambert. 15. Falaise Gap – 20 August: 22 CAR rescue to Maczuga. In comparison, Majors Bourne and Shackleton analyze 12 battles: Buron, Putout-en-Bessin, Bretteville, Le Mesnil Patry, Carpiquet, Grouchy-Buron, Verrières Ridge, Tilly La Campagne (4 battles) and Pt 140 ("Worthington Force"). See: Analysis Firepower Normandy Ops 44, 1, 2 and, Table 1.

Canadian historians may be influenced by General Burns's eminent study, Manpower in the Canadian Army. His data for Normandy credits armour with 22% casualties compared to the infantry's 65%.⁴⁷ These are total losses and include infantry casualties taken from indirect fire to which armour was largely immune.⁴⁸ The bulk of armoured casualties occurred in the attack⁴⁹ – after the infantry, armour's casualties exceed all other arms and services.⁵⁰ Battle casualties to tank troop commanders were 57%⁵¹ compared to Rifle Platoon commanders 31.2%.⁵² BRL MR-798 stated: "Limited data on allied tank crew casualties indicated that an average of 2.0 to 2.5 crewmen per tank became casualties."⁵³ That meant for each tank hit, crews took over 50% casualties. This rate of wastage was not found in any other arm.

Detailed Wastage: 2 CAB in Battle

Battle data illustrates both the aggressiveness of units as well as a more accurate armoured picture of actual losses – but statistics do not reflect the psychological damage

⁴⁷ MajGen E. L. M. Burns, Manpower in the Canadian Army 1939-1945. (Toronto: Clarke Irwin, 1956), 91. Burns later writes: "It will also be noted that the actual casualties in the infantry were less than as given in the 1944 wastage rate calculations.", 94.

⁴⁸ "Limited Data on Allied tank crew casualties indicated that an average of 2.0 to 2.5 crewmen per tank became casualties." ORO T 117, 4.

⁴⁹ <u>German Tank Losses</u>	BRL MR-798	ORO T 117
GUNFIRE	43.8%	44%
SELF DX / ABANDON	43%	43.3%
AIR ATTACK	7.5%	8%

⁵⁰ Inf 65%; Armour 22%, Artillery 9%, Engineers 7%, Signals 4%, Ordnance and RCME 2 %, all others 5%. Burns, 91. The greatest fear was fire but only 10% of crew cas were burns. RG24 10554. Report Medical Research Section on Distribution of Casualties. 28 Aug 45.

⁵¹ Casualties by position in main battle tanks were Commander 57%; Gunner 51%, Loader 51%, Bow Gunner 48% and Driver 47%. Light tank crew casualties were higher. "Germans would disable tank by panzerfaust or Bazooka fire, forcing the crews to abandon the tank. When the crews were attempting to abandon the tanks they would be shot with machine pistols or MGs." Visit Col Black to 736th Tank Bn, HQ 9th US Army, 24 Apr 45. P.37. See also: German Tanks Destroyed by XIX Corps. 15 Dec 44. Booklet Tank and SP Gun Identification. Tech Int Bulletin No. 8. 20 Feb 1945. Casualties "wholly outside their vehicles, amounted to 40 percent of the total casualties sustained. Of this figure, 30 percent, or 11 percent of the total, became casualties while trying to escape immobilized tanks." ORO T 117. 4, 12, Figure 8.

⁵² Infantry Offr Cas 1944 ETO. Rifle Pl Comd: 31.2%, Rifle Coy Comd: 30.0%, 2 i/c Rifle Coy: 20.1%, C.O.: 18%. D Hist. 2 ORG. Report No. 19 "Infantry Officer Casualties. 21 Army Group. As at 31 Jan 45", 120. Based on 2,407 Offr Cas from seven divisions suffered from 6 June to 6 Nov 44. Mortality rates were highest for C.O. s (38.9%); Coy Comd (32.6%) and, Pl Comd 28.9 %.

⁵³ ORO T 117, "Personnel Casualties." Tables XX, XXII, XXIV; "Conclusions", 38, 40, 42, 4.

to crews who have received glancing hits or survived a knocked out tank. Brigade Tank States, daily vehicle status reports, indicate that 2 CAB battlefield wastage equalled, and in most cases exceeded, corresponding infantry casualties.⁵⁴ After the *Atlantic* battles, 27th CAR's losses were 80% Sherman and 50% Firefly VC. This should meet any historian's tough standards. Following *Spring*, 2 CAB's Regiments reported the following wastage:

2 CAB Losses Operation <i>Spring</i> ⁵⁵		
6 CAR:	57% M4	75% VC
10 CAR:	20% M4	42% VC
27 CAR:	40% M4	50% VC

Table 15

4 CAD's losses during *Totalize* are well known, Force Worthington alone took 85% tank casualties. During Operation *Tractable*, 14 Aug, where both recce and armour took turns leading the assault, 2 CAB's reported wastage by 16 August was:

2 CAB Losses Operation <i>Tractable</i>		
6 CAR:	62% M4	27% VC
10 CAR:	56% M4	75% VC
27 CAR:	55% M4	84% VC

Table 16

The combined strength of Fort Garry Horse and 1st Hussars was "equal only to two sqns."⁵⁶ This wastage was not made good until September.

The Sherman was an easy tank to kill. It took 1.63 hits to knock one out.⁵⁷ It was vulnerable to all enemy anti-tank weapons and the majority of German AP shot (89%) penetrated the hull and caused fires – a surprising 91.2% of Canadian tanks burned when

⁵⁴ By 12 June, 2 CAB reported the following losses: 6 CAR was reduced by 35% Sherman M4, including 100% Firefly VC losses; 10 CAR lost 37% M4s and 66% Fireflies; 27th CAB wastage was 33% M4 and 66% VC. 2 CAB lost 45% of its Shermans and 77% of Fireflies within six days of combat.

⁵⁵ RG24 Vol. 14046 2 CAB Radio Logs 7 June 44-31 Aug 44. Data based on 2 CAB, BRAC Tank States. 4 CAD boxes did not include daily tank states. 2 CAB tank states were incomplete during operations.

⁵⁶ Account of the Operations of 6 Cdn Armd Regt (1H) 14-16 Aug 44. MG30 E157 Vol 8. GOCinC File 13-0-1 also, WD 10 CAR 16 Aug 44; 2 CAB Radio Log 14 Aug 44.

⁵⁷ ORS Report No. 17, 5.

hit and prompted the infamous "Ronson" nickname for the Sherman.⁵⁸ This is extraordinarily high compared to Allied average of 65% (73.5% British and 54.9% US). Diesels seemed to burn less easily but they were not to be had in large numbers.⁵⁹

As earlier data has demonstrated, range was the determining issue in Normandy. It posed no limitations to German armour which killed comfortably at any distance, but forced Allied tanks to close well within 500 meters to effect penetration.⁶⁰ The average engagement range in the Canadian sector during the Normandy campaign was 902 yards. This range favoured German "suped up guns."

Panther roamed at will with a 75mm gun that frankly outclassed the gun on the Sherman tank by a velocity of 1230 FPS.... It is hard for one to appreciate such a fact but it meant in simple language, practically two German shells could be on their way to one American.⁶¹

Allied study of Normandy tank losses found that direct gun-fire accounted for 55% of Canadian wastage, the majority being enemy tank fire.⁶² British armoured divisions

⁵⁸ "Percentage of fires caused by turret penetration is very high compared with those resulting from penetration of engine compartment, Reason ... splinters ignite the cordite in cartridge cases.... Cordite usually burns for a few minutes before the whole of the ammunition is detonated." RG24 10458 BRAC Report "First Cdn Army Tank Casualties. AFV Tech Report No.14, 30 Aug 44. See also RG24 10597, G. I. Finch, "Incendiary Projects Committee: Notes on Fire Raising in the AFV." 8 Mar 43.

⁵⁹ "The M4A2 was used for training in the USA and supplied both to the Soviet Union and Great Britain. With few exceptions, the M4A2 was not used operationally by American forces due to War Department policy that US troops would only use petrol engined tanks." and, George Forty, M4 Sherman. (Poole: Blandford, 1987), 59. Only the USMC used M4A2 diesels, 8,053 were built. see: Camberlain / Ellis, 116. "Most of the new M4A2s were supplied to the Soviet Union." Hunnicutt, 272.

⁶⁰ Operational studies identified tanks most frequently attacked by Pzfaust, in order: 1st. Cromwell, 2nd. Sherman, 3rd. Comet, 4th. Firefly. Tanks most attacked by AP shot: 1. Sherman, 2. Comet, 3. Firefly. Operational Research Report, No.2 Op Research Gp. June 44 - July 45. D Hist 99/705. See also, ORO T 117, Table XIV. Coox and Naisawald site 785 yards as the average ETO range for tank engagement. Using BRL MR-798, author selected 136 tank actions (July to December) average range of intervisibility was 1229 yards. Close range combat was deadlier: American-British wastage in bocage exceeded Canadian by 5:1 in July and 12:9 in August.

⁶¹ Col G. B. Jarrett, Achtung Panzer – The Story of German Tanks (Aberdeen: US Army Ordnance School, 1948), 3. German evaluation of American armour was not kind: "Here on the western front we are fighting an enemy superior to us in equipment but not in fighting spirit ... the enemy tanks are timid." RG24 14186 BRAC, Bulletin No.5, Apx G: "2 SS Das Reich in Bocage Country."

⁶² "Gunfire, both numerically and percentagewise, exacted the highest over-all toll of tank casualties...." In final totals, the American 3rd Army lost the most tanks followed by the 2nd British Army. Canadian armoured wastage data was gathered from two formations: 2 CAB and 4th Canadian Armoured Division. 1st Polish Armoured Division was evaluated as a "UK formation" and its actions - mostly long range tank vs. tank battles during *Totalize* and *Tractable* raise the British average engagement range for August. ORO-T-117, 2.

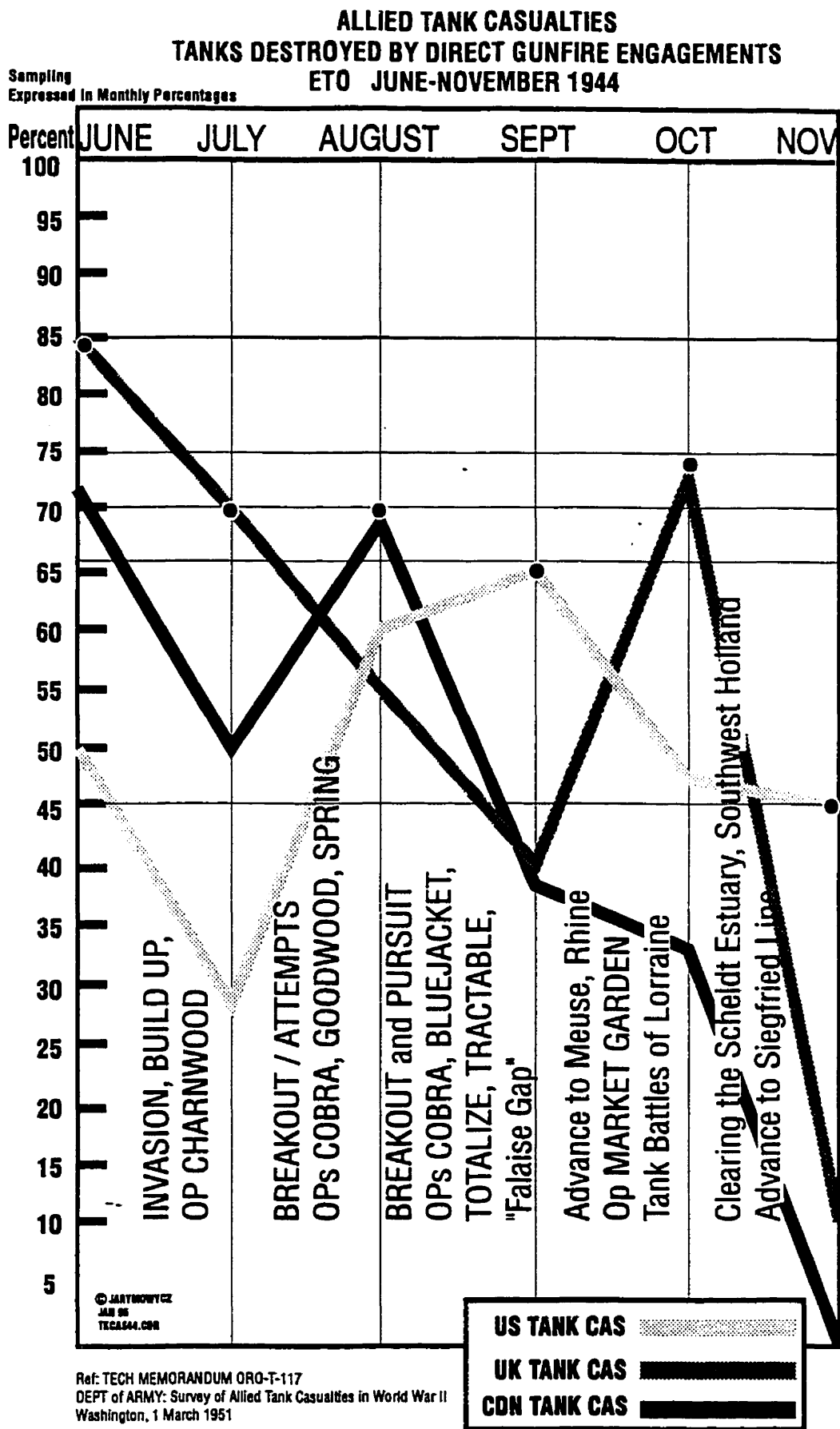


Figure 31

absorbed most tank-to-tank kills during the great breakout attempts of June and July. Subsequently, the *Cobra* "dogfight" within the bocage had US troops absorbing extensive tank casualties from panzerfaust and pak. By August, Patton had broken through but the British were still grinding through *Bluecoat*, now taking the lion's share of total kills (tank, anti-tank, panzerfaust⁶³ and mine) in the bocage. Concurrently, Canadian armoured formations, attacking during *Totalize* and *Tractable*, suffered most gun kills⁶⁴ while conducting tank-vs.-tank engagements in the open terrain south of Caen:

GUNFIRE: Allied Tank Casualties Sampling: ETO 1944 ⁶⁵							
	June	July	August	September	October	November	December
CDN	71%	50%	68%	38%	33%	2%	25%
UK	85%	70%	64%	40%	68%	10%	12%
USA	50%	28%	60%	64%	48%	47%	53%
HOLLOW CHARGE: Allied Tank Casualties Sampling: ETO 1944 ⁶⁶							
	June	July	August	September	October	November	December
CDN	1%	4%	9%	12%	10%	1%	25%
UK	3%	4%	12%	5%	6%	1%	11%
USA	3%	22%	9%	8%	13%	9%	13%

Table 17

Canadian armour achieved numerical dominance in August; however, during June and July 2 CAB operated at extreme technical disadvantage and fought at numerical parity or inferiority. This is not made clear by armour's critics: armour advanced until it was shot to pieces.

Had the near catastrophic casualties dealt the Allied armoured forces been imposed on the combined Allied air forces, the Normandy Campaign would have ended in a stalemate. When sixty American B-17s were shot down on the October 1943

⁶³ Bocage allowed unmanned tank ambush sites to be prepared: panzerfausts tied to trees with a trip wire ("Panzerfaust als automatische sperre"). RG24 14186 BRAC Bulletin No. 4, 2 Jan 45.

⁶⁴ Of the 841 tank samples of AFVs destroyed by guns of 75mm and above, 48% of Allied were destroyed by 88mm gunfire (British studies credit 55%). In the 2nd Canadian Corps sector, Caen to Falaise, where terrain favoured long distance engagements, Canadian losses to 88mm gunfire were 77.2%. Capt H. B. Wright and Capt R. D. Harkness. A Survey of Casualties Amongst Armoured Units in Northwest Europe (Medical Research Team, British 21 Army Group (No. 2 ORS) Jan 1946) and, Coox and Naisawald, ORO 117 Based on 95 vehicle sample. Table XIV, 24.

⁶⁵ ORO T 117, Table XVIII.

⁶⁶ ORO T 117., 1-3, 6, 8, 14. Of a sampling study of 10,388 known Allied tank casualties in all theatres of operation, 20% were caused by German mines; Allied mines caused less than 5% German tank casualties. Of Destroyed vehicles in ETO, 51% were caused by direct gun fire, 20% by artillery, 14% by Hollow Charge. Of disabled tanks, 28% gunfire, 52% artillery/mortar and 5% Hollow Charge. Based on 6th Armd 18 July44-8 May 45.

Schweinfurt mission, further major efforts were terminated until long-range fighters were made available. "Not until late in February 1944, was the Army Air Force able to resume its attacks."⁶⁷ Had the same standards been applied to armour after *Goodwood* or upon contact with Panther/Tiger, the Allied forces would have not advanced until the M26 or the Tortoise appeared. Somehow, the loss of 60 heavy bombers was cataclysmic whereas 500 burning tanks constituted a lesson learned.

All Allied tank outfits generally operated in the same aggressive style:

In my opinion the reason our armor has engaged the German tanks as successfully as it has is not due to any means to a superior tank but to our superior numbers of tanks on the battlefield and the willingness of our tankers to take their losses while maneuvering to a position from which a penetrating shot can be put through a weak spot of the enemy tank.⁶⁸

The technical imbalance dogging the Armoured Corps was not experienced by the Infantry. Although they did not have an MG42 or panzerfaust, their basic weapons did the job; their supporting artillery was superior ("Artillery is the main weapon of the enemy's annihilation tactics."⁶⁹) and they enjoyed complete air superiority.⁷⁰ If Canadian infantry did not dominate German infantry (and Stacey et al admit they did not) it is not because they were outgunned, outarmoured or outnumbered. The armoured corps enjoyed no such level playing field. Simonds's criticism of armour after *Totalize* was not that they failed to follow doctrine, but rather that they did not scorn doctrine and carry on attacking frontally despite casualties, logistic limits, and the limitations of night.

Armoured doctrine was alien to Brigade, Division and Corps commanders who grouped tanks inefficiently and used them clumsily. Canadian armour was not concentrated throughout June and July. Tank actions were defeated in detail. The

⁶⁷ Martin Caiden. *Black Thursday* (New York: Dell, 1960), 269. November 1943 USAAF deployed *Lightning* P38Js (520 mile range) followed in Dec '43 - Jan '44 by P51D *Mustangs* whose range exceeded 600 miles. See also: John Sweetman *Schweinfurt* (New York: Ballantyne, 1971), 53.

⁶⁸ Exhibit No.2, 1, Colonel S. R. Hinds, Commanding, Combat Command "B." White Report.

⁶⁹ BRL Report. Captured Report quoted from Pz Div Lehr "Report on Experiences 6-22 June." See: Interview MajGen Stadler, 9 SS Pz: "...the use of artillery by the British was definitely much more powerful and oppressive than enemy air superiority..." German soldiers feared: "the proximity of radio transmitters as enemy could detect their whereabouts, and concentrated artillery fire on the spot detected. This fear was very widespread and took the form of a complex so it was called "*Peil Psychoses*," 13, 18.

⁷⁰ "During the period 6 June to 6 September 1944, Allied air supremacy permitted the use of air power in support of ground forces in the campaign in France to an extent never before equalled." HQ ETO US Army Immediate Report No.1 (Combat Observations) 20 Nov 44. The Sheffield Edwards Papers. MHI.

standard “armoured battle” in Normandy was too often fought in support of an infantry attempt to break through established German defences. Despite experimentation with night attacks, massed heavy bomber preparations, and extensive smoke screens, the Canadian general staff treated tanks as infantry addenda. Brigades were split. Regiments were fragmented – victims of incomplete training and misunderstood principles. Some were simply without tactical ability altogether. Neither Sicily nor Italy prepared senior commanders for Normandy. The Germans had the benefit of post graduate training in Russia. The AGF had Louisiana. The Americans and British shared Tunisia. Canadians had Dorset.

The most successful Canadian armoured tradition is the squadron attack. Canadian Armoured doctrine evolved in battle. It was not created in the United Kingdom or Camp Borden; the RCAC’s “Louisiana” was Normandy. It was a grass roots doctrine and first appeared at the troop, then squadron level. It did not mature beyond that. Once the tanks broke through, as Maczek demonstrated, the regiments did pretty well. However, until a breakthrough, tank wastage equalled or exceeded infantry loss rates. The real issue was Simonds’s employment of armour. The record should be put straight and armour’s denied valour restored.

Allied Operational Art

An opportunity that comes to a commander not more than once a century. We’re about to destroy an entire hostile army..

General Omar Bradley

Mnogo raz podumat⁷¹

Stalin to the Stavka

When Simonds did acquire operational maneuver, the achievement was overshadowed by overemphasis on other (American) triumphs on the Normandy front. In their practice of the Operational Art, Canadian and British high command had no practical concept of “Deep Battle” and because of the emphasis on seaborne assault Allied strategic offensives were principally ultra sophisticated amphibious operations.

⁷¹ “Let’s think this over one more time”

The only model of a successful Allied strategic ground offensive was, unfortunately, El Alamein. It was to dominate the British-Canadian doctrine totally out of proportion to its importance.

The mechanics of a strategic offensive emphasized combined arms, massed armour and breakthrough artillery. The Germans, and especially the Soviets, used the strategic artillery offensive to support the "one big strike" ("a strong strike at one point")⁷² which was based on massive artillery fire in concentrations unheard of in the West. The assault was preceded by a "double barrage" followed by insertion of mobile formations with orders to avoid local engagements⁷³ and quickly overwhelm operational reserves ("... numerous meeting engagements with the enemy's reserves where artillery fought decentralized and using direct fire.")⁷⁴

Initial preparatory fires averaged 2 hours and 30 minutes with a density of 233 guns and rockets per km on an average breakthrough sector of twenty-four kilometres as compared with the artillery density for *Goodwood* and *Spring* of approx eighty-three guns per kilometre. The heavy bombers are not included in artillery density calculations, but the bomber strike accounts for one continuous thirty minute stream of individual bombers dropping single loads. Artillery fires are capable of being revised (Soviets issued a completely new counter battery plan within thirty minutes of the Lvov H Hour), repeated, and accurately concentrated on troublesome strongpoints during an operation. Heavy bombers, as *Cobra*, *Totalize* and *Tractable* proved, often missed.

Offensives included formal deception which was practiced by SHAEF but centered on electronic misinformation (Operations *Overlord* and *Fortitude*).⁷⁵ Another

⁷² Sidorenko, 130, J. Erickson, L. Hansen, W. Schneider, 16-20. Also, Bellamy, 62, 135 and, H. F. C. Duffy, *Red Storm on the Reich* (New York: Da Capo Press, 1993), 332-337. There were twelve Red Army Strategic Offensives from the 24th December 1943 to 12th May 1944. The 1944 Summer offensive (22 June-29 August 44) corresponds roughly with the Normandy Campaign (6 June to 30 August – reaching the Seine at Elbeuf) but also coincided with the Belorussian Offensive (22 June-29 August).

⁷³ "Practically every Russian attack was preceded by large-scale infiltration, by an 'oozing through' of small units...." German after action report, as in, N. Leites, *Soviet Style in War*. (New York: Crane Russak, 1990), 300.

⁷⁴ Bellamy 135-136.

⁷⁵ The sophisticated planning, control and practical, technical efficiency required was best illustrated during the destruction of Army Group Center in July 44. The Soviets conducted an artillery maneuver moving 3,500 guns over 660 kms without the OKH knowledge. "Artillery concentrations were increased from 5,500 to 9000 guns along the attacked sector." Chris Bellamy, 62.

important feature was penetration by Operational Maneuver Groups (OMG). The OMG was a totally mechanized assault unit, no smaller than a division and usually a tank corps, whose mission was to quickly penetrate the front by avoiding all contact in order to reach the enemy's operational depth. The OMG sought out political, operational, and strategic objectives.⁷⁶ These independent formations, set loose in rear areas, not conforming to the traditional maneuver, created immense headaches for defending staffs. They drew away strategic reserves and disrupted communications. More dangerous, their presence denied the defender operational maneuver in his own rear areas, which was their goal.

Facing a Soviet style-assault, the only viable defence doctrine centered on the mobile defence capable of trading ground for tactical advantage. Hitler would not hear of it. The German General staff was not permitted to maneuver operationally and certainly not strategically. The Wehrmacht was ordered to dig in and fight for every inch of Mother Russia, a policy that was repeated in Normandy but not used to advantage by Montgomery. This politically sound but militarily moronic strategy eventually resulted in the "we could have defeated them if Hitler let us" argument.⁷⁷ It is a moot point.

Stavka's aim was not a Schwerpunkt-Blitzkrieg penetration pouring troops through the breach à la France 1940; instead, the assault ripped out a chunk sixty kilometres wide. The defender cannot hold the shoulders of a breach if the initial attack destroys his entire upper torso: "large scale enemy losses ... enemy could not close the gaps ... was forced to execute the maneuver of deep reserves and take forces from strategic directions."⁷⁸ Although "glubokii boi" (perfected in the 1942-43 campaigns)

⁷⁶ OMG missions included Luftwaffe airfields, communication centers, high level headquarters, and government centers. The group could be called upon to conduct a meeting engagement but this was rare. The OMG was a one way operation. Its tanks, assault guns, armoured personnel carriers, and self propelled artillery, followed by mobile supply columns, raced to specific goals using any available approach until they captured the objective or ran out of supplies.

⁷⁷ Duffy notes that beside Hitler's persistent meddling in deployment, operations, tactics even the movement of a tank train, "Stalin was Olympian and detached in comparison." Duffy, Red Storm on the Reich, 362. See also Warlimont for detailed examples of Hitler's obsession with military trivia during conferences.

⁷⁸ Sidorenko, 220; Stalin personally urged "a single main blow" for the offensive but finally agreed with Rokossovskii to accept more than one operational attack to form a Strategic Offensive. See: John Erickson The Road to Berlin. Stalin's War with Germany. Vol 2. (London: Weidenfeld & Nicholson, 1983), 203. The Russian terminology for the armoured breakthrough is particularly apt and certainly more stimulating than the low key terms used by Canadians in imitation of the casual, antithetical language of the British officer class ("write down", "write off", "bump", "push through", "engage", "sort out" "smash",

was the key to operational and strategic success against the Wehrmacht⁷⁹ it was all but unheard of in the West. Montgomery and Simonds substituted breakthrough bombers for breakthrough artillery but did not organize the second and third echelon armoured formations required to extend the shock of the initial assault.

The concept of "bypassing points of resistance" was perhaps understood by Kitching, and Maczek, but left to brigade and regimental commanders to bring it about. The war time restrictions governing maneuver in farmlands and the paucity of divisional exercises produced an armoured force unfamiliar with the essence of maneuver warfare. Simonds's frustration at *Totalize* were foreseen by the Soviets⁸⁰ whose operational instructions emphasized: "one strike after the other ... it is not permissible to stop... 'neostanovlivat sya' (do not permit yourself to halt)." ⁸¹ By the summer of 1944, the Red Army's offensive had evolved to a stage where the Wehrmacht could not afford to practice its own doctrine. The only defence against the Soviet strategic offensive was not to defend.

To illustrate the total Allied miscomprehension of what was going on in Russia, the No. 10 Liaison Letter (July 1944) distributed throughout 21st Army Group stated that military reports demonstrated "the remarkable parallel between British and Soviet tank tactics."⁸²

"bash" etc). The aim of the offensive was not merely to "break-in, dog -fight, and break out" but to "razdrobit" (tear to fractions), "razedenit" (rip apart) and the very apt: razryvat ("tear to pieces").

⁷⁹ D. M. Glantz, *The Soviet Conduct of Tactical Maneuver*. (New York: Frank Cass, 1989), 19-22, 151-153, 168. and, D. M. Glantz "The Nature of Soviet Operational Art" *Parameters*, Journal of the US Army War College Vol XIX No.1 March 1989, 7-10. See also, W. F. Scott, *The Soviet Art of War*. (Westview: Boulder. 1982), 20,56-59; and, V. Matsulenko, "Razitie taktiki nastupatel nogo boya" (The Development of the tactics of the offensive battle) *Voenno-istoricheskii zhurnal* February 1968, 28-29. And, MS T 31 MajGen Peter von der Groeben *Collapse of Army Group Center* (22 June to 1 Sept 44), 4b.

⁸⁰ "If you press on him (a subordinate officer) he attacks. If you leave him out of your sight, he stops." N. K. Popel *Tanki Dovernuli Na Zapad* (Moscow: Noenizdat, 1960), 120. It may be argued the Soviets had five years to perfect their operational art – it should be remembered the western Allies had seven.

⁸¹ *1944 Combat Regulations for Tank and Mechanized Forces*. "A tank attack must be carried out without stopping...it is forbidden...to partition a combined arms formation assigned to a tank brigade...." Chapter 1. "Fundamentals." Leites, 54. See: Chris Bellamy *Red God of War*, 199-200; P. A. Zhilin, *The History of Military Art* (Moscow: Voenizdat, 1986), 126, Radzievsky, *Tankovi Udar*, 88. It may be argued that the Soviet T-34 and Stalin series, as well as weapons ranging from their submachine gun to heavy artillery were superior to western models. See: Ellis and Chamberlain, 52-66, Eric Grove, 110-121; Kenneth Macksey, *Tank versus Tank*, 84-87.

⁸² Liaison Letter No. 10. July 44. D Hist 141,009 D116. *Comparison of Soviet and British Tank Tactics*.

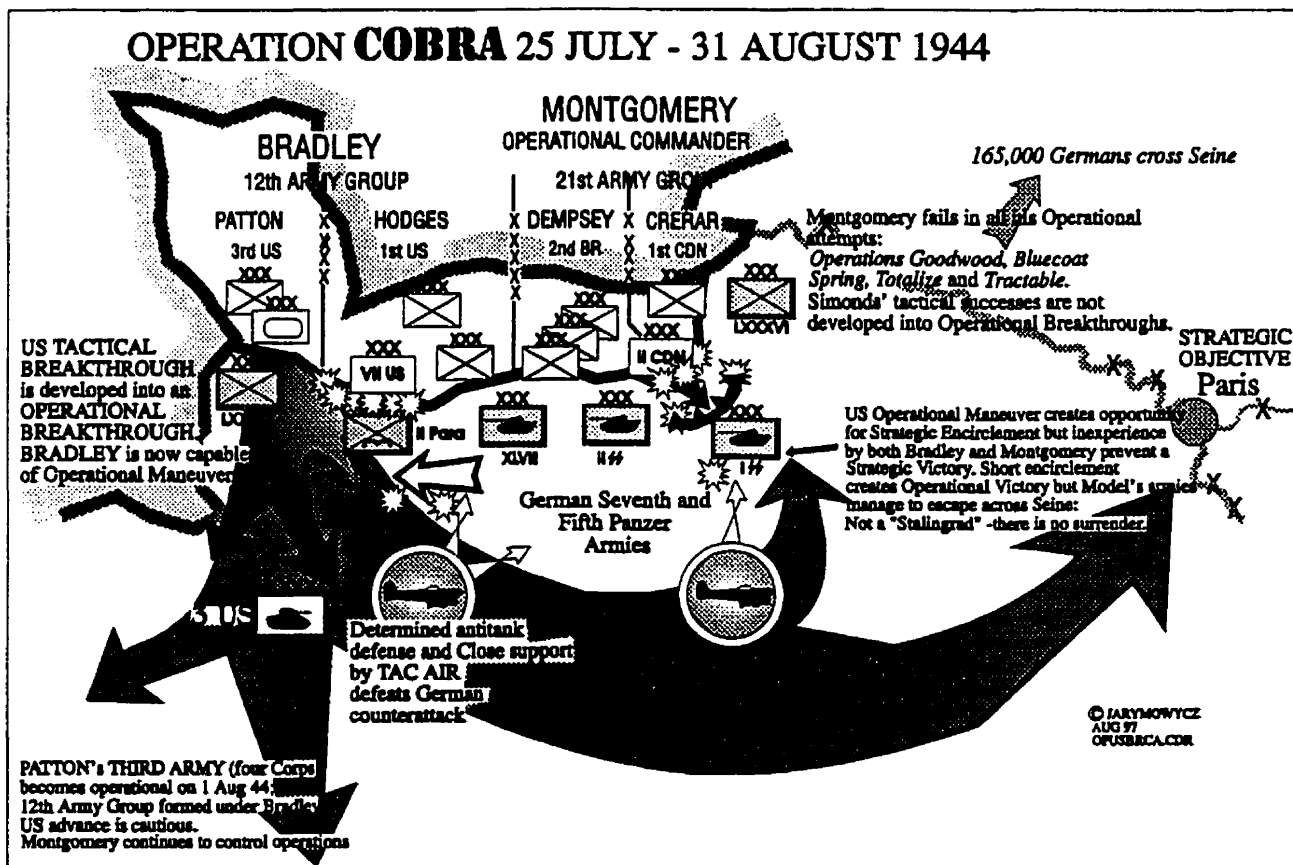
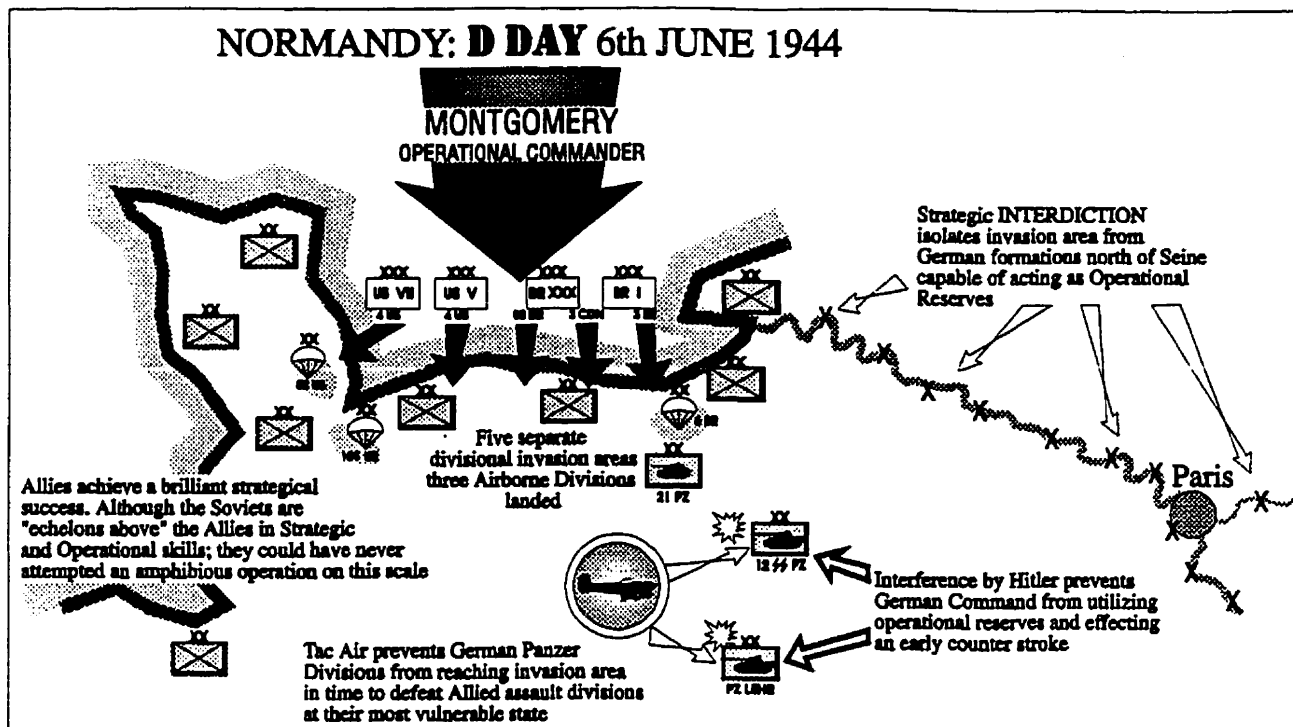


Figure 32

Russian Disapproval

Battle is the means of the operation. Tactics are the material of Operational Art. The Operation is the means of Strategy and, Operational Art is the material of Strategy.
A. A. Svechin

I repeatedly urged Montgomery to speed up and intensify his efforts to the limit. He threw in attack after attack, gallantly conducted and heavily supported by artillery and air, but German resistance was not crushed.

General Dwight D. Eisenhower

In comparison to Soviet offensives, *Goodwood*, *Spring*, and *Totalize* were sent in along 6.4, 6 and 4.8 km frontages respectively. These were noted with disapproval by the Russians as “examples of unsuccessful offensive operations.” Stavka was bewildered by “18 July Goodwood Front of 5 km”⁸³ with particular concern for: “the inaction of the Allies on the remainder of the front.”⁸⁴

The Lvov offensive took place at the same time as *Goodwood*. Stavka concentrated 68% of Red Army divisions for the attack, including 80% of armoured fighting vehicles, 65% of the artillery, and 100% of the aircraft. The breakout sector was twenty-six kilometres wide while the offensive front extended 440 kms – considerably superior ratios to *Goodwood* figures. Since Montgomery had access to all the artillery and armour⁸⁵ in Normandy, it is reasonable to assume it was his decision to have an “all British” show rather than create a powerful second echelon based on an American armoured corps.

Despite the orders given 7th British and Guards Armoured Divisions,⁸⁶ there was no actual breakthrough plan for Operation *Spring*, rather a “wait and see” approach. The immediate destruction of von Kluge’s operational reserves was fundamental for a rapid

⁸³ Sidorenko, 38.

⁸⁴ Sidorenko, 41. “The main and decisive force in exploiting the success after the break-through were the tank armies and the detached tank and mechanised corps. In cooperation with the air force, like a fast moving ram of colossal power, they cleared the way for field armies.” F. M. Zhukov.

⁸⁵ 12th and 21st Army Groups had 10 Armd Divs (not including GHQ Tk Bns and Ind Tk Bdes) vs. 10 Panzer and 1 PzGren divisions in Normandy by mid August (6 SS and 5 Wehrmacht). During *Spring*, more SS panzer divisions were concentrated around Caen than were available for either panzer Army in Operation *Zitadelle* (Kursk). See: Helmuth Spaeter Panzerkorps Grossdeutschland (Friedberg: Podzun-Pallas Verlag, 1988), 174-176., H. S. Scheibert and U. E. Elfrath German Armoured Forces on the Eastern Front 1941-44 (Dorheim: Almark, Podzun Verlag, 1971), 115. page ref Manstein, RH16/71 WD 5 Pz Army: Order of Battle July 44 and OKW Orbat.

⁸⁶ WD 2 Cdn Corps, 23 July 1944.

success in Normandy but Western planning parodied the actual mechanics of a breakout.⁸⁷ From the briefing at St. Paul's School to the bridgehead battles of June, it was always assumed the Allies would *somehow* break out. There was no specific Allied doctrine save that used in North Africa – Montgomery's attacks tended to mimic El Alamein, the one battle he knew how to win.

The Allied breakout was played in five acts: *Goodwood*, *Spring*, *Cobra*, *Bluecoat*, and *Totalize*. None of the 21st Army Group operations husbanded all available resources, but they were very democratic efforts. Each team gave it a go and they shared the strategic bombers. Planning *Totalize*, Simonds actually conspired to stop the entire offensive to wait for a second bomber attack. These operations, compared to Soviet breakouts, appear amateur. By mid August, Montgomery, who ruled with an iron fist and meddled in most affairs, left the Americans totally alone and permitted spontaneous operational creativity in Canadian offensives. The idea of Simonds, a Corps Commander, sitting alone in his caravan dreaming up new methods of breaking through 5 Panzer Armee's defence would have been so out of place in the Soviet system as to be completely ludicrous.

The Allies could have duplicated the type of artillery concentrations used by the Russians. British and Canadian communications were superior to the Soviets and the logistic support was far more extensive. There were more than 500 guns in the Simonds's Corps alone; Montgomery controlled over 3000 Allied guns, not including thousands of medium and heavy mortars, tank guns, rocket batteries, anti-aircraft or anti-tank regiments. The failure of his first major breakout attempt, *Goodwood*, forced him to announce a battle philosophy based on a breakout through the American bocage sector. This is suspect. Montgomery's grasp of tank doctrine paralleled Field Marshal von Rundstedt: "Of all the German generals, Genfldm von Rundstedt knew the least of panzer tactics – he was an infantryman of the last generation."⁸⁸

⁸⁷ "The worth of a mechanized unit shows itself in the highest degree when the enemy has not yet had time to organize anti-tank defense." GenLt. Ivan G. Zav'yalov., *Voyennaya Mysl' (Military Thought)* No. 11, Nov 1971 quoted in Scott and Scott, 217.

⁸⁸ Panzer General Leo Geyer von Schweppenburg, when queried regarding von Rundstedt's decision to commit entire divisions to the counter-attack in Normandy. ETHINT 13, 4-5.

The 1944 Soviet Strategic Offensive provides an interesting comparison to Normandy. The destruction of Army Group Center, June - August '44, included an advance of 450 miles into German held territory. Normandy lasted 86 days and pushed the Germans from the bocage to the Scheldt, the Ardennes, and Lorraine, about 350 miles. The Red Army destroyed over sixty divisions. Model got most of his armies across the Seine, lost no panzer divisions, and was able to defeat Montgomery's next strategic offensive, the rashly planned and tragically executed Operation *Market-Garden*.⁸⁹

The Cannae Maneuver

And I shall pop out at them like an angry rabbit.

Field Marshal BLM Montgomery

Manoeuvre warfare consists of applying superior forces on one point.

Marshal F. Foch

The "write down the panzers" strategy is a popular military myth. The panzer divisions were not held in the Caen sector despite *Spring*. Montgomery vacillated between "holding" and "breakout." Although he ordered breakouts, he failed to coordinate and support them: "In the final stages Montgomery had British divisions to spare, but Simonds was not reinforced."⁹⁰ The Caen sector offered the best opportunity of destroying the German Army in the west ("at least 550 of the 750 [German] tanks destroyed in Normandy by this date [end of July], met their fate on the Caen front."⁹¹) When he was at last offered Bradley's gift of operational maneuver and the possibility of strategic victory, Montgomery chose conservatism and conducted the breakout with little

⁸⁹ The division most responsible for destroying the British Airborne envelopment into Arnhem was Monty's old friend, the 9th SS Höhenstauffen, "resting and reforming" near the city after escaping from the Falaise pocket. See: R. J. Kershaw 'It Never Snows in September' The German View of Market Garden and the Battle of Arnhem, September 1944, (Ramsbury: Crowood, 1990), 16, 304, 308.

⁹⁰ Wilmot, 424.

⁹¹ Milton Shulman, Defeat in the West (London: Secker and Warburg, 1947), 144.

decisiveness.⁹² In the end, the final encirclement of the Falaise Pocket was a series of division level thrusts overseen by the theatre commander.⁹³

The US pursuit during *Cobra* was spectacular, but overrated. There were no German operational reserves to intercept or block. Nevertheless, there were not enough armoured formations for envelopment, counter-attack and pursuit. McNair's quest for the "sound fundamental"⁹⁴ and a "lean and tough" infantry division was to cost the AGF tank divisions by channelling effort, funds, and massive resources (schools, training centers, engineering development and the assembly line production of three different TD models) into his Tank Destroyer scheme. In the end, the AGF did not get the fifty armoured divisions it requested; in fact, Bradley broke out of Normandy with five. One can only speculate how *Cobra* would have been resolved had there been another American armoured corps available to maneuver. It was an American infantry division, the 90th, not an armoured division that met Maczek's 1st Polska Pancerna Divisia at Chambois. The spectacular clearing of Brittany, the Loire and the thrust to Paris was mainly accomplished by two tank divisions: Wood's 4th and Grow's 6th. Allied armoured indigence permitted von Kluge to maintain operational maneuver throughout the *Goodwood - Spring - Bluecoat - Cobra* offensives until forced by Hitler to concentrate and attack within the growing Falaise pocket.

Too many Germans escaped from the pocket; while much of the fault is Bradley's and Montgomery's, Eisenhower cannot be absolved from some guilt. He refused to take action even after it became apparent that Montgomery was not capable of breaking out of Normandy and prepared to invent excuses to justify failure. He should have taken command of the operational battle directly. Patton cleared Avranches and *Cobra* required

⁹² "Montgomery's great error in the Normandy Campaign was continually to promise more than the Second British Army could deliver." Stephen T. Powers "The Battle of Normandy: The Lingering Controversy," Quarterly Journal of Military History. Vol 65, No. 3, July 1992, 470.

⁹³ Montgomery did impress at least one key player - "I know why you all hate him. You are jealous: he is better than you are." Winston Churchill, quoted by Horne, "In Defense of Montgomery", 66.

⁹⁴ K. R. Greenfield, R. Palmer, and B. I. Wiley, The Organization of Ground Combat Troops (United States Army in World War II: The Ground Combat Forces, (Washington: Historical Division US Army, 1947), 316-317, see also: Weigley, 22-23.

guidance – he could not have possibly done worse than Montgomery who spent his time racing Bradley to Trun.⁹⁵

Simonds, without an armoured doctrine and helpful direction from above⁹⁶ – Crerar's inability resulted in far too much latitude to Simonds – behaved as his own army commander. His "corps attacks" were actually *army* level offensives that used most of Crerar's resources. Despite a considerable cheering section in Canadian military history, sober analysis of *Tractable* and *Totalize* will show they were inflexible, over-complicated and carried the mechanics of their own destruction.

The fact that 1st Canadian Army, despite a vast numerical advantage, was checked by one weak panzer division (12thSSHJ) further illustrates the Canadian difficulties with "warfighting" doctrine. As Commander of 2nd Canadian Corps, Simonds fought his tanks just as he described while a Captain – in penny packets of "GHQ" squadrons, tossed out by headquarters as they saw fit. When he failed, he resorted to extremes and threw brickloads of tanks down tight corridors. His inability to select armour leaders with the right stuff and his unnecessarily complex approach to armour was to rob him of victory in Operations *Spring*, *Totalize* and *Tractable*. In an evaluation of 2nd Canadian Corps' three attempts to break out, one is tempted to paraphrase Simonds's own pronouncement upon the Black Watch at St André: a failure in major tactics. Nevertheless, in the final assessment, given the weight of responsibility assigned to him by Crerar, Simonds must be rated next to Collins, Dempsey, Patton and Bradley, all army commanders under Montgomery.

Massed armour required leaders with skill and imagination: "Cavalry is not simply an arm – it is a state of mind."⁹⁷ Creative experiments with grouping and tactics ensured that when they finally went to war, the Americans were far closer to emulating

⁹⁵ Montgomery's wartime correspondence to Viscount Alanbrooke evaluated his boss: "As a commander, Eisenhower is quite useless. There must be no misconception on this matter; he is completely and utterly useless." Glenn LaFantasie, "Mont and Ike Take Gettysburg" *The Quarterly Journal of Military History Autumn* 1995, Vol 8, No. 1, 73. This and the publication of the Montgomery's Memoirs may have prompted Eisenhower's final judgement on the British Field Marshal: "just a little man, he's just as little inside as he is outside." quoted by LaFantasie, 68.

⁹⁶ Crerar was eventually removed from command of 1st Cdn Army by Montgomery in the autumn of 1944: "I had great troubles with Crerar.... He was utterly unfit to command an Army, and some of his Divisional Commanders were very poor.... The Canadian Army produced only one general fit to hold high command in the Second World War – Guy Simonds." Montgomery, quoted by Hamilton, 507.

⁹⁷ Grow, "Black Lines on a Map", 5.

the success of the German Kampfgruppen than the British and Canadians. A study comparing 1st Polish Armoured and 4th Canadian Armoured Divisions is important because it is the perfect laboratory experiment: the same vehicles, combat support, and the same senior commanders. Their operational style was markedly different. 4 CAD suffered from both ineffective leadership at the divisional and brigade level as well as bad luck. 1 PAD, perhaps through good fortune, found itself in a position to excel. It did not falter. Its success was unique in 21st Army Group.⁹⁸

Canadian doctrine evolved through attrition. Canadian senior commanders were mostly artillery officers with no talent or inclination for armored warfare. Simonds chose the wrong armoured leaders and sacked at least one right leader. General F. F. Worthington, ("Aggressive, with reputation as fearless fighter"⁹⁹) should have been given his chance at command. He was dynamic and made quick decisions. "Worthy" led from the front. He could have done no worse at *Totalize* or the *Tractable* breakout than George Kitching. The Simonds "all youth" movement robbed him of experienced senior leadership when he needed it most.¹⁰⁰ After the Normandy battle school, Maczek and Kitching might have performed as well as Wood or Grow but the Canadian Armoured Corps had had its day in Europe.

Canadian armour would never again have the opportunity to conduct the type of operations it was offered in Normandy.

⁹⁸ After the breakout was complete, MajGen Horrocks used armour boldly. The dash of 11th and Guards Armcd Divs to Brussels is a classic example of an armoured corps in the pursuit. Horrocks, 77-79.

⁹⁹ MG27. Vol 54. Ralston Papers: Division Commanders. Rated by Stuart before D Day. Stuart felt Worthington was old and "not a good disciplinarian ... allows his interest to become absorbed in too many matters outside his command."

¹⁰⁰ In fairness to Simonds it should be noted that the Americans were equally heavy handed with their older divisional commanders. MajGen H. W. Baird (62 years old) was relieved of command of 4th Armored and replaced by Wood. Bruce Clarke found him "sitting at his desk with his face in his hands and he was crying... 'Read this letter.' It was from George Marshal: 'You are too old to command a division, and you are retired and ordered home.'" Bruce C. Clarke Papers. MHI. The Americans had the sense to replace Baird in May, 1942. Simonds dumped Worthington less than five months before D Day.

APPENDIX A

ALLIED ARMoured FORMATIONS ETOCANADA

4th Armoured Division	(1942)	Normandy – <i>Cobra / Tractable</i> ; Germany
5th Armoured Division	(1941)	Italy, Holland, Germany

UNITED KINGDOM

1st Mobile Division	(1937)	
1st Armoured Division	(1938/1939)	
Mobile Division Egypt	(1938 -became 7 th Armd Div)	
2nd Armoured Division	(1939/1940)	
6th Armoured Division	(1940 Sept)	
7th Armoured Division	(1940 Sept)	Normandy – <i>Cobra / Bluecoat</i> ; Germany
8th Armoured Division	(1940 Nov)	
9th Armoured Division	(1940 Dec)	
10th Armoured Division	(1941 Aug fm 1 st Cav Div)	
11th Armoured Division	(1941 March)	Normandy – <i>Cobra / Bluecoat</i> ; Germany
Guards Armoured Division	(1941 June, fm Guards Bde)	Normandy – <i>Cobra / Bluecoat</i> ; Germany
42nd Armoured Division	(1941 Aug; from Inf)	
79th Armoured Division	(1942 Sept)	Normandy; Germany

UNITED STATES

1 st Armored Division	(1940) "Old Ironsides":	North Africa; Italy
2nd Armored Division	(1940) "Hell on Wheels":	North Africa; Normandy – <i>Cobra</i> ; Germany
3rd Armored Division	(1941) "Spearhead":	Normandy – <i>Cobra</i> ; Germany
4th Armored Division	(1941) "Breakthrough":	Normandy – <i>Cobra</i> ; Germany
5th Armored Division	(1941) "V for Victory":	Normandy – <i>Cobra</i> ; Germany
6th Armored Division	(1942) "Super Sixth":	Normandy – <i>Cobra</i> ; Germany
7th Armored Division	(1942) "Lucky Seventh":	France/Germany
8th Armored Division	(1942) "Iron Snake":	France/Germany
9th Armored Division	(1942) "Phantom":	France/Germany
10th Armored Division	(1942) "Tiger":	France/Germany
11th Armored Division	(1942) "Thunderbolt":	France/Germany
12th Armored Division	(1942) "Hellcat"	Germany
13th Armored Division	(1942) "Black Cat"	Germany
14th Armored Division	(1942)	Germany
16th Armored Division	(1943)	Germany
20th Armored Division	(1943)	Germany

OTHER ALLIED ARMoured FORMATIONS

1st Polish Armoured Division	(1942/43)	Normandy – <i>Cobra / Tractable</i> ; Germany
2nd French Armoured Division	(1942/43)	Normandy – <i>Cobra</i> ; Germany

APPENDIX B

ARMoured CORPS CASUALTIES

CANADIAN ARMoured CORPS CASUALTIES

May 1940 -April 1945

<u>UNIT</u>	<u>REGT</u>	<u>KIA</u>	<u>TOTAL</u>
10 CAR	<i>FGH</i>	86	402
12 CAR	<i>Three Rivers</i>	67	382
6 CAR	<i>1 H</i>	105	344
8 RECCE	<i>14 CH</i>	50	308
27 CAR	<i>SHER FUS</i>	66	287
14 CAR	<i>CALG R</i>	44	273
28 CAR	<i>BCR</i>	35	270
7 RECCE	<i>17 DYRCH</i>	49	269
2 CAR	<i>LDSH</i>	59	268
29 RECCE	<i>S ALTA</i>	49	259
11 CAR	<i>ONT R</i>	30	258
22 CAR	<i>CGG</i>	57	250
3 RECCE	<i>GGHG</i>	39	246
9 CAR	<i>BCD</i>	48	245
1 RECCE	<i>RCD</i>	24	230
21 CAR	<i>GGFG</i>	58	204
5 RECCE	<i>8 PLNBH</i>	27	179
18 RECCE	<i>XII MAN D</i>	31	147
4 RECCE/INF	<i>PLDG</i>	127	802*

*The high casualties attributed to Princess Louise Dragoon Guards, 4th Recce Regt, occurred after the unit had been converted to infantry and sent into action before they had been sufficiently trained

UNITED STATES ARMORED FORCE CASUALTIES

<u>UNIT</u>	<u>Total</u>
1st Armored Division	6596
2 nd Armored Division	5740
3 rd Armored Division	9189
4 th Armored Division	5907
5 th Armored Division	3152
6 th Armored Division	4655
7 th Armored Division	4899
8 th Armored Division	2039
9 th Armored Division	2973
10 th Armored Division	3883
11th Armored Division	2912
12th Armored Division	3141
13th Armored Division	1165
14th Armored Division	2515
16th Armored Division	23
20th Armored Division	293

APPENDIX C

Sampling of Allied Tank Casualties¹:

<i>Theatre of operations</i>	<i>Total Sample</i>	<i>Total Known Casualties</i>	<i>Gunfire</i>		<i>Non Enemy</i>	
<u>Western Europe</u>						
US - 1944	2579	2065	1051	50.9%	292	14.1%
UK - 1944	1103	1048	621	59.2%	21	2.0%
CDA 1944	473	294	161	54.8%	66	22.4%
<u>North Africa</u>						
US - 1942	72	37	23	62.2%	12	32.4%
US - 1943	205	81	36	44.4%	14	17.3%
UK - 1942	1123	1123	884	78.7%	1	0.1%
UK - 1943	182	182	140	76.9%		0
FR - 1943	39	39	30	76.9%		unknown
<u>Sicily</u>						
US - 1943	58	21	10	47.6%	4	19.0%
UK - 1943	31	31	23	74.2%		0
CDA 1943	20	20	6	30.0%	4	20.0%
<u>Italy</u>						
US - 1943	55	44	18	40.9%	17	38.6%
US - 1944	471	407	180	44.2%	103	25.3%
UK - 1943	128	109	60	55.0%	6	5.5%
UK - 1944	652	521	309	59.3%	18	3.5%
CDA 1943	73	66	21	31.8%	22	33.3%
CDA 1944	631	488	146	29.9%	246	50.4%

¹ ORO T 117 Tables I, II: "SAMPLING OF ALLIED TANK CASUALTIES TO ALL CAUSES"

APPENDIX D

Analysis of Sherman Casualties: 6th June - 10th July²

(I)	Total Tank Casualties Analysed	Proportion of Total Tanks
	(a) Number penetrated by German AP Shot	40 89%
	(b) Number Mined	4 9%
	(c) Number Damaged, unidentified but "brewed up"	1 2%
(II)	Total "Brewed Up":	37 82%
	(a) Number penetrated by shot and "brewed up"	33 73%
	(b) Number mined and "brewed up"	3 7%
	(c) Number "brewed up" by unknown causes	1 2%

Note: In several cases it is difficult to distinguish between penetrations of 75 and 88mm particularly after the tank had "brewed up". Too much reliance must not be placed on the proportion of such penetrations though the proportion given agrees well with the estimated occurrences of such guns given by 2nd Army, Main HQ. Estimates by fighting soldiers were found to be unreliable since many reported they had been knocked out by 88mm, when in fact it had been 75mm shot, while the reverse mistake has not yet been discovered.

(III)	<u>Tanks Penetrated by German AP Shot</u>	Proportion of Total Hits
	(a) Total Hits Recorded	65
	(i) 75 mm	53 82%
	(ii) 88 mm	12 18%
	(b) Number of Penetrations	62 95%
	(i) 75 mm	50 77%
	(ii) 88 mm	12 18%
	(c) Number of Failures to Penetrate	3 5%
	(i) 75 mm	3 5%
	(ii) 88 mm	nil 0%

<u>Distribution of Hits</u>	<u>Front</u>	<u>Side</u>	<u>Rear</u>
Hull	7	24	6
Turret	12	12	4
Total	19	36	10

Distribution of Number of Hits required to knock out each Tank

Number of Hits	1x HIT	2x Hits	3x Hits	4	5	6	7	8xHits
Tks Knocked Out	<u>25</u>	11	2	1	-	-	-	1

Distribution of Hits

Angle of Penetration	0°-9°	9°-30°	30°-90°
Hull	32	19	8
Turret	19	16	3

Further Study of Tanks that were HIT but not Penetrated and remained in action

Total Tanks Inspected	124
Hits Failing to Penetrate	8

² RG24 Vol. 14186, BRAC War Diary, Report No.12: "2nd Army: Analysis of 75mm Sherman Tank Casualties Between 6th June and 10th June" and, data based on ORO T 117, 16-27, Tables VII, VIII, X, IX, XI, XII. And, Hardison BRL MR 798, TableIII 10.

APPENDIX E

Tank States 2 CAB Normandy June-August 1944

2 CAB Tank State June 1944

	6			7			12			13			14		
	M4	VC	M3	M4	VC	M3	M4	VC	M3	M4	VC	M3	M4	VC	M3
6 CAR	50	12	11	38	7	6	19	0	7	41	5	10	39	5	7
10 CAR	50	12	11	39	7	7	35	4	7	36	3	9	36	3	9
27 CAR	50	12	11	21	3	2	37	4	7	38	6	6	42	6	6

	18			19			20			21			23		
	M4	VC	M3	M4	VC	M3	M4	VC	M3	M4	VC	M3	M4	VC	M3
6 CAR	40	5	7	40	8	8	43	5	9	43	5	9	38	5	10
10 CAR	39	4	10	44	5	9	41	5	10	44	5	10	45	5	10
27 CAR	35	6	6	45	6	6	46	6	6	45	6	6	32	6	9

	24			27			28			29			30		
	M4	VC	M3	M4	VC	M3	M4	VC	M3	M4	VC	M3	M4	VC	M3
6 CAR	43	5	10	46	7	10	41	7	10	42	7	11	42	7	11
10 CAR	44	5	10	45	7	10	42	7	10	46	7	10	46	7	10
27 CAR	46	6	9	44	7	10	41	7	9	47	8	9	46	7	8

Daily Avg/Regt			Below 50%:		
M4:	41	82%	6	2x	9x
			10	0x	9x
			27	1x	10x
VC:	6	50%	Tot	3x	28x

2 CAB Tank State July 1944

	1			2			3			4			5		
	M4	VC	M3	M4	VC	M3	M4	VC	M3	M4	VC	M3	M4	VC	M3
6 CAR	44	6	11	43	7	11	50	7	11	48	7	10	49	7	10
10 CAR	46	7	8	46	7	8	51	7	8	45	6	8	40	6	8
27 CAR	47	7	5	48	6	10	51	7	9	49	7	9	50	8	9

	6			7			8			9			10		
	M4	VC	M3	M4	VC	M3	M4	VC	M3	M4	VC	M3	M4	VC	M3
6 CAR	49	7	11	44	7	11	47	7	11	42	7	11	44	7	11
10 CAR	39	1	8	39	7	8	44	7	8	42	3	8	40	7	8
27 CAR	50	8	9	55	8	9	38	6	9	33	6	9	39	6	9

	11			12			13			14			15		
	M4	VC	M3	M4	VC	M3	M4	VC	M3	M4	VC	M3	M4	VC	M3
6 CAR	44	7	11	53	6	11	53	7	11	52	7	11	54	7	11
10 CAR	40	7	8	40	8	8	40	8	8	40	8	7	38	8	7
27 CAR	35	6	9	30	5	9	25	5	9	49	8	8	49	8	8

	16			17			19			23			24		
	M4	VC	M3	M4	VC	M3	M4	VC	M3	M4	VC	M3	M4	VC	M3
6 CAR	54	7	11	53	7	11	44	6	11	43	7	11	42	7	11
10 CAR	38	8	7	39	8	7	35	8	6	49	7	5	52	9	7
27 CAR	51	8	8	53	8	8	53	8	7	25	6	7	34	7	9

	25			26			27			29			30		
	M4	VC	M3	M4	VC	M3	M4	VC	M3	M4	VC	M3	M4	VC	M3
6 CAR	29	4	11	24	3	11	27	3	11	26	4	11	28	5	11
10 CAR	36	7	8	43	7	8	41	8	6	41	8	8	48	8	8
27 CAR	38	7	9	33	6	9	31	7	10	49	11	10	50	11	10

	31		
	M4	VC	M3
6 CAR	28	5	11
10 CAR	49	8	7
27 CAR	49	11	10

Daily Avg/Regt		
M4:	43	86%
VC:	7	57%

Below 50%		
6	5x	5x
10	1x	0x
27	2x	8x
Tot	8x	13x

2 CAB Tank State August 1944

	1			2			3			4			5		
	M4	VC	M3	M4	VC	M3	M4	VC	M3	M4	VC	M3	M4	VC	M3
6 CAR	29	5	11	36	5	11	41	5	11	43	8	11	40	6	11
10 CAR	48	8	7	49	8	8	49	8	8	50	11	8	50	11	8
27 CAR	50	8	10	50	11	10	50	8	8	47	11	8	47	11	9

	9			10			11			12			13		
	M4	VC	M3	M4	VC	M3	M4	VC	M3	M4	VC	M3	M4	VC	M3
6 CAR	45	8	11	50	10	11	47	9	11	48	9	9	48	10	10
10 CAR	37	10	7	40	10	7	45	11	7	44	11	6	45	11	5
27 CAR	41	11	9	43	10	8	46	11	7	24	4	8	41	6	7

	16			18			19			20			21		
	M4	VC	M3	M4	VC	M3	M4	VC	M3	M4	VC	M3	M4	VC	M3
6 CAR	21	7	9	24	5	8	25	5	9	27	8	9	27	4	9
10 CAR	24	3	5	24	5	4	29	6	4	29	10	5	28	7	5
27 CAR	25	2	5	32	5	3	33	7	9	37	7	5	35	7	5

	22			23			24			29			30		
	M4	VC	M3	M4	VC	M3	M4	VC	M3	M4	VC	M3	M4	VC	M3
6 CAR	27	4	9	27	4	9	33	6	7	36	7	7	36	6	7
10 CAR	28	7	5	34	4	5	34	5	6	35	5	5	36	6	4
27 CAR	28	6	3	31	6	9	24	4	3	25	4	4	29	4	4

	31		
	M4	VC	M3
6 CAR	35	7	6
10 CAR	36	6	4
27 CAR	31	4	4

Daily Avg/Regt		
M4:	37	73%
VC:	7	59%

Below 50%		
6	7x	10x
10	6x	9x
27	6x	10x
Tot	19x	29x

EFF TANK STRENGTH 2nd CDN ARMD BDE JULY 44 NORMANDY

Date	HQ 2 CAB	6 Cdn Armd Regt				10 Cdn Armd Regt				27 Cdn Armd Regt				TOTAL 17 PDR FIREFLYS	% Firefly	TOTAL
		SHER A24	SHER VC	% Firefly	TOTAL	SHER A24	SHER VC	% Firefly	TOTAL	SHER A24	SHER VC	% Firefly	TOTAL			2 CAB
03 Jul	8				57				58				58	21	11.6%	181
04 Jul	7				55				51				56	20	11.8%	169
09 Jul	4				49				45				39	21	15.3%	137
15 Jul	9				61				46				57	23	13.3%	173
16 Jul	4				61				46				60	23	13.5%	171
17 Jul	8				60				47				61	23	13.1%	176
18 Jul					60				44				61	22	13.3%	165
19 Jul	6				50				43				61	22	13.8%	160
23 Jul	8	43	7	14.0%	50	49	7	12.5%	56	25	6	19.4%	31	20	13.8%	145
24 Jul	8	43	7	14.0%	50	52	9	14.8%	61	34	7	17.1%	41	23	14.4%	160
25 Jul														18	14.8%	122
26 Jul	7	24	3	11.1%	27	43	7	14.0%	50	33	6	15.4%	39	16	13.0%	123
26 Jul	5	25	4	13.8%	29	43	7	14.0%	50	31	7	18.4%	38	18	14.8%	122
27 Jul	7	27	3	10.0%	30	41	8	16.3%	49	31	7	18.4%	38	18	14.5%	124

AVG	6.2	32.4	4.8	12.6%	45.6	45.6	7.6	14.3%	49.7	30.8	6.6	17.7%	45.7	20.6	13.6%	152.0
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GERMAN PANZER STRENGTH NORMANDY 44

PZ DIVISION		PZ REGTS	TIGERS		MARK V		MARK IV		JPZ/STUG		FR PZ		JPANT	TOTALS	
			JUNE	JULY	JUNE	JULY	JUNE	JULY	JUNE	JULY	JUNE	JULY	JULY	JUNE	JULY
PZ LEHR	DIV	LEHR	6	0	86	32	97	36	31	28				220	96
2 PZ	DIV	3 PzRgt			67	21	94	85	21	21				182	127
116 PZ	DIV	16 PzRgt					58	68	12	12				70	80
21 PZ	DIV	22 PzRgt					98	65	43	32				141	97
1 SS PZ	DIV	1 SS PzRgt			38	25	42	30	44	31				124	86
2 SS PZ	DIV	2 SS PzRgt			25	26	44	50	75	36				144	112
9 SS PZ	DIV	9 SS PzRgt			36	19	41	30	38	29				115	78
10 SS PZ	DIV	10 SS PzRgt					32	30	33	17				65	47
12 SS PZ	DIV	12 SS PzRgt			46	48	92	32	33	18				171	98
7 SS PZGR	DIV	17 SS PzRgt							37	25				37	25
IND PZ BNS		503 sPzAbt	24	13										24	13
		101 SS sPzAbt	37	20										37	20
		102 SS sPzAbt	28	18										28	18
		654 PzAbt											12	0	12
		206 PzAbt									24	0		24	0
		100 E/A PzAbt									15	0		15	0
TOTALS			95	51	298	171	598	426	367	249	39	0	12	1397	909

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