THE TANKS OF DIEPPE: THE HISTORY OF THE CALGARY REGIMENT (TANK), 1939 to AUGUST 19, 1942

by

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The concluding chapter discusses the fate of the prisoners of war captured at Dieppe and summarizes the regiment's reinforcement, reorganization, training and experiences during the campaigns in Italy and in Holland.

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ABSTRACT

At the outbreak of the Second World War, Canada possessed one of the most inadequately trained, ill-equipped and poorly prepared armed forces among the Allied nations. German blitzkrieg tactics in 1939 and 1940 underscored the need to create Canadian armoured units for action overseas.

This paper examines the process of mobilization, organization, equipage, and training of the 14th Canadian Army Tank Regiment (14 CATR). Not only was it one of the first Canadian armoured regiments to be formed, but it was also the first to be committed to battle. Analysis of its actions at the Dieppe Raid reveals a total lack of understanding by senior Allied commanders concerning limitations and capabilities of the operational employment of tanks in a built-up area.

An operational study of the actions of each one of the regiment's tanks that landed during the raid demonstrates problems faced at the regimental level. The regiment had been trained to support infantry but never under the extremely adverse battle conditions which presented themselves at Dieppe. A reinterpretation of misconceptions surrounding the regiment's performance and supposed lessons learned, follows.

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ACKNOWLEDGEMENTS

Sources of information, aside from the usual secondary ones such as the British and Canadian Official Histories, memoirs and relevant standard monographs, include such primary material as the regimental war diary, intelligence reports, battle narratives, Operation Orders, German reports, battle maps, and photographs. The majority of documents were obtained from The King's Own Calgary Regiment Archives, Calgary; the Directorate of History, National Defence Headquarters, Ottawa; and the National Archives of Canada, Ottawa. Finally, interviews and correspondence with many veterans of the regiment clarified details and gave insights into areas not covered by the written records.

I would like to express thanks to several individuals and, in general, to the 50/14 Veterans Association, Calgary, without whose support this thesis would not have been possible. I am indebted to my co-supervisor, Professor R. H. Roy, who originally suggested the topic, and supervisor, Professor David Zimmerman, both of whom maintained my focus on the topic when I tended to deviate, which was often the case. Credit must go to the other two members of my committee, Professors Patricia Roy and Michael Hadley who were able to give me constructive criticism on the many preliminary drafts.

Special mention must go to Lieutenant-Colonel R. G. "Dick" Maltby, who constantly gave me enthusiastic support in this endeavour, reading preliminary drafts, giving suggestions and putting me in touch with other veterans. Other individuals who deserve credit are Brigadier C. A. "Stoney" Richardson, Lieutenant-Colonel Alex F. McIntosh, Lieutenant-Colonel C. R. "Bob" Sharp, Captain Gordon L. Drysdale, Mr. Stan A. Kanik, and other veterans of the regiment with whom I was in contact and are listed in the bibliography. I would like to express thanks to Mr. Bob Wyman, Mrs. Patricia Murphy and Mr. Jack Jenner, who let me have free access to the private diaries, letters, personal papers and scrapbooks of their fathers. Thanks is also owed to Dr. W. A. B. Douglas and his staff at the Directorate of History and Mrs. Denise Ross and the staff of the National Archives, who were always helpful and efficient in quickly processing my numerous requests for information. Finally, I am grateful to my parents who have unwaveringly supported me during my academic schooling up to now.

CHAPTER I

A HISTORICAL OVERVIEW

The first historical accounts of the Canadian Army overseas appeared in 1945 and 1946, often while the regiments were still in Europe. Compiled by the regiments themselves, usually by the Regimental Intelligence Officer, these short pamphlets were nothing more than a summary of dates, facts and figures copied from the unit war diary. The officers who had no professional historical training, did not attempt any analysis in their brief outlines of the regiment's activities in the war but intended to inform new recruits and to provide a souvenir for members of the regiment on demobilization. Almost all regiments produced these pamphlets, that of the 14 CATR, *The Calgary Regiment* (1945) was written by Lieutenant R. G. "Dick" Maltby.[1]

While regiments were preparing their own souvenir booklets, the Army Historical Section in London under the direction of Lieutenant-Colonel Charles P. Stacey, a professional historian, prepared three popular historical booklets for immediate public consumption. Collectively entitled *The Canadian Army at War*, the booklets *The Canadians in Britain, 1939-1944* (1945), *From Pachino to Ortona* (1946) and *Canada's Battle in Normandy* (1946). They

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[1]Lieutenant R. G. Maltby, Regimental Intelligence Officer, *The Calgary Regiment* (Hilversum, Netherlands: DeJong & Co., 1945).

were the forerunners of Stacey's later official army history.[2]

In the decade after the war, the most common type of history on the actions of the Canadian Army, aside from those by war correspondents, were regimental histories.[3] Generally speaking, journalists and former officers of the unit, who possessed no professional historical training, wrote these books from unit war diaries and regimental records, which they fleshed out with personal experiences. Lacking analysis and references they are of limited interest to the historian. They tended to overlook the regiment's development within the context of the Great Depression, government disinterest and the state of domestic opinion, and instead concentrated on the history of the overseas campaigns. Such histories were primarily a monument to the men who had served and for those who came after.

Typical examples of the early phase of regimental history are Lieutenant-Colonel H. M. Jackson's *The Princess Louise Dragoon Guards--A History* (1952), *The Sherbrooke Regiment* (1958) and Captain Lex Schragg's *History of the*

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[2]Army Historical Section, *The Canadians in Britain, 1939-1944*, No. 1 (Ottawa: King's Printer, 1945) and *From Pachino to Ortona*, No. 2 (Ottawa: King's Printer, 1946); C. P. Stacey, *Canada's Battle in Normandy*, No. 3 (Ottawa: King's Printer, 1946).

[3]A typical work by a war correspondent is Ross Munro's *Gauntlet to Overlord: The Story of the Canadian Army* (Toronto: MacMillan, 1945), which is of little scholarly value and is a hastily compiled volume of dates and events full of insignificant anecdotes and name-dropping.

Ontario Regiment, 1866-1951 (1951). All three books, by former officers, concentrate on overseas battles and devote only limited space to mobilization, training and the problems of the inter-war period.[4] Another example of the genre is *A History of the 1st Hussars Regiment, 1856-1951* (1951). Written by officers of the unit, for strictly regimental consumption, the book gives a broad overview of the unit from its inception and develops the theme that the spirit of the regiment is what makes a soldier in war and peace part of his unit.[5]

In the same vein is *Lord Strathcona's Horse: A Record of Achievement* (1947), written by its last war-time commanding officer, Lieutenant-Colonel J. M. McAvity, in collaboration with officers and men of the regiment. After briefly summarizing the unit's early history, the author delves immediately into a highly detailed "drum and bugle" account of its overseas actions. Although it is of little interest to those who did not serve in the regiment, some descriptive passages contain impressions of the commanding officer that could be a useful adjunct to the primary sources. Copious appendices include the complete nominal

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[4]Lieutenant-Colonel H. M. Jackson, *The Princess Louise Dragoon Guards--A History* (n.p., 1952); by the same author, *The Sherbrooke Regiment* (n.p., 1958); Captain Lex Schragg, *History of the Ontario Regiment, 1866-1951* (Oshawa: n.p., p.p., 1951).

[5]*A History of the 1st Hussars Regiment, 1856-1951* (London, Ontario: n.p., p.p., 1951). The history was updated in 1981, but with no change in the approach.

roll of personnel who served in the Second War, the roll of honour, and a unique listing of short sketches of the history of almost every tank in the Regiment.[6]

The writing of this narrowly focused regimental history continued. Douglas How, a professional journalist, in *The 8th Hussars: A History of the Regiment* (1964) brings out the regimental pride of the New Brunswickers with beautifully written anecdotes and colour. Besides a photographic section of forty pages, extensive appendices list commanding officers, personnel, decorations, battle honours, roll of honour and maps. Unfortunately, from a scholarly point of view, his description of the unit's operations is sometimes unclear, confusing and lacks analysis.[7]

Another example of this genre is by Stacey's predecessor at the Army Historical Section, Colonel Archer F. Duguid. Neither Duguid nor his staff at the Historical Section were trained historians. Like the works by amateur historians, Duguid's *History of the Canadian Grenadier Guards, 1760-1964* (1965) suffers from a lack of context.[8]

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[6]Lieutenant-Colonel J. M. McAvity, *Lord Strathcona's Horse: A Record of Achievement* (Toronto: n.p., 1947).

[7]Douglas How, *The 8th Hussars: A History of the Regiment* (Sussex, New Brunswick: Maritime, 1964).

[8]Colonel Archer F. Duguid, *History of the Canadian Grenadier Guards, 1760-1964* (Montreal: Gazette Printing, 1965). Numerous non-scholarly regimental histories exist. Examples from the Canadian Armoured Corps include Captain G. T. Service and Captain J. K. Marteinson, *The Gate: A History of the Fort Garry Horse* (Calgary: n.p., p.p., 1971); Douglas E. Harker, *The Dukes: The Story of the Men Who*

Only one chapter is devoted to the inter-war period, and a few pages to training before Duguid leaps into a narrative of the unit's actions. Even in the battle chapters, he made no attempt to assess tactics or allocate praise or blame to senior commanders--possibly because Duguid wanted to avoid offending officers who were still living. Nevertheless, this book has some references that could be of use to the military historian.

The first comprehensive account of the Canadian Army in the Second World War was a group effort under the direction of Colonel Stacey. As director of the old Army Historical Section of the Canadian General Staff, he had access to all the classified material unavailable to other scholars. Entitled *The Canadian Army 1939-1945: an Official Historical Summary* (1948), this single volume, in the words of Stacey, gave a "satisfactory bird's-eye view of the struggle and the achievements," and was intended for the intelligent general reader.[9] The study was later expanded into the three volumes of the official history, *Six Years of War* (1955) and

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Served in Peace and War With the British Columbia Regiment, 1883-1973 (n.p., p.p., 1974); an earlier volume by the same author, *The Story of the British Columbia Regiment, 1939-1945* (Vancouver: n.p., p.p., 1950); W. B. Fraser, *Always a Strathcona* (Calgary: Comprint, 1976); W. Van Der Schee, *A Short History of Lord Strathcona's Horse* (n.p., 1973); *The Governor-General's Horse Guards, 1939-1945* (Toronto: Canadian Military Journal, 1953); and Larry Worthington, *The Spur and the Sprocket: The Story of the Royal Canadian Dragoons* (Kitchener, Ontario: Reeve, 1968).

[9]C. P. Stacey, *A Date With History: Memoirs of a Canadian Historian* (Ottawa: Deneau, 1983), p. 180.

The Victory Campaign (1960) by Stacey, and *The Canadians in Italy* (1956) by G. W. L. Nicholson.[10] All three volumes are detailed but lack interpretation. Frequently they avoid assessing the calibre of generalship or analyzing such controversial subjects as command relationships and tactical competence.[11] *The Canadians in Italy* surprisingly lacks a description of the activities of the 1st Canadian Armoured Brigade in many of the major battles. Other inaccuracies include the misspelling of the name Trasimeno.

The official histories and other works written in this period by Stacey and his associates inspired a major change in the writing of Canadian military and regimental history. In the 1960s and early 1970s military historians began to study a broader spectrum of military issues and institutions and how they fitted into their social environment. This "new" historiographical approach has changed the writing of regimental history. Historians now examine a regiment's development, training, operations and tactics within the

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[10] C. P. Stacey's three volumes are: *The Canadian Army 1939-1945: An Official Historical Summary* (Ottawa: King's Printer, 1948); *Six Years of War* (Ottawa: Queen's Printer, 1955) and *The Victory Campaign* (Ottawa: Queen's Printer, 1960). The fourth volume is Colonel G. W. L. Nicholson, *The Canadians in Italy* (Ottawa: Queen's Printer, 1956).

[11] For a description of the financial, political and drafting difficulties encountered in the writing of the three army histories, see Stacey, *A Date With History*, pp. 214-233.

context of relevant political, social and economic factors.[12]

The new regimental historians had a great advantage over their predecessors since they had both professional historical training and military experience. As professional historians, they were likely to cross-check references and to use wide documentation including German sources. They could also draw on personal experiences to understand the complexities of certain aspects of military organizations and logistics.

Many of the new regimental historians worked at least for a time at the Army Historical Branch, or its successor, the Directorate of History (formed in 1964), and became familiar with all the relevant files and documents and were willing to share their knowledge of the sources with other researchers.

Examples of works combining genuine scholarship with military expertise are Lieutenant-Colonel G. W. L. Nicholson's two volumes on *The Gunners of Canada: the History of the Royal Regiment of Canadian Artillery* (Toronto: 1967-72). Thoroughly researched using war diaries, official histories, and veterans' interviews, this history

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[12]For a clear, detailed description of the transition of military history from its previous preoccupation with strategy and tactics to understanding the military within its social environment and the subsequent influences on each other, see Richard A. Kohn, "The Social History of the American Soldier: A Review and Prospectus for Research," *An American Historical Review* 86 (June 1981): 553-567.

keeps the story of the artillery within the contexts of both operations and the overall progress of the war. Nicholson discusses weapons, equipment, training, drill, manoeuvres, uniforms and social life, frequently with humorous anecdotes.

A former infantry officer, Reginald H. Roy, who served with the Army Historical Section for two years before undertaking an academic career, used the "new" military history approach to write three model regimental histories: *Ready for the Fray: the History of the Canadian Scottish Regiment, 1920-1955* (1958), *The Seaforth Highlanders of Canada, 1919-1965* (1969), and *Sinews of Steel: the History of the British Columbia Dragoons* (1965). He examines the relationship of the unit to its community at home and in England, the social strata from which its officers and other ranks are drawn and the unit's problems due to low defence expenditure during the inter-war period and he stresses the experiences of the regiment as a whole over the activities of individuals to give insight and add colour to the narrative. He does not hesitate to expose problems or deficiencies among the unit's personnel who, despite belonging to the "best regiment in the Canadian Army," were still prone to going absent-without-leave, contracting venereal disease, deserting, or being court martialled.[13]

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[13]Reginald H. Roy, *The Seaforth Highlanders of Canada, 1919-1965* (Vancouver: B.C. Historical Committee, 1969), pp. 57 and 257.

His critical analysis of the regiment's successes and failures, vacillations in governmental policy, clashes of personalities, and the use of extensive interviews and reminiscences create a realistic atmosphere that makes these books of interest to more than members of the regiment.[14]

While some regiments have commissioned academics to write their histories, others have employed professional writers. The best example of the latter is Farley Mowat, whose book, *The Regiment* (1955), an emotional and witty account of the Hastings and Prince Edward Regiment's activities from mobilization, training in England and action in Italy and Germany develops the theme of the regimental entity. While not always accurate in every detail, it colourfully and successfully portrays the atmosphere of war.[15]

To date the 14 CATR has not had an official regimental history of its activities during the Second World War. Apart from Lieutenant Maltby's seventeen-page pamphlet, *The Calgary Regiment,* nothing was written about the regiment until 1989, when Maltby in association with Major W. R. James, published a two-volume collection of veterans' stories and anecdotes, *The Informal History of the Calgary*

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[14]Reginald H. Roy, *Ready for the Fray: The History of the Canadian Scottish Regiment, 1920-1955* (Vancouver: p.p., 1958) and *Sinews of Steel: The History of the British Columbia Dragoons* (Brampton, Ontario: p.p., 1965).

[15]Farley Mowat, *The Regiment* (Toronto: McClelland and Stewart, 1955).

Regiment--14th Canadian Armoured Regiment and *Onward II*. These limited publications are primarily meant for veterans of the regiment and their families. They belong to that early phase of regimental history designed to maintain regimental tradition and to serve as a monument to veterans' war exploits and experiences. Both volumes' early chapters deal with the organization, mobilization and training of the unit in Canada and England, while the later chapters contain mostly battle stories of the regiment's actions at Dieppe, in Italy and Northern Holland. All the stories, written by the veterans from memory, narrowly focus on the regiment as a whole or on the specific actions of certain individuals. Interspersed throughout are appropriate photographs, newspaper clippings, battle maps, cartoons and songs, again all of which concern only the regiment and its men. Of course, *The Informal History* was meant to be just that by Maltby, informal. If used correctly, the history can be useful to the scholar. This thesis uses *The Informal History* to confirm details about training, the operational actions of the tanks at Dieppe and, in general, to give insight and fill in gaps in the official evidence.[16]

The absence of a formal history of The Calgary Regiment (Tank) with such an outstanding war record is a serious gap

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[16]Lieutenant-Colonel R. G. Maltby and Major W. R. James, eds., *The Informal History of The Calgary Regiment--14th Canadian Armoured Regiment* (Vancouver: 50/14 Veterans Association, 1989) and *Onward II* (Vancouver: 50/14 Veterans Association, 1991).

in Canadian armoured regimental histories. The Calgary Regiment (Tank) was the first militia regiment to be converted to a tank battalion and the first armoured regiment to see action on mainland Europe when it took part in the Dieppe Raid on August 19, 1942, and landed on the toe of Italy at Reggio Calabria on September 3, 1943. While in Italy, it was part of the 1st Canadian Armoured Brigade which holds the record for having been committed in action longer and for the longest unbroken period of time than any other formation in the Canadian Army.

CHAPTER II

EARLY HISTORY, TRAINING, ORGANIZATION, AND MOBILIZATION IN CANADA, UP TO JUNE 30, 1941

During the victorious and jubilant atmosphere after the Armistice of November 1918, few could have predicted that the world would again be at war in two decades' time. Imperial Germany had been overthrown and the victorious Allies were reducing it to a state of military impotence. Over 600,000 Canadians had answered the call-to-arms and by the end of the war had earned an impressive war record. Therefore, it is a remarkable fact that the War, which in the words of C. P. Stacey, "affected Canadian development so fundamentally in so many ways, had almost no long term influence upon the country's military policy." This is especially relevant since, in his opinion, it was "the most important episode in Canadian history until this time."[1]

Looking at the events in the context of 1919, one can understand the prevailing public attitude which continued for nearly two decades. Most people were concerned about the difficult change from a wartime to peacetime economy, the reintroduction of veterans into civilian life, and the future of Sir Robert Borden's Union Government. Major

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[1]C. P. Stacey, *Six Years of War: The Army in Canada, Britain and the Pacific* (Ottawa: Queen's Printer, 1955), p. 4.

events, such as the much-heralded formation of the League of Nations and the Bolshevik Revolution in Russia, also held the public attention. Victory had been won at the cost of over 60,000 Canadian lives and had strained the country economically, politically, financially and emotionally. Civilians were tired of war and wanted to forget wartime restrictions on their activities; while returning soldiers wanted to forget the horrors of the trenches. Civilians and soldiers alike wanted to get on with the routine of peacetime life. However, after the war, economic recession and widespread unemployment led to civil disturbances and rioting, of which the Winnipeg General Strike in the spring of 1919 is the most conspicuous example. These were clear indications that social discontent could reach an alarming level that the small regular or permanent force might not be able to handle. Consequently, the militia's role as "aid to the civil power" could justify its continuation.

There was little concern about defending Canada against an outside aggressor. The people had been assured beyond doubt that the Great War had been the war-to-end-all-wars. Since the Allies had been victorious, the argument went, there seemed to be no possible threat to Canada. To the south was her recent ally, the peaceful United States. To the north, east and west, the Arctic, Atlantic and Pacific ocean "moats" were guarded by the powerful navies of her

past allies, Great Britain and the United States.[2] By 1924, the public felt that "Canada, in brief, seemed to be living in a fireproof house far from the flames of war, and this attitude was to remain predominant for the next decade and a half."[3] Then in 1928 the Briand-Kellog Pact rejected war as a means of resolving disputes or as instrument of national policy. Even though the pact lacked conflict resolution powers and proved to be ineffective, pacifists and others often cited it in advocating increased cuts of expenditure on the militia.

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[2]Colonel J. "Buster Brown" Sutherland-Brown, Director of Military Operations and Intelligence from 1920 to 1927, formulated a top-secret contingency plan, Defence Scheme No. 1, based on the assumption that the main external threat to the security of Canada was the United States. Despite the absurdity of the scheme, which was contrary to the basic tenets of both Canadian and British foreign policy, for some years it formed the base on which the militia was organized and positioned. Canadian politicians were probably unaware of the scheme and it was never put into final form. In 1933 material referring to it was burned. For more on this see James S. Eayrs, *In Defence of Canada: Vol. 1. From the Great War to the Great Depression* (Toronto: University of Toronto Press, 1969), pp. 70-78 and Stephen J. Harris, *Canadian Brass: The Making of a Professional Army, 1860-1939* (Toronto: University of Toronto Press, 1988), pp. 168-175. Harris shows that Eayrs and other historians have distorted the picture of military planning in Canada from 1919 to 1939. Harris explains that similar plans were being outlined in the United States, because they were seen as necessary and because such exercises were helpful from a training point of view. Harris contends that other senior Canadian officers besides Brown believed in the possibility of war with the United States.

[3]R. H. Roy, *The Seaforth Highlanders of Canada, 1919-1965* (Vancouver: B.C. Historical Committee, Seaforth Highlanders of Canada, 1969), p. 15. For a more in-depth discussion of this see C. P. Stacey, "Geography and Canadian Security," in *The Military Problems of Canada* (Toronto: Ryerson Press, 1940), Chapter 1.

This public attitude was directly reflected in the federal government's indifferent treatment of the armed forces. In October, 1926, the Chief of Staff at the Department of National Defence Headquarters lamented in a memorandum that, "we have had no clear statement of military policy since 1905."[4] Government apathy towards the military held until the late 1930s when international events shocked it into forming a definite military policy and recognizing the abysmal condition of the militia and the armed forces in general.

For politicians domestic problems were the priority and, consequently, the militia suffered from a lack of funds. Canadian defence expenditure in 1924 was $1.46 per capita and changed little until the 1930s.[5] The Minister of Militia, Hugh Guthrie, confirmed this sorry state of affairs in 1922 by stating that, "Canada ranked last among the civilized nations in military expenditure both per capita and in proportion to the country's wealth."[6] As a result of the financial restrictions imposed by the government, the militia was streamlined and the very existence of each militia unit depended, to a large extent,

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[4]James S. Eayrs, *In Defence of Canada: Vol 1. From the Great War to the Great Depression* (Toronto: University of Toronto Press, 1964), p. 81.

[5]See Stacey, *Six Years of War*, p. 4.

[6]J. Castell Hopkins, *The Canadian Annual Review, 1921* (Toronto: The Canadian Review Co., 1922), p. 337.

on the initiative and disposition of the officers and non-commissioned officers (NCOs).[7] The nadir of the militia's difficulties were the early 1930s, when government defence expenditure was at its lowest since 1913 despite the fact that the army was responsible for administering the work camps set up for the unemployed civilian men. Completed projects were of military and urban significance and included the Trans-Canada highway, airway, and the construction of barracks, armouries and arsenals.[8]

The lack of equipment was a constant concern for all militia units which had to train with equipment left over from the Great War. As equipment wore out, it was not replaced. No mortars, submachine-guns, grenades, gas masks, military vehicles or comparable equipment were available.[9]

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[7]George F. G. Stanley, *Canada's Soldiers: The Military History of an Unmilitary People* (Toronto: MacMillan, 1960), p. 343; Eayrs, *From the Great War to the Great Depression*, pp. 310-313; and R. H. Roy, *Sinews of Steel: The History of the British Columbia Dragoons* (Toronto: Charters, 1965) p. 76.

[8]For a detailed examination of the unemployment relief scheme see John Swettenham, *McNaughton*, vol. 1: *1887-1939* (Toronto: Ryerson Press, 1968), pp. 269-285.

[9]The militia's signal equipment consisted of flags for semaphore and Aldis lamp, Heliograph (which reflected the sun's rays), Don Mark 111 telephone and Fullerphone for Morse Code. The Don Mark III field telephone could also send Morse Code over lines when poor conditions prevented voice communication. The Fullerphone was a telegraph instrument designed for sending Morse over land lines. It included a means of cancelling out effects of earth currents when used on ground return circuits. Weapons included the bolt-action .303 Lee Enfield rifle, the Lewis light machine-gun and the officers' Colt .45 revolver. John S. Moir, Ed., *History of the Royal Canadian Corps of Signals, 1903-1962*

A limited number of officers and NCOs received specialized training at the Royal Schools of Instruction. The instruction included signalling, artillery, cavalry and small arms schools in the permanent force barracks, for anywhere from three to six weeks, depending on the course being given and the money available.[10] More common were the Provisional Schools periodically set up at the local armoury or another military headquarters in the vicinity. Here a Permanent Force NCO, or if the regiment was lucky, an officer, would instruct the militiamen three or four nights a week, for up to six weeks, at the end of which an exam was given. This was the only means of qualifying for higher rank and the men attended without pay. Instruction was almost entirely theoretical due to the shortage of facilities, equipment and teaching aids.[11]

Summer camp became the most significant part of the entire training program period since it provided one of the

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(Ottawa: RCCS, 1962), p. 322. See also Lieutenant-Colonel E. L. M. Burns, *The Defence of Canada: The Canadian Defence Quarterly*, 13 (July 1936): 391; Lieutenant-Colonel Alex F. MacIntosh, *The King's Own Calgary Regiment: Resume of History from 1910 to 1960*, contained in the King's Own Calgary Regiment Archives, Calgary [hereafter referred to as KOCR Archives], p. 2, and Roy, *Seaforth Highlanders*, p. 24.

[10]Stanley, *Canada's Soldiers*, p. 342; McIntosh, *The King's Own Calgary Regiment*, p. 3; and Roy, *Seaforth Highlanders*, p. 25

[11]Canada, Sessional Papers, *Report of the Department of National Defence for the Fiscal Year Ending March 31, 1929* (Ottawa: King's Printer, 1929), p. 8; and Roy, *Sinews of Steel*, p. 86.

few occasions bringing militia regiments into contact with permanent force regiments. At camp all ranks slept under canvas tents and training was similar to that carried out at the regiment's local headquarters--arms drill, map reading, lectures, and physical training. Regiments were also exercised in infantry section and platoon tactics and some, such as signallers, received more intensive specialist training. Occasionally, a platoon from the permanent force would give a demonstration. The men's interest in the work was encouraged by the annual inter-regimental small arms competition and the carrying out of some minor field manoeuvres against a mock enemy. Camp was also one of the rare times that the regiment could parade as a whole and take part in regimental gatherings such as church parade or sports. A shortage of funds as in the Depression years of 1932 and 1933, could result in the cancellation of camp and even in relatively good years, the length of the camp and the number of men permitted to attend depended on the availability of funds.[12] Training in the late 1930s lasted for a total of ten days at both local headquarters and summer camp for all militia regiments. In 1935 Major-General McNaughton presented a paper to the government entitled *The Defence of Canada* in which he reviewed Canadian

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[12]Canada Sessional Papers, *Report of the Department of National Defence for the Fiscal Year Ending March 31, 1933*, p. 14; and Eayrs, *From the Great War to the Great Depression*, p. 309.

defence policy since the last war. He commented that defence spending had been "barely sufficient to keep the mechanism of defence in being," and it had been only possible to give training to "a minimum cadre of officers, non-commissioned officers and specialists." He concluded that since no new equipment had been issued, equipment reserves had been exhausted.[13] Two years later, in attempting to obtain support for increased defence expenditures, the Minister of National Defence, Ian A. MacKenzie, quoted from this document:

> The Militia service was sorely in need of attention. There was not a single modern anti-aircraft gun. . . . Our stock of field gun ammunition was less than 90 minutes firing. . . . Our available field artillery was unsuited for mechanical traction and seriously out-ranged by modern equipment. Our coastal defence armaments were obsolescent and defective. . . . We had no tanks, no armoured cars and no tractors for heavy guns or Non-Permanent [Active Militia] field batteries . . . . Militia training was so restricted that many officers had no experience in the handling of troops on manoeuvres and no opportunity to acquire power of leadership by actual practice.[14]

It was clear that Canada had neither enough trained troops, nor the necessary equipment to field at short notice even a small contingent, either for overseas duty or to protect her own coasts.

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[13]Stacey, *Six Years of War*, pp. 6-7.

[14]C. P. Stacey, "Canadian Defence Policy," *The Canadian Journal of Economics and Political Science*, 4, (November 1938): 493.

Given the Depression, the many demands on its limited resources, and lingering isolationist sentiments, the government made only fractional increases in defence expenditure in the late 1930s. As a consequence of the cumulative shock of the Japanese invasion of Manchuria in 1931, Italy's conquest of Ethiopia in 1935, the outbreak of the Spanish Civil War, the German occupation of the Rhineland and Austria in 1936 and the Munich Crisis over Czechoslovakia in 1938, Canada gradually increased its defence budget.

Some critics did not oppose the increases in general but only wanted it spent on the navy and air force. The Prime Minister, William Lyon MacKenzie King, having previously ignored defence matters, realized the extremely deficient state of the armed forces when he took office again in 1935, although he did not do much about it. The Canadian Defence Committee was formed a year later to draw up an expenditure program to rehabilitate the armed forces with the direct defence of Canada in mind. King, recalling the heavy casualties of the army and the conscription crisis surrounding it during the Great War, wanted to avoid a repetition of these politically sensitive issues . He gave the untainted air force priority.[15] An air force could be

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[15]C. P. Stacey, *Canada and the Age of Conflict: A History of Canadian External Policies Vol. 2: 1921-1948, The MacKenzie King Era* (Toronto: University of Toronto Press, 1981), p. 200.

used in territorial defence, could be sent overseas to protect Great Britain in the event of war and was unlikely to have heavy casualties.

Despite the strategic potential and political attractiveness of the navy and air force and increased appropriations for them, the army continued to be Canada's major armed force. The army, however, was aware of technological changes; military strategists in Canada had been debating whether or not to retain the cavalry or to convert such units to armour.

In the early 1920s British Major-General J. F. C. Fuller predicted that as "machines become simpler in design, we may expect to see companies of tanks attached to infantry battalions and eventually platoons of tanks to companies."[16] Tanks could carry more weapons with greater firepower and were more economical than horses, since petrol was easier to transport than fodder.[17] Another proponent of the mechanization of the cavalry, Canadian Captain E. L. M. Burns, noted that cavalry were worthless against barbed wire, permanent defensive works and modern weaponry such as the machine gun and that the sword was no longer an effective weapon.[18] These pioneering thinkers had

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[16]J. F. C. Fuller, "Tanks in Future Warfare," *The Nineteenth Century* 100 (July 1921), p. 107.

[17]Fuller, "Tanks in Future Warfare," p. 97

[18]Captain E. L. M. Burns, "The Mechanization of Cavalry," *Canadian Defence Quarterly* 1 (April 1924): 6.

realized that the traditional roles of the cavalry--reconnaissance, protective screening and hitting-mobility--could be more effectively done with the airplane and the tank.

Proponents of the cavalry vigorously defended their position by citing the cavalry's many past victories and by attacking the limitations of the tank. Canada, they noted, had neither tank manufacturing capability nor major oil fields, but Canada did have thousands of horses and the endless prairies to supply fodder. The winner of the 1932 essay competition of *The Canadian Defence Quarterly*, noted an important weakness was, "the utter dependence of tank brigades on their 'B' Echelons, ordnance workshops and, above all, on their too vulnerable supplies of petrol and lubricants."[19] Others noted how rough terrain and difficult weather restricted tanks. In the late 1930s, as better tanks were developed, the cavalry was forced to think in terms of tank-cavalry cooperation.[20]

Part of the debate concerned the most effective way to employ the tanks. The prevailing strategy held that tanks were to be used in small numbers, usually to make an initial

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[19]W. W. Goforth, "Prize Essay--1932," *The Canadian Defence Quarterly* 10 (July 1933): 436.

[20]For a discussion of this see Major G. S. Patton, Jr. and Major C. C. Benson, "Mechanization and Cavalry," *The Canadian Defence Quarterly*, 7 (April 1930): 322-327 and Captain G. R. Forneret, "Prepare to Mount," *The Canadian Defence Quarterly* 5 (April 1932): 389-392.

breakthrough in support of infantry, to be exploited by the cavalry waiting in reserve. As early as 1925, British Captain B. H. Liddel Hart disagreed. Realizing the future value of large masses of armour in warfare, he wrote, "so long as tanks are intermingled with infantry and frittered away in driblets on unsuitable ground, they will be no more effective than the fourteenth-sixteenth-century cavalry, before Gustavus Adolphus."[21] The cavalry lobby could not withstand the impetus for mechanization, especially when Canadian defence officials realized that with the advent of armour and wireless communication, warfare was changing and becoming more modernized while Canadian capabilities lagged behind.[22]

In the summer of 1936 after the World Disarmament Conference in Geneva failed, the government at last decided to rehabilitate its armed forces and to make some changes in the militia. Since the government now realized that Defence Scheme No. 1, the plan to defend Canada against the United States, was pure fantasy, the number of cavalry units and the considerable proportion of officers to men were reduced.

The post-war theoretical establishment of eleven infantry militia divisions and four cavalry divisions was

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[21]Captain B. H. Liddel Hart, "After Cavalry--What?," *The Atlantic Monthly* 136 (September 1925): 418.

[22]Major E. L. M. Burns, "A Step Towards Modernization," *Canadian Defence Quarterly* 12 (April 1935): 305 and Roy, *Sinews of Steel*, p. 97.

lowered to seven, including one cavalry division.[23] The decrease was accomplished by disbanding inactive units, by amalgamations and by converting some infantry and cavalry units into artillery, engineer, anti-aircraft and signal detachments, or into the new armoured car regiments and tank battalions.

One example was the amalgamation of "Headquarters" and "B" Companies of the 13th Canadian Machine Gun Battalion with The Calgary Regiment in 1936. The Calgary Regiment emerged during the several reorganizations of the militia in the early 1920s. Its purpose was to perpetuate the 103rd Regiment "Calgary Rifles," NPAM, authorized on April 1, 1910, in Calgary, Alberta, and the 50th Battalion, Canadian Expeditionary Force (CEF).[24]

During the 1920s, training for The Calgary Regiment, as an infantry unit, was carried out at Mewata Armoury, local headquarters, Calgary. Generally the militiamen paraded there one or two evenings a week and from September to March and trained for two hours. Training consisted of arms and foot-drill, first aid, map reading, target practice, military organization and administration, weapons training,

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[23]The peace establishment of 135,000 personnel was reduced to 90,000. These were both paper figures since the actual strength of the militia was 48,761 in 1936. Statement by Ian McKenzie, *House of Commons Debates*, 3 (May 19, 1936): 2992-2993; see also Stacey, *Six Years of War*, pp. 18-19.

[24]See Appendix 1 for exact dates of redesignations and reorganizations of the regiment.

physical training, signalling and lectures on various subjects.

In 1927 enough finances became available for The Calgary Regiment to send members for the first time to the annual inter-regimental summer camp at Sarcee, on the outskirts of Calgary. It lasted only a few days and only one officer and two other ranks were allowed to attend due to limited spaces. Two years later, the camp was held for seven days, and thirteen officers and fifty-six men attended.[25] After a two-year cancellation because of short finances, summer camps started again in 1934. In 1936, 19 officers and 88 other ranks of The Calgary Regiment attended summer camp.[26]

The same year the regiment was converted into an infantry tank battalion and redesignated The Calgary Regiment (Tank). This was the first militia tank unit created in Canada although its companies were equipped with only .303 Vickers medium machine guns. The first instructions issued for armoured training included new drill movements borrowed from the navy and cavalry. However, limited funding meant no tanks were available. During tactics training each "tank crew" had to run around

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[25]Canada, Sessional Papers, *Report of the Department of National Defence for the Fiscal Year Ending March 31, 1927*, p. 15, and *1929*, p. 14.

[26]Canada, Sessional Papers, *Report of the Department of National Defence for the Fiscal Year Ending March 31, 1929*, and *1936*, p. 36.

pretending to be inside a vehicle. Some of the more imaginative members of the regiment purchased five old Chevrolet cars and a large high tracked tractor, to which they attached plywood panels and sheet metal, to simulate tanks. They became fondly referred to as "Snow White and the Five Dwarfs." Attempts were made to mount and fire a Vickers Machine Gun on the back of civilian trucks and then the tractor, but these modified vehicles proved impractical.[27]

In 1938 the 14 CATR received its tank badges and the distinctive black beret of the future Canadian Armoured Corps (CAC).[28] In the same year the first group of officers and NCOs attended the Canadian Armoured Fighting Vehicles School in Camp Borden, Ontario, directed by Major (later Major-General) F. F. Worthington (fondly known as "Worthy" or "Fighting Frank").[29] Here they learned about

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[27]McIntosh, "The King's Own Calgary Regiment," p. 3 and Lieutenant-Colonel C. R. Sharp and Tom Ward, eds., "General History of The Calgary Regiment," *Round Up* (Calgary, Alberta: 50/14 Veteran's Association, no date), KOCR Archives, p. 13.

[28]The formation of The Royal Canadian Armoured Corps was approved on August 13, 1940, by the Minister of National Defence, Colonel J. L. Ralston. Stacey, *Six Years of War*, p. 88.

[29]Called the Canadian Tank School since 1936, it was redesignated in the spring of 1938 The Canadian Armoured Fighting Vehicles School. Stacey, *Six Years of War*, p. 34. Originally its complement was twenty-five all ranks, including the commanding officer, although ten more instructors were assigned later. The school began with no equipment except for twelve Carden-Lloyd tracked two-man personnel carriers. The eagerness of the men and their

tank gunnery, driving and maintenance. At home, to break the monotony of training, the regiment held occasional weapons demonstrations for the general public in Mewata Armoury. At one such presentation three dummy tanks were constructed out of burlap superstructures mounted on motorcycles to represent tank formations.[30] A gunnery instruction team from Camp Borden brought a two-pounder training mount, which was similar to the gun and interior of the Valentine Tank, and directions to make up training aids for the instruction of fire orders.[31]

Training facilities improved in time. In 1939, the first "RYPA" arrived at Mewata Armoury. The acronym stood for the movements of a tank--roll, yaw, pitch, and alteration of course apparatus.[32] First produced for the Royal Navy, this motorized training aid was constructed to

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ability to improvise was soon evident. An old airplane hangar was converted into a workshop and several old cars and engines were acquired for maintenance training. By the late summer, sixteen Vickers ~~Valentine~~ Mark VI tanks, each mounted with a medium and heavy machine gun, had been delivered from Britain, accompanied by an official note that no other equipment could be spared. With the outbreak of war in September 1939, the name of the school was changed to the Canadian Armoured Fighting Vehicles Training Centre. Larry Worthington, *"Worthy": A Biography of Major-General F. F. Worthington* (Toronto: Macmillan, 1961), pp. 149, 151 and 154.

[30]McIntosh, "The King's Own Calgary Regiment," p. 3 and Sharp and Ward, "General History of The Calgary Regiment," p. 13.

[31]McIntosh, "The King's Own Calgary Regiment," p. 3.

[32]Worthington, *"Worthy,"* p. 151.

simulate the gun-turret of a tank in action. One officer depicted it as being designed:

> To simulate the movement of a tank across country, from flat ground to broken to uneven and rocky. . . . It was really a tank turret mounted on an apparatus which gave one these various movements. There was in front of it a large, landscaped table with moving gantry on it which carried small miniature targets of tanks and vehicles. . . . This galley could move up and down the table, and by means of a wire pulley, the galley could rotate and carry the targets across the table as well as diagonally. As the apparatus was put into motion the gun, being affixed to the turret, would oscillate as it would across country. Then it was up to the gunner to sight the gun on the various targets on the table. They used an air gun with pellets, and as the table had dry sand on it, you could see where the shots were falling in relation to the targets. Later Major-General Worthington got an elevator company in Toronto to develop a better one, It fired an infrared beam of light which, when it struck the target emitted a loud ticking noise indicating a hit. No sound meant no hit. It was a clever device and meant the gun no longer needed to be loaded.[33]

Unfortunately, with the outbreak of war in September 1939, the only RYPA in Canada was returned to Camp Borden for use by the Canadian Armoured Fighting Vehicles School.

When the war began in September 1939, the regiment was not mobilized as part of the Canadian Army (Active), although some personnel were placed on active service for

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[33]Roy, *Sinews of Steel*, pp. 143-144. See also McIntosh, *The King's Own Calgary Regiment*, p. 3, and two photographs of the RYPA dated April 18, 1941, in Lieutenant-Colonel R. G. Maltby and Major W. R. James, eds., *The Informal History of The Calgary Regiment--14th Canadian Armoured Regiment* (Vancouver: 50/14 Veteran's Association, 1989) Chap. 1, "Baby Tank Unit Learns Monster Tricks."

local guard duties at Sarcee Camp, an internment camp at Seebe, one hundred kilometres west of Calgary, and for vital points such as bridges and railroad junctions. At this time about 10 officers and 150 other ranks were transferred to active service units either because they were anxious to see some action or needed a job.[34] Since the regiment had no vehicles or new equipment of any kind and personnel who were leaving for active units were constantly being replaced by new recruits, training remained at a basic level.

In June 1940, the regiment contributed five officers and 179 other ranks of Headquarters Company for the newly mobilized active infantry unit, the South Alberta Regiment.[35] Soon The Calgary Regiment (Tank) was authorized to recruit to war establishment strength.

During the fall and winter of 1939 and 1940 the Allied armies had sat and waited, comfortable and confident, behind the supposedly impregnable defences of the Maginot Line which stretched along the expected invasion route of the French border. This period of waiting and false security, the "phoney war," was shattered in early April by the sudden German occupation of Denmark and Norway. This was followed by the rapid flanking attack through Belgium and the

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[34]"Summary of History: 14th (Reserve) Army Tank Regiment (Calgary Regiment)," (n.a., date approximately 1943), p. 3.

[35]See Sharp and Wood, "General History of the Calgary Regiment," p. 13, and McIntosh, "The Kings Own Calgary Regiment," p. 3.

Netherlands which split the Allied armies and caused them to retreat in a confused and disorganized state. The bulk of the British Expeditionary Force was evacuated in the "miracle" of Dunkirk. By June, after only six weeks of fighting, the Germans had forced the French to sign a humiliating armistice.

The successful "Blitzkrieg" strategy and tactics, which used a combination of concentrated Panzer divisions, motorized troops, airborne and special forces, demonstrated that proponents of mechanization and the use of tanks *en masse* were correct. Canada and other countries immediately began to concentrate on developing their own armoured formations.

In August 1940, the Minister of National Defence, Colonel the Honourable J. L. Ralston, approved the formation of the Canadian Armoured Corps. Three months later the all military forces, including the militia were redesignated The Canadian Army (Active) or (Reserve). Consequently, The Calgary Regiment (Tank) was reorganized as a reserve unit of the Canadian Army and decentralized--Regimental Headquarters and Headquarters Squadron at Calgary, C Squadron at Olds, B Squadron at Stettler and A Squadron at Red Deer. The thinking behind this, which ultimately proved correct, was that men living in these areas were mostly farmers, familiar with trucks and tractors, and therefore would be suitable recruits for a tank regiment. Having three enlistment

centres also made it easier for potential recruits to travel to them.

After a series of conferences in Britain, between Colonel Ralston, Lieutenant-General H. D. G. Crerar, Chief of the Canadian General Staff, and Anthony Eden, then British Secretary of State for War, the Canadian government decided in January 1941 to provide an army tank brigade, among other formations, for operations overseas.[36] Within a month the Commanding Officer of The Calgary Regiment (Tank), Lieutenant-Colonel W. K. "King" Jull, received an order dated February 12 to mobilize immediately an active unit under the name 14th Army Tank Battalion (The Calgary Regiment), with an establishment of about 32 officers and 625 other ranks.[37] The unit was to be third battalion of the First Army Tank Brigade, Canadian Armoured Corps (CAC), Canadian Army (Active), under the command of Brigadier

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[36] Specifically,it was agreed that Canada would provide three infantry divisions, with the necessary corps troops and anti-aircraft units, an armoured division and an army tank brigade by the end of 1941. See Stacey, *Six Years of War*, p. 91.

[37]War Diary, 14th Canadian Army Tank Battalion, The Calgary Regiment, (hereafter referred to as 14 CATB), Department of National Defence, Record Group 24, Volume 14242, National Archives of Canada, Ottawa (hereafter, NAC), February 15, 1941. Lieutenant-Colonel Jull was unofficially notified of the mobilization order on the evening of Thursday, February 13, 1941, and at the evening parade of "Headquarters" Company of the regiment, he informed the troops.

Worthington.[38] The other units in the brigade were 11th Canadian Army Tank Battalion (Ontario Regiment) and the 12th Canadian Army Tank Battalion (Three Rivers Regiment).

The new 14th Canadian Army Tank Battalion was put under the command of Lieutenant-Colonel G. R. Bradbrooke. Within two weeks he formed 400 men from the reserve unit of The Calgary Regiment, 120 Seaforth Highlanders and 40 men of the Edmonton Regiment (the latter two groups then training at Currie Barracks, Calgary), into a complete unit and immediately began organizing squadrons and elementary training at Mewata Armouries.[39] Rumours spread that there would soon be a move to the east. Embarkation leave was granted to most of the battalion and an advance party consisting of Second-Lieutenant C. R. "Maintenance Dick" Eldred, and forty other ranks (ten men from each squadron)

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[38]Worthington had to choose the third army tank battalion from the four unmobilized tank regiments. Therefore, he sent telegrams to the Commanding Officers of each regiment asking if they could form an active unit. The replies he received either asked questions, stated an indefinite time in the future or read "willing if it is for overseas duty." However, from "King Jull" of The Calgary Regiment (Reserve), he received something to the effect of, "when do you wish me to report?" (McIntosh, "The Kings Own Calgary Regiment," p. 5), or "Ready and willing to serve in any capacity needed," (Worthington, *Worthy*, p. 168), thus The Calgary Regiment was chosen.

[39]McIntosh, "The Kings Own Calgary Regiment," p. 5 and Sharp and Ward, "General History of the Calgary Regiment," p. 13. The reserve unit was redesignated on April 1, 1941, the 14th (Reserve) Army Tank Battalion (Calgary Regiment [Tank]).

left for Camp Borden in the middle of March.[40] A week later the remainder of the battalion followed by train. During the trip an epidemic of scarlet fever broke out and Captain L. G. Alexander, the Medical Officer, was forced to have the train temporarily stopped at Fort William, Ontario, to send one man to Military Hospital.[41]

After a three-day journey, the train arrived at Camp Borden, about one hundred kilometres north of Toronto, and the unit was immediately put into quarantined barracks. Until the epidemic was eradicated, the battalion received no leaves or passes and could not mix with other troops. Nevertheless, within a few days, the men were organized into three advanced training wings--Driving and Maintenance, Gunnery and Wireless. Each man was given a specific position within a crew. Evening lectures for the officers and voluntary classes on a variety of subjects, such as security and gas-attack procedure, were started.

The only equipment available were five field artillery tractors (commonly called FATs), obtained "after several days of bickering with Ordnance," one British Mark III Valentine Infantry tank, two Bren-Gun carriers, and fifteen

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[40]War Diary, 14 CATB, March 10, 1941.

[41]War Diary, 14 CATB, March 19, 1941.

Great War vintage, two-man Renault tanks stripped of their weapons.[42]

Even though the Renault six-ton tanks were obsolete, they were better than no tanks at all and they did serve the useful purpose of training all ranks in the rudiments of driving and maintenance. The tank could reach a top speed of ten miles per hour with a crew consisting of a driver and a tank commander who used his feet or strings attached to the driver's shoulder straps to give movement instructions. These tanks frequently clanked to a stop usually because their boiling radiators needed more water. For every hour of driving, they required about three hours of maintenance. An observer could always tell the centre line of a squadron or regimental advance by the long line of broken down tanks which inevitably built up on it with their crews working desperately to fix them. For tactical training, these tanks were "utterly useless."[43]

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[42]See, War Diary, 14 CATB, March 27, March 28, April 28 and May 5, 1941. The fifteen Great War tanks were the American version of the French 1917-model Renault tank, and were discovered by Brigadier Worthington in the United States where they were about to be sold to junk dealers. Shipping arms from the U.S. to Canada was prohibited by the U.S. Neutrality Act but "Worthy" solved this by purchasing the tanks and sending them across the border as "scrap-iron" to the "Camp Borden Iron Foundry." Worthington, *Worthy*, p. 167.

[43]Roy, *Sinews of Steel*, pp. 142-143, The one Valentine tank was rotated among the three regiments of the brigade and valuable training was carried out with it:

> Unfortunately at the same time the Department of National Defence (then in early stages of Valentine production) kept removing parts of the

Training at Camp Borden consisted of the usual foot and arms drill, "range practice" with the Rypa, driving, maintenance, route marches, map reading, convoy and harbouring practice, use of the #11 Wireless Set and proper use of the new respirator.[44] In April and May, 1941, a total of eighteen officers and ninety other ranks attended a variety of courses and regimental schools of instruction--Intelligence and Motor Cycle Courses at Brigade Headquarters, Officers' Training School in Brockville, Ontario, Signals School held in unit lines and a Technical Course at Toronto's Central Technical School.[45]

While at Camp Borden, the brigade held a small arms competition, the results of which improved the morale of the regiment and of the brigade as a whole. Lieutenant-Colonel R. G. "Dick" Maltby, a Sergeant at the time, explains the regiment's success in the competition:

> tank one by one for study and duplication, with the result that the tank suffered rather heavily and gradually disappeared during the period of training.

Headquarters, 1st Canadian Army Tank Brigade, "A Brief History of the 1st Canadian Army Tank Brigade, February 1941-June 1943," June 29, 1943, p. 2, contained in the personal papers of Brigadier R. A. Wyman, now in the possession of his son, Mr. Bob Wyman, Vancouver, B.C. Hereafter material from this source will be referred to as the "Wyman Documents."

[44]War Diary, 14 CATB, April 11 and May 1, 1941; Sharp and Ward "General History of The Calgary Regiment," p. 13; McIntosh, "The King's Own Calgary Regiment," p. 3; and Worthington *Worthy*, p. 169.

[45]See War Diary, 14 CATB, April and May, 1941.

> Cemented the growing feeling of attachment to their new unit and ensured their wholehearted acceptance by the regiment's old timers. From that day onwards all members of The Calgary Regiment lived, worked and played together without regard to what province, corps or unit they had come from.[46]

The development of a regimental spirit was especially important because members of the regiment who had formed the nucleus of the 14 CATB, had come from small towns around Calgary where many of the men already knew each other. As farmers, many were more familiar with heavy machines than most men in the other regiments in the brigade and therefore were ahead of the rest of the brigade in related training.[47]

The men in the Canadian Armoured Corps (CAC) were probably more closely knit than members of the other corps because of the size of their smallest sub-units, consisting of four or five-man crews with their own officer, sergeant and corporal in charge of three or four tanks in a troop. They also perhaps had a certain *élan* that did not exist in infantry regiments. The CAC tended to attract recruits who were adventurous, unorthodox and occasionally somewhat wild.

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[46]Lieutenant-Colonel R. G. Maltby, "Those Bloody Infanteers," *The Informal History of The Calgary Regiment*, Chapter 1, p. 2.

[47]The fact that these men from the western provinces were called names such as, "gopher ranchers," "plough-jockeys" or "sidehill ranchers," by the other eastern based regiments, helped meld together the regiment, assimilate new recruits more easily and strengthen their *esprit de corps*. Lieutenant-Colonel C. R. "Bob" Sharp, interview, Calgary, June 17, 1990.

These troopers, especially from the Prairies, were also somewhat more casual and relaxed, often referring to their commanding officers by their nicknames, for example, "Worthy" or "Fighting Frank" Worthington, "Spud" Murphy and "Stoney" Richardson, a habit not usual in infantry regiments.

In mid-May the 1st Canadian Army Tank Brigade held its first brigade-size scheme. This was the first large manoeuvres in which the battalion had participated and the largest of its type yet held in Canada. A convoy of wheeled vehicles only carried almost all the personnel of the brigade, and undertook harbouring (for defence at night) and convoy practice for three days. The scheme gave all ranks an idea of field conditions and taught many lessons especially in administration.[48] This was important because the battalion was about to leave for Great Britain.

At the end of May 1941, the battalion moved from barracks to canvas tents and the canteen was officially closed. In early April, the Second-in-Command, Major Jack A. Macdonald, and six sergeants had gone to England as a regimental advance party, where they were attached to the 9th and 10th Battalions, Royal Tank Regiment, 31st Brigade to undergo advanced training and make arrangements for the

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[48]Headquarters, 1st Canadian Army Tank Brigade, "A Brief History," p. 2.

arrival of the rest of the unit.[49] The battalion knew it would soon follow when it received orders to pack spare equipment and supplies in large boxes, was issued anti-gas capes and ointment, eye shields, the whole unit was inoculated, and the majority of the men received special leaves.

On the evening of June 18, 1941, the battalion marched through Camp Borden for the last time and entrained for Quebec City, and thence to Halifax, Nova Scotia, where they arrived two days later. The battalion almost immediately proceeded to the harbour and boarded SS *Louis Pasteur*. This was a converted French luxury liner of 30,000 tons with a complement of 500 men and was initially constructed to carry 700 first-class passengers via the southern Atlantic routes, not the rough seas of the North Atlantic. Now it held 3,400 men of various units.[50] The trip across was in a convoy of six troop-ships escorted by the two battle cruisers HMS *Repulse* and *Ramilles* and eight destroyers. This occurred with no unusual incidents although there was much conjecture about lurking German U-Boat packs.

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[49]War Diary, 14 CATB, April 4, 1941.

[50]War Diary, 14 CATB, June 20 to 21, 1941.

CHAPTER III

TRAINING IN ENGLAND, JULY 1, 1941 TO AUGUST 18, 1942

Early on the morning of June 30, 1941, the convoy arrived in the Firth of Clyde off Gourock, Scotland. Unfortunately, lack of rail transportation delayed disembarkation and after nine days at sea the men had to spend another day "looking longingly at the green hills of Scotland."[1] The 14th Canadian Army Tank Battalion (14 CATB) was finally disembarked the next day, Dominion Day, and the complete 1st Canadian Army Tank Brigade left by overnight train to Lavington, Wiltshire, England. The brigade set up under canvas tents at West Lavington Camp on Salisbury Plain, four miles southwest of the town. Because of a shortage of tents, seven or eight shared a tent and some members of the regiment were permitted to stay as guests in English homes.[2]

The cooks found the change from Canadian rations to British Scale difficult and there were many hungry troopers. When they discovered an abundance of rabbits they organized regular hunting parties. They did not know the rabbits were

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[1]War Diary, 14th Canadian Army Tank Battalion (14 CATB), Record Group 24, Volume 14242, National Archives of Canada (NAC), June 30, 1941.

[2]This was arranged through the Lady Ryder Society, represented at the camp by a Miss Cash. War Diary, 14 CATB, July 4, 1941.

an emergency food reserve for the English people, in the event that Britain's food supply was cut off by German U-boats.[3]

Salisbury Plain, although not very picturesque and prone to poor weather, has flat open areas ideally suited for armoured warfare training. The unit did not receive the equipment expected, but was issued with a few trucks, lorries, six Carden-Lloyd Personnel Carriers, eight British Mark II "A" Star (Matilda) Infantry Tanks, a staff car and a Daimler Dingo Scout Car.[4] Training with the new vehicles started almost immediately, although much of the unit was on disembarkation leave and during July and August others were away for courses at the Armoured Fighting Vehicles School, Bovington; the Gunnery School, Lulworth; the Royal Armoured Corps Tactical School, Bulford; the Messing Officers Course

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[3]See Lieutenant-Colonel C. R. Sharp and Tom Ward, eds., "General History of The Calgary Regiment," *Round Up* (Calgary, Alberta: 50/14 Veterans Association, no date), The King's Own Calgary Regiment Archives (KOCR Archives), Calgary, p. 13.

[4]War Diary, 14 CATB, July 5, July 11, and July 17, 1941. The Matilda four-man tank weighed approximately twenty-six tons and had an overall armour thickness of 78 mm. It was about eight feet high, eight feet wide and over eighteen feet long. Carrying a jettisonable fuel tank, it had an operational radius of action by road of 160 miles. The two 87-horsepower diesel engines allowed a top road speed of fifteen miles per hour. Its armament consisted of a 2-pounder gun and 7.92 mm Besa machine gun. See Bryan Perrett, *Through Mud and Blood: Infantry/Tank Operations in World War II* (London: Robert Hale, 1975), p. 256; and Lieutenant-Colonel R. G. Maltby and Major W. R. James, eds., *The Informal History of The Calgary Regiment--14th Canadian Armoured Regiment* (Vancouver: 50/14 Veterans Association, 1989), Chapter 6, p. 4.

at Chissledon; the Gunnery Course at the 57th Training Regiment, Warminster; the camouflage course at Leatherhead, Surrey; the Driving and Maintenance course on the Matilda tank at No. 39 (Lincoln) Tank Training Group; and the wireless course at Bovington Camp, Dorset.[5]

Those who remained at Salisbury Plain during July learned air-raid and gas attack procedures, heard lectures on security and the "proper" way of camouflaging vehicles (which they thought they already knew) and finally, underwent range and convoy practice. The only respite from the usual weekly training programs occurred when a group of fifty other ranks and three officers were invited, along with other groups of the brigade, to tour a tank factory at Nottingham where they observed the testing of many types of armoured vehicles and tanks over all types of obstacles, ditches and traps.[6]

In the middle of July, the 1st Canadian Army Tank Brigade commenced its first operational role with the 14th CATB doing reconnaissance for defence of the brigade area against possible airborne and paratroop attacks.[7] This operational role bolstered the morale of the men who felt they were finally assisting Great Britain during such a dangerous and uncertain period. At month's end all the

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[5]War Diary, 14 CATB, July and August, 1941.

[6]War Diary, 14 CATB, July 17, 1941.

[7]War Diary, 14 CATB, July 13, 1941.

officers, under the direction of Major Jack MacDonald, conducted an exercise in which a tank force was ordered to repulse a simulated German air-borne drop. The exercise is candidly described in the War Diary:

> Officers of HQ Squadron were the enemy parachute troops in control of a small group of trees just to the south of the camp area. Officers of A and C Squadrons represented the attacking tank force. . . . It was a mechanized attack without vehicles, and officers were to be seen running about here and there representing a tank assault. . . . By a surprise assault from the rear the officers of C Squadron completely subdued the enemy--some of whom were shooting crap by this time.[8]

The original issue of only eight Matilda tanks and six Carden-Lloyd tracked personnel carriers meant that each troop in the battalion had the tanks and carriers only one day a week. By the end of August, a doubling in the number of tanks and carriers allowed more time for driving, maintenance, and gunnery practice.[9] Similar training continued and included the loading and unloading of rail-flatbeds, night driving and convoy discipline, wireless and small arms weapon training, with more frequent brigade-size schemes countering "enemy" airborne landings. One day in September a brigade scheme of planting "spies" in the Calgary's area caused much interest and excitement. One "culprit" was caught as he attempted to outline a map of the

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[8]War Diary, 14 CATB, July 30, 1941.

[9]War Diary, 14 CATB, August 29, 1941.

battalion area. Other "fifth-columnists" were apprehended and initially were at great pains to explain their actions.[10]

In a letter to his wife, the commanding officer of another armoured unit, Lieutenant-Colonel W. C. Murphy (who later became Commanding Officer of the 1st Canadian Army Tank Brigade) describes what these schemes or exercises entailed. His explanation is relevant since the training of all armoured formations was the same. He outlined that the purpose of the exercise was to practice radio intercommunication and gain experience in the movement of vehicles and troops. Since the training of armoured regiments was still at the elementary level each fighting squadron was represented by one tank and a few other vehicles, while Headquarters squadron had a full complement of four tanks and several jeeps and motorcycles. Lieutenant-Colonel Murphy, with about one hundred and fifty men under his command, explains that:

> Schemes of this nature work this way. I have two tanks ahead, say, on different roads, representing my two forward squadrons. With them is an umpire, who tells them they are now held up by a roadblock or a blown bridge, or paratroops have landed near them, etc. Back comes this information to me by despatch rider or wireless and I must deal with the situation accordingly. It is very interesting and quite realistic. Well, the first day we ran into all sorts of enemy which held us up and finally hit a defended water-line on which all the bridges were blown. So that definitely held up

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[10]War Diary, 14 CATB, September 17, 1941.

> the tanks until motorized infantry could come up, attack at night with boats, get a bridge-head, and enable the engineers to build a bridge for us.[11]

While the bridge was being built, the "regiment" was ordered to retire for the night to the vehicle harbour where the supply echelon was. The next morning the men did maintenance before moving to the concentration area in the afternoon. Murphy summarized the scheme's last day:

> This time my regiment's line of advance was through a series of English lanes. My God, what a beating I took. The lovely English trees arched over the blasted lanes, and towering high above the lowest branches I was beaten about the head and body as we crashed through. I wear a crash helmet which preserved me a certain extent. I had to map read, of course, so had my map board on top of the turret.
>
> We fought the odd tank battle and were approaching our objective about 11:00 p.m., still on tiny rough trails, when the word came to harbour thirty miles back.[12]

About the middle of September 1941, the fighting troops were instructed to prepare to move to the Armoured Fighting Vehicles Firing Ranges at Castlemartin, Pembrokeshire, Wales. The remainder of the unit was ordered to move into billets in the town of Headley, in Hampshire, where the whole battalion would quarter for the winter. Range-firing, including "battle practice" runs, in which complete troops

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[11]Murphy Letters, "Lieutenant-Colonel W. C. Murphy to his wife, 17 July, 1942." These letters are in the possession of Dr. R. H. Roy, Victoria, B.C.

[12]Murphy Letters, June 14, 1942.

on the move with full crews, fired on stationary and moving targets, continued until the end of the month.

Early in October 1941, the whole brigade concentrated around Farnham, Surrey, with the 14 CATB in the area of Headley. Training now was concentrated on tank-infantry cooperation with the Royal Winnipeg Rifles and the Regina Rifle Regiment, from the 7th Canadian Infantry Brigade, 3rd Canadian Division. Exercises were usually "set-piece" attacks with one squadron of tanks cooperating with one company of infantry. By late October, the battalion had forty-nine Matilda tanks and eleven personnel carriers.[13] The usual routine training was enlivened by the surprise appearance of Lieutenant Harper Prowse who showed up with a "tank-buster" anti-tank platoon from Number 3 Canadian Infantry Holding Unit at Whitely and persuaded Lieutenant-Colonel Bradbrooke to let them do an anti-tank demonstration. A combined troop of tanks, each commanded by an officer, was assigned to the exercise and although the "tank-busters" were quite professional at their art, they were unable to break the tracks of the Matildas. Lieutenant Prowse claimed his team won the competition, but Lieutenant-Colonel Bradbrooke disagreed.[14]

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[13]War Diary, 14 CATB, October 24, 1941.

[14]War Diary, October 9, 1941, and Sharp and Ward, "General History of the Calgary Regiment," p. 13.

Over the next few months, however, the Matildas were gradually replaced by the heavier British Mark IV (Churchill) Infantry Tank. This five-man tank weighed approximately 39 tons and had a maximum armour thickness of 101 mm. It was about eight feet high, ten feet wide and over 24 feet long, a length which enabled it to cross a six-foot trench.[15] Carrying a total of 150 gallons of petrol (excluding an optional 32 1/2 gallon auxiliary tank), it had an operational range of between 90 and 125 miles. The Bedford 325 horsepower, 12-cylinder engine allowed a top speed of 17 miles per hour. Its armament consisted of the 2-pounder gun and the 7.92 mm Besa machine-gun of the Matilda in the turret, and a 3-inch smoke howitzer mounted in the hull. In the Mark III version, the 2-pounder and the ineffective howitzer were replaced respectively by a 6-pounder and another 7.92 mm Besa machine-gun.[16] All

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[15]For the various characteristics see Bryan Perrett, *The Churchill* (London: Ian Allan, 1974), pp. 130, 136-137; Peter Chamberlain and Chris Ellis, *The Churchill Tank: The Story of Britain's Most Famous Tank, 1939-1945* (London: Arms & Armour Press, 1971), pp. 100-103; and The Royal Armoured Corps, *The Royal Armoured Corps Tank Museum: The Second World War, 1940-1946* (Bovington, Dorset: RAC Tank Museum, 1956), pp. 11-12.

[16]War Diary 14 CATB, November 1, 1941. The 2-pounder gun could penetrate 24 mm of steel plate at a range of 2000 yards. The 6-pounder could penetrate double this at the same range. Headquarters, 1st Canadian Army Tank Brigade, "Comparison Primary Tank Weapons" (no author or date) from the personal papers of Brigadier R. A. Wyman, in the possession of his son Mr. Bob Wyman, Vancouver, B.C. (hereafter referred to as "Wyman Documents." See also Appendix 3 for diagrams of Churchill Tanks and Appendix 4--Basic Specifications of the Churchill Tank.

models were fitted with a No. 19 High Frequency (HF) wireless set. It had an 'A' net for general use up to a range of about ten kilometres, a 'B' net for inter-tank troop communication within one kilometre, and an inter-communication unit for each crew.

Meanwhile, tank-infantry training continued (now with the Canadian Scottish Regiment, 7th Infantry Brigade) but with an emphasis on gunnery, wireless and tactics, rather than maintenance and driving. Troopers of the 14 CATB would have shared the same experiences recalled by a member of another regiment:

> The tank was to us what the slit trench was to the infantry--a place of refuge and a home. . . . This home away from home differed from a slit trench in that it had five people occupying it, all of whom had to get along. A person slept, lived and perhaps died as a team, and to be a good crew there had to be a good deal of trust in the ability of the other man to do his job and to do it well. The driver had a very limited field of vision and he had to depend on the crew commander for his direction, and by the same token the crew commander had to trust the driver not to run them into trouble should his attention be taken off the progress of the tank. The gunner, who also had a limited field of vision, also had to depend on the crew commander for his targets and on the loader-operator to keep his guns in ammo, clear stoppages if any developed, and also help him in spotting a target. The co-driver had a machine-gun which he could be called on to fire. He helped the driver with a certain amount of vision directions and also had to pass up ammunition to the turret crew from the storage bins behind him under the turret. The escape hatch was under him so you didn't want

> anyone there who couldn't move rapidly if the time came.[17]

While training continued, the battalion slowly acquired new equipment until by the end of November, its armour had increased to a total of fifteen Churchill and thirty-one Matilda tanks.[18] Due to a general shortage in England of tanks, the regiment received them gradually, and still did not have a full war establishment of fifty-eight five months later.[19]

About the same time that the battalion was working in these new tanks, Lieutenant-Colonel Bradbrooke was informed that he was being sent to the Middle East as a military observer. Despite his promotion to brigadier, and the general realization that he was probably too old to take the unit into action, both he and the whole battalion were saddened by his departure. Since mobilization in Calgary, he had commanded the group of "Red Deer plough jockeys," as they were called by the other battalions in the brigade. Now, with the unit trained and equipped for action, he was leaving it. To honour Lieutenant-Colonel Bradbrooke's departure, a special battalion parade was held on the parade

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[17]R. H.Roy, *Sinews of Steel: The History of the British Columbia Dragoons* (Toronto: Charters, 1965), p. 180.

[18]War Diary, 14 CATB, November 30, 1941.

[19]War Diary, 14th Canadian Army Tank Regiment, April 1, 1942.

ground--known as "The Land of Nod." When he approached the saluting base, he was welcomed by the rousing cheers from all ranks, after which the battalion gave him a smart march-past. The men who had speculated about their next Commanding Officer, were pleased when the Brigade Major, Lieutenant-Colonel J. G. "Johnny" Andrews, was given the command. He continued with the same schedule of training as Lieutenant-Colonel Bradbrooke.

About the middle of December the entire brigade moved by train to Seaford, Sussex, on the south coast where they were billeted in houses and several schools, including what was normally Seaford Ladies College. The brigade's operational role was guarding the south coast in the area of Seaford, Worthing, Brighton and Rottingdean and continuing training with the 1st, 2nd, and 3rd Canadian Infantry Divisions. This was the first meaningful operational role for the brigade in the defence of Great Britain. According to the unit war diary, their role was:

> To work in cooperation with 6th Canadian Infantry Brigade and assist . . . by counter-attack against enemy A.F.V.'s [Armoured Fighting Vehicles] that may reach the "Downs." . . . This is the part of the defences of the port of Newhaven which is one of the most vital ports of the south coast and owing to its proximity to London would be of great value to the enemy.[20]

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[20]War Diary, 14 CATB, December 20, 1941.

The first Christmas overseas was spent in the Seaford billets, and on Christmas Day, in accordance with an old army custom, the officers served lunch to the men of all squadrons.[21] This happy occasion was unusual since the morale of the battalion, and the entire brigade, had been gradually sagging because of restrictions and rationing leading to very boring meals, the monotony of barrack room life, and the fact that no large Canadian military forces in Great Britain had seen action yet. While the threat of a German invasion of Great Britain had greatly declined, the war was not going well for the Allies. On December 7, 1941, the Japanese had attacked Pearl Harbor and then moved rapidly to victories in Malaya, Burma, Hong Kong and the Philippines. On the Eastern Front and in North Africa, the German armies seemed unstoppable against courageous Russian and British armies. At sea the German U-boat threat, at first regarded as just a nuisance, was now much more serious as Allied shipping losses rose dramatically.

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[21]The meal was excellent and served with beer. Later the officers had their Christmas dinner in the Officers' Mess and "Although there was great frivolity, the turkey was very conspicuous by its absence." On Christmas morning, the men each received one egg for breakfast, one of the highlights of the day, since they were the first eggs the men had seen since leaving Canada. See War Diary, 14 CATB, December 25, 1941 and Sharp and Ward, "General History of the Calgary Regiment," p. 13.

By the end of December, the whole brigade had received Churchill tanks.[22] During the next few months, the men familiarized themselves with the new tanks and began gearing up for several brigade-size exercises and schemes. After Brigadier Worthington was promoted to command of the 4th Canadian Armoured Division, the new Brigade Commander, Brigadier R. A. "Bob" Wyman, was responsible for making the brigade battle-worthy. Besides the normal training of driving and maintenance, map reading, infantry-cum-tank cooperation, wireless instruction, gas attack procedures, and daily "netting-in," reconnaissance and tactical training were intensified, and range firing at moving targets, towed behind boats, was carried out at Cuckmore, on the south coast. In addition, all ranks were given small-arms practice with the Bren Light Machine Gun, Thompson Sub-Machine Gun, hand grenades and the ineffective, tiny calibre Boyes Anti-Tank Rifle.[23]

Individual crew and troop training gradually progressed to exercises with fully equipped squadrons. This advanced training continued until the battalion, and the rest of the

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[22]The 14 CATB having a total of thirty-five. War Diary, 14 CATB, December 30, 1941.

[23]In April 1942, all ranks saw a bomb throwing demonstration. The most interesting innovation was the new "Sticky Bomb," which could be emplaced on an object to which it stuck until it exploded. Churchill tanks, mounted with the three-inch howitzer, gave a smoke screen demonstration, during which some tear gas cartridges were mixed in to check the reaction of all ranks. War Diary, 14 CATB, April 16, 1942.

brigade, were more or less fully equipped and ready to take part in the forthcoming divisional and corps anti-invasion exercises. The most important exercises during the spring of 1942 were code-named *Beaver I, II, III*, and *IV*. All exercises were under the direction of the 1st Canadian Corps, which consisted of 1st, 2nd, and 3rd Canadian Infantry Divisions. *Beaver I* and *II* were for headquarters staff only, that is, brigade, division, and higher formation staffs. *Beaver III* and *IV* included all formations of the 1st Canadian Corps, and although, in the words of the official historian, "these exercises were still 'anti-invasion' in character, they were, at the same time, the first in which the Canadians participated on a large scale as an offensive force."[24] Brigadier C. A. "Stoney" Richardson, the first Quartermaster and last wartime Commanding Officer of The Calgary Regiment, commented that "it was an exercise to combat enemy forces landing on the coasts of England."[25] Despite some problems with the new Churchills which had not been tested properly before being

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[24]Stacey, *Six Years of War*, p. 243. Sometimes exercises were postponed or even cancelled because of snow since no tracks could be made in the "Action Stations" area because of possible enemy air reconnaissance. War Diary, 14th CATB, February 3, 1942.

[25]Interview between Brigadier C. A. Richardson and Lieutenant-Colonel R. G. Maltby, Montreal, August 1989.

put into production, the exercises were generally successful.[26]

The highlight of the exercise was the 14 CATB's performance. Certainly the War Diary confirms the "victory" in that exercise:

> Much to the surprise of the umpires, the unit arrived on time and the "enemy" were taken completely by surprise. As a result The Calgary Regiment was awarded the battle. This proved to be the highlight of the exercise for with the winning of the attack, came the completion of the exercise [two days early].[27]

In a letter to his wife, Lieutenant-Colonel Murphy provides an excellent account of a fifteen-day exercise. Besides giving a vivid picture of the training, it also demonstrates how commanding tanks in such a scheme was much the same as that expected in combat:

> We left camp at 5 p.m. sharp on our way to . . . the concentration area from which we would jump off to attack the large English [sic] army against us. It drizzled for a couple of hours during the evening, so it was pretty cold and miserable in a tank turret.[28]

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[26]Tank casualties on the first large brigade exercise *Beaver III* dramatically illustrated problems of the Churchill tank. During the five-day exercise all 139 tanks drove approximately 135 miles. By the end of the exercise 119, or almost ninety per cent, were reported as "off the road" with major or minor breakdowns. The major problems, mainly oil seals, gear boxes, clutch and starters were mostly solved during the next few months. Headquarters, 1st Canadian Army Tank Brigade, "A Brief History," p. 3.

[27]War Diary, 14 CATR, April 23, 1942.

[28]Murphy Letters, February 25 to March 11, 1943.

At night, only the lead vehicles carried headlights. The rear vehicles were guided only by a tiny blue spotlight on the back of each vehicle. A regiment could stretch over four miles and often became mingled with other units. Procedure dictated that every two hours an armoured regiment would stop for twenty minutes for maintenance. The regiment often travelled all day without food or rest. At each halt the officers would have to go up the column waking up the drivers who had fallen asleep at their positions. Murphy concludes with a description of the last day:

> This was to be a big attack. The whole brigade deployed and charged across country--through gardens, fields, hedges, fences and anything that was in our way.
>
> By three p.m. we had reached our objective and had just unpacked a bit of food when we were ordered to move again. At last we had a meal and got the better part of a night's sleep. We were up by six and getting ready for another move. . . . Just as we were ready to go once more word came that the scheme was over. . . .[29]

Such exercises disturbed the civilian population--when A Squadron moved through the middle of the serene village of Newhaven, the deafening rumble and noise of the tanks on the usually quiet cobblestone streets "caused quite a sensation, as a result of which a phone call was received at Battalion Headquarters from the police enquiring if an invasion had

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[29]Murphy Letters, February 25 to March 11, 1943.

started."[30] Similarly, Brigadier Richardson related that although his unit kept damage to a minimum, residents were upset when "we drove over their golf courses and many of their lovely spots along the beach!"[31]

Along with the intensive training and exercises, regular air-raid warnings were sounded, and "stand-to's" were frequent as an invasion was expected at any time.[32] A variety of courses and lectures continued. For recreation, sporting events such as boxing, softball, hockey, football and soccer were organized.[33] Dances were held and films were shown on a weekly basis, courtesy of the Canadian Legion War Services. On two occasions in the spring, all ranks were given a chance to speak to relatives and friends in Canada through the services of the Canadian Broadcasting Company.[34]

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[30]Murphy Letters, February 12, 1942.

[31]Interview, Brigadier Richardson and Lieutenant-Colonel Maltby, Montreal, August, 1989.

[32]For "Stand To" purposes, the men's kit was divided into three classes; "Battle Kit," which was carried in each man's tank or vehicle; "Baggage," which was carried in B Echelon transport, and "Spare Kit," which was stored under squadron arrangements and remained behind. War Diary, 14 CATB, February 2, 1942.

[33]A soccer team formed from members of the Calgary Tanks won a Brigade championship, held at Brighton, and Brigadier R. A. Wyman, presented each member of the team with a jack knife bearing the inscription, "Soccer 1 C.A.T. Bde. 1942." War Diary, 14 CATB, April 18, 1942.

[34]War Diary, 14 CATB, March 18, 1942.

After the *Beaver IV* exercise finished in the middle of May, the battalion prepared to take part in an even larger scheme, code-named *Tiger*. This seventeen-day exercise, involving the complete 1st Canadian Corps and a British corps, was not an anti-invasion exercise, but had two "armies" advancing to contact and fight an "encounter battle."[35] However, the 14 CATB received a surprising and unexplained order to move to a new training area at Osborne Bay, Isle of Wight, where they would get advanced training with the 2nd Canadian Infantry Division and other arms of the service.

The 2nd Canadian Infantry Division had been selected on April 30, 1942 to provide units for a planned raid on the French port of Dieppe. The three brigades of the 1st Canadian Infantry Division had previously made brief landings on the continent, the 2nd Canadian Infantry Division was next in line.[36] A former trooper of the

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[35]During *Tiger* and previous exercises using Canadian units, McNaughton struggled with British commanders to maintain Canadian control of the Canadian units participating and not allow them to be used piecemeal or subdivided at the whim of a British commander. John Swettenham, *McNaughton, Vol. 2 1939-1943* (Toronto: Ryerson Press), pp. 163-167. These exercises are also discussed by R. H. Roy, *For Most Conspicuous Bravery: A Biography of Major-General George R. Pearkes, V.C., Through Two World Wars* (Vancouver: University of British Columbia Press, 1977), pp. 160-171.

[36]On June 12 and 13, 1940, units of the 1st Canadian Infantry Brigade landed briefly on the Brittany peninsula. On August 25, 1941, units of the 2nd Canadian Infantry Brigade landed on Spitsbergen, Norway. In late April 1942, a unit of the 3rd Canadian Infantry Brigade made an abortive

regiment, Stan A. Kanik, claims The 14th Canadian Army Tank Regiment (14 CATR) was selected because of all the armoured regiments that had participated in BEAVER III, it had performed the most satisfactorily.[37]

In the continuing attempt to expand the Canadian Army Overseas and to conform more closely to the British organization, facilitating better command and control, the Canadian Armoured Corps was reorganized in the spring of 1942. Consequently, on May 15, 1942, the 14th Canadian Army Tank Battalion was redesignated 14th Canadian Army Tank Regiment (The Calgary Regiment [Tank]).[38] Within a few days the regiment had completed its move to the Isle of Wight and was put under the command of the 2nd Canadian Infantry Division.

Commencing intensive training and the usual small arms and range practice, they also experimented with the waterproofing of tanks, an exercise that required much improvisation and testing. Then for the next couple of

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landing attempt at the French coastal village of Hardelot. For more details on these actions see Stacey, *Six Years of War*, pp. 279-283, 301-307, 308-310. For the argument that Major-General Pearkes opposed such large-scale raids and therefore his 1st Canadian Infantry Division was not selected, see Roy, *For Most Conspicuous Bravery*, pp. 101, 172-173.

[37]Trooper Kanik says one of his officers told him this. Personal communication Trooper Stan A. Kanik, A Squadron, May 13, 1991.

[38]Army Historical Section, *The Regiments and Corps of the Canadian Army* (Ottawa: Queen's Printer, 1964), p. 102.

months, the regiment practised embarking and disembarking tanks, from tank landing craft. Several amphibious exercises were carried out with engineers and infantry of the 2nd Canadian Infantry Division to give the tank crews experience in supporting infantry assaulting a defended beach. Unfortunately, none of the beaches had towns fronting them or the same critical chert cover of the beach in front of Dieppe. A typical exercise began by securing a beachhead, then moving a few miles inland over open country to capture an objective, such as an airport, and finally, covering the withdrawal of the infantry to the beach before the tanks re-embarked themselves. The regiment never underwent street-fighting training in any villages or towns.

Training the drivers to load and unload tanks from the landing craft was completed in late June 1942. Orders were received to prepare for the next divisional exercise, *Klondike*, a cover for the planned raid, code named *Rutter*, on Dieppe. All ranks were issued with ammunition and special rations. The tanks, men, ammunition and fitters' stores were loaded on the Tank Landing Craft (TLC) in Osborne Bay which then moved to either New Haven or to Portsmouth on July 3.

On board, the men were finally informed of the operation and its objective. All ranks were given detailed orders, maps, air photographs to study, and escape kits. Due to poor weather, the raid was repeatedly postponed and

for security reasons the men were forced to live on the TLCs for almost a week in very cramped conditions. Eventually, Major-General J. H. Roberts, the assault commander, cancelled the raid.

The regiment temporarily returned to the Isle of Wight before moving back to Seaford in mid-July, 1942.[39] All ranks were rotated on leaves and the regiment began the usual maintenance, routine training and field firing in conjunction with infantry. On the beach near Seaford, several exercises were carried out where the tanks, in conjunction with engineers from 2nd Canadian Infantry Division, experimented in scaling the seawall. In early August, the decision was made to remount the raid. In mid-month, the regiment was ordered to prepare for another amphibious assault scheme. All tanks, vehicles, ammunition, stores, and personnel were loaded on the TLCs at Gosport and Newhaven by August 18, at which time the men were informed that the exercise would be an actual operation against Dieppe.

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[39]The War Establishment for a Canadian Army Tank Regiment for July 1942 was 40 officers and 630 other ranks. The strength of the 14 CATR on July 3, 1942, was 37 officers and 647 other ranks. This was reduced through the month until by July 31 it was 34 officers and 620 other ranks. War Diary, 14 CATR, Part II Orders, Return of Officers and Other Ranks, July 3-31, 1942. For the 14 CATR command structure for July 1942, see Appendix 5.

CHAPTER IV

THE DIEPPE RAID, AUGUST 19, 1942

Since 1942 the Dieppe Raid has been the subject of much controversy surrounding its political and military background, aims, plans, execution and supposed "lessons learned."[1] Although historians have documented their arguments well, they have not examined accurately or in any detail the operations of The 14th Canadian Army Tank Regiment (14 CATR). Some misunderstandings and myths concerning the tanks, their performance and conditions affecting their actions, must be dispelled. At this juncture it should be recalled that in early July, 1942 Operation *Rutter* was indefinitely cancelled due to unfavourable weather conditions.[2] The decision to revive the raid, redesignated Operation *Jubilee*, and the exact

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[1]The most recent of which is the pioneering revisionist work of Brian Loring Villa, *Unauthorized Action: Mountbatten and the Dieppe Raid* (New York: Oxford University Press, 1989).

[2]It has been suggested that the operation was cancelled because the assault craft crews were insufficiently trained. Their special amphibious training had been delayed due to the preoccupation of Force Commanders with changes in the overall plan. See John Hughes-Hallet, "The Mounting of Raids," *Royal United Services Institute Journal* 95 (November 1950): 585. For the role of Lieutenant-General B. L. Montgomery, Commander-in-Chief South-Eastern Command, in the planning of the raid and opposition to its revival, see Nigel Hamilton, *Monty: The Making of a General, 1887-1942* (London: Hamish Hamilton, 1981), chapter 16, particularly pp. 553-555.

status of its authorization continues to be controversial.[3]

A serious deficiency in the plan was the cancellation of a preliminary heavy naval and air bombardment and the lack of heavy naval support artillery.[4] Instead, four *Hunt* class destroyers, with only 4.7-inch guns were to briefly bombard, for about ten minutes, the buildings and frontal installations at Dieppe before switching their fire to the headlands on either side of the town where the Germans had emplaced heavy coastal guns. Similarly, Air Marshal Sir Charles Portal, Chief of the Air Staff, refused to risk losing bombers needed for the strategic bombing of Germany.[5] So the heavy air bombardment component was

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[3]Brian Villa contends that the conceited, overly-ambitious and too rapidly-promoted Mountbatten revived the raid without any formal or written authorization from his superiors. This premise explains why the date of its revival cannot be determined. He concludes, based largely on the lack of supporting documentary evidence authorizing the raid by the Joint Chiefs of Staff, that Mountbatten was able to do so due to the silent acquiescence of both Churchill and the British Chiefs of Staff and a certain amount of collusion with a few key British and Canadian military figures. Villa, *Unauthorized Action*, Chapter 11, especially pp. 237-239. A defence of Mountbatten's position is in Phillip Ziegler, *Mountbatten: The Official Biography* (London: Collins, 1985), pp. 188-190. For support of the argument attempting to explain the task of authorization see Stacey, *Six Years of War*, p. 341; S. W. Roskill, *The War At Sea, 1939-1945*, Vol. 2 (London: HMSO, 1956), p. 243; and James Leasor, *Green Beach* (London: Heineman, 1975), p. 75.

[4]The Royal Navy did not want to expose its large battleships to the risk of enemy air and U-Boat attack. Roskill, *The War at Sea*, pp. 129-130.

[5]Villa, *Unauthorized Action*, pp. 150-152; Stacey, *Six Years of War*, p. 336. See also Brigadier C. C. Mann, "Lecture notes on Combined Services Raid on Dieppe, 19 August 1942, September 1942," Record Group 24, Vol. 10871,

dropped.

Another significant fault in the plan, probably the result of COHQ planners' attempt to maintain secrecy, was they did not inform or request the assistance of the Air (Intelligence) Liaison Officers (ALOs) and Army Co-op Command, the organization specializing in ground/air cooperation. No ALOs went with the fighter squadrons which carried out the low-level attacks. No Air Support Signals Unit (ASSU) tentacles were arranged forward with the infantry and tank units on the beaches and backwards to the fighter headquarters and airfields in Britain. Finally, Army Co-op Command sent out seventy-two low-level reconnaissances, using the new American Mustang single-seater fighter, losing ten of them, for no reason, since they had no direct radio links with the forward ground units or naval support vessels.[6]

An important consideration during the planning was where to land the tanks. Since all planners agreed that

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File 232C2(D26), NAC, p. 2.
Moreover, night bombing was too imprecise and day bombing would have to be carried out previous to the raid, thereby alerting the Germans. The planners also worried that any heavy bombardment would block streets with rubble and cause many fires, which would impede the engineers' demolition tasks and the tanks trying to proceed through the town. The effect on the local French population was also considered but this was not a major element in the bombardment's cancellation.

[6]More details on the lack of air/ground cooperation are in Charles Carrington, *Soldier at Bomber Command* (London: Leo Cooper), pp. 102-107.

rivers had to be avoided, the tanks could only land between the mouths of the Scie and D'Arques rivers--this meant either at the beach at Dieppe or a small part of the beach at Pourville (see map in Appendix 13). In appreciation of the outline plan for *Jubilee* by the 2nd Canadian Division, General Staff Officer 1, Lieutenant-Colonel C. C. Mann naively pointed out that tanks assaulting Dieppe could give immediate fire support to the attacking infantry and engineers and cause a psychological shock to the Germans and civilian population. Ammunition and engineer support material for tanks could be supplied more easily on the main beach where the supply craft concentration point was. The tanks would also be closer to their planned objectives and the beach front was the most convenient place for re-embarkation after the raid.

Mann recognized the disadvantages of attacking the enemy frontally, the need for engineer assault teams, and the difficulty of penetrating blocked streets due to bombardment, but he pointed out that the garrison only consisted of two low-grade infantry companies. Opting in favour of the plan, he concluded that the tanks would play an important part in the withdrawal phase and that, in general, the tanks "seemed to have a reasonable prospect of success."[7]

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[7]Lieutenant-Colonel C. C. Mann, "Observations Upon the Outline Plan," Record Group 24, Vol. 10872, File, 232C2(D36), NAC, pp. 3-4.

The idea of trying to send a tank cavalry charge through the narrow streets of an enemy defended town, and out into the surrounding countryside, holding a defensive perimeter and then withdrawing through the town, all in the matter of four to five hours, was ridiculously foolhardy and reckless. It also showed gross ignorance on the part of COHQ planners and senior Allied commanders of the capabilities and limitations of tanks.[8] No one seems to have considered the extreme vulnerability of tanks taking part in street-fighting in built-up areas. Vision from a tank is considerably impaired. If a crew commander stuck his head out of the turret to get a clear view, he was exposed to enemy sniper fire. Tanks could neither protect themselves nor return fire unless at some distance from the target because their guns could not be elevated very high. Because they depended on the infantry they moved slowly.

The assault would be on a front of approximately ten

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[8]In this period, astonishing as it may seem, no clear and established tactical doctrine for the employment of tanks existed in the British Army. The pre-war doctrines had been proved disastrously imperfect during the campaign preceding Dunkirk. The British High Command had not collectively decided on the type of tank to be produced and how it was to be employed mainly because during the inter-war period British senior officers, schooled in the traditions of the infantry or cavalry arms, were unwilling to recognize that the gradual mechanization of the cavalry arm, in turn necessitated a radical revision of the cavalry's traditional roles. Lieutenant-General E. L. M. Burns, *General Mud: Memoirs of Two World Wars* (Toronto: Clarke, Irwin, 1970), pp. 110-111.

miles at five different points.[9] At 0450 hours precisely, after the short naval bombardment and air attack by cannon equipped Hurricanes and Spitfires, the surprise flank attacks would go in, followed half an hour later by the main assault on the town.[10]

On the flanks Commandos would capture and destroy the coastal batteries about five miles east and west of Dieppe, while infantry were to neutralize coastal batteries on the east and west headlands which dominated the town.[11] The Cameron Highlanders of Canada were to advance to meet the tanks of A Squadron, 14 CATR behind the town and then advance against another coastal battery, an emergency

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[9]See Appendix 13--Map of the Dieppe Operation.

[10]60 RAF and Allied Air Forces' squadrons were involved in the largest single air battle of the war over the Dieppe area. The Allied Air Forces lost 106 aircraft while the Germans had 48 destroyed. Effective air cover for the 14 CATR and other ground units was not possible because the operational conditions dictated its nature and scope. The flight from Great Britain to Dieppe used most of the fighters' fuel leaving them only about ten minutes flying time over the area before they had to return. The German fighters could remain aloft much longer and had their airfields close by. Some 14 CATR veterans, not realizing these facts, have held a misplaced bitterness towards the RAF ever since the raid. For more on the air battle see Norman Franks, The Greatest Air Battle: Dieppe, 19 August, 1942 (London: W. Kimber, 1979).

[11]COHQ apologists say that the airborne element was replaced because it was necessary to have clouds at a certain height if paratroops were to drop accurately and effectively and such weather conditions might not coincide with the amphibious assault. The true reason is that Air Marshal Sir Arthur Harris, Chief of Bomber Command, did not want to risk losing his valuable bombers on "side-shows." Villa, *Unauthorized Action*, p. 151 and Leasor, *Green Beach*, p. 75.

fighter airfield and the local enemy divisional headquarters, thought to be at Arques-la-Bataille. These flank attacks were an essential requirement for the success of the main frontal assault, half an hour later, and to ensure the safety of the naval support vessels. They were, in general, a failure.

The main attack was to capture the town and hold it for a limited period while demolitions were carried out. The beach was divided in half, the eastern (Red Beach) being invaded by the Essex Scottish Regiment, commanded by Lieutenant-Colonel F. K. Jasperson, while the western half (White Beach) was attacked by the Royal Hamilton Light Infantry, commanded by Lieutenant-Colonel R. R. Labatt. (See map in Appendix 14.) Both regiments were to be supported by fifty-seven tanks of the 14 CATR. Les Fusiliers Mount-Royal and "A" Commando of the Royal Marines were to be held in reserve.

The Canadian commanders, Generals McNaughton, Roberts and H. D. G. Crerar, commanding 1st Canadian Corps, formally approved the final military plan by August 14, even though any one of them could have vetoed it.[12]

In planning *Jubilee* COHQ relied on imperfect

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[12]Of course, this was out of the question since they would have been immediately castigated by their fellow officers who all wanted to see action; it would have been bad for the troops' morale and besides all three were confident in the operation's success. Stacey, *Six Years of War*, p. 344. See also comments by the Honourable J. L. Ralston, *House of Commons Debates*, May 13, 1943, p. 2670.

intelligence. F. H. Hinsley, the official historian of British intelligence during the Second World War, writes that COHQ planners were "overreliant on one source" of intelligence, photo reconnaissance, and "took at face value" intelligence that underestimated the strength of the defences and the terrain.[13] Shots taken from high elevations did not effectively show any defences hidden by building roofs or caves in the cliffs of the headlands.[14]

Given the limitations of photographic intelligence, it is regrettable that intelligence officers did not make a more careful evaluation of known defensive positions from the perspective of established German tactical doctrine.[15] If COHQ had used its knowledge of the enemy order-of-battle and equipment in use, it could have made a more realistic and detailed evaluation of the defences on the beaches and in the cliffs. In actual fact, Dieppe had been turned into a fortress.

The garrison consisted of two battalions and staff of the 571st Infantry Regiment amounting to approximately 1500 men. The east and west headlands and cliffs contained

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[13]F. H. Hinsley, *British Intelligence in the Second World War: Its Influence on Strategy and Operations*, Vol. 2 (London: HMSO, 1981), p. 699. COHQ had also expected the beaches to be mined when in fact they were not.
S. R. Elliot, *Scarlet to Green: A History of Intelligence in the Canadian Army, 1903-1963*, (Toronto: Canadian Intelligence and Security Association, 1981), p. 172.

[14]Elliot, *Scarlet to Green*, p. 163.

[15]Elliot, *Scarlet to Green*, p. 174.

numerous positions ideal for defence. Artillery, machine-gun nests, and dual-purpose flak-batteries were all sited to bring enfilade fire on the beach, while being cleverly hidden in depressions and caves(blasted into the cliffs) and camouflaged bunkers. Allied Intelligence and COHQ planners underestimated the numbers and calibre of many of these guns

The defences in town itself consisted of 37-mm, 47-mm and French 75-mm anti-tank guns and heavy machine-guns hidden in buildings fronting the promenade. They could fire directly into approaching landing craft. The 1500-yard promenade was interspersed with concrete pillboxes, siting similar weapons. Many of these emplacements had connecting trenches to open weapon pits from which German soldiers could hurl grenades at the crouching troops beside the seawall. Finally, the Germans had mortars precisely ranged on the beach.[16]

A major intelligence blunder was the failure to identify the composition of the beach at Dieppe which proved to be the main technical difficulty for the tanks. The whole beach is composed of chert rocks which average one to

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[16]For a detailed summary of German defences see Major-General J. H. Roberts, "Report by the Military Force Commander-Operation *Jubilee*, 27 August 1942," Record Group 24, Vol. 10870, File 232C2(D2), NAC, p. 4. Lieutenant-Colonel Labatt, in an after-action report stated that, ". . . stakes for ranging were still standing on the beach from a mortar practice carried out the previous day. Their fire plan was well laid out and beautifully coordinated." Lieutenant-Colonel R. R. Labatt, "Narrative of Experiences at Dieppe," Record Group 24, Vol. 10873, File 232C2(D62), NAC, p. 10.

six inches in diameter. Stan A. Kanik, a former trooper of the regiment who was on the raid but did not land, returned to Dieppe in 1967. Drawing on his knowledge as a geological engineer his analysis of the beach clearly explains why many tanks had problems getting off the beach:

> The white cliffs are composed of siliceous chalk, interspersed with chert lenses and beds. The chalk component erodes easily and leaves very little residue. The chalk is literally dissolved by sea water and carried into the ocean. It is the chert beds, some up to a metre in thickness, that remain on the beaches, forming now the major component of the beaches and which are subject to typical beach and water erosion. Chert is an exceedingly hard rock and in composition, is allied to flint (stone) and chalcedony. Chert breaks with a conchoidal fracture, (a conchoidal fracture is one which presents smooth shell-like convexities and concavities) but under beach erosion conditions are shaped into rounded and oblong stones (rocks) that resist cracking or breaking. . . . The entire beach is composed of chert stones, boulders and rubble. When this material is sorted and resorted by tides, the rocks eventually rest at an "angle of repose" of about 15° to 20°. Secondly, these rocks will extend many meters in depth, so vehicles cannot dig down to a solid rock base for traction. When a tracked or wheeled vehicle tries to climb up this slope, it immediately digs itself down; when the tracks are turned to either side the stones roll in between the drive sprocket and track and the object that first gives way is the pins holding the track links--end of locomotion![17]

All regimental and standard histories referring to Dieppe

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[17]S. A. Kanik, "Chert Beach--Alias Dieppe," *The Informal History of The Calgary Regiment--14th Canadian Armoured Regiment*, eds. Lieutenant-Colonel R. G. Maltby and Major W. R. "Jesse" James (Vancouver: 50/14 Veterans Association, Calgary, 1989), Chapter 2, p. 1. See also E. L. Waldo Smith, *What Time the Tempest* (Toronto: Ryerson, 1953), p. 75.

claim its beach is composed of "shale" or "pebbles." The Allies had carried out landing tests with the tanks on the firm, sandy beaches of the Ilse of Wight but not on a chert beach, such as found at Dover. The Germans, who had many such trials, found their tanks became bellied down and stuck and did not site any heavy anti-tank guns or place anti-tank mines on the beach in front of the town since they thought the beaches were not negotiable by tanks.[18]

One supposed tank obstacle for which COHQ had planned was the seawall which the Royal Canadian Engineers (RCE) were to aid the tanks in crossing. The RCE were divided into two main groups--the Beach Assault Party (under Major B. Sucharov) and the Demolition Party (under Lieutenant-Colonel L. F. Barnes) and then subdivided into various sized detachments and squads depending on their tasks and distributed throughout the TLCs.

The Beach Assault Party was responsible for getting all troops, stores, tanks and other vehicles from the point of touchdown by the naval craft onto, across, and clear of the beach area.[19] This meant demolishing any anti-tank

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[18]The German tank track pins had never broken in trials so they concluded after the raid that the British track pins were made of inferior steel. Kanik, "Chert Beach," *Informal History of The Calgary Regiment*, p. 2. For more on the German tank trials, see T. M. Hunter, *Canada at Dieppe* (Ottawa: Balmuir, 1982), p. 33 and R. Atkin, *Dieppe 1942: The Jubilee Disaster* (Toronto: Gage, 1980), p. 159.

[19]Major B. Sucharov, "Report of the training carried out by the Engineer Group from 2nd Canadian Division during the exercises RUTTER and JUBILEE, 20 August 1942," to Chief

concrete road blocks at the exits of the promenade and using bulldozers and tractors to clear boulders, prepare ramps for evacuation and generally keep the beaches clear.[20] If needed, these machines could also aid vehicles stuck on the beach and push off grounded landing craft. Ensuring that the tanks crossed over the seawall was the most important task of the Beach Assault Party. The seawall was estimated to be up to six feet in height. The *Rutter* plan of using sappers to blow gaps in the wall had been dropped in favour of building timber crib ramps beside it for the tanks to climb.[21] Due to the intensity of German firing, no timbers were ever unloaded. Major B. Sucharov, RCE, was assigned to develop a device to enable the tanks to get over the seawall. He came up with a carpet-laying device using chespaling, a flexible roll of chestnut fencing, "similar to wood-slat snow fencing but made with tough split-slats." An apparatus was designed to hold one roll of chespaling, three feet wide (the width of one track was twenty-two inches) and about twenty-five to thirty feet long in front of each track

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Engineer, 1st Canadian Corps, File 594.019(D8), D.HIST., p. 2.

[20]Sucharov, "Report of the Training," p. 10.

[21]A highly trained detachment of thirty engineers could build a timber crib ramp beside a seven-foot wall in five minutes under favourable conditions. In this test the materials were carried a distance of thirty yards. The materials were 30--6" x 12" x 12' timbers, 8--12" x 12" x 4' chocks, weighing approximately five tons. Sucharov, "Report of the Training," p. 10.

(see Appendix 7). Controlled electrically from the turret, the ends of the rolls could be released when the tank was the appropriate distance from the seawall. The rolls would then be gradually dragged under the tank's tracks. The tank could then mount up to a twenty-eight inch wall without problem. After use, the whole apparatus could be jettisoned by an explosive charge, electrically set off from inside the turret.[22]

Finally, the Beach Assault Party was responsible for preparing for the successful reembarkation of all tanks and vehicles.

The Demolition Party was charged with demolishing power stations, petrol dumps, dockyard, drydocks, swing bridges, gas works, pumping stations, telephone exchanges and rail facilities. The group was split up into many small squads each with its own commanding officer and assigned precise objectives to be sabotaged once the infantry and tanks secured a perimeter around the town. Most of these squads never got off the beach. Indeed, the engineers had about eighty-five to ninety per cent casualties--the highest rate

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[22]A. J. Kerry and W. A. McDill, *The History of the Corps of the Royal Canadian Engineers*, vol. 2, 1936-1946 (Ottawa: Military Engineers Association of Canada, 1966), p. 108. For a detailed description of the beach track laying device see Sucharov, "Report of the Training," Appendix III.

in the raid.[23]

The tanks themselves had been adapted for amphibious operations up to a depth of six feet using rubber balloon fabric. Tall, box-shaped ducts known as louvre extensions were fitted to the air intake vents and the exhaust pipes were extended so as to be well above the water line. The waterproofing and the louvre extensions could be blown off by electrically triggered cordite charges placed underneath them. The waterproofing procedure was still in the experimental stage and had never been tested under battle conditions. Such were the plans and preparations of COHQ and the regiments involved. No contingency plans for failure existed so success now depended on the individuals of the assaulting force.

Thirty minutes prior to the TLC's touchdown, the tanks were to start warming up their engines. Two types of TLCs were used and could hold three or four tanks and one or two smaller vehicles. Radio silence was maintained until zero hour. On the run in, mortar detachments located in the rear of the first flights of TLCs lobbed smoke bombs onto the promenade to add to the smoke screen already supplied by the Royal Air Force. The infantry were to land first, followed immediately by the TLCs carrying the engineers and tanks

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[23]Kerry, *Royal Canadian Engineers*, p. 99 shows a breakdown of the types of casualties; and Brigadier C. C. Mann, "General Operational Questions and Answers--Operation *Jubilee*, 18 October 1942," Record Group 24, Vol. 10870, File 231C2(D2), NAC, p. 4.

which would give immediate supporting fire. Stacey points out:

> In any opposed landing, the first minute or two after the craft touch down are of crucial importance; and it may be said that during that minute or two the Dieppe battle, on the main beaches, was lost. The impetus of the attack ebbed quickly away, and by the time the tanks arrived the psychological moment was past.[24]

The first wave of tanks of the 14 CATR arrived ten to fifteen minutes late due to navigational error. During this critical period, the infantry had no fire support and the German defenders were able to recover from the short preliminary air and naval bombardment and man their weapons. Thus, the assault engineers were caught trying to blast gaps in the unexpectedly strong rows of wire, while the majority of the infantry became pinned down at the seawall, unable to dig slit trenches in the rocks. The Essex Scottish tried three times to cross the promenade but were repulsed each time with heavy casualties. Thereafter, they could only return fire from the limited protection of the seawall. By about 0630 hours, only an hour or so after landing, they had suffered at least seventy-five per cent casualties.[25]

On White Beach, the Royal Hamilton Light Infantry were initially held up by the strongly fortified Casino. After

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[24]Stacey, *Six Years of War*, p. 375.

[25]Captain R. W. Meanwell, ed., *1st Battalion, The Essex Scottish Regiment, 1939-1945: A Brief Narrative* (Aldershot, England: Gale and Polen Ltd., 1986), p. 18. See also Appendix 11.

stiff fighting, they cleared it despite many casualties. From the Casino they gave covering fire to some small groups attempting to penetrate the town. These units engaged in minor house-to-house and street fighting incidents with German patrols until they started to run out of ammunition. When they attempted to withdraw to the Casino some were taken prisoner in the process.[26] The infantry, initially pinned down behind the rows of barbed wire and seawall, were only able to pass these obstacles and later take the Casino after the first flights of TLCs disembarked the supporting engineers and tanks.

Flight 1 consisted of three TLCs which landed between approximately 0525 and 0530 hours (five to ten minutes late). *TLC-1* (No. 145) touched down on the eastern end of Red Beach holding C Squadron Headquarters Fighting (F) Troop, consisting of the tanks CHIEF, COMPANY and CALGARY, as well as a scout car.[27] After landing all vehicles, the TLC was sunk by shore batteries as it was withdrawing.

CHIEF, commanded by Major Allen Glenn, Officer

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[26]For details and stories of the experiences in the town, see Brereton Greenhous, *Semper Paratus: The History of the Royal Hamilton Light Infantry, 1862-1977* (Hamilton, Ontario: RHLI Historical Association 1977), pp. 199-204; and Stacey, *Six Years of War*, pp. 375-376.

[27]For the slate of officers, 14 CATR, August 19, 1942, see Appendix 6. For a table showing the allocation of 14 CATR Troops to TLCs see Appendix 8. 14 CATR crews for each tank disembarked are listed in Appendix 9. The functions of non-tank personnel disembarked are shown in Appendix 10.

Commanding C Squadron, was the first tank out and prematurely used the chespaling track-laying device to advance to the high ridge of stones before jettisoning the whole apparatus.[28] On the other side, however, was a wide trench about seven feet deep running the entire length of the beach to the Casino. Tidal action on the chert had created this trench and German excavations of rubble for the building of fortifications had deepened it. From the ridge, however, Major Glenn had a good view, when not obscured by smoke, of the promenade and both flanks of the beach and therefore kept his tank on the beach. Many years later he wrote that "this was a logical place to set up a command post to observe all action and give support" and that "it was only close to the end of the action that CHIEF was moved west, along the ridge to observe other developments."[29] After moving down the beach to the area in front of the Casino, CHIEF then returned the way it had come. On

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[28]Terence Robertson writes that the track laying device was received with "mixed feelings" by many tank commanders, some of whom thought it might work and others "who simply refused to use it," *The Shame and the Glory*, p. 317. The present author cannot substantiate this claim.

[29]Major Allen Glenn, Officer Commanding C Squadron, Letter January 17, 1991. Other information about C Squadron HQ F Troop was taken from an article written by the former loader-operator of COMPANY, Corporal Bill Leach, "Where are the Russians?," *The Informal History of The Calgary Regiment*, Chapter 2, p. 1; see also "14 CATR Wireless Log-Regimental Command Net," Record Group 24, Vol. 10873, File 232C2(D56), NAC, pp. 1-2; correspondence with Major A. S. Wagstaff and Troopers Dennis G. Scott and Ken Smethurst of CALGARY; and telephone interview with Trooper J. W. Hilsabeck of COMPANY.

arriving at the beached *TLC-3* CHIEF stopped at the western end of it, broadside, to provide more protection for the men sheltering behind the TLC.

COMPANY, commanded by Captain G. T. Valentine, landed and was about to turn right after CHIEF when a shell hit the left front drive wheel, breaking a track pin and immobilizing the tank just in front of the ridge on the beach. The co-driver, Trooper Fred Hilsabeck, recalls that after clearing the water proofing around his 3-inch howitzer with a smoke shell, he did not have enough elevation to shoot over the ridge which the infantry was using for cover. The crew could only use the 2-pounder and Besa machine-gun in the turret. The tank was hit by mortar shells several times and although it filled with smoke there were no injuries by the time of surrender.

CALGARY, the last out, was under the command of C Squadron's recently appointed reconnaissance officer, Lieutenant Brice G. Douglas. Towing a scout car it turned right, proceeding parallel to the seawall towards the Casino, looking for a place to cross onto the promenade. About halfway down White Beach its left track was suddenly blown. Although the scout car had released within fifteen feet of landing; it burst into flames when the fifty pound bags of plastic explosives it carried on its hood were hit by tracer fire.

CALGARY spent the rest of the day acting as a pillbox,

concentrating its 6-pounder fire on predetermined targets such as the Casino, initially, and the tobacco factory. The loader-operator of CALGARY, Trooper Dennis G. Scott, describes this action:

> We were sitting with no cover and so had a good view of the beach. Lieutenant Douglas found enough targets to keep [his gunner Trooper Ken] Smethurst busy until we had used up all our ammunition. Once we observed horses pulling mortars or guns along the top of the [west] cliff to the chateau, Smethurst hesitated because he really did not want to shoot the horses. Meanwhile we were attracting a lot of gunfire. We took some direct hits on the turret, hard enough that the paint was melting and running down on the inside. The heat inside, along with the smell of the smoke and cordite, was almost unbearable, so much so that Sergeant "Al" Wagstaff, who was down in the co-driver's seat, was put out of action. We stayed in the tank until we were ordered to surrender.[30]

TLC-2 (No. 127) touched down near the west jetty at the east end of the beach. It soon became a focal point for German coastal artillery, anti-aircraft guns, machine-guns and mortars. 13 Troop of C Squadron, under Troop Leader Lieutenant T. R. Cornett, quickly left the TLC after the engineers moved some of their wounded clear. Cornett's tank, COUGAR, successfully crossed the beach and the seawall, using its chespaling, jettisoned part of its

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[30]Trooper D. G. Scott, Letter February 4, 1991. Interestingly, tanks with 6-pounder guns only had armour piercing (AP) shells. High explosive shells (HE) had not been developed for the 6-pounder yet. Thus the effectiveness of the 6-pounder was limited.

apparatus and turned right.[31] The next two tanks, CHEETAH and CAT, attempted to follow the lead tank over the wall. Although CAT had no problem in climbing onto the promenade, CHEETAH initially did. Its driver, Trooper Fred Hilsabeck, recalled that he tried to drive as straight as possible, so as to avoid getting the rocks built up behind the bogey wheels. The first time CHEETAH tried to climb the wall, the tank's exposed belly was hit by a shell which, he vividly describes:

> Turned red hot right at my feet, so it came mighty close to coming through. . . . It blew all the fuses in the tank, so we rolled back down in behind the wall. I got all the fuses changed with a flashlight, got it started up again and then we went up over the wall. . . . Once we were upon the promenade we were like a bunch of rats in a treadmill. We didn't know where to go or just what to do.[32]

TLC-2 also had Major Sucharov and his Beach Assault Party of fifteen men aboard. Since all of 13 Troop's tanks had successfully made it on to the esplanade, they were no longer needed in this area.[33] Major Sucharov decided that landing at the east end of the beach would mean carrying all timber and materials to the right on foot. "Under existing

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[31]Major B. Sucharov, RCE, "Combined Operations Report (Dieppe), September 2, 1942," Record Group 24, Vol. 10870, File 232C2(D3), NAC, Appendix 1, p. 3.

[32]Trooper Fred Hilsabeck, 13 Troop, C Squadron, telephone interview, February 19, 1991.

[33]Sucharov, "Combined Operations Report," Appendix 1, p. 3.

fire the loss in men would have been too heavy."[34] He asked the captain to put in more to the west but additional shell fire so damaged the craft, it had to withdraw. Thus, none of the assault engineers or the mortar detachment landed.

On crossing over the wall, COUGAR, turned right and was immediately fired upon by a well-sited 75-mm coastal gun, positioned on the far side of the canal below the east headland. A shell hit the turret ring and jammed it. CAT aimed its 6-pounder at this enemy position and silenced it. COUGAR, after concentrating its six-pounder fire on the tobacco factory, broke its left track while manoeuvring, because chert rocks lodged between the bogey wheel and treads. The tank briefly manoeuvred with one track before it too was blown by shellfire. The crew evacuated and went back to the beach looking for cover. Trooper G. M. Ross, the gunner, stayed behind to burn out the interior of the tank with a sticky bomb.[35]

CAT and CHEETAH cruised up and down the esplanade for hours, firing their machine-guns at the German positions in the sea-front buildings and trenches, and using the

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[34]Sucharov, "Combined Operations Report," Appendix I, p. 3.

[35]Information on 13 Troop after crossing the wall is from correspondence and telephone interviews with the following members of 13 Troop, C Squadron: Troop Sergeant Jack Weaver, Trooper Robert H. Hill, Trooper G. M. Ross and Trooper Fred Hilsabeck.

6-pounders on German strong points, the Casino and headlands. Junkers 87 (*Stuka*) dive bombers attacking the tanks throughout the battle, finally hit the engine in the back of CAT and the flash of the bomb went up underneath the skirt of the turret. The loader-operator, Trooper G. L. Blair, was temporarily blinded, and the gunner, Trooper W. L. "Lloyd" McLellan, was burned and wounded. Since the escape doors were sealed by the waterproofing, Sergeant Weaver quickly climbed out the turret and pulled off the waterproofing to allow the crew to escape. CHEETAH came by to give cover and to evacuate the two wounded to the beach. Sergeant Weaver then spread some sticky bombs in CAT and set them off, took some grenades and a machine-gun, and ran towards the beach, being forced to take cover, periodically, by machine-gun and mortar fire.

Meanwhile, CHEETAH was heading towards the beach when the same Stuka came in for another pass. Trooper Hilsabeck still remembers the bomb coming straight for his periscope, then levelling off at the last minute, and finally hitting the engine compartment. The hydraulic system was hit, and he recalls that "the motor went wild, there was no clutch or steering and the radio was out." Corporal G. H. Wiggins, the crew commander, ordered him to shut off the engine and the crew to get out through the left side escape hatch. The crew of CHEETAH and the two wounded troopers from CAT remained on the sheltered side of the tank until the

surrender.

TLC-3 (No. 159) carried the naval and tank beach parties. The tank beach party was composed of two officers, Assistant Military Landing Officers (Tank) [AMLO(T)], and four other ranks and was divided into separate groups for each beach.[36] Their duties included guiding the reserve flights of tanks to their objectives, directing medical and ammunition parties on the beaches and liaising with the beach headquarters of the Senior Naval Landing Officer, otherwise known as the Principal Beach Master (PBM), Commander G. T. Lambert, Royal Navy, and the Principal Military Landing Officer (PMLO), Major B. S. McCool, of the Royal Regiment of Canada.

The *TLC-3* also carried a bulldozer and 8 Troop of B Squadron under Troop Leader Captain B. G. "Spike" Purdy. His tanks were equipped with the Oke flame-thrower device. At approximately 0525 hours, about one hundred yards from

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[36]The tank beach parties were:

Captain A. H. Turney,	Captain C. R. Eldred,
Senior AMLO(T) White Beach.	AMLO(T) Red Beach.
WO II (SSM) A. H. Tough	WO II (SSM) R. Cordner
Lance-Corporal D. E. Welch	Corporal V.C. Leonard

Personal interview with Colonel C. R. Sharp, June 17, 1990, and Captain C. R. Eldred, "Report on Dieppe Raid with Particular Reference to the Activities of the Beach Parties," File 594.019(D8), D.HIST, p. 1, and confirmed in telephone interview with Corporal V. C. "Vern" Leonard, C Squadron Headquarters, January 9, 1991. Corporal Leonard also recalls that his party had their helmets painted blue for recognition and carried small blue flags to mark the tanks' route of withdrawal.

the junction of Red and White beaches, a naval rating lowered the ramp half way to give Captain Purdy, in his tank BULL, a preview of the beach. Believing the TLC had reached the beach, Captain Purdy ordered his driver to go forward. They could not hear the warning shouts from men nearby since the tank was closed down. The tank moved forward and the ramp collapsed. BULL sank in about ten feet of water and the crew abandoned it.[37] Trooper Percy W. Aide, the loader-operator, recalls what happened:

> When we went out, I remember Captain Purdy saying "We are running behind time . . . ." All I could hear, when I got the order to switch on the [wireless] set, was nothing but gutteral German commands, excited commands, crackling all over the place. Then I heard Captain Purdy say, "driver advance," and we just rolled ahead a few feet and the left front side of the ramp went down and hesitated a second. The lights in the tank went out and the engine went off. Corporal Isbister, the driver, kicked it in again, the lights came back on, the motor started and then drowned. Then there was that pause in between where it seemed to me that a couple in the [ramp] chain had sprung and she [BULL] nosed right down. That's when the water started to pour in all over the place, from a thousand different sources . . . .
>
> The boat was in reverse then, struggling to get back and it was whipping from right to left,

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[37]Information regarding the actions of 8 Troop in *TLC-3* is from: Atkin, *Dieppe*, pp. 162-163; Terence Robertson, *The Shame and the Glory* (Toronto: McClelland & Stewart, 1962), p. 178; after-action report by Lieutenant J. E. R. Wood, RCE, "Dieppe," File 594.019(D8), D.HIST, pp. 4-5; Lieutenant P. Ross, "Report on the Dieppe Raid on 19 August, 1942," Record Group 24, Vol. 10873, File 232C2(D53), NAC, pp. 1-3; Eldred, "Report on Dieppe," pp. 1-3; Joe Sauve, ed., "Dieppe: August 19, 1942," *Random Thoughts* (Ottawa: Plastic Modellers Society of Canada, 1977), vol. 10, No. 8/9. Reprinted in Maltby and James, *The Informal History of The Calgary Regiment*, Chapter 2, pp. 90 and 96.

> trying to shake the tank off. It had to back up into deep water to get it off, and as it did that I pushed [the turret hatch] just as they shook one way and the thing flew open. They never did get the other door open because everyone poured out of the one aperture on the left side . . . .[38]

Captain Purdy could not swim and, although Trooper Aide tried to save him, he drowned. The co-driver, Trooper W. "Pipe Smoking Bill" Stewart was last seen swimming out to sea, while the other two members of the crew made it to shore. Trooper Aide was wounded and was evacuated, one of the only two tank crewmen to have landed and returned to England.

As *TLC-3* came in again, a shell obliterated the wheel house and killed all its personnel. The TLC ended up grounded in the shallow water at an angle pointing east, about thirty yards west of the tobacco factory, and was so badly damaged it was unable to move off the beach. Ten minutes after BULL's unfortunate exit, the second tank, BOAR, in making a heavy landing from the rampless TLC knocked off its flame thrower fuel tank. The driver, Lance-Corporal A. A. "Ack Ack" Poirier, who had previous catskinning experience as a farmer, could feel when rocks were starting to build up behind the track wheels and knew he had to drive straight for a time to clear them out. BOAR proceeded west down the beach and crossed onto the promenade

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[38]Corporal Percy W. Aide, 8 Troop, B Squadron, telephone interview February 20, 1991.

in the area of the Casino. It remained mobile throughout the morning before being ordered back to the beach to cover the withdrawal. At that time the crew was ordered to immobilize the tank and use it as a fort.[39]

The third tank, BEETLE, under the command of Lieutenant G. L. "Gordon" Drysdale, started up but could not move forward. The tank reversed, crushing two wounded soldiers in its path. Unfortunately, the left track chock had not been removed, the men responsible probably having become casualties. BEETLE landed heavily, blew its lighting system and had to operate with its emergency supply. After turning left, Lieutenant Drysdale soon heard a general announcement from Lieutenant Ed Bennett, 10 Troop, B Squadron, that he could cross over the seawall in the area of the Casino. As Lieutenant Drysdale turned, a pin in BEETLE's right track broke because of the build-up of rocks. For the remainder of the day, BEETLE remained immobilized, at the junction of Red and White beaches, acting as a pillbox. Lieutenant Drysdale ordered his crew to watch for muzzle flashes from the west headland, and his gunner, Trooper S. G. Hodgson, fired back at them.

Later, Lieutenant Drysdale left the tank to check the damaged track, but realizing it was unfixable, kept his crew in the tank. The tank also protected others who had

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[39]Trooper A. A. Poirier, 8 Troop, B Squadron, personal interview, February 7, 1991 and undated letter.

gathered behind it, including Major C. E. Page, Officer Commanding B Squadron, and Sergeant T. R. "Tommy" Cunningham, also of B Squadron Headquarters F Troop. Lieutenant Drysdale, taking his tank's Bren gun, took cover behind the right side of the disabled tank and started firing on the west headland. His firing brought a heavy response in the form of machine-gun and mortar fire.

Flight 1A landed a few minutes after the first flight on White Beach. *TLC-4* (No. 126) came in just east of the tobacco factory carrying Major Page, and B Squadron Headquarters F Troop consisting of tanks BURNS, BACKER, and BOLSTER.[40] After landing all three tanks, the TLC was immediately sunk. Disembarking in under three minutes, Major Page, in BURNS, headed across the beach over the first wire to the crest of the ridge, "I gave orders to turn to the right and that's when I was hit . . . the right track was blown off. The left one went on for a few seconds and kind of pulled me into the trench." Since the tank was immobilized pointing downward into the ditch and thus unable to use its weapons, he ordered the crew to bail out and take whatever cover they could beside the seawall. Corporal G. M. Mowat, the driver, was wounded and Trooper T. G. Gorman, the co-driver, was killed later in the morning.

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[40]Information regarding the action of tanks in 4, 5 and 6 Troops, unless otherwise indicated, is taken from Sauve, "Dieppe," *The Informal History of The Calgary Regiment*, Chapter 2; Robertson, *Shame and the Glory*, pp. 320-321; and Atkin, *Dieppe*, pp. 163-165.

Just as the second tank, BACKER, left the TLC, it received a direct hit on the turret ring which prevented the turret from traversing. BACKER's commander, Lieutenant R. H. "Dick" Wallace, followed the path of BURNS, went around it turning westwards, advanced about another ten yards, with the intention of handing the tank over to Major Page, in accordance with operating procedure, before being immobilized either by a direct hit on the left track or more likely by the stones breaking the left track. The tank was now almost parallel to the seawall pointing west. The 2-pounder in the immobilized turret was pointing straight ahead down the beach and was therefore ineffective. In order to get its main armament and second Besa machine-gun into action, the co-driver, Trooper J. A. "Jack" Chapman, crawled out the left side escape hatch to attach a strong cable to the gun turret. As the driver Trooper E. M. Snider reversed the track, it pulled the gun around so they could fire on the houses and German positions at the western side of the town.[41] After firing off all ammunition, the crew blew up the interior of the tank and took cover. Trooper Chapman recalls BACKER's gunner, Trooper C. L. "Heavy" Provis:

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[41]Trooper J. A. Chapman, B Squadron Headquarters F Troop, telephone interview, February 21, 1991. When looking at two German photographs taken after the raid, one can see the steel-hemp cable hanging on the 2-pounder gun and the left track lying behind the tank. See William Whitehead, *Echoes of Disaster: Dieppe 1942* (Toronto: Personal Library, 1979), p. 15 and NAC, Negative No. C29877.

> He was killed teaching me, he was an old infantry man with the Seaforth Highlanders, a hell of a guy, there was never a better guy on earth. Of course, I had never had any association with infantry and once we abandoned the tank, he taught me how to crawl along on your belly from where our tank was to the beach . . . . I was right beside "Heavy," that's what we called him "Heavy" Provis. He was a big guy and that's the reason he got shot. He couldn't get in the hole we were in totally and his head was sticking out . . . when he got shot right between the eyes.[42]

The third tank, BOLSTER, was still climbing the beach when its right track was broken by the build up of chert rocks and it came to a full stop in the area of the beached *TLC-3*. Although the tank could not move, it continued firing its 2-pounder and 3-inch howitzer until out of ammunition.

TLC-5 (No. 121) came in slightly east of the Casino and unloaded its tanks but very accurate mortar and artillery fire wiped out the crew, leaving the blazing craft beached in front of the Casino. The craft carried the tanks of 9 Troop, B Squadron, under Troop Leader Lieutenant M. J. A. "Marcel" Lambert. All tanks landed dry; BUTTERCUP, under the command of Troop Sergeant J. D. "JD" Morrison, leading the way and laying down the chespaling tracks. Sergeant Morrison recalls that to activate the track-laying device and simultaneously blow off the waterproofing and louvre extensions, he just had to hold the plug about an inch from

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[42]Trooper Chapman, telephone interview, February 21, 1991.

the socket and the sparks would set it off.[43] Unfortunately, it also shorted out the "B" (inter-troop communication) set of his radio, and the only way that Lieutenant Lambert could contact BUTTERCUP was through the regimental "A" net. Sergeant Morrison also remembers how on advancing up the beach, enemy shellfire was hitting his 6-pounder gun mantelet, causing the paint to peel on the inside of the tank. It successfully crossed the beach, wire and seawall and, then, for the remainder of the action, concentrated its fire on the west headland and on the seafront buildings behind and to the east of the Casino.

The second tank, BLOSSOM, under Lieutenant Lambert, attempted to follow the path of the first tank using the laid chespaling tracks but swerved off the chespaling, breaking its right track in the rocks and stopping sideways across the chespaling. Lieutenant Lambert remembers the situation well:

> We were doing a turn to get lined up with the wall, where Sergeant Morrison had gone over, when our right track broke . . . we had never run into that kind of stuff before . . . once we had broken our track we were pretty much sheltered by the Casino and, therefore, the mortar and artillery shells that came lobbing over, because of their trajectory, landed behind us in the water . . .
>
> A couple of times things popped in, on one occasion, something hit me on my hat badge, either

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[43]Information on the actions of 9 Troop, B Squadron is from Lieutenant M. J. A. Lambert and Sergeant J. D. Morrison, both of 9 Troop, B Squadron, telephone interviews January 17, 1991.

> a bit of rock or shrapnel, and then fell down my gunner's [Trooper H. A. "A1" Embree] neck, it was hot because Embree reacted quite vigorously![44]

Remaining stationary for the rest of the morning, BLOSSOM directed its fire at targets on the west headland and a 37-mm gun situated in a blockhouse built into the northeast corner of the Casino. Lieutenant Lambert describes this two-story blockhouse as being so well built with concrete of superior quality that the 6-pounder's armour-piercing shells had little effect; "it was just like chipping away with a handpick . . . or spitting at it, we were terribly undergunned." Luckily, for the crew of BLOSSOM, the tank had become immobilized at an angle to the east side of the blockhouse and, therefore, was not exposed to its field of fire.

The third tank, BLUEBELL, attempted to go around BLOSSOM but became bogged down in the loose chert, immediately in front of the Casino, only able to move back and forth a few feet, while firing its weapons. The co-driver of BLUEBELL, Trooper G. Volk, describes how the crew, through the tank's telescopic sight, finally picked up the flash of the barrel of an annoying German sniper situated on the Casino roof. A round from the 6-pounder demolished the area. Later, Volk was ordered out of the tank to unhitch a scout car they were towing and to see if he could clear the

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[44]Lieutenant Lambert, telephone interview January 17, 1991.

rocks away from the tracks. In doing so, he was wounded and eventually evacuated as a casualty, the only other tank crew member to have landed and subsequently returned to England.[45]

TLC-6 (No. 163) attempted three times to come in but had three helmsmen killed. On its fourth attempt, it used the sinking *TLC-1* as cover and was able to land the tanks dry. Lieutenant J. H. "Jack" Dunlap was Troop Leader of 6 Troop, B Squadron. His tank, BOB, quickly exited the landing craft and moved to the right before halting to blow the waterproofing. BERT was the second tank off, turned left and halted. At this time, the gunner of BERT, Trooper W. G. Stewart, realized that the turret was not traversing because of the inadequate blowing of the waterproofing. The co-driver, Trooper T. A. Dunsmore, went out and cut the turret loose with a machete.

BILL, the last tank, disembarked without problem. With BOB in the lead, 6 Troop proceeded west and made it over the seawall just to the left of the Casino where the wide trench had stopped. 6 Troop headed towards the rear of the Casino firing at strong points in the area of the Chateau on the west headland. As Troop Leader Lieutenant Dunlop remembers:

> Just as we got behind the Casino, we received a radio call from Lieutenant Marcel Lambert,

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[45]Statement by Trooper G. Volk, 9 Troop, B Squadron, contained in Mann, "General Operational Questions," supplementary report.

> 9 Troop, B Squadron, that a 37-mm gun was firing from a concrete bunker on the east end of the Casino. I moved BOB into position and we fired into an opening at the rear of the bunker. We also fired the turret Besa but it again jammed, so we forgot about it for the rest of the day. I turned the bunker over to Sergeant Menzies, in BERT, and moved to fire the 6-pounder at a sand-bagged gun emplacement at the side of a building facing the promenade. We destroyed it.[46]

Lieutenant Dunlap could see no way of penetrating the town due to concrete road blocks, so he moved about the promenade firing at suspected targets on the western headland.

Later in the morning, while manoeuvring in the area immediately to the east of the Casino, BERT had its left track blown off.[47] Its crew would have been killed instantly if they had attempted to fix the track so they stayed inside. They were in a position, though, to give covering fire to about twenty men of the Royal Hamilton Light Infantry who crossed from the Casino into the town. Lieutenant Dunlap explains that:

> I ordered Corporal Heck, in BILL, to go alongside

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[46]Lieutenant J. H. Dunlap, 6 Troop, B Squadron, 14 CATR, Letter December 12, 1990.

[47]Sources on the actions of 6 Troop are Robertson, *Shame and the Glory*, p. 321; John Mellor, *Forgotten Heroes* (Toronto: Methuen, 1975), p. 68; David Masters, *With Pennants Flying: The Immortal Deeds of the Royal Armoured Corps* (London: Eyre & Spottiswoode, 1943) Chapter XVI, p. 170; Stacey, *Six Years of War*, p. 376; C. P. Stacey, "Dieppe, 19 August, 1942," *Canadian Geographic Journal* (August 1943): 59; Trooper H. J. "Jim" Ganshirt, 6 Troop, B Squadron, personal communication in Red Deer, Alberta, June 17, 1990; and correspondence with Troopers J. D. White, W. G. Stewart and John H. Cox, all from 6 Troop, B Squadron.

> and take off three of BERT's crew. It took some time because they had to cut through the waterproofing covering the side hatches, with the tank's machete. When they had the three crewmen, my tank BOB moved alongside and took the remaining two crew members, one of whom was Sergeant Menzies.[48]

The co-driver of BILL, Trooper John D. White, recalls that what was probably a sniper, shot and smashed the thick glass of the driver's vision port forcing the driver, Trooper Elmer Schlapkohl, to rely on the extremely limited vision through his periscope. Eventually, BOB and BILL returned to the beach to lay down a smokescreen to cover the withdrawal.

At about 0605 hours, Flight 2 of four TLCs landed on schedule, drawing extremely heavy fire. *TLC-7* (No. 124), carrying 10 Troop of B Squadron, under Troop Leader Lieutenant "Ed" Bennett, landed in the centre of Red and White beaches. On the way in, the gun emplacement on the jetty put a shell through the side of the TLC. It ricocheted off a tank turret and hit the barrage balloon storage area, exploding some hydrogen cylinders and setting the balloons on fire. The flaming rubberized material settled on the rear of the troop commander's tank BELLICOSE. A piece of metal from the explosion hit Lieutenant Bennett's right eye while the flames burned off all his hair. He

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[48]Dunlap, Letter December 12, 1990. The details of the evacuation are confirmed by the surviving members of 6 Troop; see also Robertson, *Shame and the Glory*, p. 321.

ordered the crew to put out the fire. His radio operator, Trooper A. F. "Archie" Anderson, got out of the tank and used a nearby fire extinguisher to good effect. (Anderson was awarded the Military Medal for this and other brave acts he carried out during and after the battle). The explosion also jammed the turret so it could not rotate.[49]

BEEFY was the first tank out, landing dry, and immediately blew the waterproofing, but to remove fabric still around the turret ring the co-driver, Trooper R. A. "Abe" Lincoln, had to climb out on top of the moving tank which was under enemy small arms fire. BEEFY temporarily halted about thirty feet off the ramp to get its bearings.[50]

Lieutenant Bennett, although severely wounded, went in with BELLICOSE. An ammunition party consisting of Lance-Corporal C. E. D. "Chuck" Suffel, Trooper F. D. "Tiny" Bevan and others, had tied a sled loaded with tank ammunition to

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[49]Information about the actions of *TLC-7*, 10 Troop, is from the following sources, unless otherwise indicated: Atkin, *Dieppe*, pp. 169-170, 175; Robertson, *Shame and the Glory*, pp. 323 and 363; Mellor, *Forgotten Heroes*, pp. 67-69, 83; Stacey, *Six Years of War*, p. 379; Lieutenant Ed Bennett, "Dieppe 1942," *The Informal History of The Calgary Regiment*, Chapter 2, pp. 1-4; Trooper A. F. Anderson, "Trooper Anderson at Dieppe," *The Informal History of The Calgary Regiment*, Chapter 2, pp. 1-2; Brigadier-General W. W. Southam, "Report on Approach, Landing and Subsequent Events Dieppe," File 594.019(D8), D.HIST, pp. 1-2; and C. P. Stacey, "Memorandum--TLC-7, Operation *Jubilee*, December 22, 1942," File 594.014(D9), D.HIST , p. 1.

[50]Trooper M.A. "Archie" McIntyre, 10 Troop, B Squadron, personal communication in Red Deer, Alberta, June 17, 1990.

the back of BELLICOSE. Unfortunately, it did not slide very well on the steel TLC and the tow cable snapped. Since they could do nothing about it they took what cover they could against the seawall and in bomb craters.[51] Passing BEEFY, Lieutenant Bennett instructed his driver, Trooper R. C. "Bobby" Cornellsen, to turn right towards the Casino. His reasons were sound:

> I had seen all the other tanks in the centre of the beach stranded in the shingle [chert]. We may have had a better chance on the beach because we didn't land as high up as the first flight of tanks. With the tide going out, it may not have been as loose shingle as it was higher up . . . . I decided that we would stick to the water line and go along until we could see a place where we could go over the seawall.[52]

Lieutenant Bennett found the chert piled up to within two feet of the wall near the Casino and crossed without problem. The rest of his troop followed.

BLOODY was the last tank out towing the scout car HUNTER. This scout car, driven by Trooper M. F. Zima, carried Major Gordon M. "Shorty" Rolfe, Royal Canadian Corps of Signals (RCCS), and his two No. 19 wireless sets. Rolfe commanded 1st Canadian Army Tank Brigade (1 CATB) Signals and was on loan to The Calgary Regiment to put their communications in order for an exercise that turned out to

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[51]Trooper F. D. Bevan, B Squadron Headquarters Administration, personal communication February 4, 1991.

[52]Bennett, "Dieppe 1942," *Informal History of the Calgary Regiment*, p. 2.

be Operation *Jubilee*.[53] He had three scout cars under his command, HUNTER, HOUND and HARE, each with one 14 CATR driver and one signalman, and was supposed to report to Brigadier Southam's 6th Infantry Brigade Headquarters at St. Remy Church to coordinate the withdrawal between infantry and tanks.

Sergeant Ron B. Lee, the crew commander of BLOODY, realizing he could not cross the wall in this area, stopped, reversed and started crushing HUNTER and its occupants. Major Rolfe quickly pushed the warning button on the rear of the tank which stopped reversing and then moved right. Major Rolfe recalled:

> I guess the scout car looked like a derelict to the enemy but my radio sets were unharmed and operated all through the operation. Scout cars HOUND and HARE were knocked out on landing from other TLCs. Lance-Corporal A. G. Wills, however, was not injured, made his way to HUNTER and became my operator until we surrendered along with the rest. Shortly after landing, I saw Brigadier Southam on the beach and made my way to him. He said his communications were completely non-existent because a tank had run over and destroyed the Signals "baby carriage." I told him we could cover any frequency he wanted and he was with me

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[53]Major Rolfe explains that when Colonel Andrews was Brigade Major of the 1 CATB, prior to becoming Commanding Officer of the 14 CATR, they both had been good friends. When Colonel Andrews heard about the Dieppe operation, he asked Brigadier Wyman if Major Rolfe could be attached to the 14 CATR to put his signal plan in shape. As Rolfe explained:

> The Regimental Signals Officer, Stanley Roadhouse had just been posted to The Calgary Regiment and was new to the job and very inexperienced. Once attached and once in the picture there was no way out of permanently becoming part of the operation.

Major Gordon M. Rolfe, Letter February 11, 1991.

> lying beside the scout car for most of the time. (The side opposite the west headland, of course.) About an hour after landing, my CAC driver, Michael Zima, received a mortar shell fragment which proved fatal. I rendered aid but it was ineffective.[54]

Rolfe and his operator, by quickly switching frequencies, were able to maintain contact with the Headquarter's ship and the TLCs offshore, and the infantry and tank squadron commanders on shore.

On crossing onto the promenade, all three of Lieutenant Bennett's tanks went up the east side of the Casino towards the buildings fronting the promenade. On the way, BLOODY dropped into an anti-tank ditch. BEEFY gave covering fire while Troopers D. R. Lazier and A. W. "Aussie" Hill attached a tow line, constantly under fire, and BEEFY pulled BLOODY out of the ditch. Sergeant Lee then dismounted to inspect the tank. He noticed that one of the left treads was partly cracked because of the chert. Consequently, BLOODY drove slowly and carefully while on the promenade.[55]

Lieutenant Bennett, noticing some men of the Royal Hamilton Light Infantry pointing to something, turned his

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[54]Major Rolfe's account follows closely to the official version in John S. Moir, ed., *History of the Royal Canadian Corps of Signals 1903-1961* (Ottawa: Corps Committee, RCCS, 1962), pp. 120-121.

[55]Trooper Donald R. Lazier, 10 Troop, B Squadron, transcript of interview contained in the MacPherson Library Special Collections, University of Victoria, and confirmed by Trooper A. W. Hill and Sergeant R. B. Lee, both of 10 Troop, B Squadron.

troop down the Boulevard de Verdun in front of the buildings. The troop proceeded down the full length of the boulevard, clearing the Germans out of slit trenches and giving the tanks' gunners easy targets, although BELLICOSE had to rotate the whole tank to compensate for the jammed turret. All the roads exiting the promenade were blocked with concrete barriers which were as high as eight feet and were four feet thick with a firing step on the rear.[56]

At one point in the battle, the gunner of BEEFY, Corporal W. J. "Billy" Hunt, spotted a sniper in a third storey window. Unable to get a proper sighting, he dropped the 6-pounder's breech block, lined up on the sniper through the barrel, then fired. Apparently he hit several snipers in this manner.[57]

BELLICOSE cruised around the promenade only returning to the beach to repair its steering system which had been damaged by frequent anti-tank hits. Once the damage had been fixed, BELLICOSE started to move back down the beach towards the Casino with the intention of returning to the promenade. An accumulation of the chert rocks broke the

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[56]See Hunter, *Canada at Dieppe*, p. 34; R. W. Thompson, *At Whatever Cost: The Story of the Dieppe Raid* (New York: Coward-McCann, 1957), p. 103; Brigadier Mann, "General Operational Questions," p. 11. Jacques Mordal writes that the road blocks not only caused the tanks problems, but made it impossible for the Germans to reinforce the seafront with heavy anti-tank guns, *Dieppe: The Dawn of Decision* (Toronto: Ryerson Press, 1963), p. 204.

[57]Trooper McIntyre, personal interview, June 17, 1990.

left track, immobilizing BELLICOSE at the junction of Red and White Beaches right beside the grounded *TLC-3*. The gunner, Trooper, W. E. "Bill" Stannard, continued firing the 6-pounder at targets on the west headland, obliterating a tower in the process. When a message came over the radio that some boats were coming in for evacuation, Lieutenant Bennett and his crew left the tank and took shelter behind *TLC-3*. The Germans waited until the boats were full before opening fire. Many were killed. Bennett's eyes were closed up from his earlier injury by this time. Three members of his crew told him they were going out to help the wounded. During this effort Trooper R. C. "Bobby" Cornelsen, Bennett's driver, was killed.

When ordered back to the beach to cover the withdrawal, BEEFY and BLOODY returned near the Casino. A rain of shells first hit BLOODY's turret seal so that the 6-pounder could not traverse and then the left tread finally broke, immobilizing the tank in the middle of White Beach. BEEFY halted in the same area.[58]

TLC-8 (No. 125) held 4th Brigade Headquarters, Brigadier Sherwood Lett, and 14 CATR Regimental Headquarters, including the Regimental Commanding Officer Lieutenant-Colonel Andrews, his Second-in-Command (2IC), Major John Begg, and his Adjutant, Captain A. G. "Austie"

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[58]BLOODY's actions were described by Sergeant R. B. Lee, 10 Troop, B Squadron, telephone interview February 2, 1991.

Stanton. On the first run in to Red Beach, the craft was able to land Captain Stanton in his tank RINGER. Unfortunately, it was temporarily stuck in the chert, blocking the exit of the other tanks. A beach assault party of twelve sappers rushed forward carrying chespaling rolls to assist the tank. This attempt failed and seven or eight sappers were killed and their officer, Captain J. E. Bight, was twice wounded before withdrawing on board the TLC.[59] RINGER's loader-operator, Trooper Tom H. Pinder, recalls the action of his tank after landing:

> Almost immediately we were going up hill, very slowly, then could go no further--this was the point at which we were blocking the way of REGIMENT so the TLC had to pull out again . . . . We backed down under our own power, swung to the right and started along the beach parallel to the sea, in the lowest gear because of all those damnable round stones that no one mentioned beforehand. I don't remember any help from sappers to get us going. A short distance along the beach and there was a "clang" on the front of the tank and we stopped dead with at least one track broken. Up ahead of us we could see the Casino, and near it a large pillbox which one of our tanks was bouncing 6-pounder shells off with no visible effect. There we were for the rest of the morning, using up our ammunition wherever Captain Stanton and [Trooper F. A.] Fred Tanner thought it might do some good. Every now and then a mortar shell would land on the tank, doing us no harm but creating havoc with some of the infantry who were using us for shelter . . . . All through

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[59]Kerry, *Royal Canadian Engineers*, p. 106; Mellor, *Forgotten Heroes*, p. 69; Smith, *What Time the Tempest*, p. 76; Robertson, *Shame and the Glory*, p. 322; and Lieutenant-Colonel K. A. Hunter, "Medical Observations During Combined Operations in the Attack on Dieppe--19 August, 1942," Record Group 24, Vol. 10873, File 232C2(D56), NAC, p. 1

> the morning the radio was a confusion of voices and orders.[60]

When they ran out of ammunition, Captain Stanton kept his crew in the tank. As he explained:

> Nobody was getting hurt and I would not let them make a run for it because people were dying like flies on the beach. We fired up the Primus stove and had some pork and beans and bread while we waited for them to come and take us prisoners.[61]

At some point Colonel Andrews may have gone ashore on foot to do a quick reconnaissance before returning to the TLC as it was leaving, although this is unsubstantiated.[62] From the TLC he radioed Major Glenn, Officer Commanding C Squadron, to take command of the tanks ashore.[63]

The TLC withdrew offshore for an hour or so before

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[60]Trooper Tom H. Pinder, Regimental Headquarters, Letter February 2, 1991.

[61]Atkin, *Dieppe*, p. 196.

[62]One author writes that:

> "Learning over the wireless that there were difficulties ashore, Colonel Andrews landed in the Adjutant's tank to discover what they were . . . . In the circumstances he concluded it would be unwise to land another tank until the situation clarified and he returned to the landing-craft and ordered it to withdraw."

Masters, *With Pennants Flying*, pp. 166-167; Robertson says that Andrews:

> ". . . leapt from the landing craft, scrambled to the top of a rise in the beach and scanned it for signs of the tanks already ashore. Most were immobile, trackless and helpless . . . . He returned to the landing craft just as it was pulling astern."

Robertson, *Shame and the Glory*, p. 322.

[63]Masters, *With Pennants Flying*, p. 167.

attempting to land its remaining two tanks on the western end of White Beach. Since no smoke cover remained, the craft attracted an extremely heavy concentration of fire. As the ramp was lowered in preparation for landing, a shell burst at the front of the landing craft, damaging the air intake louvre extensions of Colonel Andrew's tank and breaking the chains of the ramp. The ramp fell open, touching down in eight feet of water. Colonel Andrews, perhaps believing a normal landing had been made, drove off and his tank, REGIMENT, drowned. Even at that depth he might have made the beach if the louvres and waterproofing had not been destroyed. He and the crew successfully evacuated the tank, climbing aboard a motor launch. This craft was almost immediately hit by shellfire, bursting into flames, causing everybody to bail out. Colonel Andrews was last seen wading or swimming in the water when he was cut down by machine-gun fire. His body was never found nor identified.[64] This was a sad loss for The Calgary Regiment for he had been well liked, as a professionally

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[64]For information about Colonel Andrew's attempt to land, see Atkin, *Dieppe*, p. 172; Robertson, *Shame and the Glory*, p. 354; Stacey, *Six Years of War*, p. 378; Thompson, *At Whatever Cost*, p. 105; Masters, *With Pennants Flying*, p. 167; Eric Maguire, *Dieppe* (London: Jonathan Cape, 1963), p. 102; War Diary 14 CATR, August 19, 1942; Major M. E. P. Garneau, "Report on the Dieppe Raid," Record Group 24, Vol. 10873, File 232C2(D53), NAC, p. 4.

trained soldier and an effective commanding officer.[65] From 1938 to 1941 he had been part of Lieutenant-Colonel Worthington's Canadian Armoured Fighting Vehicle School staff in Camp Borden.

Major John Begg, in ROUNDER, was unable to land his tank because "the volume of shellfire increased to such an extent that *TLC-8* was actually blown off the Beach."[66] This craft withdrew with most of its crew killed, all guns out of action and having been hit by shell fire at least thirty-five times.[67]

TLC-9 (No. 166) landed on White Beach soon after 0605 hours using *TLCs 7* and *8* as cover on her port side. It carried 7 Troop of B Squadron, under Troop Leader Lieutenant A. L. "Art" Breithaupt. BRENDA, under the command of Troop Sergeant W. W. "Bill" Olive, was the first tank to land and drove immediately up the beach, blowing its waterproofing. Trooper Jim W. Horne remembers that the cordite charges did not clear all the fabric from his driver's viewport:

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[65]During the six years before becoming Brigadier Worthington's right-hand man at the Canadian Tank School in 1936, Lieutenant-Colonel Andrews had been with the Royal Canadian Regiment and Princess Patricia's Canadian Light Infantry Regiment.

[66]Lieutenant-Colonel R. D. King, "Narrative of Events in *TLC-8* at Dieppe," Record Group 24, Vol. 10873, File 232C2 (D53), NAC, pp. 2-3.

[67]King, "Narrative of Events in *TLC-8* at Dieppe," p. 3 compare with Sergeant R.O. "Dick" Freeman, Ammunition Party, 14 CATR, letter to his aunt, August 25, 1942. Received from Captain Ed Bennett, Woodstock, Ontario.

> As we advanced the front of the tank kept going up in the air, then dropped suddenly, hit an obstruction and killed the motor. I took this opportunity to push the port open and remove the fabric from the front. I was looking at the seawall on top of which was concertina wire and laying across the wire, a body [of] an engineer.
>
> I started the motor and reversed and then turned right on orders from Sergeant Olive . . . . Beside the Casino was a flight of concrete steps and it was over these we made our way onto the promenade.[68]

The co-driver of BRENDA, Trooper R. H. "Dick" Clark, adds that:

> We had no idea we were going to land on a beach with stones the size of baseballs. There were several of us up there on the promenade . . . . We were just going around in bloody circles, using up our ammo, using up our gas, being shelled, rolling over people.[69]

Lieutenant Breithaupt, in BETTY, was the second tank off the TLC towing a scout car with two engineers and explosives. BLONDIE was the last tank off. No information can be found on BLONDIE's movements except that it did cross onto the promenade and German photographs show it still there after the raid.

The scout car being towed by BETTY was hit and burned

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[68]Trooper J. W. Horne, Letter February 2, 1991, corroborated by Sergeant W. W. Olive. Thompson, *At Whatever Cost*, p. 105 and Robertson, *Shame and the Glory*, p. 324 claim that BETTY and BLONDIE never made the promenade. This is incorrect. Compare with German photographs of the two tanks immobilized on promenade; Mellor, *Forgotten Heroes*, p. 69; Stacey, *Six Years of War*, p. 379; Sauve, "Dieppe," *The Informal History of The Calgary Regiment*, p. 90 and Lieutenant A. L. Breithaupt, Letter February 3, 1991.

[69]Thompson, *At Whatever Cost*, p. 174.

with its unfortunate occupants. Somehow it was released and BETTY went over the ridge into the trench. Realizing that he could not cross there, Lieutenant Breithaupt backed out of the trench and then proceeded west towards the Casino. He had heard Lieutenant Bennett's announcement about the low seawall by the Casino. Once over the wall, BETTY roamed around the promenade blocked in by the road blocks, firing at whatever targets presented themselves on the cliffs or promenade. Lieutenant Breithaupt recounts that:

> Sometime later we got a hit on our turret which knocked out our radio, lights and intercommunication. Some flaked metal cut my wrist. I told Corporal [J. K.] Nash to drive anywhere as I could not direct him. As Corporal Nash was turning the tank, he saw a large hole and in order to avoid the tank rolling over he steered into the hole, and as we hit bottom the lights came on, and the intercom and radio worked. We started out of the hole but the tracks skidded near the top, so we called one of the other tanks [probably BLONDIE], put on a tow cable and got out, only to have our left track shot away. Rather than go forward one track length, we backed down into the hole. This gave a little protection to evacuate. I called up two tanks and three of the crew got into one, and two of us got into the other.[70]

The latter tank was BEEFY. The loader-operator, Trooper R. A. Gilbert, remembers that Trooper H. A. Stanfield, of BETTY, was running so fast he went up over the top, onto the turret, and came down through the hatch on Trooper Gilbert's head. Lieutenant Breithaupt, after

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[70]Lieutenant Breithaupt, Letter February 3, 1991.

tearing off the waterproofing on the right side hatch, crawled inside, narrowly being missed by a burst of machine-gun fire, and lay on the tool box behind the driver and co-driver (Troopers McIntyre and Lincoln). BETTY's crew commander, Sergeant Harry R. Patrick, asked if Lieutenant Breithaupt would like to take command. He declined as they were now returning to the beach for the evacuation.

BRENDA also returned to the beach where the crew bailed out, Sergeant Olive burning the interior out with a sticky bomb. Later, while the crew was taking cover behind another immobilized tank nearby, they noticed BRENDA roll by into the water. Obviously, the bomb had destroyed at least the braking mechanisms.[71]

TLC-10 (No. 165), transporting 15 Troop of C Squadron, touched down at 0610 on the middle of Red Beach. The TLC also carried an engineer demolition party of sixty-two men under the command of Lieutenant- Colonel L. F. Barnes.[72]

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[71]For BETTY's actions see Mellor, *Forgotten Heroes*, pp. 83-84. Confirmed by Lieutenant Breithaupt, Letter February 3, 1991, and Trooper R. A. Gilbert, 10 Troop B Squadron, personal communication. For photos of BETTY in the ditch on the promenade, left track broken, see Whitehead, *Echoes of Disaster*, p. 148; Atkin, *Dieppe*, p. 82; Hunter, *Canada at Dieppe*, p. 33.

[72]Information about the actions of 15 Troop is taken from: Thompson, *At Whatever Cost*, p. 106; Corporal T. B. Gorman, "Action of the Tanks and Situation Generally (Red and White Beaches)," Record Group 24, Vol. 10873, File 232C2(D53), NAC, p. 1; and Lieutenant T. R. McCoy, "Account of Dieppe Raid--Exercise *Jubilee*," Record Group 24, Vol. 10873, File 232C2(D53), NAC, p. 1; Lieutenant LeBlanc, "Dieppe Raid," Record Group 24, Vol. 10874, File 232C2(D58), NAC, p. 2; Corporal Harold L. Cooper, Regimental

In the rear of the TLC was a scout car attached to the last tank and an ammunition sled that was to be hooked up, after the last tank exited, to the back of the first tank which would reverse up into the TLC. Hooking the sled was the duty of Corporal Harold L. Cooper, Headquarters Squadron. A jeep (or blitz buggy as it is referred to in primary documents), under the command of Squadron Quartermaster Sergeant Allen Stewart, C Squadron, was to rove the beach checking on the stocks of ammunition and other supplies needed by the tanks. A total of twenty-three 14 CATR personnel were on board, fifteen were in the tanks, two were drivers and six were in the ammunition party. Of the total personnel on board, only those in the tanks were able to land.

Troop Leader Lieutenant A. B. "Pat" Patterson was in the first tank CAUSTIC. As soon as the ramp dropped the TLC was greeted with a hail of artillery and anti-tank fire, the explosions blowing water, rock splinters and shrapnel into the opening of the craft. CAUSTIC moved onto the ramp immediately after touchdown and was hit by more fire. Lieutenant Patterson, who had his head out of the turret to see better, quickly ducked inside. Contemporary reports

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Electrician, Headquarters Squadron, Letter February 13, 1991; Trooper Leaman Patterson, Letter February 12, 1991; Troop Leader Lieutenant A. B. Patterson, 15 Troop C Squadron, Letter February 13, 1991; Trooper R. H. Johnston, Letter February 7, 1991 and Trooper Jeff J. Pewtress, Letter January 30, 1991, all of 15 Troop, C Squadron.

state that the explosion stalled the tank on the ramp for a few minutes. This could have been caused by an air vacuum created by the exploding bombs close by.[73] Going again, Lieutenant Patterson moved left along the beach attempting to find a way across the wide trench and seawall. Noticing a ramp going up to the height of the wall, which the Germans must have been using for their vehicles, Lieutenant Patterson drove up it.

The number two tank, CANNY, followed CAUSTIC immediately but was also hit while on the ramp, receiving slight damage to its left air louvre. It turned sideways to the right and took about five minutes to straighten itself out before following after CAUSTIC. Both tanks were able to pass safely over the beach, explains Trooper Lee Patterson, the driver of the third tank, CONFIDENT, by:

> Turning a bit, backing up, then going ahead again, then turning a bit and so on. This defeated the piles of rubble (small rocks, bricks and pieces of concrete) that the Germans had hauled onto the beach. If the tank was turned sharply and continued ahead this rubble would pile into the tracks and go up into the drive sprockets thus snapping the tracks. The troop had picked this up on our No. 19 sets from the other troops who had landed before us and had run into this problem.[74]

CONFIDENT had immediately followed CANNY. It had difficulties due to the longer distance it had to travel to

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[73]Trooper R. H. Johnston, Letter February 7, 1991.

[74]Trooper Lee Patterson, Letter February 12, 1991.

the TLC exit, the towing of the scout car and the fact that the driver and co-driver were blinded by the waterproofing. Smoke also obscured the crew commander's vision. As CONFIDENT was going out the door it received a direct hit, fortunately a dud, above the engine compartment, causing one of the air louvres to hook the door frame and stalling the tank, half on the ramp and half on the beach. Revving its engines at the same time as the TLC reversed, the tank and scout car were released.

CONFIDENT swung left to follow the other two tanks and manoeuvred over the beach in a similar manner as the others. Due to the unexpected heavy resistance and preoccupation with battle, the crew forgot about the scout car and smashed into it while reversing. CONFIDENT climbed the ramp to the seawall, but was suddenly hit by concentrated shellfire, the Germans obviously having got the range by this time. Trooper Lee Patterson describes the situation:

> There was one hell of a ringing thump and when we had collected our senses the tank had been driven back down the slope out of sight. Our steering mechanisms was lying in a heap of junk where my feet should have been. I was driven back through the back of my seat into a low tool box which was behind the seat. A piece of the steering tiller was still in my hand.
>
> Trooper Johnston was bleeding badly from his neck [or near one of his eyes] . . . No one was seriously hurt . . . After we got our marbles together we started the engine and drove up to the top to have a look see and fire a shot or two at whatever seemed worthwhile, then back down again

before they could hit us again.[75]

CONFIDENT used this tactic for several hours. During this period the tank gradually moved sideways to the left but after a while the gunner, Trooper J. J. "Dad" Pewtress, was not able to depress his 2-pounder low enough to shoot at anything because the tank was angled up. Since they were no longer useful, the crew evacuated, blew up the inside and took cover.[76] Later the brakes let go and it rolled slowly backwards into the water, disappearing in a cloud of steam.

CAUSTIC and CANNY spent the morning cruising around the promenade in circles in the area of Red Beach. Lieutenant "Pat" Patterson writes:

> The fire was intense and there were several tanks on this promenade. . . . If at any time our tank stopped we immediately came under fire. . . .
>
> We did see an enemy soldier running across the promenade--he appeared to be a dispatch runner--I ordered my gunner [Trooper C. J. "Cliff" Anderson] to get him and he did with the Besa.
>
> The word finally came over the air to pull back to the beach which we did. We went down the ramp and parked the tank near the seawall. . . . The beach was littered with wounded men and some disabled

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[75]Trooper Lee Patterson, Letter February 12, 1991.

[76]No German photographs of CONFIDENT have been published in any of the standard histories of Dieppe, but one clearly showing the tank's name is in possession of Captain W. T. Marshall, Museum Director, Canadian Forces Communications and Electronics Museum, CFB Kingston.

tanks.[77]

CANNY also returned to cover the withdrawal and both crews abandoned the tanks just before the surrender.

The tanks on the promenade drove back and forth, unable to penetrate the town because of the huge concrete road blocks, on which the tanks' puny armour piercing shells had no effect. The engineers and sappers had suffered tremendous casualties and could not demolish these concrete barriers.[78]

Since the whole of A Squadron and the remaining three troops of C Squadron were never sent in and the disembarked tanks were trapped on the promenade, the two tank beach parties instead of carrying out their planned initial tasks of directing the tanks to their objectives, spent most of their time in assisting wounded and organizing tank cover for the general withdrawal.

A description of the actions of Captain Eldred, Assistant Military Landing Officer (Tank) on Red Beach, gives an idea of their activities and the chaotic situation on the beaches. Still aboard the half-beached *TLC-3* at 0600 hours, Captain Eldred could see that the beach was under intense mortar and machine-gun fire pinning down the

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[77]Lieutenant "Pat" Patterson, Letter February 13, 1991.

[78]Smith, *What Time the Tempest*, p. 77; Robertson, *Shame and the Glory*, p. 363; and 14 CATR, "Wireless Log" 1205 hours.

infantry. At 0615 hours Captain Turney, SAMLO(T), ordered Captain Eldred and his party ashore with instructions to order all mobile tanks off the beach because they were attracting heavy fire and causing unnecessary casualties among the infantry. Captain Eldred and his two men covered the four hundred yards of beach unhurt by "moving between machine-gun bursts and using whatever cover was available." He set up his post beside one of the breakwaters.[79]

Leaving Squadron Sergeant-Major R. Cordner and Corporal Vern Leonard at this point, Eldred made a reconnaissance and counted five tanks in the centre area of Red and White beaches. Two were out of action, two started moving and firing when he signalled, and the last failed to take any action. Two scout cars in flames with their crews dead were also in this area.

At 0645 hours, Captain Eldred noted that on Red beach the Essex Scottish Regiment had suffered severe casualties on landing and had only been able to advance as far as the large excavated trench beside the seawall. Later Eldred recorded that:

> The [Essex-Scottish] second-in-command asked me to get tank support, pointing out to me the machine-gun strong points and the pill boxes, which were too far away (200 to 300 yards) and surrounded by too much wire for them to get at without some tank support.[80]

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[79]Eldred, "Report on Dieppe", p. 3.

[80]Eldred, "Report on Dieppe," p. 3.

Eldred continued on his beach reconnaissance and found that the heavy German artillery and mortar concentrations made movement very difficult.

On the way back to his post, he met Commander Lambert (SNLO) and Major McCool (SMLO) who had finally established their headquarters after intensive shelling had frustrated two previous attempts. By this time the only operating radio post, that in the scout car HUNTER, under the command of Major Rolfe, was constantly under enemy small arms fire. Eldred noted:

> I received authority from the Senior Military Landing Officer to leave the beach in order to secure a tank to take out the machine-gun emplacements which were holding up the infantry. I passed through the wire to the promenade, found a tank, ordered it back to a position on the beach and directed the tank to fire into these posts.[81]

About 0715 hours the Fusiliers Mont-Royal and the Royal Marine Commandos landed on White beach. Eldred recounts that this caused the Germans to open up with all their weapons along the whole length of the beaches, negating any advantages gained by taking out the machine-gun posts.

At 0830 Eldred received instructions that the evacuation would take place as scheduled at 1000 hours. From then on all beach parties were engaged in organizing for the evacuation. Eldred recorded that:

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[81]Eldred, "Report on Dieppe," p. 4.

> A second tank by now had arrived on RED beach and was assigned the task of engaging machine-gun fortifications along the high wall and laying down a smoke screen along the left flank. I considered that the smoke might give us some protection from the snipers who were taking a heavy toll. This tank took up a position on the beach but drew so much high explosive fire that it became necessary to clear the troops away from the area along the water line. This tank [CAUSTIC] was under command of Lieutenant Patterson, 14 CATR and helped the infantry machine-gun crews considerably in keeping down small arms fire.[82]

At 1000 hours, Eldred concluded that the infantry was rapidly using up small arms ammunition and that the situation was critical.

At 1100 hours, Major Glenn ordered all remaining mobile tanks to withdraw to the beach and take up defensive positions to cover the withdrawing infantry. It seems that the Germans were preparing for an infantry counterattack which the tanks probably deterred. By noon all tanks had been immobilized, the majority with broken tracks, although many continued to fire until they ran out of ammunition. Contemporary reports that some tanks actually entered the back streets of the town are false.[83] The crews were ordered to evacuate at 1225 hours. At 1300 hours, about the time of general surrender on Red and White beaches, General Roberts sent out the code-word VANCOUVER, the signal for the

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[82]Eldred, "Report on Dieppe," p. 5.

[83]For reports that tanks entered town see Mordal, *Dieppe*, p. 203; Kerry, *Royal Canadian Engineers*, p. 107 and Stacey, "Dieppe," p. 59. A report to the contrary is in Buckley, *Norway. The Commandos. Dieppe*, p. 258.

entire naval force to turn around and head back to port.[84]

In review, twenty-nine tanks attempted to land, two drowned and the rest made it to shore. Of these twenty-seven, sixteen crossed the seawall, although ten ultimately returned to the beach in the area of the Casino, where three were immobilized by the chert.[85] The remaining eleven tanks never got off the beach. Four had their tracks broken by shellfire, four by the chert and two for uncertain reasons. The last tank stayed on the beach and was mobile for the duration of the battle.

Of the 32 officers and 391 other ranks (ORs) of the 14 CATR embarked in England, 17 officers and 152 ORs landed; of these 2 officers and 10 ORs were killed, 3 ORs were evacuated, 15 officers and 142 ORs were taken prisoner, some of them wounded, while 15 officers and 239 ORs of A Squadron, the three Fighting troops of C Squadron and those remaining from B Squadron were ordered to return to England.[86]

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[84]See Headquarters 4th Canadian Infantry Brigade, "Intelligence Log--Intercepted Message, 19 August 1942," Record Group 24, Vol. 10873, File 232C2(D53), NAC, p. 5 and Maguire, *Dieppe*, p. 91.

[85]Fifteen tanks across the wall is the standard figure quoted, see Stacey, *Six Years of War*, p. 379; Hunter, *Canada at Dieppe*, p. 33; Atkin, *Dieppe*, p. 174.

[86]The three men who landed and were evacuated were Trooper G. Volk of 9 Troop, B Squadron from BLUEBELL, Trooper P. W. Aide of 8 Troop, B Squadron from BULL, and Lance-Corporal F. Howe of Regimental Headquarters, from the scout car RUBY. See Appendix 8 and "Part II Order 52, September 4, 1942 for 14 CATR" issued by Canadian Section,

The raid failed because the *Jubilee* Plan was too inflexible, complicated and lacked essential heavy bombardment from sea and air. All units had precise objectives but there were no contingency plans. Another serious fault was the COHQ's neglect in using the air/ground cooperation and support structure available to it. The Army liaison officer attached to the Royal Air Force headquarters, Lieutenant-Colonel Charles Carrington, later wrote that there was "nothing to be learned from Dieppe, except how not to do it, a little late in the war to learn that lesson."[87] This remark is also correct in reference to the raid in general. Other obvious defects were an overreliance on surprise, which was not achieved, inadequate inter-service communications and supporting naval fire, and a lack of intelligence on the defences. These were the germs of failure as one German report concluded.[88]

From the point of view of the 14 CATR, the major intelligence failure was not identifying the geological nature of Dieppe's chert beach, which defeated nine (possibly thirteen) tanks, in other words, one-third of tanks ashore. Major Sucharov's beach track-laying device attached to some of the lead tanks had not, as many

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General Headquarters, 2nd Echelon, KOCR Archives; and "14th Canadian Army Tank Regiment Personnel Returns from Dieppe," memorandum September 10, 1952, File 594.065(D7), D.HIST.

[87]Carrington, *Soldier at Bomber Command*, p. 105.

[88]Roskill, *War at Sea*, p. 245.

historians claim, been meant to aid the tanks over this hazardous obstacle. This is obvious since the length of chespaling carried was only slightly longer than the tank itself, whereas the beach was thirty to fifty yards wide at high tide. Instead, the device was designed to give a tank traction at the moment of crossing the two-foot tall seawall. Two of the three tanks carrying this device successfully used it as it was designed, although one had problems jettisoning the apparatus which had either been damaged by enemy shellfire or was technically faulty.

The success of the experimental waterproofing and deep wading attachments on the tanks cannot be determined because almost all the TLCs landed dry and many tanks received damage to their exhaust and air intake louvres and waterproofing before and while exiting the TLCs, resulting in two drowning. Most of these problems were caused either by the tanks scraping against the sides of the TLCs or by enemy fire. Better disembarking training might have avoided some of these difficulties.

All but two tanks successfully blew their waterproofing; in those cases it jammed the turrets and had to be cut loose. Turret jams were also caused by shellfire hitting the turret ring, a technical problem that also could have been foreseen with more testing.

At least two scout cars were rammed by their towing-tanks, probably because tank crews forgot about them in the

excitement of battle and confusion caused by the unexpected fierce enemy resistance. Again, more training under simulated battle conditions might have avoided the problem.

The tanks were also severely undergunned. Ten of the tanks had 2-pounders while the other nineteen had 6-pounders which were both like peashooters. The 6-pounder tanks did not even have high explosive shells. Although some of the technical problems of the tanks could have been avoided through more testing and training (the 14 CATR had only been given two months of amphibious assault training before the raid), it probably would not have made much difference to the overall outcome of the battle.

The objectives and orders of the 14 CATR in the raid showed the shattering ineptness of COHQ's tactical planning and the inadequacy of Allied armoured doctrine at this stage in the war. The futile decision to send tanks into a heavily fortified town was based on the outdated armoured tactics of the Great War.

To have planned a tank attack across a chert beach without trial on a similar beach, such as available at Dover, is, in afterthought, incomprehensible and unforgivable. Additionally, the idea of using tanks, with their very limited gun elevation and visual capabilities, to fight through a major built-up area, without considerable support, indicates gross ignorance or deliberate overlooking of the operational limitations of tanks. Only one sniper's

bullet is necessary to kill a tank commander who tries to improve vision by putting his head outside the turret.

The plan is astonishing when it is recalled that the 14 CATR had been trained for infantry support either in the open countryside or on the sandy beaches of the Isle of Wight. The regiment never had any training in the complex and dangerous type of close-quarter street-fighting, necessitating extremely close infantry cooperation, that it would have encountered if its tanks had been able to penetrate the narrow streets.

Immediately after the Dieppe Raid, the people responsible for its inception and planning, namely COHQ under the command of Admiral Mountbatten, justified the huge losses in men and material by claiming that the "lessons learned" would lead to future victory and a saving of lives when the final invasion of Fortress Europe took place. The COHQ report stated that the need for heavy supporting fire was the most important lesson learned from the Dieppe raid and emphasized the point using capital letters and italics.[89] Similarly, German reports reveal that the Germans were surprised that such an attack was attempted without the required supporting fire. The successful

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[89]Stacey, *Six Years of War*, p. 399. COHQ also produced a book, with a few chapters on Dieppe which was the beginning of Admiral Mountbatten's efforts at justifying the raid and covering up his responsibility for it, see COHQ, *Combined Operations: The Official Story of the Commandos* (London: HMSO, 1943), especially page 145.

Normandy landings in 1944 strengthened this argument but this certainly was not a new lesson, especially after the experiences of the Great War and specifically the disastrous amphibious landing at Gallipoli.

In the post-war decades military historians have questioned the necessity of the raid and particularly the selection of Dieppe as a target and the choice of tactics used.[90] The official Canadian army historian explains that:

> Surprise, rather than striking power was the chief reliance in this operation; yet no surprise could be hoped for in the frontal attack, which was to go in half an hour later than those on the flanks. . . . It seems impossible to avoid the conclusion that from the beginning the planners underrated the influence of topography and of the enemy's strong defences in the Dieppe area.[91]

After nearly five decades Brian Villa finally debunked the long accepted justification that the "lessons learned" as a result of the Dieppe debacle were a necessary sacrifice that contributed to victory two years later on D-Day. Villa emphatically states:

> The evidence that British planners knew perfectly well that the operation had virtually no hope of success has been almost hidden from view in later efforts to justify the raid *ex post facto* as having produced a rich harvest of important lessons.

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[90]Villa, *Unauthorized Action*, pp. 2-7.

[91]Stacey, *Six Years of War*, p. 398.

> Though some lessons *were* learned, we can see now that none were unknown beforehand.[92]

The experience necessary for the major invasion of the continent could have been gained far more easily and with far less casualties from the amphibious landings on Sicily, the Italian mainland, North Africa and the Japanese held Pacific islands.

Notwithstanding all of the foregoing comments, it is fitting to pay tribute to the naval, army and air personnel who attempted to carry out their allotted tasks. The courageous action of The Calgary Regiment's tank crews in providing covering fire to help the few infantry and other survivors to evacuate Dieppe beach explains why all except three of the men were taken prisoner. These valiant men fought until all their ammunition had been used up, by which time they had to choose between death, if they left the shelter of their tanks, or imprisonment if they stayed inside their tanks until taken prisoner. Their choice was an obvious one.

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[92]Villa, *Unauthorized Action*, p. 3.

CHAPTER V

REORGANIZATION, TRAINING AND A SUMMARY OF ACTIONS UNTIL APRIL 1945

An unfortunate epilogue to the Dieppe raid was the experiences of the prisoners of war captured after the battle. Each of the two infantry brigade headquarters had been naively authorized to take two complete copies of the Military Detailed Plan for Operation *Jubilee* ashore.[1] Regrettably, Brigadier W. W. Southam, Officer Commanding 6th Canadian Infantry Brigade, had been captured on the beach trying to bury his copy. One order specified that, "Whenever possible the hands of the prisoners are to be bound, so that they may not destroy their papers."[2] The Germans were furious about this instruction and on October 8, 1942, ordered that all Allied prisoners of war captured at Dieppe would have their hands bound.[3] At first they were bound with rope, then handcuffs and later shackles

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[1]Combined Operations Headquarters (COHQ) "Operation *Jubilee*. Detailed Military Plan, Copy No. 18, August 7, 1942," Record Group 24, Vol. 10871, File No. 232C2(D25), Directorate of History, NDHQ [D.HIST], p. 2.

[2]Canadian Military Headquarters (CMHQ), "Summary of Events Relating to the Question of the Shackling of Prisoners of War, September 2, 1942 to February 10, 1943, File No. 45, *Treatment*," February 10, 1943, The King's Own Calgary Regiment [KOCR] Archives, p. 7, C.P. Stacey, *Six Years of War: The Army in Canada, Britain and the Pacific* (Ottawa: Queen's Printer, 1955), p. 396.

[3]CMHQ, "Shackling of Prisoners of War," p. 1

with an eighteen-inch chain between them. They were shackled from eight o'clock in the morning until eight at night. The British authorities responded with the same treatment to German prisoners of war. Although the British ended this policy a few months later, the Allied prisoners of war were not unshackled until November 1943. Trooper Fred A. Tanner, Regimental Headquarters, relates his experience:

> You'd pick the lock, put the cuffs in your pockets with the chaining across the front of you. So when you saw a German coming, you'd just slip your hands in your pockets, and it would look like you were still chained.[4]

In actuality, the constraints were only worn twice a day during parades after which the prisoners of war would easily remove them. The Germans, perhaps not agreeing with the order, did not strictly enforce it.[5] Sergeant Tom R. Cunningham, B Squadron Headquarters Fighting (F) Troop, recalls:

> Toward the end of the chaining, everybody had their own tag on their handcuffs. Two German guards would bring down a big wooden box, and all the chains were laid in it, so the guys would just root through and pick out

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[4]Daniel G. Dancocks, *In Enemy Hands: Canadian Prisoners of War 1939-45* (Edmonton: Hurtig, 1983), p. 46.

[5]Stacey, *Six Years of War,* p. 397. For more information on 14 CATR Dieppe prisoners of war experiences, see Lieutenant-Colonel R. G. Maltby and Major W. R. James, *The Informal History of The Calgary Regiment--14th Canadian Armoured Regiment* (Vancouver: 50/14 Veterans Association, 1989), Chapter 2.

> their chains and chain themselves up. This one day we had a new guard and, boy, was he a wiseguy, going right by the book. He was going to personally chain everybody up. So he'd chain one guy and away he'd go. They'd take off their chains and sneak them back into the box. He'd chain up fifty guys, and there'd still be the same fifty guys in line waiting to be chained up! And we got lots of time, we could have been there all bloody day. So he gave up. And that kid cried. He actually cried.[6]

Meanwhile, four days after the Dieppe Raid, remaining members of the regiment and personnel from other units attended a memorial service held by the 14 CATR padre, Captain Waldo E. L. Smith, at Seaford Parish, Sussex. The loss of the 14 CATR's Commanding Officer, Adjutant and half of the fighting personnel profoundly affected the regiment. Brigadier R. A. Wyman, worried about a drop in morale and efficiency, immediately promoted Major John Begg, formerly the second-in-command, to command the regiment.

Lieutenant-Colonel Begg wasted no time reorganizing the regiment. The original officers and non-commissioned officers were spread throughout the regiment to facilitate the smooth absorption of new officers and other ranks. Numerous men were promoted. After reorganization the regiment started elementary training in driving and maintenance, wireless and gunnery. To speed up the process, it borrowed instructors from the British 11th Armoured

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[6]Dancocks, *In Enemy Hands*, p. 46.

Divisional School.[7] Several officers and other ranks also attended British Royal Schools of Instruction.

The fighting troops spent ten days at the Armoured Fighting Vehicle ranges at Minehead, Somerset, where the tank crews practised gunnery techniques until all troops could successfully complete the one and a half mile Regimental Battle Practice Run. Each troop was required to engage various targets, stationary and moving, which would periodically pop out as the tanks moved along the course.[8]

By mid-September, although the war establishment of officers and other ranks was up to strength, the regiment had only about half the required tanks and other vehicles. The vehicle establishment was not reached until two months later.[9] In March 1943 the Churchill tanks were replaced by the Canadian-manufactured Ram Tank, much to the disapproval of many men in the regiment. Barely had the men finished familiarizing themselves and training with these new tanks, when within two months, the Rams were withdrawn and replaced by the more reliable, American-built General Sherman Mark V tank.[10]

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[7]War Diary, 14th Canadian Army Tank Regiment (14 CATR), National Archives of Canada, Ottawa, August 25, 1942.

[8]War Diary, 14 CATR, September 6, 1942.

[9]War Diary, 14 CATR, September 17 and November 1942.

[10]War Diary, 14 CATR, March 21 and May 4, 1943; Lieutenant-Colonel C. R. Sharp and Tom Ward, eds., "General History of The Calgary Regiment," *Round Up* (Calgary: 50/14 Veterans Association, no date), p. 14. The General Sherman

In late 1942 General McNaughton approved the reorganization of the Canadian Armoured Corps and its war establishment in order to conform it, as far as possible, to the British organization which was based on the practical experience gained in North Africa. The revisions would also facilitate more efficient command and control if Canadian units worked alongside British or other empire forces.[11]

The revisions did not change the 14 CATR's status within the 1st Canadian Army Tank Brigade (1 CATB) but allowed an increase in the war establishment to 37 officers, 663 other ranks and 69 tanks.[12] Only in late February 1943 did enough reinforcements arrive to bring the regiment near to the new war establishment.[13]

With the fresh draft two new troops, one anti-aircraft and one reconnaissance, were added to Headquarters Squadron.

M4A4 (Mark V) weighed 31 tons, had a crew of five, a 75 mm cannon, two .30 inch and one .50 inch Browning machine guns, a road speed of 42 kilometres per hour, a range of 161 kilometres and a maximum armour thickness of 75 mm. Christopher F. Foss, *Jane's World Armoured Fighting Vehicles* (London: Macdonald & Jane's, 1976), pp. 114-115.

[11]Stacey, *Six Years of War,* p. 102.

[12]The War Office, *A Canadian Armoured Regiment: War Establishment* (Ottawa: King's Printer August 1943), pp. 2 and 4. On May 29, 1943 the war establishment of other ranks was increased to 727. Effective January 12, 1944, the war establishment was again revised to 38 officers and 657 other ranks. Besides the usual 61 cruiser tanks, the anti-aircraft tanks were increased to 6 and the light tanks were increased to 11; The War Office, *An Armoured Regiment, CAC: War Establishment* (Ottawa: King's Printer, November 1943 and revised again September 1944), pp. 2, 3 and 6.

[13]War Diary, 14 CATR, February 24, 1943.

The major commanding Headquarters Squadron now had three captains and two lieutenants under his command. Respectively, these held the positions of second-in-command, technical adjutant, quartermaster, signals officer and reconnaissance troop leader. The fighting squadrons, commanded by a major with a captain as second-in-command, had another "battle" captain added to act as the major's rear communications link to regimental headquarters.[14]

During the spring and summer of 1943 the regiment periodically moved to different training areas within the United Kingdom. In remote areas of Scotland gunnery practice, waterproofing, wading experiments and combined arms amphibious assaults were carried out. The regiment was fortunate to have a few British instructors who had taken part in the tank battles of North Africa. In England the 14 CATR took part in the ever increasing invasion and anti-invasion schemes, including the largest manoeuvres to date, Exercise *Spartan* in March 1943. The regiment also trained in the correct method clearing a path through a minefield and of pinning and flanking targets with gunfire.[15]

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[14]The battle captain always remained close to the squadron commander in action for if the latter became a casualty, the former could immediately take over until the second-in-command could come up from the rear to assume command.

[15]Headquarters, 1st Canadian Army Tank Brigade, "A Brief History of the 1 CATB February 1941-June 1943, June 29, 1943," Wyman Papers; War Diary 14 CATR, February to June 1943.

When, due to new age regulations Lieutenant-Colonel Begg was transferred to command of #2 Training Centre at the Armoured Corps School at Camp Borden, he was replaced by Lieutenant-Colonel Cyril H. Neroutsos, formerly second-in-command of the 12th Canadian Army Tank Regiment, the Three Rivers Regiment, 1 CATB. Many 14 CATR men resented this unknown easterner, for they felt that equally capable and qualified officers within the regiment itself should have assumed command.[16]

In June the entire 1 CATB was issued tropical kit and prepared for Operation *Husky*, the invasion of Sicily. On June 23 part of the 14 CATR embarked in several new American Landing Ships Tank (LSTs) from Greenock, Scotland, while the remainder had to wait a week to board the troop ship S.S. *Eameronia*. After exactly two years in England the 14 CATR left fully trained, equipped with the latest equipment, and generally better prepared for the upcoming amphibious landing than the previous one at Dieppe.

On July 10, 1943 the 12 CATR made the assault landing in support of the 1st Canadian Division at Pachino Bay, Sicily. The 14 CATR played a holding role against possible counter-attack, being positioned on the left flank of the northern thrust of the British 8th Army. In less than a month the campaign was over and the entire brigade withdrew

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[16]Waldo E. L. Smith, *What Time the Tempest: an Army Chaplain's Story* (Toronto: Ryerson, 1953), p. 96; information from Lieutenant-Colonel "Dick" Maltby.

and concentrated around Scordia. Here, the 1 CATB was converted and redesignated the 1st Canadian Armoured Brigade (1 CAB). The three regiments were likewise redesignated, the 14 CATR now being the 14th Canadian Armoured Regiment [The Calgary Regiment (Tank)] or 14 CAR.[17]

During the last weeks of August preparations were made for Operation *Baytown*, the invasion of mainland Italy. A Squadron of 14 CAR was chosen to support the 1st Canadian Infantry Division in the amphibious assault on Reggio di Calabria, the first assault by tanks on Hitler's *Festung Europa* since the Dieppe Raid. With that bitter experience in mind Allied planners were determined not to make the same mistakes. Air reconnaissance of the defensive positions and geographic features were incorporated in regimental intelligence summaries.[18] Enemy unit positions with the probable axis of advance were marked on traces for maps, as were tracks and roads which were passable to vehicles and tanks.[19] Throughout the night before the assault, Allied

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[17]Army Historical Section, *The Regiments and Corps of the Canadian Army* (Ottawa: Queen's Printer, 1964), p. 102 and C. H. Stewart, *The Concise Lineages of the Canadian Army, 1855-1982* (Toronto: no publisher, 1982), p. 48. The redesignations were for administrative reasons and no change occurred in the war establishment or internal organization of the regiments or brigade.

[18]S. R. Elliot, *Scarlet To Green: A History of Intelligence in the Canadian Army, 1903-1963* (Toronto: CISA, 1981, pp. 179-181.

[19]War Diary, 14th Canadian Armoured Regiment, September 1943, Appendix 4.

artillery lobbed shells across the Messina Straits to soften up the defences.

On September 3, 1943 the dawn invasion was anti-climactic, since the enemy had abandoned the majority of their defensive positions. Five days later Italy surrendered, followed by an Anglo-American amphibious landing and subsequent lodgement at Salerno. Lieutenant-Colonel Neroutsos, taking advantage of the situation, quickly formed an armoured striking force, commonly called a "jock column," made up of a variety of units with the 14 CAR as the spearhead. "X" Force, as it was officially named, rapidly moved up the east coast of the toe of Italy, liberating the towns of Catanazaro and Potenza (see Appendix 15 map). Disengaging from the stalemate at Salerno, the Germans started a general defensive withdrawal to the Volturno River Valley above Naples.

The 14 CAR continued the advance northward and was ordered to proceed from Canosa along the single road to take the inland town of Campobasso. When the regiment met resistance halfway along the road at the town of Motta Montecorvino, it experienced its first major engagement in Italy and lost six tanks and suffered twelve casualties.[20] After taking Campobasso on October 15, the regiment moved to the east coast and, with the 8th Indian Infantry Division,

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[20]War Diary, 14 CAR, October 2, 1943.

prepared to assault the German defensive positions along the Sangro River.

Continuing northwards against increasingly heavy opposition, the regiment found itself assaulting well dug-in defensive positions, usually along rivers or in mountain valleys, at Vine Ridge, The Gully and San Leonardo. Hitler had ordered that a line be held south of Rome and two German defensive belts were constructed during the lull in fighting over the winter of 1943-44.[21] During this static period the regiment remained in divisional reserve in the Lanciano area carrying out infantry-tank training with the 8th Indian Division.

In April 1944 the 14 CAR moved to the Volturno Valley and made ready to assault the *Gustav* and *Adolf Hitler* lines behind the Gari-Rapido River system. The 14th CAR employed a turretless tank with a Bailey Bridge on top of it, which was driven forward during the initial assault and used to get tanks quickly across the Gari River.[22] This ingenious tactic allowed the 8th Army to crack both German defensive lines within two weeks. The 14 CAR was awarded battle honours for its actions at Pignataro and Aquino. This victory enabled a general Allied advance and Rome was taken

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[21]December 1943 was the last time the 14 CAR supported Canadian infantry during the war.

[22]For a detailed account of this action see Captain Ian Seymour, "A Bridge Too Soon--For the Germans, that is," in Maltby, *Informal History of The Calgary Regiment*, Chapter 3, pp. 2-10.

on June 4. The Germans attempted a desperate daylight retreat but were caught in the open by the Allied Air Forces which inflicted heavy losses. These victories were the turning point of the Italian campaign.

During the summer of 1944 the 14 CAR supported, at different times, the 4th British Infantry Division and the 8th Indian Division, in the advance north of Rome through the Trasimeno Line towards Arezzo. Movement was slow and frustrating due to the difficult tank country. Ordered to shift their advance west, the 14 CAR finally halted and were relieved at Empoli on the Arno River just west of Florence.

On August 25 the 14 CAR supported the 8th Indian Division as it crossed the Arno River in an attack on the *German Gothic* Line at Mount Cerrone. This Line was pushed back through the Appennine Mountains beyond the town of Marradi by the 14 CAR and a Ghurka regiment. In this mountainous region the Germans had cleverly laid countless mines and their demolition of certain roads, tunnels and bridges continually slowed down the advance.[23] Terrible weather exacerbated the situation and in October the 14 CAR was forced to take up static defensive positions for the winter.

In mid-February 1945, the German Army in Italy put out tentative peace feelers and Allied divisions began to be

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[23]1st Canadian Armoured Brigade, "Overseas History of the 1 CAB, July 1, 1941 to May 11, 1945," KOCR Archives, p. 3.

transferred to northwest Europe.[24] The 14 CAR made a miraculously successful nighttime withdrawal over an Appennine Mountain pass to the Po Valley, near Forli, where the regiment remained for a month. It was withdrawn to Florence and hence to Leghorn where it embarked for Marseilles. Once in France, all tanks were transported by train while all wheeled vehicles travelled by road to Belgium. On March 15 the regiment took up billets in the town of Dottignies.

The regiment was soon issued some of the new Firefly tanks, a British adaptation of the Sherman mounting the heavier British 17-pounder (76 mm) gun. A general reorganization of the regiment was also carried out. All fighting squadrons were reduced to 4 troops--two with 75 mm guns and two with 17-pounder guns. Squadron Headquarters retained two troops of 105 mm guns and one troop of 75 mm guns.[25] After some gunnery practice at Dunkirk, France, with the new tanks, the regiment was ordered in April to concentrate temporarily in an area of the Reichswold Forest in northern Germany before moving to Holland.

Starting on April 12, and for almost two days and three nights, the regiment's fighting squadrons alternated participation in a continual bombardment, code named

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[24]G. W. L. Nicholson, *The Canadians in Italy* (Ottawa: Queen's Printer, 1966), p. 677.

[25]War Diary, 14 CAR, March 15, 1945.

Pepperpot, in support of the Ontario Regiment's and British 49th West Riding "Polar Bear" Division's attack on the Ijsel River and the Dutch town of Arnhem.[26]

The 14 CAR's only battles in Holland were the liberation of Ede and Opheusden on April 17 and 18. The battle for Ede was, as the regimental war diary states, "largely a tank show." After taking the high ground the regiment reduced the town's defences with the aid of flamethrower tanks.[27] No further advance was made due to truce arrangements. The regiment remained in that area where it celebrated Victory in Europe Day on May 8, 1945.

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[26]War Diary, 14 CAR, April 12 to 15, 1945.

[27]War Diary, 14 CAR, April 17, 1945.

CONCLUSION

The difficulties of the underfunded Canadian militia in the interwar period and early war years are exemplified by the training and experiences of The Calgary Regiment (Tank), 14th Canadian Army Tank Regiment (14 CATR). The lack of equipment and proper training was due partly to the government's refusal to purchase tanks, partly to the lukewarm emphasis given to armoured training in Great Britain and partly to the influence of both British and Canadian cavalry officers. Also to blame was pacifist public opinion, government apathy and an interwar defence policy which completely ignored the length of time it takes to mould men and machines into an efficient fighting unit.

The regiment's year of training in England was based on anti-invasion exercises in the open country, and its two months of combined-arms amphibious assault training on the open beaches of the Isle of Wight were totally inadequate for what it was expected to accomplish in the Dieppe Raid. The regiment had never undertaken the difficult and complicated close infantry support training necessary for assaulting a fortified town by sea or land.

When Canadian infantry and armour stormed ashore, they were driven back with great losses in a brief but bloody battle. The 14 CATR attacked with great enthusiasm but was unable to overcome the numerous German coastal defences,

tank traps, anti-tank obstacles and gun emplacements manned by a skilled and determined enemy. The Canadian tanks also encountered difficulty in traversing the unexpected chert rock that disabled some even before they had reached the high tide mark. Others were later immobilized for the same reason. The major cause of these failures was poor intelligence. Lacking was signal intelligence and reports from British Secret Intelligence Service (SIS) agents concerning Dieppe, its defences and the enemy order-of-battle. In constructing the overall intelligence picture, Combined Operations Headquarters (COHQ) overrelied on photo-reconnaissance, resulting in serious intelligence failures, particularly in the case of the Dieppe beach.

Two long accepted myths about the beach have now been dispelled. The claim by all previous regimental and standard histories that it was composed of shale has been proven wrong. The beach was actually a deep bed of extremely hard chert rocks. Failure to identify this tank obstacle was a colossal blunder by the COHQ.

The other myth is that the planners had identified the beach as difficult for armour and therefore designed the Beach Track-laying Device to overcome it. In actual fact this device was designed to allow a tank to gain traction on the beach immediately prior to scaling the seawall. It was never intended, as has been later claimed, even by veterans who participated, to be used in the crossing of the beach.

Immediately after the raid, COHQ, under the direction of Vice-Admiral Mountbatten, tried to cover up its responsibility for the disaster by advertising the many important lessons learned. The successful 1944 D-Day landings strengthened their argument. The justification soon became accepted fact in post-war decades as many reputable historians repeated it. Recently, however, some military historians, notably Brian Villa, have quite rightly claimed that the supposed lessons learned should have been known already or could have been learned far more easily in other ways and at a much less cost in lives.

In actuality, the Dieppe fiasco dramatically revealed the incompetence of COHQ in its amphibious assault planning on both the strategic and tactical levels. The use of tanks at Dieppe demonstrated just how obsolete contemporary Allied armoured doctrine was and how ignorant senior officers were to the operational capabilities and limitations of armour.

The apparent ignorance of COHQ in planning to send heavy infantry support tanks against a fortified town, with the aim of penetrating it and then withdrawing in a matter of hours, is astonishing. The tanks would have had a hard enough task protecting themselves, let alone infantry, in the narrow, confined streets sided by three-storey stone buildings. Had the tanks been able to enter the town, the casualties among the 14 CATR crews would have been even higher.

In hindsight it seems unnecessarily risky to use a tank, not previously tested in battle, in so dangerous an operation but the COHQ needed to see how it performed in battle. Two-thirds of the tanks also mounted the new 6-pounder gun, which meant that the attackers were extremely undergunned, and were supplied with armour-piercing shells. COHQ planners may have been unaware of these dangers, but more likely they ignored them in the sincere belief that the risks were justified by the valuable, cumulative experience that would be gained. They saw casualties resulting from the Dieppe and other amphibious operations as a regrettable but necessary sacrifice for the inevitable, decisive invasion of the continent.

The next time the regiment saw action was in Sicily and mainland Italy in 1943 and 1944. Ironically, on the only other occasion when it participated in an amphibious assault, on the toe of Italy, it was unopposed. The regiment was part of the 1st Canadian Armoured Brigade (1 CAB) but often fought attached to other units, usually non-Canadian. Through the early months of the Italian Campaign, the regiment gained experience with each battle. It became known for its adaptability and earned the trust and respect of all the units it supported. As part of the 1 CAB it was the last Canadian formation to leave the Mediterranean prior to its transfer to North-West Europe. By the time it arrived in the Netherlands, the war was

almost over. In 1946 the regiment was renamed The King's Own Calgary Regiment (14th Armoured Regiment) in recognition of its actions at Dieppe and latterly in Italy and Holland--an honour deservedly earned by all who served with the regiment.

In conclusion, the difficulties and training experiences of The Calgary Regiment (Tank) during the early war years were typical of other militia units. The regiment's actions at the Dieppe raid graphically revealed just how poorly prepared and ill-equipped the regiment was for this type of operation, illustrated a total lack of understanding on the part of senior Allied officers as to the limitations and capabilities of the operational employment of armour and, finally, revealed the extreme incompetence of COHQ in planning amphibious assaults. It took another year for the regiment to become battle-ready and, as usual, it took several weeks of experience under battle conditions for it to become the competent, hard-hitting unit which gained it a respected reputation.

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APPENDICES

APPENDIX 1

THE KING'S OWN CALGARY REGIMENT--

HISTORY AND ORGANIZATION, 1910-1958

April 1, 1910	-	Organization of 103rd Regiment (Calgary Rifles) Non-Permanent Active Militia (NPAM).
March 15, 1920	-	Reorganized and redesignated The Calgary Regiment.
May 15, 1924	-	Reorganized into two regiments: The Calgary Regiment and the Calgary Highlanders.
April 1, 1936	-	Headquarters and B Company of the 13th Canadian Machine Gun Battalion were amalgamated with The Calgary Regiment.
December 15, 1936	-	Converted and redesignated The Calgary Regiment (Tank). The first Canadian NPAM regiment to become a tank unit.

ACTIVE UNIT--1941-1945

September 1, 1939	-	Mobilized for local protective duties.
February 12, 1941	-	Mobilized as 14th Canadian Army Tank Battalion (The Calgary Regiment [Tank], 1st Canadian Army Tank Brigade, Canadian Army (Active).
May 15, 1942	-	Redesignated 14th Canadian Army Tank Regiment (The Calgary Regiment [Tank], Canadian Armoured Corps (CAC).
August 26, 1943	-	Redesignated 14th Canadian Armoured Regiment (The Calgary Regiment), CAC.
December 15, 1945	-	Disbanded.

Appendix 1 cont'd

RESERVE UNIT--1939-19-

April 1, 1941	-	Converted and redesignated 14th (Reserve) Army Tank Battalion (The Calgary Regiment [Tank]).
August 19, 1942	-	Redesignated 14th (Reserve) Army Tank Regiment (The Calgary Regiment [Tank]).
April 1, 1946	-	Converted and redesignated 14th Armoured Regiment (Calgary Regiment), Royal Canadian Armoured Corps (RCAC).
July 22, 1946	-	Redesignated 14th Armoured Regiment (King's Own Calgary Regiment), RCAC.
February 4, 1949	-	Redesignated The King's Own Calgary Regiment (14th Armoured Regiment), RCAC.
May 19, 1958	-	Redesignated The King's Own Calgary Regiment, RCAC.

APPENDIX 2

THE KING'S OWN CALGARY REGIMENT MISCELLANEOUS FACTS

Battle Honours:

First World War: Ypres 1915, 1917, Festubert 1915, Mount Sorrel, Somme 1916, Ancre Height, Ancre 1916, Arras 1917, 1918, Vimy 1917, Hill 70, Passchendaele, Amiens, Scarpe 1918, Drocourt-Queant, Hindenburg Line, Canal de Nord, Valenciennes, France and Flanders 1915-1918.

Second World War: Dieppe, Sicily 1943, Motta Montecorvino, San Leonardo, The Gully, Cassino II, Gustav Line, Pignataro, Liri Valley, Aquino, Trasimeno Line, Arezzo, Advance to Florence, Cerrone, Italy 1943-1945, North-West Europe, 1942, 1945.

Regimental Birthday: 1 April 1910

Regimental Celebrations: St. George's Day 23 April
Mobilization Day 12 February 1941

Regimental Colours: Oxford on Cambridge
"The Guidon of The King's Own Calgary Regiment was presented to the Regiment by Her Majesty Queen Elizabeth II at Beacon Hill Park, Victoria, British Columbia, July 17, 1959.

Regimental March: "Colonel Bogey"
Originated with the 50th Battalion, Canadian Expeditionary Force (CEF).

Regimental Motto: ONWARD

Allied Regiment: The King's Own Royal Border Regiment (Lancaster)

The Cap Badge: Coat-of-Arms of the City of Calgary

Honourary Colonel: Colonel G. J. Maier

Honourary Lieutenant-Colonel: Lieutenant-Colonel N. J. Stewart

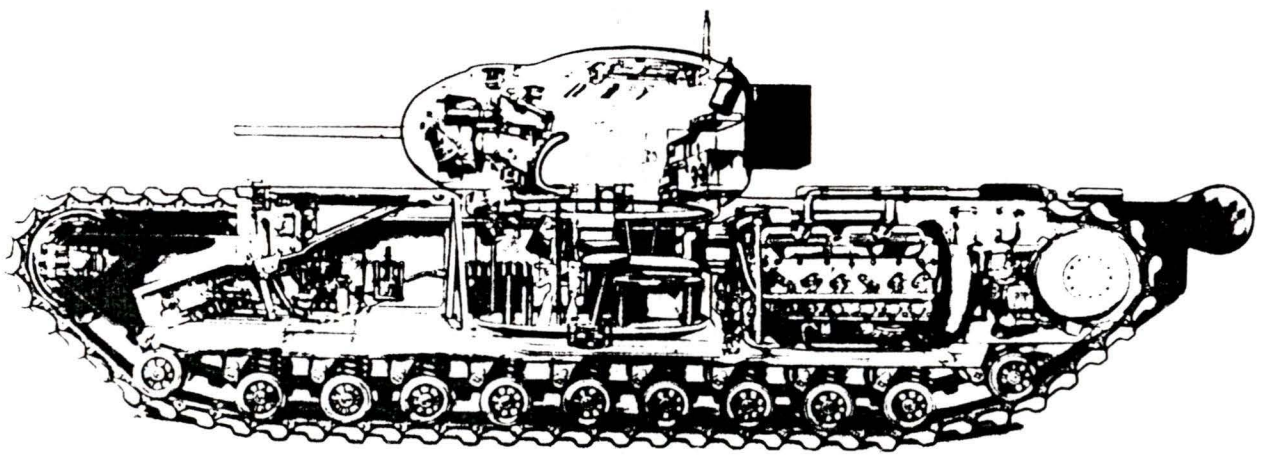
Colonel-in-Chief: Her Majesty Queen Elizabeth II (1953)

Associations: 50/14 Veterans' Association, Calgary

Nickname: Calgary Tanks

APPENDIX 3--FIGURE 1

CUTAWAY VIEW OF CHURCHILL TANK MARK I



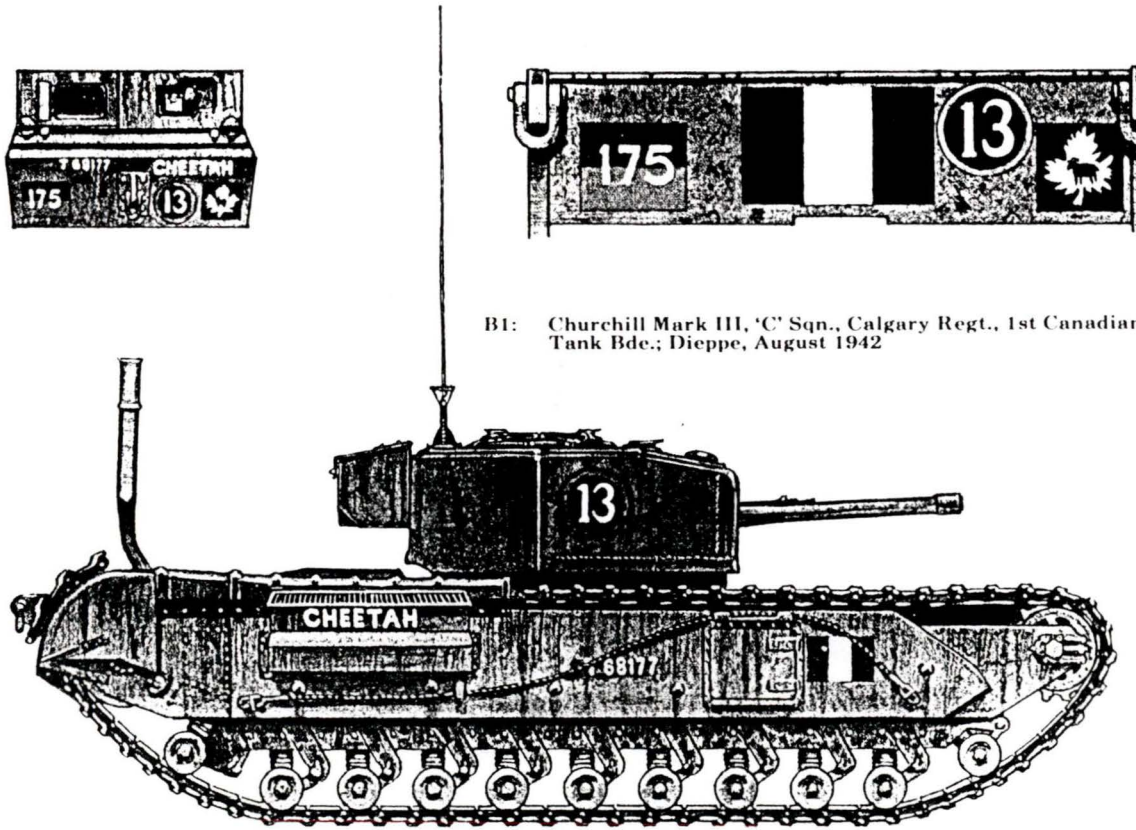
Cutaway view of the Churchill Mark I showing internal layout of driving, fighting, engine and transmission compartments. (RAC Tank Museum)

Bryan Perrett, *The Churchill Tank* (London: Osprey, 1986), p. 4.

APPENDIX 3--FIGURE 2

TYPICAL CHURCHILL TANK MARK III USED AT DIEPPE

CHEETAH (Corporal G. H. Wiggins), 13 Troop, C Squadron



B1: Churchill Mark III, 'C' Sqn., Calgary Regt., 1st Canadian Army Tank Bde.; Dieppe, August 1942

Perrett, *The Churchill Tank*, plate B1.

APPENDIX 4

BASIC SPECIFICATIONS OF THE CHURCHILL TANK[1]

The data tables overleaf gives comparative details of the three models of the Churchill used on the Dieppe Raid.

Transmission: in all the various marks this was the Merritt-Brown regenerative steering system designed by Dr. Merritt, the Director of Tank Design, and built by David Brown Ltd. Mounted at the rear, this featured controlled differential steering combined with the gearbox and transmission. It had four forward speeds and reverse.

Suspension: independent suspension was used throughout with eleven bogies each side--all had triple helical springs except the last which only had a single spring. Bogie diameter was 13 inches.

Electrics: 12 Volt main dynamo with an auxiliary petrol dynamo on the floor of the front compartment, and 2 x 6 Volt batteries in series. The turret could be traversed by hand or by power.

Typical performance: trench-crossing, 6 feet 9 inches; step, 4 feet; fording (unprepared), 3 feet; maximum gradient negotiable, 34˚.

Elevation limits (gun tanks): 6 pounder -12 1/2˚ + 20˚; 2 pounder, -15˚ + 20˚

Tracks: two types of track were used: either heavy cast steel, 8.32-inch pitch with 70 links per track, either used on Mark I and II, and also on some of the early Mark III vehicles, or light cast steel, 7.96-inch pitch and 72 links, which was used on the later IIIs. The distance centre-to-centre between the two tracks remained constant at 7 feet 2 1/2 inches and the track width of 22 inches was unchanged throughout the series.

Wireless: the Number 19 High Frequency (HF) radio set was used on all the variants and had been designed to be used in tanks and vehicles or as a ground station. The operator had the option of voice and Morse Code communications over a range of up to fifteen miles. It included a short range, Very High Frequency (VHF) set intended primarily for inter-tank voice communications.*

Fuel: all variants carried 150 gallons and also carried a 32 1/2 gallon auxiliary tank. The radius of action varied between 90 and 125 miles.

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*Wireless information from John S. Moir, ed., *History of the Royal Canadian Corps of Signals, 1903-1962* (Ottawa: RCCE, 1962), p. 321.

[1] Peter Chamberlain and Chris Ellis, *The Churchill Tank* (London: Arms & Armour Press, 1971).

APPENDIX 4 cont'd

BASIC SPECIFICATIONS OF THE CHURCHILL TANK

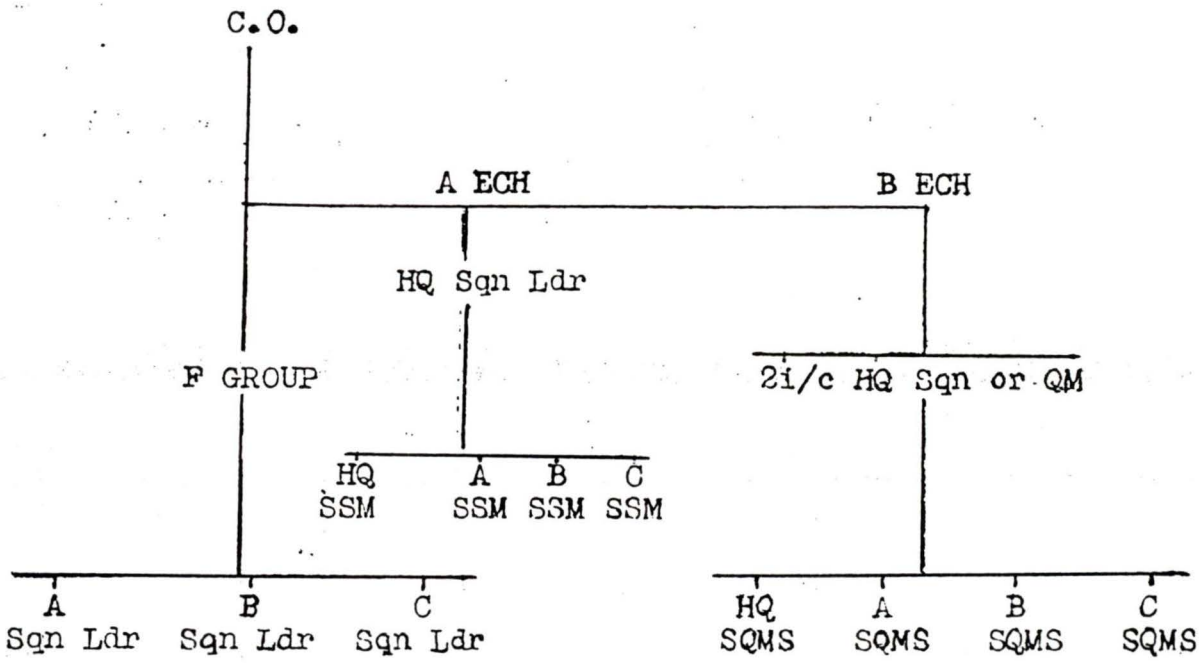
Model	*Engine Bhp/rpm*	*Speed (max) mph*	*Max Armour Thickness*							*Ordnance Designation*	*Production and / or Service period*	*Distinguishing features/ remarks*
			Hull				*Turret*					
			Front	*Side*	*Roof*	*Rear*	*Front*	*side*	*Roof*			
Churchill I	Bedford Twin-Six (12 cyl) 325/2,200	17.3	1 89	76	15	50	101	89	29	Infantry Tank Mk IV, Churchill I (A22)	1941–42	Small cast turret and howitzer between front horns. Originally lacked track guards, added in "re-worked" vehicles.
Churchill II	"	"	"	"	"	"	"	"	"	Infantry Tank Mk IVA, Churchill II (A22A)	1941–42	As Mk I but without the front mounted 3in howitzer which was replaced by a 7.92mm Besa MG.
Churchill III	350/2,200	15.5	89*	76	19	50	88	76	19	Infantry Tank Mk IV Churchill III (A22B)	1942–43	Larger (welded) turret than previous marks, with 6pdr gun. Most had track guards as built and intake louvres with top openings. Very early vehicles had old pattern intakes.

Model	*Crew*	*Battle Weight (Tons)*	*Length Overall*		*Height*		*Width Overall*		*Armament:*		*Ammunition: (rounds)*		*Vision devices*
			ft	*in*	*ft*	*in*	*ft*	*in*	*Main*	*Secondary*	*Main*	*Secondary*	
Churchill I	5	38½	24 (ex track guards)	1.3/8	8 (ex aerial base)	2	10	8	1 x 2pdr 1 x 3in how.	1 x 7.92mm Besa MG 1 x 2in BT 1 x .303in Bren	150 x 2pdr 58 x 3in	4,725 x 7.92mm 25 x 2in Smoke 600 x .303in	6 periscopes 3 telescopes
Churchill II	"	"	"		"		"		1 x 2pdr	2 x 7.92mm Besa MG 1 x 2in BT 1 x .303in Bren	150 x 2pdr	6,975 x 7.92mm 25 x 2in Smoke 600 x .303in	"
Churchill III	"	39	25 (inc. track track guards)	2	8	2.9/16	"		1 x 6pdr Mk 3 or Mk 5	2 x 7.92mm Besa MG 1 x 2in BT 1 x .303in Bren	84 x 6pdr	6,975 x 7.92mm 30 x 2in Smoke 600 x .303in	5 periscopes 2 telescopes

APPENDIX 5

14th CANADIAN ARMY TANK REGIMENT (14 CATR)

COMMAND STRUCTURE, JULY 1942



Abbreviations Used Above

C.O.	Commanding Officer
ECH	Echelon
F	Fighting
HQ	Headquarters
2 i/c	Second-in-command
Ldr	Leader
SQMS	Squadron Quartermaster Sergeant
Sqn	Squadron
SSM	Squadron Sergeant Major

APPENDIX 6

SLATE OF OFFICERS--14TH CANADIAN ARMY TANK REGIMENT (14 CATR)

August 19, 1942[1]

Regimental Headquarters:

Commanding Officer	Lieutenant-Colonel J. G. Andrews
Second-in-command	Major E. D. Begg
Adjutant	Captain A. G. Stanton
Intelligence Officer	Lieutenant D. F. Cameron
Assistant Adjutant	Lieutenant ?

Headquarters Squadron:

Officer Commanding	Major F. T. Jenner
Second-in-command	Captain A. H. Turney
Administrative Officer	Captain A. J. Miller
Technical Officer	Captain C. R. Eldred
Quarter Master	Lieutenant C. A. Richardson
Intelligence Communication Officer	Lieutenant H. S. Roadhouse
Medical Officer	Captain L. G. Alexander
Padre	Captain W. E. L. Smith

A Squadron

Officer Commanding	Major R. R. Taylor
Second-in-command	Captain ?
Lieutenant	?
1 Troop Leader	Lieutenant D. H. McIndoe
2 Troop Leader	Lieutenant C. J. MacDonald
3 Troop Leader	Lieutenant J. M. Cross
4 Troop Leader	Lieutenant de B. G. Trotter
5 Troop Leader	Lieutenant E. R. Watkin

Appendix 6 cont'd

B Squadron

Officer Commanding	Major C. E. Page
Second-in-command	Captain W. H. Payne
Lieutenant	Lieutenant R. H. Wallace
6 Troop Leader	Lieutenant J. H. Dunlap
7 Troop Leader	Lieutenant A. L. Breithaupt
8 Troop Leader	Captain D. G. Purdy (Lieutenant G. S. Drysdale)
9 Troop Leader	Lieutenant M. J. A. Lambert
10 Troop Leader	Lieutenant E. Bennett

C Squadron

Officer Commanding	Major A. Glenn
Second-in-command	Captain G. T. Valentine
Lieutenant	Lieutenant B. G. Douglas
11 Troop Leader	Lieutenant I. A. Allison
12 Troop Leader	Lieutenant D. S. Clapperton
13 Troop Leader	Lieutenant T. R. Cornett
14 Troop Leader	Lieutenant D. G. Taylor
15 Troop Leader	Lieutenant A. B. Patterson

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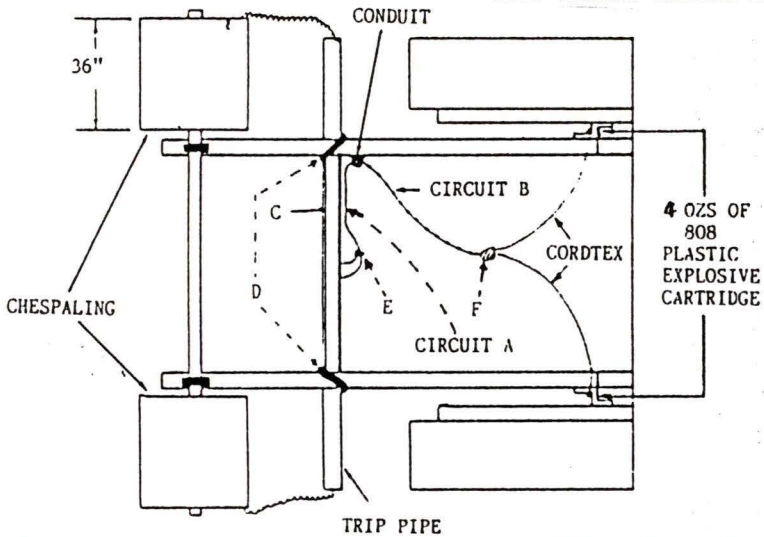
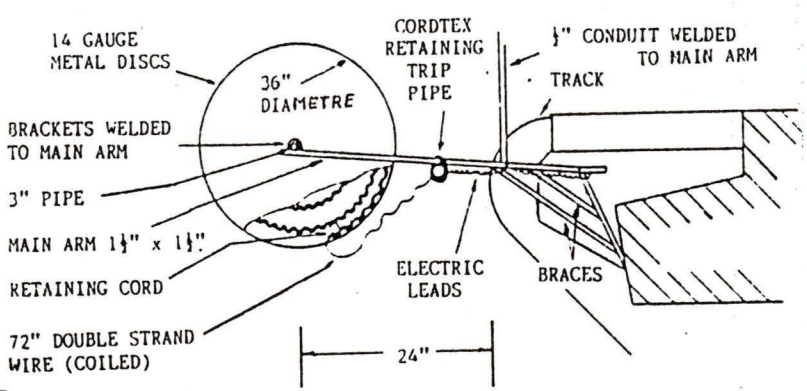
[1]The list contains omissions and probably some errors. Sources used include *War Diary*, 14 CATR, "Field Return of Officers for July 31, 1942," and 14 CATR, "*Jubilee*, Operation Instruction No. 1, August 7, 1942," pp. 1-3, The King's Own Calgary Regiment Archives; Combined Operations Headquarters, "Operation *Jubilee* Detailed Military Plan, Appendix C, Allotment of Personnel, Equipment and Stores, August 10, 1942," Record Group 24, Volume 10871, File 232C2(D25), NAC, pp. 1-28 and various 14 CATR veterans.

APPENDIX 7

THE BEACH TRACK-LAYING DEVICE



C. CORDTEX HOOKED UP AS RING MAIN
D. CORDTEX - 6 TO 10 TURNS WELL TAPED
E. 2 ELECTRIC DETONATORS
F. 2 DETONATORS & PRIMER



The Beach Track-Laying Device consisted of a jettisonable frame fitted between the front horns of a normal Churchill gun tank. The frame was formed by two arms projecting forward from brackets on the mudguard supports. At the front of the arms was a three-inch diameter pipe which carried two coils of chespaling; on each side of the coils were three-feet diameter discs to prevent slippage.

The chespaling was laid through the use of a trip-pipe. This pipe was slung beneath the arms and was held to them by cordtex. Seventy-two inches of double-stranded coiled wire joined each end of the pipe to the chespaling. The trip pipe was dropped by firing an electrical circuit (A in the diagram). As the tank ran over the pipe, the wire became taut and broke the light string used to hold the chespaling in place. The wire then pulled the chespaling down to the ground and under the tank's tracks.

Once the wall had been crossed, the redundant frame could be jettisoned by means of another electrical circuit (B), running to small explosive charges on each bracket. Both this circuit and the one used to lay the chespaling were controlled from within the tank turret, the leads being run through an "L"-shaped conduit to the frame. The conduit was necessary to prevent the leads being damaged when the waterproofing was jettisoned.

APPENDIX 8

ALLOCATION OF 14TH CANADIAN ARMY TANK REGIMENT TROOPS TO TANK LANDING CRAFT (TLC) FOR DIEPPE RAID

FLIGHT	TLC	SUBUNIT	TLC SPOT	VEHICLE NAME	WAR DEPART-MENT NUMBER	VEHICLE TYPE	TURRET NUMBER	VEHICLE COMMANDER
2	TLC-8	Regtl. HQ	2	REGIMENT	T-31923R	CHURCHILL II	F1 in Diamond	Lt-Col J. Andrews
	#125		3	ROUNDER		CHURCHILL II	F2 in Diamond	Maj John Begg
			1	RINGER	T-68881	CHURCHILL II	F3 in Diamond	Capt A.G. Stanton
1A	TLC-4	B Sqn HQ	1	BURNS	T-31135R	CHURCHILL I	F1 in Square	Maj C.E. Page
	#126	F Troop	2	BACKER	T-68352	CHURCHILL II	F2 in Square	Lt R.H. Wallace
			3	BOLSTER*	T-31107R	CHURCHILL I	F3 in Square	Sgt T.R. Cunningham
1A	TLC-6	6 Troop	1	BOB	T-68558R	CHURCHILL III	6 in Square	Lt J.H. Dunlap
	#163		2	BERT	T-68560R	CHURCHILL III	6 in Square	SSM G.M. Menzies
			3	BILL	T-68557R	CHURCHILL III	6 in Square	Cpl C.A. Heck
2	TLC-9	7 Troop	2	BETTY*	T-68176R	CHURCHILL III	7 in Square	Lt A.L. Breithaupt
	#166		1	BRENDA	T-68760R	CHURCHILL III	7 in Square	Sgt W.W. Olive
			3	BLONDIE	T-68880	CHURCHILL III	7 in Square	Cpl D.W.G. Jordon
1	TLC-3	8 Troop	1	BULL	T-31862	CHURCHILL I OKE	8 in Square	Capt D.G. Purdy
	#159		3	BEETLE	T-68875	CHURCHILL I OKE	8 in Square	Lt G.S. Drysdale
			2	BOAR	T-32049	CHURCHILL I OKE	8 in Square	Sgt J. Sullivan
1A	TLC-5	9 Troop	2	BLOSSOM	T-68561R	CHURCHILL III	9 in Square	Lt M.J.A. Lambert
	#121		1	BUTTERCUP**	T-31655	CHURCHILL III	9 in Square	Sgt J.D. Morrison
			3	BLUEBELL*	T-68759R	CHURCHILL III	9 in Square	Cpl D.L. Brownlee
2	TLC-7	10 Troop	2	BELLICOSE	T-68175	CHURCHILL III	10 in Square	Lt E. Bennett
	#124		3	BLOODY*	T-68701R	CHURCHILL III	10 in Square	Sgt R.B. Lee
			1	BEEFY	T-68177R	CHURCHILL III	10 in Square	Sgt H.R. Patrick

APPENDIX 8 cont'd

FLIGHT	TLC	SUBUNIT	TLC SPOT	VEHICLE NAME	WAR DEPART-MENT NUMBER	VEHICLE TYPE	TURRET NUMBER	VEHICLE COMMANDER
1	TLC-1	C Sqn HQ	1	CHIEF**	T-31124R	CHURCHILL I	F1 in Circle	Maj A. Glenn
	#145	F Troop	2	COMPANY	T-31878R	CHURCHILL I	F3 in Circle	Capt G.T. Valentine
			3	CALGARY*	T-68559	CHURCHILL III	F2 in Circle	Lt B.G. Douglas
1	TLC-2	13 Troop	1	COUGAR**	T-68173	CHURCHILL III	13 in Circle	Lt T.R. Cornett
	#127		3	CAT*	T-68696	CHURCHILL III	13 in Circle	Sgt J. Weaver
			2	CHEETAH	T-62171	CHURCHILL III	13 in Circle	Cpl G.H. Wiggins
2	TLC-10	15 Troop	1	CAUSTIC	T-68702	CHURCHILL III	15 in Circle	Lt A.B. Patterson
	#165		2	CANNY	T-68704	CHURCHILL III	15 in Circle	Sgt N.R. Thompson
			3	CONFIDENT*	T-68870	CHURCHILL III	15 in Circle	Cpl R.W. Dowling
?	?	Regtl. HQ		RUTH	DAIMLER	SCOUT CAR	?	Tpr A.K. Thompson
?	?	Regtl. HQ		RUBY	DAIMLER	SCOUT CAR	?	L/Cpl F. Howe
2	TLC-7	HQ Sqn		HUNTER	DAIMLER	SCOUT CAR	1 in Diamond	Maj G.M. Rolfe
?	?	HQ Sqn		HOUND	DAIMLER	SCOUT CAR	?	?
?	?	HQ Sqn		HORACE	DAIMLER	SCOUT CAR	?	?
?	?	HQ Sqn		HARRY	DAIMLER	SCOUT CAR	?	?
?	?	HQ Sqn		HARE	DAIMLER	SCOUT CAR	?	?

* These seven tanks each towed ashore a Daimler Dingo Scout Car with a driver (14 CATR) and one signalman (RCCS).

** These three leading tanks carried the track-laying device. The track-laying equipment for the other lead tanks, BOB and BURNS, had been damaged in transit and had been removed before landing. The lead tank in TLC-3, BULL, could not be fitted with the track-laying equipment because of its flame thrower apparatus. Major B. Sucharov, RCE, "Combined Operations Report Dieppe," Record Group 24, Vol. 10870, File 232C2(D3), NAC, Appendix 1, pp. 2 and 3.

Note: The above table is the result of extensive research based on primary documents, secondary sources, personal accounts of the men involved and German photographs.

APPENDIX 9

TANKS AND CREWS OF THE 14TH CANADIAN ARMY TANK REGIMENT DISEMBARKED ON DIEPPE RAID*

REGIMENTAL HQ TLC-8

	"REGIMENT" T31923R	"RINGER" T68881	"ROUNDER" (not landed)
Crew Commander	Lt-Col J.G. Andrews (CO)†	Capt A.G. Stanton (Adjutant)	Maj. John Begg (2IC)
Driver	M27156 L/Cpl Nelson, G.A.	M17352 Cpl Makaroff, F.	_____
Co-driver	K53670 Cpl Carnie, T.L.	B74402 Tpr Mayhew, J.J.	_____
Gunner	L54835 Tpr Friesen, P.†	B93580 Tpr Tanner, F.A.	_____
Loader-operator	M27121 Sgt Reinhart, C.	M27045 Tpr Pinder, T.H.	_____

"B" SQUADRON

"B" Squadron HQ F Troop TLC-4

	"BURNS" T31135R	"BACKER" T68352	"BOLSTER" T31137R
Crew Commander	Major C.E. Page (OC B Sqn)	Lt R.H. Wallace	M27204 Sgt Cunningham, T.R.
Driver	K52648 Cpl Mowat, G.M.	L13275 Tpr Snider, E.M.	M16569 Tpr Booker, J.A.
Co-driver	B74323 Tpr Gorman, T.G.†	M27217 Tpr Chapman, J.A.	M26871 Tpr Hailes, G.E.
Gunner	M26803 Tpr Scheuchner, W.E.	K67244 Tpr Provis, C.L.†	M26892 Cpl Porter, E.S.
Loader-Operator	B74344 Tpr Dickie, J.M.	B74426 Cpl Cote, J.O.	B74388 Tpr Bell, S.A.

6 Troop TLC-6

	"BOB" T68557R	"BERT" T68560R	"BILL" T68558R
Crew Commander	Lt J.H. Dunlap	M27246 SSM Menzies, G. M.	M27221 Cpl Heck, C.A.
Driver	M26886 Tpr Cox, J.H.	M27104 Tpr McArthur, N.A.	L13375 Tpr Schlapkohl, E.E.
Co-driver	M27104 Tpr Johnson, A.L.	M17519 Tpr Dunsmore, T.A.	M27043 Tpr White, J.D.
Gunner	M17411 Cpl Bererton, T.	M26887 Tpr Stewart, W.G.	M17570 Tpr Hunter, J.O.
Loader-operator	M26875 Tpr Ganshirt, H.J.	M55959 Tpr Noel, F.H.	M26885 Tpr Herzog, L.A.

7 Troop TLC-9

	"BETTY" T68176R	**"BRENDA" T6876OR**	**"BLONDIE" T68880**
Crew Commander	Lt A.L. Breithaupt	M26873 Sgt Olive, W.W.	P3348 Cpl Jordan, D.W.G.
Driver	M17384 Cpl Nash, J.K.	M27103 Tpr Horne, J.W.	M26884 Tpr Dannewald, E.
Co-driver	M27220 Tpr Halase, J.P.	B74452 Tpr Clark, R.H.	H63683 Tpr McCaskill, D.H.
Gunner	M17428 Tpr Leithead, M.	M28055 Tpr Clifton, B.H.	G12049 Tpr Harned, L.N.
Loader-operator	M26901 Tpr Stanfield, H.A.	M26888 Tpr Taylor, E.	B68084 Tpr Armstrong, P.

8 Troop TLC-3

	"BULL" T31862	**"BOAR" T32049**	**"BEETLE" T68875**
Crew Commander	Capt D.G. Purdy†	K53754 Sgt Sullivan, J.	Lt G.L. Drysdale
Driver	M27118 Cpl Isbister, W.D.	M17548 L/Cpl Poirier, A.A.	L22824 Tpr Milne, R.F.
Co-driver	M17392 Tpr Stewart, W.†	H63690 Tpr Birston, A.R.	M26870 Tpr Anderson, R.H.
Gunner	K53260 Tpr Hudson, L.	M12089 Tpr Paquette, E.	M26895 Tpr Hodgson, S.G.
Loader-Operator	B74449 Tpr Aide, P.W.	M26879 Tpr Chick, A.L.	K53786 Tpr Skinner, B.M.

9 Troop TLC-5

	"BLOSSOM" T68561R	**"BUTTERCUP" T31655**	**"BLUEBELL" T68759R**
Crew Commander	Lt M.J.A. Lambert	K53838 Sgt Morrison, J.D.	M26869 Cpl Brownlee, D.L.
Driver	M27097 Tpr Twa, L.G.	M26931 Tpr Johnstone, L.H.	M26918 Tpr Holden, M.
Co-driver	M27229 Cpl Wigley, W.H.	M17560 Tpr Walker, J.G.	M17348 Tpr Volk, G.
Gunner	M26874 Tpr Embree, H.A.	M55962 Tpr Heffer, A.	M17560 Tpr Watson, A.R.
Loader-Operator	M27169 Tpr Whitley, J.L.	M26906 Tpr Edwards, S.H.	M12040 Tpr McBryan, W.C.

10 Troop TLC-7

	"BELLICOSE" T68175	**"BEEFY" T68177R**	**"BLOODY" T68701R**
Crew Commander	Lt E. Bennett	M26883 Sgt Patrick, H.R.	M26922 Sgt Lee, R.B.
Driver	M26929 Tpr Cornelssen, R.C.†	M26923 Tpr McIntyre, M.A.	M26913 Tpr Richardson, C.V.
Co-driver	L13391 Tpr Storvold, L.	M26898 Tpr Lincoln, R.A.	M10550 Tpr Hill, A.W.
Gunner	M26880 Tpr Stannard, W.E.	B74262 Cpl Hunt, W.J.	M11372 Tpr Lazier, D.R.
Loader-Operator	M27039 Tpr Anderson, A.F.	M27100 Tpr Gilbert, R.A.	M26928 Tpr Staples, C.M.

APPENDIX 9 cont'd

"C" SQUADRON

"C" Squadron HQ F Troop TLC-1

	"CHIEF" T31124R	**"COMPANY" T31878R**	**"CALGARY" T68559**
Crew Commander	Major A. Glenn (OC C Sqn)	Capt G.T. Valentine (2IC C Sqn)	Lt B.G. Douglas
Driver	M27002 Tpr Powers, L.A.	M26988 Tpr Richards, O.G.	M26978 Cpl McCann, J.H.P.
Co-driver	M26957 Tpr Morton, F.R.	M26991 Tpr Hilsabeck, J.W.	K52348 Sgt Wagstaff, A.S.
Gunner	K53540 Tpr Perdue, L.A.	M26977 Tpr Kind, J.C.	M26973 Tpr Smethurst, K.
Loader-Operator	K53640 Cpl Vermilyea, C.J.	H17453 Cpl Leach, W.W.	M26936 Tpr Scott, D.G.

13 Troop TLC-2

	"COUGAR" T68173	**"CAT" T68696**	**"CHEETAH" T68177**
Crew Commander	Lt T.R. Cornett	K53929 Sgt Weaver, J.	K53889 Cpl Wiggins, G.H.
Driver	M27139 Tpr Armstrong, G.R.	M27012 Tpr Choveaux, N.F.	M27120 Tpr Hilsabeck, F.
Co-driver	M26831 Tpr Hill, R.H.	B74215 Tpr Sommerville, J.R.	M27234 Tpr Farr, E.E.
Gunner	K75130 Tpr Ross, G.M.	K76060 Tpr McLellan, W.L.	B68009 Tpr Jenkins, D.M.
Loader-Operator	M27239 Tpr Leithead, A.R.	M27137 Tpr Blair, G.L.	A22485 Tpr Scratch, D.W.

15 Troop TLC-10

	"CAUSTIC" T68702	**"CANNY" T68870**	**"CONFIDENT" T68704**
Crew Commander	Lt A.B. Patterson	K53941 Sgt Thompson, N.R.	B74233 Cpl Dowling, R.W.
Driver	M27249 Cpl Craigie, D.F.	M27018 Tpr Brawner, C.S.	M27020 Tpr Patterson, L.
Co-driver	M27096 Tpr Hooey, C.M.	B74435 Tpr McNicol, G.A.	H63712 Tpr Johnston, R.H.
Gunner	M26937 Tpr Anderson, C.J.	K53703 Tpr Twemlow, E.	M26935 Tpr Pewtress, J.J.
Loader-Operator	M27021 Tpr Nyman, J.A.	M27073 Tpr Reilly, T.K.	M17552 Tpr Playdon, S.B.

*Major B. Sucharov, Letter to Major C. P. Stacey, included a list of tanks and crews disembarked, November 30, 1942. D.HIST, File 594.014(D9), pp. 1-3. Unfortunately the original document contains numerous errors not only in the positions of the crews in the tanks but also in their names, ranks and military serial numbers. Tank serial numbers have been checked against German photographs while the other mistakes have been corrected using the "14 CATB Original Nominal Role," in Lieutenant-Colonel R. G. Maltby, ed., *The Informal History of The Calgary Regiment (Tank)* (Vancouver: 50/14 Veteran's Association, Calgary), Chapter 5, pp. 2-6; and personal communication with 14 CATR veterans.

†Killed in action.

APPENDIX 10

14TH CANADIAN ARMY TANK REGIMENT (14 CATR)

PERSONNEL THAT LANDED BUT NOT IN TANK CREWS*

Jeep or Scout Car Drivers:

Trooper A.E. Buckley, HQ Sqn
Trooper K. Doda, HQ Sqn
Trooper J.G. Hocken, HQ Sqn
Lance-Corporal F. Howe, HQ Sqn
Trooper V.F. Oliffe, HQ Sqn†
Trooper A.K. Thompson, HQ Sqn
Trooper Michael F. Zima, HQ Sqn†

Ammunition Parties:

Trooper S.F. Dunn, Sqn
Lance-Sergeant W.B. Hammel, B Sqn HQA**
Lance-Corporal C.E.D. Suffel, B HQA
Trooper F.D. "Tiny" Bevan, B HQA

Functions and Squadrons Unsure:

Trooper E.G. Anderson, HQ Sqn
Corporal A.A. Butler, Sqn
Trooper A.E. Graham, HQ Sqn
Lance-Corporal G. L. Greenwell, C HQA
Trooper N. Hunchuck, B HQA
Trooper E. Huscroft, C HQA†
Lance-Corporal E. J. Musgrove, A HQA
Trooper N. L. Johnson, ?
Corporal T.G. Poirier, B HQA
Trooper W.D.P. Sawers, HQ Sqn
SSM C.C. Simpson, A Sqn (Beach Party?)

Beach Parties:

Captain A.H. Turney, Second-in-command HQ Sqn, CO Beach Parties, OC White Beach Party
SSM A. H. Tough, B HQA†
Corporal D.E. Welch, B HQA††

Captain C.R. Eldred, Technical Officer HQ Sqn, OC Red Beach Party
SSM R. Cordner, C HQA
Corporal V.C. Leonard, C HQA

* This list is based almost solely on personal communication with 14 CATR veterans and therefore may contain omissions and errors but cannot be substantiated.

**B HQA refers to B Squadron Headquarters Administration which served as a pool of spare men that could be used as immediate replacements for tank crews or had other functions such as fitters, or mechanics, Beach or Ammunition Parties, or drivers of jeeps and other vehicles.

†Killed in Action.

††Corporal D. E. Welch died of wounds in a hospital.

APPENDIX 11

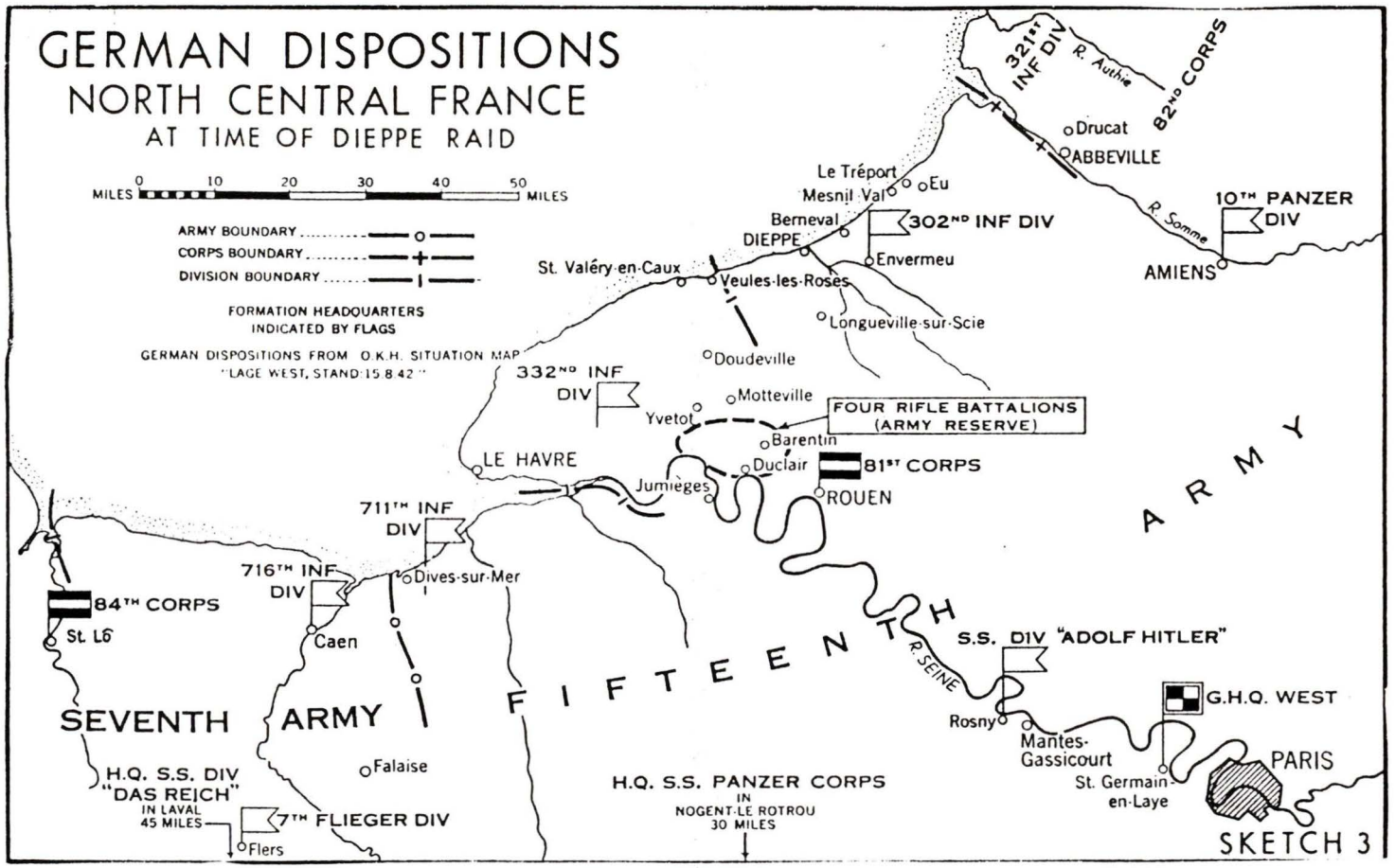
DIEPPE RAID
EMBARKATION STRENGTH—CASUALTIES—DISEMBARKATION STRENGTH
(CANADIAN UNITS)

Units	Number Embarked		Fatal Casualties								Non-Fatal Casualties								Total Fatal and Non-Fatal Casualties		Number Returning UK on completion of Operation	
			Killed in Action		Died of Wounds		Died While PW		Total Fatal Casualties		Wounded		Prisoners of War				Total Non-Fatal Casualties					
													Wounded		Unwounded							
	Off	ORs	Off	ORs	Off	ORs	Off	ORs	Off	ORs	Off	ORs	Off	ORs	Off	ORs	Off	ORs	Off	ORs	Off	ORs
Headquarters, Miscellaneous Small Units and Detachments	42	48	5	—	—	—	—	—	5	—	7	7	2	5	2	6	11	18	16	18	33	37
Royal Regiment of Canada	26	528	8	199	—	2	2	16	10	217	2	31	8	95	6	155	16	281	26	498	2	63
Royal Hamilton Light Infantry	31	551	7	172	1	6	2	9	10	187	5	103	7	71	9	88	21	262	31	449	6	211
Essex Scottish Regiment	32	521	5	100	—	2	1	13	6	115	1	26	3	119	20	240	24	385	30	500	3	49
Fusiliers Mont-Royal	32	552	7	98	—	4	1	9	8	111	2	48	8	103	11	222	21	373	29	484	5	120
Queen's Own Cameron Highlanders of Canada	32	471	5	55	1	7	—	8	6	70	9	94	3	33	6	125	18	252	24	322	18	250
South Saskatchewan Regiment	25	498	3	75	—	3	—	3	3	81	7	159	2	22	7	58	16	239	19	320	13	340
14 Cdn Army Tk Regt (Calgary R)	32	385	2	10	—	—	—	1	2	11	—	4	2	17	13	125	15	146	17	157	15	232
Toronto Scottish Regiment (MG)	5	120	—	1	—	—	—	—	—	1	—	8	—	3	—	1	—	12	—	13	5	115
Black Watch (Royal Highland Regiment) of Canada	4	107	1	—	—	—	—	3	1	3	—	6	—	2	2	59	2	67	3	70	1	43
Calgary Highlanders	1	21	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1	21
RCA Units and Detachments	14	256	2	11	—	—	—	—	2	11	1	3	1	7	3	19	5	29	7	40	8	219
RCE Detachments	7	309	1	22	—	1	1	2	2	25	3	33	1	36	—	88	4	157	6	182	4	161
RC Sigs Detachments	6	72	—	8	—	1	—	—	—	9	2	7	—	3	1	14	3	24	3	33	5	47
RCASC Detachments	1	37	—	1	—	—	—	—	—	1	—	6	—	3	1	—	1	9	1	10	—	33
RCAMC Detachments	10	116	—	4	—	—	—	—	—	4	—	3	—	2	1	9	1	14	1	18	9	101
RCOC Detachments	1	14	—	1	—	—	—	1	—	2	—	2	—	2	—	—	—	4	—	6	1	10
Cdn Provost Corps Detachment	2	39	1	—	—	—	—	—	1	—	—	7	—	7	—	11	—	25	1	25	1	21
Cdn Int Corps Detachments	2	13	—	3	—	—	—	—	—	3	—	—	—	1	—	4	—	5	—	8	2	5
Total	305	4,658	47	760	2	26	7	65	56	851	39	547	37	531	82	1,224	158	2,302	214	3,153	132	2,078

NOTE:—The number returning to the UK upon completion of the operation is obtained by subtracting the figures appearing under "Killed in Action", "Died while PW" 'Wounded and Unwounded Prisoners of War" from the number that embarked.

C. P. Stacey, *Six Years of War* (Ottawa: Queen's Printer, 1955), p. 389.

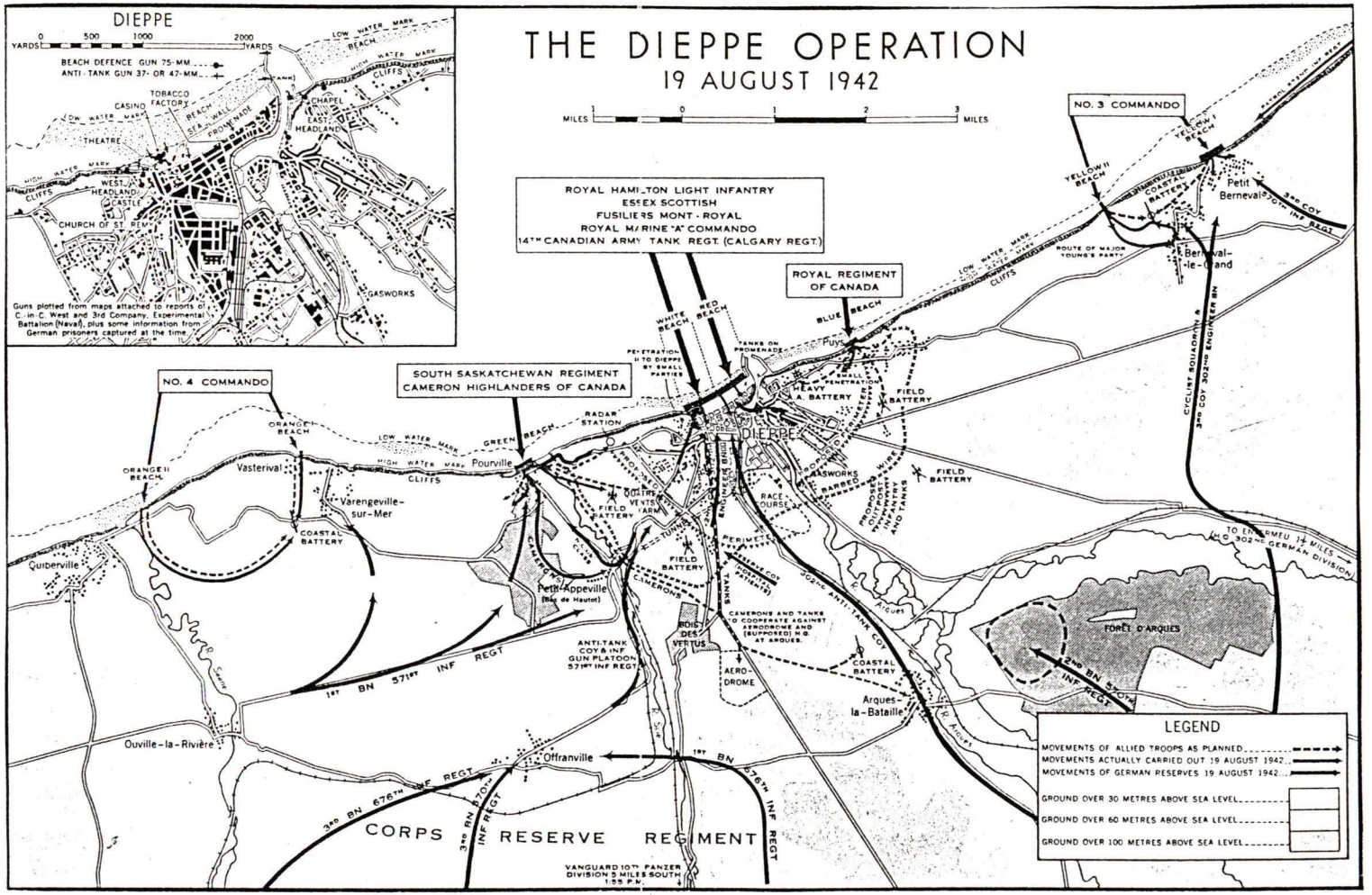
APPENDIX 12



C. P. Stacey, *Six Years of War* (Ottawa: Queen's Printer, 1955), p. 353.

APPENDIX 13

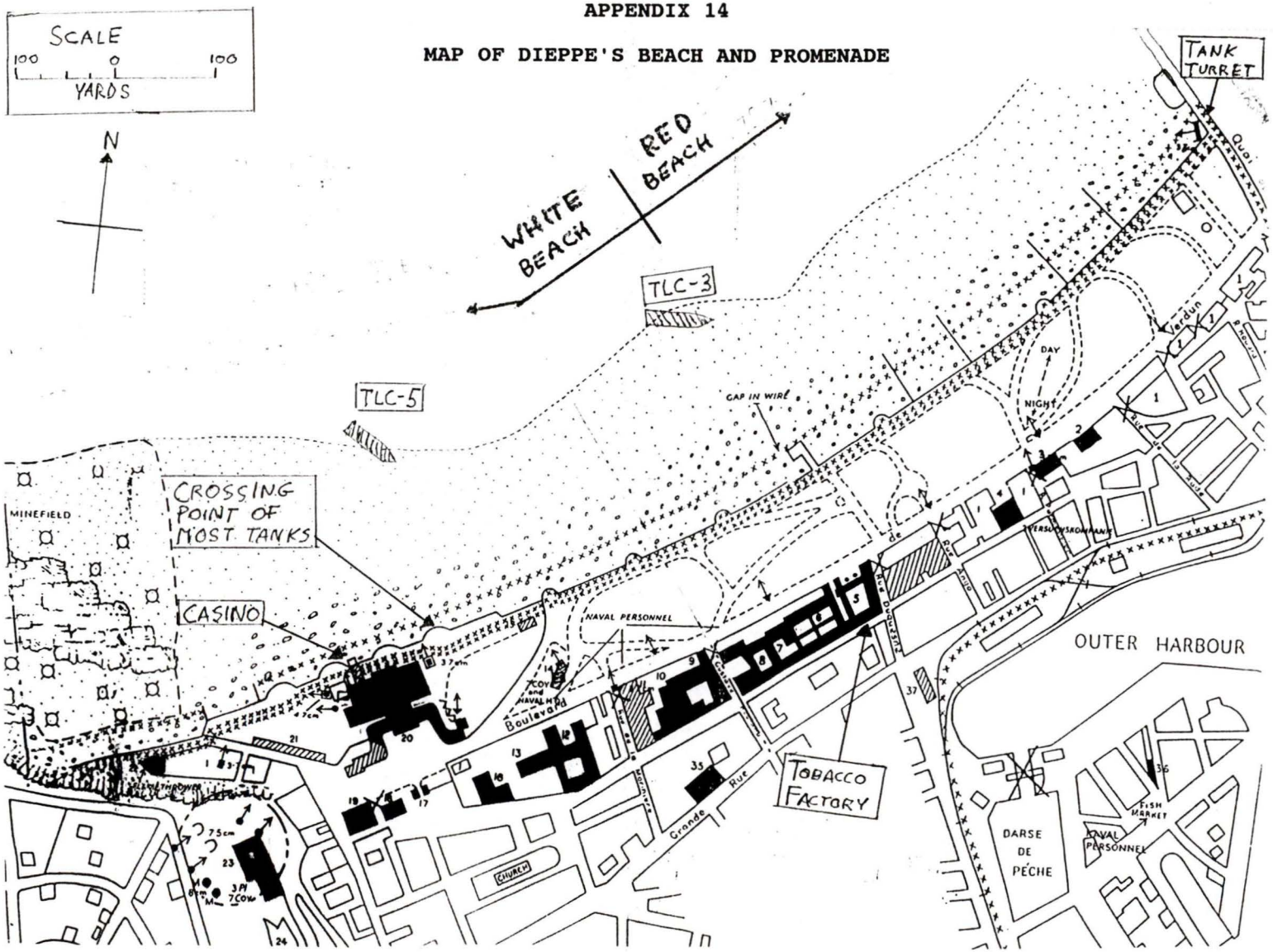
MAP OF DIEPPE OPERATION, AUGUST 19, 1942



C. P. Stacey, *Six Years of War* (Ottawa: Queen's Printer, 1955), p. 386.

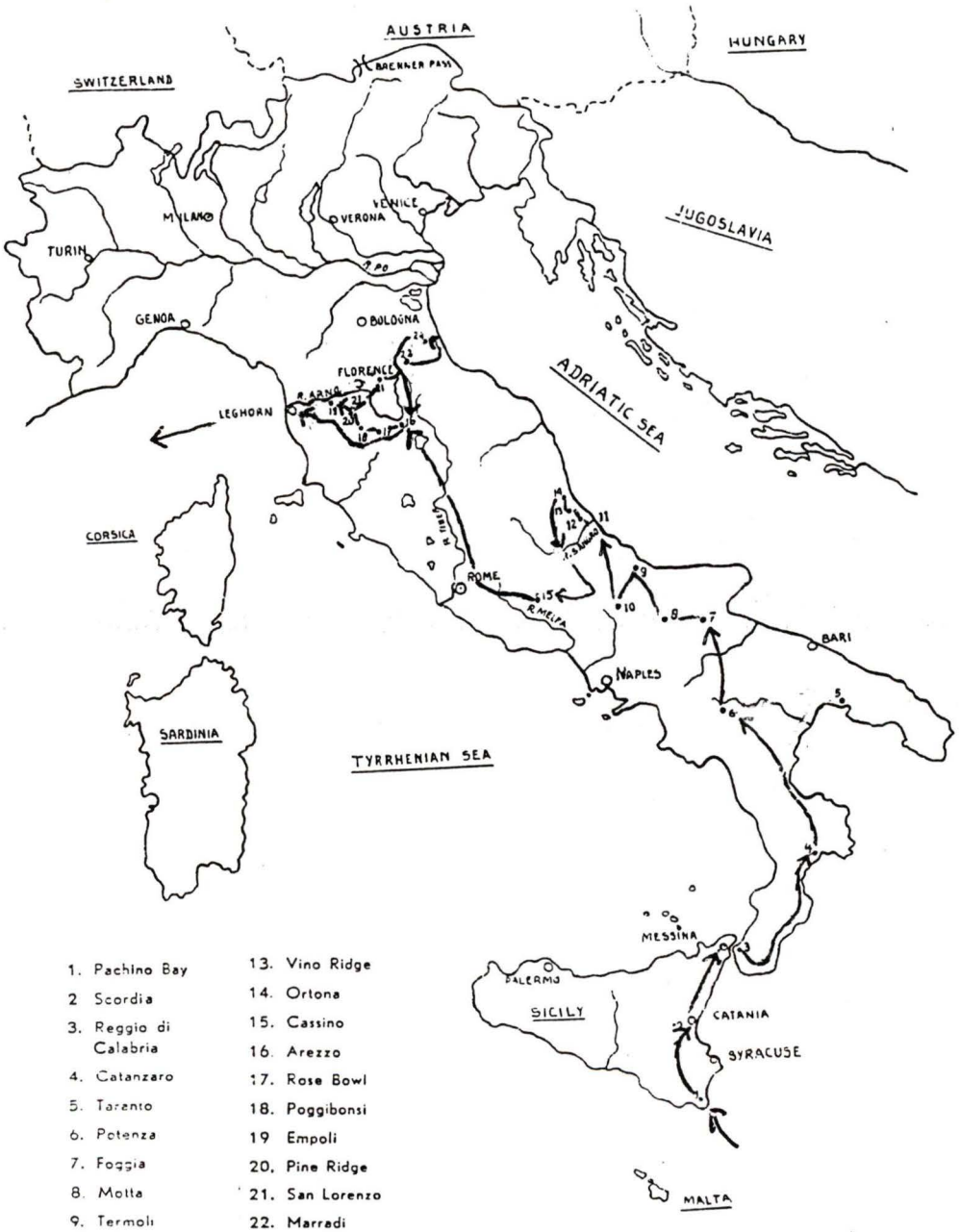
APPENDIX 14

MAP OF DIEPPE'S BEACH AND PROMENADE



APPENDIX 15

MAP OF THE 14TH CANADIAN ARMOURED REGIMENT'S MOVEMENTS IN THE ITALIAN CAMPAIGN



1. Pachino Bay
2. Scordia
3. Reggio di Calabria
4. Catanzaro
5. Tarento
6. Potenza
7. Foggia
8. Motta
9. Termoli
10. Campobasso
11. Sangro River Crossing
12. Lanciano
13. Vino Ridge
14. Ortona
15. Cassino
16. Arezzo
17. Rose Bowl
18. Poggibonsi
19. Empoli
20. Pine Ridge
21. San Lorenzo
22. Marradi
23. San Donato
24. Forli

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THE CALGARY REGIMENT (TANK), 1939 to AUGUST 19, 1942

Author: [redacted]

(Signature)

HUGH GEORGE HENRY JR.

July 31, 1991

(Date)