

**Shermans in the Sun: 12th Canadian Army Tank Regiment (Three Rivers) Operations
During Operation Husky, 10 July–17 August 1943**

by

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Abstract

Canadian participation in Operation Husky (10 July – 17 August 1943) has been re-examined by historians in recent years to address new questions about how modern western military forces waged war in Sicily in the middle of the Second World War. Earlier accounts primarily centered on Canada's infantry and artillery forces. The contributions of Canadian armoured forces remain hidden in the shadows despite the fact that the Sicilian Campaign marked the first continuous service by a Canadian tank unit in the nation's history as part of the first modern all-Canadian combined-arms force. 12th Canadian Army Tank Regiment (Three Rivers) tanks and crews played a vital role in nearly every 1st Canadian Infantry Division action in Sicily, despite the rugged, mountainous terrain there that was ill-suited to evolving Anglo-Canadian armoured doctrine. The Three Rivers supported 1st Canadian Infantry Division operations with expert technical gunnery and driving capabilities, as well as innovative leadership by junior commanders within the Regiment. In practice Three Rivers soldiers drove their tanks into incredible locations from which they could lend crucial direct fire support to the infantry. In the final analysis, members of the Regiment adapted and innovated quickly to circumstances in Sicily. Despite shortcomings in training and doctrine, fundamental soldier skills and good junior leadership won the day in the Canadian Army's first armoured all-arms campaign.

DEDICATION

This thesis is dedicated to the soldiers of the 12th Canadian Armoured Regiment who served in the Second World War, and to all of those who have followed in their footsteps in the many years since.

ADSUM

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I would like to thank my supervisor, Lee Windsor, for his guidance and support on this work. He offered invaluable aid in understanding the wider picture of the Sicilian Campaign so that I could situate my work within an ever-growing body of knowledge.

I also must thank my fellow graduate students at the University of New Brunswick who provided much needed editing to my work. Without them, this paper would be chapter after chapter of military jargon and acronyms that would make sense to only a select few. I also greatly appreciate their understanding and patience with this student-soldier who spent a year and a half with them trying to remember what the civilian and academic world looked and sounded like.

Finally, I would like to thank my wife, Chelsea, who convinced me to attempt this endeavour in the first place. I am still unsure if her suggestion for me to go back to school was simply unconditional love or her way of trying to get me to stop bothering her by talking about tank warfare at home. Probably a little bit of both. Either way, without Chelsea, this would not have been possible.

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Abbreviations and Acronyms

AP – Armour Piercing
AT – Anti-tank
Bat – Battalion
Bde – Brigade
Bty – Battery
CAB – Canadian Armoured Brigade
CATB – Canadian Army Tank Brigade
CIB – Canadian Infantry Brigade
CID – Canadian Infantry Division
CO – Commanding Officer
Coy – Company
CYR – Carleton and York Regiment
Div – Division
Eddies – Loyal Edmonton Regiment
GOC – General Officer Commanding
Hasty Pee – Hastings and Prince Edward Regiment
HE – High Explosive
HG – Hermann Goering
Highlanders – 48th Highlanders
HQ - Headquarters
LST – Landing Ship (Tank)
MG – Machine gun
PPCLI – Princess Patricia’s Canadian Light Infantry
Pz – Panzer
PzG – Panzer Grenadier
RCR – Royal Canadian Regiment
Recce – reconnaissance

Regt – Regiment

R22R – Royal 22e Régiment

Seaforths – Seaforth Highlanders of Canada

Sqn – Squadron

TEWT – Tactical Exercise without Troops

Three Rivers - 12th Canadian Army Tank Regiment (Three Rivers)

Tp - Troop

WNSR – West Nova Scotia Regiment

12 CATR – 12th Canadian Army Tank Regiment (Three Rivers)

Canadian Military Ranks

Gen – General

LGen – Lieutenant-General

MGen – Major-General

Brig – Brigadier

Col - Colonel

LCol – Lieutenant-Colonel

Maj – Major

Capt – Captain

Lt – Lieutenant

2Lt – Second Lieutenant

WO1 – Warrant Officer Class 1

WO2 – Warrant Officer Class 2

WO3 – Warrant Officer Class 3

Sgt – Sergeant

Cpl – Corporal

LCpl – Lance Corporal

Pte – Private

Allied Military Formations

Army Group – Composed of multiple Armies; operates at the strategic and operational levels of war

Army – Composed of multiple corps; operates at the strategic and operational levels of war

Corps – Composed of multiple divisions; operates predominantly at the operational level of war

Division – Composed of multiple brigades; operates at the operational and tactical levels of war

Brigade – Composed of multiple units; operates predominantly at the tactical level of war

Unit (Battalion or Regiment) – Composed of multiple sub-units; operates at the tactical level of war

Sub-unit (Company, Squadron, or Battery) – Composed of multiple sub-sub-units; operates at the tactical level of war

Sub-sub-unit (Platoon or Troop) – Composed of multiple sections, crews, or guns depending on the unit type; operates at the tactical level of war

Section – Includes up to 10 soldiers depending on unit type; term used predominantly by the infantry and engineers

Crew – Includes 3-5 soldiers depending on the vehicle platform; term used predominantly by armoured units to indicate the crew of one vehicle.

Gun – Includes up to 10 soldiers depending on the gun variant; term used predominantly by artillery units.

Introduction

It was not yet 0900 on the morning of 10 July 1943 in the hot Mediterranean sun as the crew of Landing Ship, Tank, (LST) 321 manoeuvred their vessel onto the beach near Pachino, Sicily. Inside the ship's bowels the crews of C Squadron (Sqn), 12th Canadian Army Tank Regiment (Three Rivers), finished last minute preparations on their tanks and eagerly awaited their chance to join the battle ahead.¹ By the time that LST 321 made landfall at 0900, the enemy held beaches at Pachino had been secured by riflemen from 1st Canadian Infantry Division. Opposition had been minimal, and progress inland had been unexpectedly smooth. Unfortunately, LST 321 grounded on a sandbar 180 yards from shore, forcing the crews of C Sqn to disembark in six feet of water and rely upon the waterproofing of their M4 Shermans to hold long enough for them to reach the beach.² C Sqn crews had sealed their tanks well and drove them skilfully through the surf. Only two foundered and required extraction by the regimental recovery vehicles.³ By 1015, Lieutenant-Colonel (LCol) Leslie Booth, Commanding Officer of the Three Rivers, reported to Major-General Guy Simonds, the General Officer Commanding (GOC) 1st Canadian Infantry Division, that his first tanks had passed through de-waterproofing and "that C Sqn was available immediately" for action.⁴ After years of training and waiting in the United Kingdom, Canadian tanks at last launched the nation's first combined-arms campaign of the Second World War.

¹ The Three Rivers Regiment went through several name changes throughout the war. Starting with their selection to become a tank unit in September 1939, the Regiment was known variously as The Three Rivers Regiment (Tank) between September 1939 and October 1940, The 12th Canadian Army Tank Battalion (Three Rivers) from October 1940 to May 1942, The 12th Canadian Army Tank Regiment (Three Rivers) from May 1942 to August 1943, and its final form in the Second World War, The 12th Canadian Armoured Regiment (Three Rivers) from August 1943 on. However, the Regiment would not adopt its final naming convention until November 1943.

² W.D. 12th Canadian Army Tank Regiment (Three Rivers), 10 July 1943.

³ W.D. 60 Light Aid Detachment, 10 July 1943.

⁴ W.D. 12 CATR, 10 July 1943.

The Three Rivers' contributions to the Sicilian Campaign has yet to be explored in detail despite it being the first extended Canadian tank operation in history. Brief descriptions of their participation appear in several historical works where there is consensus that the Three Rivers made valuable contributions to 1st Canadian Infantry Division's success.⁵ However, existing histories have not questioned what enabled the Three Rivers soldiers to prevail in the mountainous terrain of central Sicily or how their long years of training in the United Kingdom between 1941 and 1943 prepared them for combat against Axis forces. This thesis examines the impact and influence of British theories of armoured warfare on Three Rivers soldiers as well as how they subsequently reacted and adapted to the complex reality of Operation Husky in Sicily. The findings below are based on an in-depth examination of Canadian unit war diaries before and during Operation Husky. The Three Rivers war diary is particularly rich but seldom consulted. When it is cross-referenced against the more familiar records of Canadian infantry battalions, the evidence reveals how the 12th Canadian Army Tank Regiment (Three Rivers) contributed significantly to overall Canadian battlefield success in Sicily. There they did not employ the infamous "blitzkrieg" massed tank thrusts associated with German early-war victories in Poland, France, and Russia. Instead Three Rivers tankers defeated their powerful opponents on a mountain battlefield by providing close, direct, and accurate fire support to their infantry partners, adding precision to the more

⁵ G.W.L. Nicholson, *Official History of the Canadian Army in the Second World War, Vol II The Canadians in Italy, 1943-1945*, (Ottawa: Queen's Printer, 1956); Mark Zuelkhe, *Operation Husky*, (New York: Douglas & McIntyre Publishers Inc., 2009); Reginald Thomas Gilchrist, *Malta Strikes Back: The Story of 231 Infantry Brigade*, (Aldershot: Gale & Polden, 1946); Charles Prieur, *War Chronicles 1939-1945: Three Rivers Regiment (Tank)*, (n.p.) Accessed 27 July 2019 at <http://www.12rbc.ca/nouvelle/450/127-chroniques-de-guerre-1939-1945-du-three-rivers-regiment-tank-par-charles-prieur>; Keith L.G. Donaldson, *Thunder in the Mountains: 1st Canadian Armoured Brigade in Italy, 1943-1944*, (University of Calgary: Unpublished MA Thesis); Grant N. Barry, *1st Canadian Infantry Division and the Battle for Agira: A Reconsideration of an Incomplete Historical Consensus*, (University of New Brunswick: Unpublished MA Thesis); Douglas E. Delaney, *The Soldiers' General: Bert Hoffmeister at War* (Vancouver: UBC Press, 2005).

general area bombardment offered by Canadian artillery fire. Members of the Regiment performed well based on strong crew and troop-level training, effective innovation and leadership among their junior leaders, and their ability to adapt doctrine to the reality of near impossible terrain defended by a fierce opponent.

The path leading to the despatch of Canadian tanks to Sicily traces back to the realm of global politics. The inclusion of Canadians in the invasion of Sicily was not an automatic decision for the Allied governments. After having sat in England since 1940 without any major Canadian involvement aside from the twin disasters of Hong Kong and Dieppe, much of the Canadian population clamoured for the commitment of ground troops to the war effort as soon as possible. On 23 April 1943, after a series of political interactions between the Canadian and British governments, Field Marshal Sir Alan Brooke, Chief of the Imperial General Staff, formally requested the commitment of Canadian troops to the coming invasion of Sicily. General Andrew McNaughton, Commander of the 1st Canadian Army, responded positively two days later, and the planning commenced for the employment of the 1st Canadian Infantry Division and the 1st Canadian Army Tank Brigade on Operation Husky, otherwise known as the invasion of Sicily.⁶

The island of Sicily was chosen by the Allies as the follow up to the successful conclusion of the North African campaign. It was selected as the next target of Allied strategy for several reasons. According to the Canadian Army Official History, these factors included: the desire to deceive Germans and force them to spread their forces, the possibility

⁶ Nicholson, *Canadians in Italy*, 3; Lee Windsor, “‘The Eyes of All Fixed on Sicily’ Canada’s Unexpected Victory, 1943,” *Canadian Military History* 22, no.3 (Summer 2013): 5. Additional works that cover this aspect of the Sicilian Campaign can be found in: Tim Cook, *The Necessary War: Canadians Fighting in the Second World War 1939-1943*, (Toronto: Penguin Canada Books Inc., 2014); Dominick Graham & Shelford Bidwell, *Tug of War: The Battle for Italy, 1943-1945*, (New York: St. Martin’s Press, 1986); Zuelkhe, *Op Husky*, 22-24.

of knocking the Italians out of the war and forcing the Germans to commit more manpower to defending the island and the peninsula, opening up Mediterranean shipping routes, persuading the Turks to open access to the Black Sea, and easing supply routes to the Soviet Union.⁷ A close examination of these factors demonstrates the overarching desire to tie down as many Germans as possible away from Northwest Europe and a future cross-Channel landing. Implicit in this desire was the goal to inflict as many casualties as possible to place more strain on the Germans' dwindling manpower resources.⁸

To explore the Three Rivers story requires an examination of the historical literature and context surrounding the Sicilian Campaign, Canadian combat operations in Sicily, Three Rivers operations, the history of British theories of armoured warfare, and Canadian armoured training in Britain between 1941 and 1943. The Sicilian Campaign has traditionally been viewed as an Allied operation that, while successful in seizing the island, is stained by a failure to overcome a withdrawing enemy and prevent the Germans from evacuating significant forces to mainland Italy. This view has been argued by several historians including G.W.L. Nicholson, Charles Molony, Rick Atkinson, Dominick Graham and Shelford Bidwell.⁹ It is estimated that as many as 60,000 combat-fit Germans escaped from the island along with thousands of vehicles and tonnes of equipment.¹⁰ These forces subsequently formed the basis for the prolonged defence of the Italian peninsula. These historians have also furthered a belief that the Allies only faced significant defences from German combatants rather than combined German-Italian forces. Much of this belief

⁷ Nicholson, *Canadians in Italy*, 6-7; Windsor, "The Eyes of All," 8.

⁸ Nicholson, *Canadians in Italy*, 8; Windsor, "The Eyes of All," 8; Zuelkhe, *Op Husky*, 29-42.

⁹ Nicholson, *Canadians in Italy*; C.J.C. Molony, *The Mediterranean and Middle East, vol. 5, The Campaign in Sicily, 1943 and the Campaign in Italy, 3 September 1943 to 31 March 1944*, (London: Her Majesty's Stationery Office, 1973); Rick Atkinson, *The Day of Battle: The War in Sicily and Italy, 1943-1944*, (New York: Henry Holt and Company, 2007); Graham & Bidwell, *Tug of War*.

¹⁰ Nicholson, *Canadians in Italy*, 173-174; Windsor, "The Eyes of All," 31.

stemmed from documents and opinions taken directly from the Germans themselves, who stated that “in Sicily the Italians virtually never gave battle and... 90% of the Italian Army are cowards and do not want to fight.”¹¹ Thus, the reigning historical consensus was that the Allies squandered their numerical advantage as the Allies seemingly outnumbered their German adversaries by 8:1.¹² However, recent scholarship by Lee Windsor has suggested that the Germans were not continuously withdrawing, but instead attempted to establish serious defensive lines to hold Sicily that were defeated by the advancing Allies.¹³ Additionally, Windsor argues that Italian contributions to the German defences have been vastly underestimated.¹⁴ While over 130,000 Italians surrendered throughout the campaign, this left as many as 62,000 Italian soldiers who continued to fight alongside the Germans. Therefore, the Allied campaign is not a story of a squandered opportunity, but of a hard, difficult fight against a resilient enemy who consistently remained on the defensive.¹⁵ Furthermore, when viewed through the lens of attrition warfare, the Sicilian Campaign must be viewed as a success as the Allies inflicted over 13,000 German casualties, captured 6,663 German prisoners of war, and killed an estimated 5,000 Germans. The Italians also suffered over 2,000 dead, 5,000 wounded, and 137,000 captured.¹⁶

Within the Sicilian Campaign, the historical understanding of the Canadian contribution has also been recently updated. Beginning with the Canadian Military Headquarters’ historical reports and the Canadian Army Official History, the historical belief

¹¹ Historical Section (G.S.), Army Headquarters, “Report No.14 – The Sicilian Campaign (July-August 1943), Information from German Source,” Directorate of Heritage and History, Department of National Defence, 1947, 38.

¹² Windsor, “The Eyes of All,” 7.

¹³ Ibid.

¹⁴ Ibid.

¹⁵ Ibid.

¹⁶ Nicholson, *Canadians in Italy*, 173-174; Windsor, “The Eyes of All,” 31.

was that the 1st Canadian Infantry Division was initially assigned the task of flank security for the 8th British Army.¹⁷ Their goal was simply to screen the western flank of 8th Army as they raced along the east coast of Sicily in an attempt to seize the important ports of Catania and Messina. Only the German success in stopping the British 13th Corps' advance along the coast forced General Bernard Montgomery to change his plan and make the 1st Canadian Infantry Division his main effort as they advanced through the centre of the island.¹⁸ Accordingly, some historians assessed that the Canadian mission was to advance to the central town of Enna to outflank the German withdrawal. This view is evident in early discussions and critiques of the Canadian operations at the Battle of Agira, where Canadians were criticized for failing to quickly overcome what were believed to be German delaying positions.¹⁹ However, Lee Windsor's recent work has suggested that the Canadian mission was to intercept 15th Panzer Grenadier Division who were moving eastward through central Sicily.²⁰ Therefore, the Canadians were not just flank protection but an integral part of the 8th Army advance. Their engagements against German and Italian forces were not simply fights against a withdrawing enemy, but serious attempts to gain contact with the enemy and disrupt their efforts to concentrate for a protracted defence.²¹

The story of the Three Rivers Regiment in Sicily has yet to be told in any detail. Their actions have been briefly described in several works, including Nicholson's *Canadians in Italy*, Tim Cook's *The Necessary War*, and Mark Zuelkhe's *Operation Husky*.²² However, the Canadian fight in Sicily has been viewed predominantly as an infantry operation with little

¹⁷ Nicholson, *Canadians in Italy*, Graham & Bidwell, *Tug of War*.

¹⁸ Nicholson, *Canadians in Italy*, 88.

¹⁹ William J. McAndrew, "Fire or Movement? Canadian Tactical Doctrine, Sicily – 1943." *Military Affairs* 51, no.3 (July 1987): 140-145.

²⁰ Windsor, "The Eyes of All," 17.

²¹ *Ibid.*, 5.

²² Nicholson, *Canadians in Italy*; Cook, *The Necessary War*; Zuelkhe, *Op Husky*.

analysis of the tank side of operations. This is unsurprising as there are so many different perspectives and sources to examine and analyze. For instance, Nicholson's work focuses on the larger formation level story of the Sicilian Campaign, rather than unit and sub-unit battles. On the infantry side, most of the units who fought in Sicily have had their stories told through regimental histories that focus specifically on their individual unit campaigns.²³ The Three Rivers never published a regimental history after the Second World War therefore yielding the ground to well-known histories that made some units famous, not least being Farley Mowat's award winning work on the Hastings and Prince Edward Regiment.²⁴ Although a couple of unofficial scrapbook histories and diaries were produced, such as the one written by former Three Rivers driver and gunner, Charles Prieur, these documents were limited to just the descriptions of their experiences.²⁵ Academic examinations of the Three Rivers in the Second World War to date are limited to two theses written by Keith Donaldson and William Pratt. However, they both focused predominantly on the larger 1st Canadian Armoured Brigade operations in Italy rather than Sicily.²⁶ Therefore, with such a limited selection of literature regarding the Three Rivers' operations, a gap exists in the body of

²³ These regimental histories include: Robert William Tooley, *Invicta: The Carleton and York Regiment in the Second World War*, (University of New Brunswick: Unpublished PhD Dissertation); Strome Galloway, *A Regiment at War: The Story of the Royal Canadian Regiment, 1939-1945*, (no publication information, 1979); Thomas H. Raddall, *West Novas: A History of the West Nova Scotia Regiment*, (Liverpool, N.S: Thomas H. Raddall, 1947); G.R. Stevens, *Princess Patricia's Canadian Light Infantry, vol. 3, 1919-1957*, (Griesbach, Alberta: The Hamilton Gault Barracks, 1959); Kim Beattie, *Dileas: History of the 48th Highlanders of Canada, 1929-1956*, (Toronto: 1957); Reginald Herbert Roy, *The Seaforth Highlanders of Canada, 1919-1965*, (Vancouver: Evergreen Press, 1969); G.R. Stevens, *A City Goes to War: History of the Loyal Edmonton Regiment*, (Brampton: Charters Pub Co., 1964); Serge Bernier and Charles Phillips, *The Royal 22^e Regiment, 1914-1999*, (Montreal: Art Global, 2000).

²⁴ Farley Mowat, *The Regiment*, (Toronto: McClelland and Stewart Limited, 1973). It is worth noting that the Three Rivers are not alone in being underrepresented through publications. Many of the units that constitute the supporting cast for the Sicilian Campaign also suffer from a lack of attention. This includes the crucially important, but often less exciting actions of the artillery, engineers, mechanics, and supply technicians.

²⁵ Prieur, *War Chronicles*, 28 Mar 1940; W.D. 12 CATR, March 1940; Jack Wallace, "Shermans in Sicily: The Diary of a Young Soldier, Summer 1943," *Canadian Military History* 7, no.4 (Autumn 1998): 63-68.

²⁶ Donaldson, *Thunder in the Mountains*; William J. Pratt, *1 Canadian Armoured Brigade and the Battle of Lake Trasimene, 20-28 June 1944*, (University of New Brunswick: Unpublished MA Thesis, 2010).

knowledge regarding the Three Rivers in general, and their contributions to the Sicilian campaign specifically. This thesis addresses this gap through an in-depth examination of the Three Rivers operations between 10 July and 17 August 1943. Specifically, this project involves a deep investigation into the little used Three Rivers war diaries and appendices to demonstrate the importance of the tanks and direct fire support to both the infantry and wider combat operations in the mountainous Sicilian terrain.²⁷ This examination of the tanks and their crews in action and in the moment of adaptation to unusual mountain circumstances adds an important and missing perspective on what has typically been viewed as an infantry, and to a lesser extent, artillery story. The tanks added critical direct fire support as part of a combined-arms team so that the Canadian infantry could more easily manoeuvre to engage and capture enemy positions.

An examination of Canada's first armoured unit into battle cannot be discussed without situating it within the 20th century scholarly debate on the development of armoured warfare. Between 1970 and 1991, authors such as Kenneth Macksey, Richard Simpkin, Richard Ogorkiewicz, Robert Larson, and Field Marshal Lord Michael Carver examined the genesis of armoured warfare, especially at the operational level.²⁸ They emphasized that massed armour and manoeuvre were the keys to battlefield success rather than the minutiae

²⁷ Support is the provision of additional firepower and/or protection to friendly units. Thus, the term fire support refers to shooting weaponry on an enemy position that keeps an enemy's head down and fixed in one place. This takes the form of indirect (fired from out of visual sight of the target) and direct (fired with direct line of sight on the target) fire. This fire support then allows another group of soldiers, often the infantry, to manoeuvre to a position where they can attack from close range and destroy or capture the enemy position. Intimate support refers to the close cooperation between tanks and infantry where the infantry use the tanks as armour shields against incoming fire, and the tanks can also provide fire support for an attack.

²⁸ Richard M. Ogorkiewicz, *Armoured Forces: A History of Armoured Forces and Their Vehicles* (London: Arms and Armour Press, 1970); Kenneth Macksey, *Tank Warfare: A History of Tanks in Battle* (London: Hart-David, 1971); Richard Simpkin, *Tank Warfare: An Analysis of Soviet and NATO Tank Philosophy* (London: Brassey's Publishers, 1979); Michael Carver, *The Apostles of Mobility: The Theory and Practice of Armoured Warfare* (London: Weidenfeld and Nicolson, 1979); Robert H. Larson, *The British Army and the Theory of Armored Warfare, 1918-1940* (Newark: University of Delaware Press, 1984). The operational level of war is where a series of individual engagements fought at the tactical level are used to achieve large-scale effects.

of tactical level combat. Only one author, Bryan Perrett, has looked past the blinding attraction of the *Blitzkrieg*, or the raging tank battles in North Africa and the Russian steppes to examine tank warfare at or below the unit level.²⁹ When many of these authors discuss tank tactics, they use technological determinist arguments and have glorified tank-on-tank combat.³⁰ This thesis focuses instead on tank tactics as they relate to individual soldiers and crews as part of a combined-arms team fighting in the difficult, mountainous terrain of Sicily.

One commonality of the military history field is its emphasis on the intellectual genesis and development of interwar armoured warfare theory as expounded by the “Apostles of Mobility,” which consisted of British intellectual soldiers such as J.F.C. Fuller, Basil Liddell Hart, Charles Giffard le Quesnel Martel, Percy Hobart, and Charles Broad.³¹ The writings and theories of the “Apostles” in general, and JFC Fuller and Basil Liddell Hart in particular, have influenced decades worth of historians. The merits of the “Apostles” theories of armoured warfare, their influence on the development of German armoured doctrine in the 1930s, the impact they had upon the mechanization of the British Army and the adoption of the dual armoured doctrines have been debated for decades. Dual doctrines emerged consisting of operational level manoeuvre where massed formations of tanks attacked enemy command and control structures and lines of communication, and tactical level combat where tank units worked as part of combined-arms teams to overcome enemy defensive positions. Historians have argued that the dual doctrines were the result of the cavalry's jealousy, the institutional conservatism of the regimental system, British imperial

²⁹ Bryan Perrett, *Through Mud and Blood: Infantry/Tank Operations in World War II* (London: Hale, 1975).

³⁰ Kenneth Macksey, *Tank Tactics* (London: Almark, 1976); Shelford Bidwell and Dominick Graham, *Fire-Power: British Army Weapons and Theories of War, 1904-1945* (Barnsley: Pen & Sword Military Classics, 2004), <http://site.ebrary.com/id/10884653>; Ogorkiewicz, *Armoured Forces*.

³¹ Carver, *Apostles of Mobility*; Larson, *Theory of Armored Warfare*, 79. The Apostles of Mobility wrote about armoured warfare, oversaw its birth in the British Army, and expounded its virtues during the Interwar Period between 1919 and 1939.

policy, or simple economic pragmatism.³² More recent scholarship on the subject has created more nuanced understandings of the dual doctrine development but has adhered to the established paradigm of tank warfare as a function of the operational level of war.³³ As described by historian David French in his book on the development of the British Army:

The British... shunned the adoption of tactical drills. This may have been the product of a lingering class bias that persuaded senior officers that drills were pointless, because their soldiers were too lacking in intelligence to be able to function without close and constant supervision. But it was also the product of an attitude towards ideas, authority, and organization.³⁴

As important and interesting as these debates are, they have also unfortunately marginalized the “Apostles”’ important contributions to the tactical level of armoured warfare in the 1920s and 1930s.

The Canadian perspective of the debate on the development of Second World War armoured warfare and doctrine appeared and disappeared during the 1990s. Authors such as John English and Roman Jarymowycz addressed the creation of the dual doctrine systems and their subsequent adoption by the Canadian Army.³⁵ Once again, their focus was on operational manoeuvre and the Canadian Army's ability (or as they argued, its lack thereof) to fight at the operational level during the campaigns in Northwest Europe. In the past two decades, there has been graduate level scholarship by Keith Donaldson and William Pratt on tactical Canadian tank operations in Italy, although these works examined the validity of the

³² Macksey, *Tank Warfare*; Carver, *The Apostles of Mobility*; Larson, *The British Army and the Theory of Armored Warfare, 1918-1940*; Perrett, *Through Mud and Blood*.

³³ J. P. Harris, *Men, Ideas, and Tanks: British Military Thought and Armoured Forces, 1903-1939* (Manchester ; Manchester University Press, 1995), Accessed 30 June 2019 at <http://catdir.loc.gov/catdir/enhancements/fy0601/95021173-d.html>; David French, *Raising Churchill's Army: The British Army and the War against Germany, 1919-1945* (Oxford ; Oxford University Press, 2000), <http://site.ebrary.com/id/10464215>.

³⁴ French, *Raising Churchill's Army*, 21.

³⁵ John A. English, *The Canadian Army and the Normandy Campaign: A Study of Failure in High Command* (New York: Praeger, 1991); Roman Jarymowycz, *Tank Tactics: From Normandy to Lorraine* (Boulder: Lynne Rienner Publishers, Inc., 2001).

army tank doctrine and combined-arms combat rather than the underlying factors that contributed to Canadian successes.³⁶ There has yet to be any significant exploration of the tactical application of tanks during the Sicilian Campaign of 1943.

By contrast, there is much scholarship on Canadian Army training programs that took place in Britain between 1940 and 1944. In addition to scholars mentioned previously, works by Doug Delaney and David Allan Wilson examined the efficacy of Canadian infantry training and examined improvements in the Canadian training system prior to deployment to Sicily.³⁷ Canadian scholars argue that Canadian training under the leadership of General Andrew McNaughton between 1940 and 1941 was ineffective.³⁸ These studies also argue that leadership and training significantly improved when the Canadian Army in the United Kingdom came under the command of General Bernard Montgomery during 1942.³⁹ Finally, the field has also established the importance of the introduction of Canadian battle drill training to infantry training in 1942.⁴⁰ Despite this work, scholars have yet to explore many aspects of the training of the Three Rivers and their parent formation, the 1st Canadian Army Tank Brigade (1st CATB), between 1941 and 1943.

Given the current gaps in the established historiography, this thesis focuses on the Three Rivers, to establish its appropriate place in Canadian military history and demonstrate how the Three Rivers tankers prevailed in the harsh Sicilian terrain. Throughout the following chapters, this thesis uses war diaries, operations logs, training pamphlets and

³⁶ Donaldson, *Thunder in the Mountains*; Pratt, *Battle of Lake Trasimene*.

³⁷ Delaney, *The Soldier's General*; David Allan Wilson, *The Development of Tank-Infantry Co-operation Doctrine in the Canadian Army for the Normandy Campaign of 1944* (Unpublished MA Thesis, University of New Brunswick, 1992).

³⁸ Delaney, *The Soldier's General*; Wilson, *Development of Tank-Infantry Co-operation*; English, *Failure in High Command*; Jarymowycz, *Tank Tactics*.

³⁹ French, *Raising Churchill's Army*.

⁴⁰ Delaney, *The Soldier's General*; Wilson, *Development of Tank-Infantry Co-operation*; John A. English, *A Perspective on Infantry* (New York: Praeger Publishers, 1981).

manuals, personal diaries, and topographical maps to explore the Three Rivers' contribution to the Sicilian Campaign. It examines the impact of British armoured theory and doctrine on Canadian armoured forces and seeks to determine the importance of North African and Tunisian battlefield experiences on the regimental method of warfare. This thesis also explores Canadian training effectiveness in England. Three Rivers' weaknesses in Sicily trace back to their training programmes in Britain and poor interarm communications. This study also emphasizes the importance of the terrain, leadership, and communications had upon the employment and cooperation of the tanks and the infantry during engagements against Axis forces.

This study's findings are based upon extensive research into the Three Rivers' war diaries, as well as those of the units and brigade headquarters of 1st Canadian Infantry Division with whom they fought. Close examination and comparisons of unit combat reveals much about the contributions of the tanks to the infantry. Additionally, the war diaries include a plethora of additional information beyond the standard narrative. Operation orders, after action reports, intelligence logs, and map traces all reveal the intentions and understanding of the battlefield as the soldiers and officers perceived them. For instance, an examination of the topographical map of Agira shows a path around the canalizing ground of Highway 121 on the Canadian axis of advance. This map study, in combination with an assessment of the ground during combat allowed Sgt Allen of the Three Rivers to bypass an enemy ambush on 24 July 1943.⁴¹ Nevertheless, the war diaries must be approached with caution. They were usually compiled by the unit Intelligence Officer and his sergeant at the end of every day. Those soldiers may not have witnessed the events they wrote about and

⁴¹ W.D. 12 CATR, 24 July 1943; U.S. Army Map Service, *Agira Sheet 269-IV NW, 1:25,000*, 1943, Accessed at <http://digitalarchive.mcmaster.ca/islandora/object/macrepo%3A84288>.

relied on interviewing participants or processing sub-unit written reports. They sometimes also waited several days to update the diary depending on the intensity of the combat at that time. The Commanding Officers of each unit signed off on each month's diary, and their personal preferences heavily influenced the inclusion or exclusion of details from the narratives and the appendices. Different perspectives in the recorded unit narratives amongst the various unit diaries also creates confusion for an historian examining these documents. Each unit recorded the information they found pertinent regarding specific engagements and occasionally one version of events conflicts with the information reported by another unit who fought in the same action. An example of this can be seen in the reporting of the 2nd Canadian Infantry Brigade fighting between 26 and 27 July 1943, where the Three Rivers reported engaging enemy tanks at a different location and time then what was reported by the Seaforth Highlanders of Canada.⁴² Nevertheless, carefully cross-referencing multiple war diaries enables an historian to see the same event from multiple perspectives and to verify key details.

While the narratives and appendices offer valuable descriptions of the combat actions and the preparations related to them, it remains difficult to sense the reality experienced by the soldiers involved or to see all the influences that affected their decisions. To better understand these influences it is necessary to look at enemy positions and the terrain. It is an old maxim in the military that the ground dictates any response to a situation. Therefore, a close examination of the ground using primary source topographical maps and modern 3D terrain models like Google Earth and ArcGIS is of exceptional value. By combining an evaluation of the terrain at each engagement area with the siting of enemy positions, weapon

⁴² W.D. 12 CATR, 26-27 July 1943; W.D. Seaforth Highlanders of Canada, 26-27 July 1943.

systems, and obstacles, one sees a close approximation of the situation as it would have appeared to the tankers reacting to enemy fire. This enables the historian to better understand tough armoured and infantry battlefield choices, thus avoiding passing underinformed judgment calls on what tankers should have done.

Additional source material was found in unit and brigade training plans, Canadian military training pamphlets, and British notes from theatres of war responding to the British experiences in North Africa. These documents highlight the understanding of combat as it existed during the Canadian training period prior to their deployment to Sicily. For instance, the 1st Canadian Corps training directive released on 30 November 1942 emphasized the need to create a “satisfactory standard of cooperation between army tank sub-units and infantry sub-units.”⁴³ As soldiers are prepared through the functions of doctrinal training, these documents reveal the preparations, skillsets, and mentalities of Three Rivers crewmen as they progressed through their two years of training in England between June 1941 and June 1943. While these documents do offer some insight into doctrinal training, it is unlikely that most soldiers within the Regiment would have taken the time to read through them. The lessons and concepts held within these documents remained within the officer corps and the synthesis and instruction of the suggested doctrinal changes were passed on through their chains of command via sand table exercises and training videos.

Currently, most of the historiography on armoured warfare focuses on the operational level of war and the senior commanders who led mass groups of tanks into combat. This thesis instead seeks to examine tanks in combat at the lowest tactical level possible because it was in small tactical groups that the Three Rivers fought their enemy. It is important to state

⁴³ W.D. 12 CATR, 30 November 1942

here that when this study refers to tanks or tank crews, it carries the same meaning. For an armoured soldier, a tank is nothing without its crew. In fact, one can consider the vehicle as an additional member of the crew. It is a holistic viewpoint that encompasses the soldier and their tools as one. Without a crew, a tank is nothing. Together, they are a fearsome battlefield weapon. This study also seeks to understand the interactions between tanks and other arms, specifically the infantry, rather than just single out the tank arm in isolation. Firstly, this approach demonstrates how the individual soldier, crew commander, or troop leader at the tactical level is not something to be easily dismissed. Their tactical success creates victory conditions at the higher levels of war. While many believe operational manoeuvre is a parallel avenue to victory, it can only be achieved through hard fighting at the tactical level. Secondly, this approach reorients the focus onto the junior leaders who demonstrated ingenuity and resourcefulness during incredibly complex situations that led to operational victory. The initial battle plans belong to the generals and the accolades for victory are attributed to them as a result. When examined from the top, these successes appear to follow relatively simple formats such as a frontal assault or an enveloping manoeuvre. The realities in executing these plans on the ground are much more complex and difficult to accomplish. To paraphrase Helmuth von Moltke the Elder, “No plan survives contact with the enemy.”⁴⁴ While this is true at all levels of war, chaos is most present at the lowest tactical levels where the bullets have the greatest effect.

This thesis unfolds in four chapters. Chapter One examines the Three Rivers’ training between 1940 and 1943. This chapter explores several influences on Canadian armoured training including the British dual armoured theories of warfare, British combat experiences

⁴⁴ Helmuth von Moltke, *Moltke on the Art of War: Selected Writings*, edited by Daniel J. Hughes, (Toronto: Random House Ballantine Publishing Group, 1993), 57.

in North Africa, and the experiences of Three Rivers observers in the Tunisian Campaign of 1943, on Canadian armoured training. It then investigates the training practices of the Canadian Armoured Corps and the Three Rivers. These practices highlight the haphazard nature of the training direction given to the Three Rivers as they practiced armoured manoeuvre tactics that did not align with their stated purpose as an infantry-tank unit. As described by Jack Wallace, “The single major training deficiency, apart from the missing equipment, was the utter lack of guidance on which to base armoured training. Inasmuch as Canada was still tied to British methods, its forces were full heirs to that lack of doctrine.” In contrast, this chapter also demonstrates the thoroughness of junior level training and a concentration on fundamental technical competencies within the unit that subsequently enabled them to succeed in Sicily despite the wayward nature of much of their preparatory training.

Chapter Two covers the first combat experiences of the Three Rivers in Sicily as they advanced on German delay positions between 15 – 18 July 1943. These initial battles at Grammichele, Piazza Armerina, and Monta della Forma reveal the impact of training on automatic combat reactions as well as the continuous communications problems they experienced with their infantry counterparts. Poor preparatory infantry-tank training prior to Sicily was exacerbated by wider problems found with the infantry radios and their incompatibility with the tank radio sets. The radio issues were not unique to Sicily and reliable workarounds did not become available until 1944.⁴⁵ Nevertheless, despite issues between the infantry and the tanks, the Three Rivers crews demonstrated an ability to provide

⁴⁵ For a more in-depth of the broader radio problems and Commonwealth responses see: Lee Windsor, *Steel Cavalry: The 8th (New Brunswick) Hussars and the Italian Campaign*, (Fredericton: Goose Lane Editions, 2011).

valuable support to the infantry based on their technical skills, their ability to adapt to the terrain, and the leadership of junior commanders within the Regiment as evidenced by actions such as those of Lt R.W. “Pete” Ryckman at Grammichele, who, “with great daring and coolness, when fired upon by the multiple flak guns directed the fire of the .50 Brownings on to the gun positions in order to show the tank commanders where the positions were.”⁴⁶

Chapter Three explores the Canadian battles against the main German defensive positions between 19 and 28 July at Assoro, Leonforte, Nissoria, and Agira. These engagements examine the gunnery and driving skills of the armoured soldiers, the ingenuity and initiative of junior leaders, and the non-traditional use of armour in complex situations. This chapter argues that the intensification of the offensive battles against an enemy main defensive line forced Three Rivers soldiers to play to their strengths, specifically, their fundamental soldiering and crew skills. Actions like those of Sgt J.A. “Les” Allen at Nissoria exemplify the strengths of the Three Rivers soldiers, where he rounded a corner and received heavy fire but successfully fired back and destroyed two enemy tanks and a truck.⁴⁷ This chapter also argues that while both the armour and the infantry were able to use their skills to create opportunities on the battlefield, their inability to concentrate their efforts cost them greater success and even led to untimely setbacks. These engagements also continue to show ongoing communications problems between the armour and the infantry, particularly as it relates to radio problems with the infantry radio sets.

Chapter Four discusses Three Rivers engagements between 29 July and 6 August at Regalbuto, the Salso River, and at the Simeto River. This last chapter reveals the maturation

⁴⁶ W.D. 12 CATR, 15 July 1943.

⁴⁷ W.D. 12 CATR, 24 July 1943.

of the Regiment after several weeks of combat. The Three Rivers had learned from the trials of combat and learned to use the strength of their gunnery to provide effective direct-fire support to the infantry. Specifically, the Three Rivers learned to subordinate their interests to the needs of the infantry and thus helped create an effective all-arms team capable of crushing some of the final remnants of the Axis defences to the west of the town of Adrano. This chapter therefore shows an improvement in infantry-tank cooperation and reveals the effectiveness of interarm cooperation and the importance of the aggressive use of speed and firepower during the final stages of Canadian operations in Sicily. Three Rivers gunners demonstrated their skill as they engaged and destroyed long-range targets that enabled the infantry to attack and seize their objectives. As recorded by the Seaforth Highlanders of Canada regarding the advance to the Simeto River, “there [wasn’t] much firing from the enemy so far. The tanks [were] making them keep their heads down.”⁴⁸ This last battle in Sicily demonstrated the growth of the Three Rivers as it was hailed by Major-General Simonds and General Montgomery as the “most ideal tank and infantry action ever seen by them.”⁴⁹

The ultimate finding of this study is that the Three Rivers succeeded in their support role during the Sicilian Campaign due to their strong technical capabilities and their junior leadership’s ability to adapt doctrine and training to the realities of the battlefield. Innovation, experimentation, leadership and technical skill created opportunities for the infantry to exploit in harsh, difficult terrain as captured in the Three Rivers War Diaries. “It looked impossible, but Lieut Waldron, Commanding No. 1 troop, led his troop up a boulder strewn cutting and, with steady blasts of 75 mm H.E., succeeded in clearing the enemy from

⁴⁸ W.D. 12 CATR, 5 August 1943.

⁴⁹ W.D. 12 CATR, 5 August 1943.

their positions, in the many coves in the mountain side.”⁵⁰ The Sicilian Campaign is not a story of one unit or one arm achieving success by themselves. It is a story of a collective effort by the 1st Canadian Infantry Division to defeat Axis forces in their zone of operations. The Three Rivers were but one piece of that wider effort, but their actions have earned the 12th Canadian Army Tank Regiment (Three Rivers) its place within the Canadian story of the Sicilian Campaign.



The Sicilian Campaign – 10 July-17 August 1943 (Map from Nicholson, *Canadians in Italy*)

⁵⁰ W.D. 12 CATR, 21 July 1943.

Chapter One – “Utter Lack of Guidance:” The Impact of Canadian Armoured Doctrine and Training on the Three Rivers Regiment, 1940-1943

“The single major training deficiency, apart from the missing equipment, was the utter lack of guidance on which to base armoured training. Inasmuch as Canada was still tied to British methods, its forces were full heirs to that lack of doctrine.”¹ This comment from Lt Jack Wallace, a Three Rivers troop leader who fought in the Sicilian Campaign, illustrates his perception of their doctrine and training program as they prepared for war. Doctrine and training are two important components that generate a combat unit. Doctrine is the intellectual and theoretical spirit of how an army wishes to fight a war. It provides the guiding principles for combat at the tactical, operational, and strategic levels. Based on strategic decision-making, doctrine also determines whether the overall goals of an army should be the destruction of enemy personnel, the seizure of terrain, or the destruction of command structures and logistics systems. Tactics are then developed to conform to the chosen doctrinal approach. Training is therefore the practical expression and ingraining of doctrine and accompanying tactics into the body of an army. Training programs seek to imbue the tactics, techniques, and procedures established by doctrine into the minds of the officers and soldiers who will then apply them in combat. The intended goal for doctrine and training is for soldiers to react in a predictable and reliable manner once they encounter the enemy on the battlefield.

But what happens when an army cannot decide on a specific doctrine? How can a combat unit become an effective fighting force if its guiding principles are confused or

¹ John F. Wallace, *Dragons of Steel: Canadian Armour in the Two World Wars* (Burnstown, Ont.: General Store Pub. House, 1995), 164.

incoherent? The experience of the 12th Canadian Army Tank Regiment (Three Rivers) in the Second World War demonstrates that when doctrine and training are unclear, a unit can focus on mastering the technical components of its trade and basic soldiering skills in order to ensure success. For the Three Rivers, training during the Second World War was a period of confusion and vacillation between two separate armoured doctrines: operational manoeuvre warfare aimed at achieving decisive, large-scale victories and tactical combined-arms warfare designed to destroy enemy units and positions. These doctrines, imposed by the British upon the Canadian Armoured Corps, resulted in a lack of doctrinal clarity which created an inconsistent and unfocused training program. Theoretical and tactical training varied between operational armoured manoeuvre warfare and tactical combined-arms warfare.² The only point of consistency within the training program was the Three Rivers' continued emphasis on the technical aspects of gunnery, driving, and basic soldiering skills.³ The inconsistency of the armoured doctrine and training was further confused by British experiences in North Africa as combat experiences were not always appropriately reflected in the training process. However, Canadian observers during the Tunisian Campaign discovered updated methods of combat that helped shape the Three Rivers combat experiences in Sicily.

² Operational armoured manoeuvre refers to massed armour formations (divisions or larger) whose primary goal on the battlefield is to defeat enemy command and control nodes, lines of communication and other forces that provide direction and sustainment for the front-line tactical troops. It can be described as attacking an adversary's brain rather than its body. Attacking the enemy's body is considered tactical level warfare. This involves the close cooperation of armour, infantry, artillery, engineers, and air support to physically destroy enemy combat units and seize terrain.

³ Basic soldiering skills are fundamental aptitudes that include, but are not limited to map and compass, navigation, weapons handling, radio operation and procedure, and small unit tactics. For the armoured soldier, it would also include basic mechanical repair for various engine, hull, turret, and track components for their vehicles, turret operation, contact drills, adopting fire positions, jockeying, and moving the vehicle on different types of terrain.

1.1 – The Development of Armoured Theory and Doctrine

Despite originally being designated as a tank unit with the release of Defence Scheme No. 3 in 1936, the Three Rivers spent the first year and a half of the Second World War without any real tank training. This occurred because the Canadian Army never adopted a formal doctrine on the employment of armoured vehicles.⁴ Interwar budgetary constraints and policy decisions left the Canadian Army in a sad state of affairs for the nascent armoured force.⁵ Some argue that the end of the First World War saw an institutional failure to remember the hard-earned lessons from the Canadian Corps' interactions with the Royal Tank Regiment on the battlefields of the Western Front.⁶ This intellectual malaise regarding mechanization and armoured warfare continued throughout the 1930s with the exception of a brief intellectual battle between E.L.M. Burns (future General Officer Commanding (GOC) 1st Canadian Corps) and Guy Simonds (future GOC 1st Canadian Infantry Division and 2nd Canadian Corps) in the pages of the *Canadian Defence Quarterly*.⁷ Even the outbreak of war was not enough to motivate the Canadian Army into updating their doctrinal understanding of armoured warfare. In 1940, the Canadian Army released a *Militia Training Pamphlet* which discussed the employment of tanks using the same tactics as the First World War. Tanks were to precede the infantry in order to breach trench lines and wire obstacles, as well

⁴ John Marteinson & Michael R. McNorgan, *The Royal Canadian Armoured Corps: An Illustrated History* (Toronto: Robin Brass Studio, 2000), 70.

⁵ Tim Cook, *The Necessary War: Canadians Fighting the Second World War 1939-1943* (Toronto: Penguin Canada Books Inc., 2014), 23.

⁶ Roman Jarymowycz, *Tank Tactics: From Normandy to Lorraine*, (Boulder: Lynne Rienner Publishers, Inc., 1984), 33-35.

⁷ David Moule, "The Burns-Simonds Debate Revisited: The Canadian Defence Quarterly and the Principles of Mechanized Warfare in the 1930s," *Canadian Military History* 22, No. 1 (Winter 2013). Accessed 5 May 2019 at: <http://scholars.wlu.ca/cmh/vol22/iss1/3>; Jarymowycz, *Tank Tactics*, 35.

as communicating with the infantry via flag signals.⁸ Out of necessity, the newly constructed Canadian Armoured Corps was forced to turn to their British counterparts in order to find guiding principles for the employment of their new armoured forces. This led to the creation of a dual doctrine armoured force (operational and tactical), identical in nature to that of the British Army. The Three Rivers were employed as a tactical army tank unit throughout the Second World War.

The dual armoured doctrine traces its roots to the leading interwar tank theorists, dubbed the “Apostles of Mobility.” While each “Apostle” had different nuances to their concepts, their ideas can be simplified to a tank purity school of warfare based on what was later termed operational manoeuvre. Harking back to the original thinking of Sir Ernest Swinton, the creator of British armour, the initial concept for tanks in 1916 was that they:

Should move forward together... sweeping the enemy’s first line parapet with machine-gun fire; the assaulting infantry should charge forward so as to reach the German defences soon after the tanks have climbed the parapet... If the tanks... are successful, it is thought they will enable the assault to maintain most of its starting momentum, and break through the German position quickly.⁹

Swinton’s first view of the employment of tanks was therefore tactical in nature, as tanks were to be “an auxiliary to the infantry, that... must be counted as infantry and in operation under the same command.”¹⁰ However, by the end of the First World War, Swinton believed in the creation of massed armour formations as a decisive arm: tanks were to be the primary focus of combat operations. While the infantry were still necessary for control of the ground, the British should “help the infantry by helping the tanks.”¹¹

⁸ N.a., *Canadian Militia Training Pamphlet No.1* (Ottawa: J.O. Patenaude, I.S.O., 1940), 167, Accessed 27 November 2019, <https://archive.org/details/CanadianMilitiaTrainingPamphletNo.11940Issue>.

⁹ Kenneth Macksey, *Tank Warfare*, (London: Granada Publishing Limited, 1971), 34.

¹⁰ *Ibid.*, 34.

¹¹ *Ibid.*, 34, 36; Robert H. Larson, *The British Army and the Theory of Armored Warfare, 1918-1940*, (Newark: Associated University Presses, 1984), 54-56.

J.F.C. Fuller built on the ideas of Swinton and imagined that the future of warfare would be decided by great masses of tanks sweeping past open flanks or penetrating deep into the enemy rear areas. These massed tank formations were to rupture lines of communication and destroy enemy headquarters, thus paralyzing the enemy's ability to react. Fuller's writings sparked the intellectual movement of tank warfare in Britain with his focus on the use of pure tank armies aimed at achieving operational paralysis of the enemy forces.¹² Basil Liddell Hart added the concepts of the indirect approach and the expanding torrent, through which a flanking or penetration of the enemy lines would facilitate the committing of increasing numbers of armoured forces to wash over the enemy rear areas and achieve their operational goals.¹³ Charles Martel likened tank warfare to naval combat with fleets of tanks manoeuvring in the plains of Europe.¹⁴

Despite minor differences in approach and the measure of success, the "Apostles of Mobility" believed in several common factors. Firstly, tanks were believed to be nearly indestructible and only needed to fight as homogenous formations without the aid of their supporting arms. Tank mobility meant the supporting arms would be unable to keep up, forcing the tanks to fight alone.¹⁵ Infantry and other non-mechanized forces would only slow down the advance and therefore ruin the armoured force's chance to paralyze the enemy's command systems.

Secondly, the "Apostles" believed that the primary opponent of the tank on the battlefield was another tank; therefore, the primary goal of a tank formation was to find and

¹² Macksey, *Tank Warfare*, 44; Larson, *Theory of Armoured Warfare*, 91.

¹³ Larson, *Theory of Armoured Warfare*, 84-89; Michael Carver, *The Apostles of Mobility: The Theory and Practice of Armoured Warfare*, (London: Weidenfeld and Nicolson, 1979), 46.

¹⁴ Charles Martel, *In the Wake of the Tank* (London: Sifton, Praed & Co., Ltd., 1935); Macksey, *Tank Warfare*, 70; Carver, *The Apostles of Mobility*, 22.

¹⁵ Carver, *The Apostles of Mobility*, 39-40.

destroy the enemy's tanks before rampaging around the enemy's rear areas wreaking havoc.¹⁶ Based on this premise, the British began moving towards their dual tank doctrine approach. For if the tanks were meant to destroy tanks and manoeuvre freely around the battlefield at an operational level, then who was responsible for breaking through the enemy defensive positions and trenches of the front lines at the tactical level? The answer for the British Army was that the infantry, supported by small packets of heavy infantry tanks - a concept heavily contested by the "Apostles" and their supporters - and overwhelming fire support from the artillery, would breach the enemy lines allowing the tank formations to penetrate through and race towards their objectives deep in the rear of the enemy.¹⁷ Thus, the British created a tactical armoured doctrine with large, heavy tanks designed to support the infantry in local attacks against enemy defensive positions, and an operational doctrine with quick, lighter tanks designed to operate in large numbers where they could manoeuvre rapidly and attack the enemy's command and control systems.

Thirdly, tanks were only meant to be utilized in very specific terrain. This terrain was open, rolling ground conducive to quick manoeuvre and high mobility. As Charles Martel noted, "the most important battles in history were fought in the plains."¹⁸ The difficult, broken terrain of woodlands, wetlands, and mountains was to be left to the infantry to secure as a pivot around which the armour could manoeuvre.¹⁹ Alternatively, as the debate over mechanization raged through Britain in the late 1920s and throughout the 1930s, the horse cavalry argued they could also be employed in these more difficult areas given a horse's

¹⁶ Shelford Bidwell & Dominick Graham, *Fire-Power: British Army Weapons and Theories of War 1904-1945*, (Barnsley: Pen and Sword Books Limited, 2004), 179.

¹⁷ E.W. Sheppard, *Tanks in the Next War* (Chatham: Mackays Limited, 1938), 121.

¹⁸ Martel, *Wake of the Tank*, 234.

¹⁹ Martel, *Wake of the Tank*, 232-234. Bidwell & Graham, *Fire-Power*, 175.

higher mobility than a tank. The cavalry also argued that they would continue to conduct their traditional missions of screening and reconnaissance in an attempt to retain their importance and identity.²⁰ The important point is that tank formations were to be employed in tank country such as the plains of Europe, and nowhere else. Nevertheless, the tangible need of the infantry to have overwhelming fire support at close range to overwhelm strong enemy defensive positions necessitated the use of independent army tank battalions (and eventually brigades) as close support.

The historiographical focus on the “Apostles of Mobility” and their contributions to the development of operational manoeuvre has overshadowed the employment of tactical army tank units throughout most theatres of the Second World War. Interestingly, for all of the emphasis on the “Apostles of Mobility,” the tactical employment of tanks trace their roots to concepts devised by Swinton and Fuller during the First World War.²¹ The principles they generated at that time remained as the basic concept for tank employment with infantry up to the Second World War.

In its most basic format, Fuller’s vision for the tactical employment of tanks during an attack was quite simple. Two assault waves were to be employed against an enemy defensive position. Heavy tanks were to be used in the initial stages of a frontal attack against a prepared position and required intimate cooperation with the artillery and the infantry. A tank only force would lead the first assault wave. Following closely behind an artillery barrage, the tanks would use speed and firepower to overwhelm the defenders. They were to be followed by a second wave of tanks and infantry who would engage what was left of the

²⁰ Larson, *Theory of Armoured Warfare*, 174.

²¹ Macksey, *Tank Warfare*, 36

enemy on the objective.²² Mopping up would be conducted by the infantry who would then consolidate near the objective while the tanks rallied towards the rear in order to conduct resupply and reorganization for the next attack.²³ Charles Martel described this break-in battle by stating that the artillery shoots the tanks onto the objective, who then in turn shoot the infantry onto the objective.²⁴ Ironically, despite Fuller's belief that tanks with some self-propelled artillery could do the job alone, he actually created the format for a successful tactical combined-arms attack against a prepared enemy position.

Regardless of the tensions between the tank purists and the conventional thinkers, by 1939, British armoured doctrine had developed in two directions. Army tank battalions were to be used at the tactical level as part of a combined-arms team while armoured formations fighting at the operational level were to consist of homogenous tank brigades with self-propelled artillery in support. Infantry was to be kept to a minimum in order to maintain the momentum of the armoured force's manoeuvring on the open battlefield.²⁵

Given the Canadian reliance on British military thought, and the Dominion's evolving role as a component of an integrated Commonwealth land force, it was only natural that the Canadian Armoured Corps also adopted the dual doctrine approach and developed two separate types of armoured formations. Four armoured brigades were formed, two (1st and 2nd Canadian Army Tank Brigades) as independent army tank formations, and two (4th and 5th Canadian Armoured Brigades) as part of armoured divisions designed for operational

²² Ibid., 44.

²³ Sheppard, *Tanks in the Next War*, 121. Mopping up refers to military forces who comb through an objective once it has been attacked in order to clear out any remaining enemy forces on the position.

²⁴ Martel, *Wake of the Tank*, 258; David Allan Wilson, *The Development of Tank-Infantry Co-operation Doctrine in the Canadian Army for the Normandy Campaign of 1944*, (University of New Brunswick: Unpublished MA Thesis, 1992), 43.

²⁵ Larson, *Theory of Armoured Warfare*, 190-199.

manoeuvre.²⁶ Nevertheless, despite the stated differences in purpose of the two types of armoured formations, the lack of doctrinal clarity resulted in four Canadian formations that were trained in a wide variety of tasks without much specialization. The failure of the British to clearly explicate their position can be seen in the fact that as late as August 1942, the Canadians were still unsure what they were supposed to be doing doctrinally. This is not altogether surprising as the lessons from the Battle of France in 1940 and the rapidly changing campaign in North Africa offered conflicting understandings of armoured warfare. “For many students of warfare the success of the blitzkrieg was a vindication of the radical doctrines of the apostles of mobility and of the tank.”²⁷ North Africa however, proved, as described by General Montgomery in August 1942, “that successful battle operations depend on the intimate cooperation of all arms, whether in armoured or unarmoured formations. Tanks alone are never the answer; no one arm, alone and unaided can do any good in battle.”²⁸ Ultimately, the British settled into a firepower centric attrition model of warfare that emphasized tactical success based on combined-arms teams rather than large scale manoeuvre with armoured forces.²⁹ Nevertheless, the delays between the battlefields and Britain meant that changes to doctrine and training were slow and occasionally even outdated upon their arrival. In some cases, they never even arrived in Canadian formations. E.L.M. Burns, as the Brigadier for 4th Canadian Armoured Brigade, was forced to create his own doctrinal procedures in 1942 based on his personal understanding of armoured warfare because there was a lack of a “clear and established tactical doctrine for the employment of

²⁶ Marteinson & McNorgan, *Royal Canadian Armoured Corps*, 101. The difference in names is an important distinguishing feature of the different tasks for each type of formation. They were all renamed as Canadian Armoured Brigades in 1943 following the conclusion of the Sicilian Campaign.

²⁷ Bidwell & Graham, *Fire-Power*, 210.

²⁸ David French, *Raising Churchill's Army: The British Army and the War against Germany, 1919-1945*, (Oxford: Oxford University Press, 2000), 262.

²⁹ Bidwell & Graham, *Fire-Power*; French, *Raising Churchill's Army*.

armoured troops in the British Army.”³⁰ Burns instructed his armoured units to concentrate on the destruction of enemy vehicles above all else. His proposed method of dealing with an enemy force was for his units to begin engaging the enemy from hull down firing positions at a distance, followed by the concentration of an entire regiment of tanks on the enemy’s rear and flanks. Burns posited that tank troops should never operate by themselves but only as part of a larger, concentrated force.³¹ Quite clearly, Burns took to heart the armour-centric doctrine envisioned by the “Apostles” in their writings.

Perhaps even more striking of an example of doctrinal confusion occurred in April 1943. 1st Canadian Army Tank Brigade (1st CATB) made a request to higher command for a clarification of the role of sub-units, infantry-armoured compositions, and infantry brigade pivot locations on several occasions. Indeed, given the lack of direction from the British, they scheduled brigade level staff discussions to attempt to establish their own methods.³² While creating uniform standard operating procedures is usually not indicative of any underlying doctrinal conflicts, and is in fact good practice for any military unit or formation, the lateness with which 1st CATB was still requesting clarification on these aspects before being forced to create their own solutions highlights a significant problem with what should have been their guiding doctrinal principles. Intriguingly, 1st CATB’s question regarding infantry pivot locations is particularly enlightening as to the state of doctrinal confusion within the Canadian Armoured Corps because, per the British doctrine of army tank units, tanks were to be committed as part of the assault force creating a breakthrough of the enemy lines.³³

³⁰ E.L.M. Burns, *General Mud: Memoirs of Two World Wars* (Toronto: Clarke Irwin, 1970), 110.

³¹ W.D. 4th Canadian Armoured Brigade, August 1942, Appendix K.

³² W.D. 1st Canadian Army Tank Brigade, 20 April 1943.

³³ Bryan Perrett, *Through Mud and Blood: Infantry/Tank Operations in World War II*, (London: Robert Hale, 1975), 21-22.

Infantry pivot locations were used to create a firm location around which an armoured formation can manoeuvre past the flanks of the enemy or into his rear areas.³⁴ Thus, two months prior to the invasion of Sicily, the armoured units of the Canadian Army with the most training experience and preparation were still unclear on their purpose and vacillated between operational and tactical details of employment. As Jack Wallace had commented above, the Canadian Armoured Corps had an “utter lack of guidance” from the British to whom they were beholden in the development of armoured warfare. As such, they “were full heirs to that lack of doctrine,” and it required actual combat to begin to offer a feasible method of war.³⁵

1.2 – The North African Influence

Regardless of the genesis of the British dual doctrine system and the initial confusion it imbued in the Canadian Armoured Corps, the continued lack of doctrinal clarity is unsurprising. While Canadians in England learned the basics of tank warfare, the British were busy testing their theories of armoured warfare against the Italians and the Germans in North Africa. Despite early successes at the end of 1940 and the beginning of 1941, miscues and mistakes by armoured manoeuvre formations during Operations Battleaxe (15-17 June 1941) and Crusader (18 November – 30 December 1941) revealed inherent flaws within the tank-heavy manoeuvre doctrine that required changing. Captured in the series of documents *Current Reports from Overseas* and *Notes from Theatres of War*, the British experiences impacted the organization of armoured formations as well as their operational employment.³⁶ The resulting changes led to more balanced formations at the operational level and

³⁴ Martel, *Wake of the Tank*, 232-234.

³⁵ Wallace, *Dragons of Steel*, 164.

³⁶ Wilson, *Development of Tank-Infantry Co-operation*, 66-68.

emphasized minefield and obstacle breaching. These alterations made their way into Canadian training as evidenced by the inclusion of engineers and artillery into exercises such as the Canadian Corps Field Firing Exercise in July 1942 and Ex Breaststroke II in October 1942.³⁷ However, some of the recommendations coming from the *Notes from Theatres of War* conflicted with the doctrine being pushed by higher formations. For instance, the high threat from anti-tank guns in North Africa led the Canadian Army to conclude that infantry must precede tanks in an attack in order to destroy those guns, whereas the doctrine pushed in Britain continued to state that tanks were to lead the assault as per the standard echelon attack.³⁸

If this was not confusing enough for the Canadian armoured leadership trying to discern the best method of leading their soldiers, the reports from North Africa had little impact on the tactical army tank doctrine. In fact, despite almost two years of war in the desert, the training conducted by the Three Rivers at the end of 1942 closely resembled the tactics employed by the British at Sidi Barrani, Egypt in December 1940. At Sidi Barrani, the 7th Battalion of the Royal Tank Regiment led the assault against the Italians with a wave of tanks that destroyed targets on the objectives before pushing through to depth positions. They were immediately followed by a second wave, consisting of tanks moving at walking pace with infantry following closely behind them. A third wave stood ready in reserve.³⁹ The Australian Official History, *To Benghazi*, elucidates the tactics of the all-arms attack on a prepared defensive position:

Two or three of the cumbersome tanks would concentrate their fire on one post whilst a platoon fired with rifle and Bren from close behind. When the Italian fire seemed to have been subdued, the infantrymen moved forward, sometimes

³⁷ W.D. 12th Canadian Army Tank Regiment (Three Rivers) July; October 1942.

³⁸ Wilson, *Development of Tank-Infantry Co-operation*, 89-95.

³⁹ Perrett, *Through Mud and Blood*, 43-51.

cautiously, sometimes with a rush, and threw grenades into the concrete gun pits.⁴⁰

The tanks then rallied to the rear following the infantry consolidation and resupplied in preparation for their next mission.⁴¹ These attacks were quite successful and reinforced the established doctrine.

A year later, the plan for a night attack to conduct a link-up⁴² with the encircled Tobruk Garrison the night of 26/27 November 1941 emphasized the continued use of the standard doctrinal tactics. Lieutenant-Colonel Yeo, CO of 44th Battalion, Royal Tank Regiment:

Planned an advance of a one squadron frontage, troops being in arrow-head formation with responsibility for direction resting with the leading squadron, which would be followed, after an interval of ten minutes, by the second squadron, accompanied by an infantry battalion. The advance would be made at walking pace, with the infantry commanders walking alongside the tanks of the troop leaders who were to support them.⁴³

The tactical tendencies and experiences of Yeo are relevant to this study because on 22 July 1942, he gave “an excellent lecture” on the Libyan Campaign to eight officers and 150 soldiers of the Three Rivers in England.⁴⁴ His briefing, focused on his experiences as a tank unit commander, was very well received by the soldiers of the Regiment and reinforced the standard tactical doctrine. Once again, delays between the battlefield and Britain meant that changes to British doctrine towards more combined-arms and firepower-centric approaches arrived too late for the Three Rivers to take advantage of them. By the time Yeo briefed the Three Rivers, the British had continued to change their approach to warfare in North Africa.

⁴⁰ Perrett, *Through Mud and Blood*, 52.

⁴¹ *Ibid.*, 52.

⁴² A link-up is a tactical enabling operation where two friendly forces manoeuvre or fight to establish contact with each other in adversary controlled territory.

⁴³ Perrett, *Through Mud and Blood*, 82.

⁴⁴ W.D. 12 CATR, 22 July 1942.

It was not until members of the Regiment were sent on observer missions to Tunisia that alternative viewpoints began to enter the Regimental mindset and start shaping a different understanding of tank warfare.

Later reports coming out of North Africa called for a different approach to the employment of tanks than what had been taught in England. Yet at the same time, the experiences of different tankers, such as Yeo, reinforced the established theories. Therefore, it is not difficult to imagine how confused the Canadian armoured soldiers must have been. With no combat experience themselves, how could they have distinguished what was universally applicable and what was specific to the campaign in the deserts of North Africa? The tactical training of the armoured regiments of 1st CATB suffered from this state of confusion as the conflicting concepts led to a vacillation in training direction.

1.3 – Canadian Armoured Training 1940-1943

As armoured doctrine was developed, tested, altered, re-examined, and altered again based on combat experience, the Canadian soldiers were not sitting still waiting for the definitive version to arrive. The first armoured soldiers (The Three Rivers, alongside the remainder of 1st CATB) arrived in Britain in late June 1941.⁴⁵ Training began almost immediately, with the members of the armoured regiments excited to finally receive modern tanks with which to train and practice. The Three Rivers soldiers trained strenuously for the next two years before they were finally able to put into practice the skills they had developed against an active enemy.

⁴⁵ W.D. 12 CATR, June-July 1941.

Delving into the unit records of 1st CATB and the Three Rivers, one finds that the tank units spent very little time conducting effective training with the infantry with whom they would find themselves on the battlefields of Sicily. Instead, the Three Rivers trained extensively on the single arm technical aspects of their trade during their time in England. Furthermore, in comparison to the infantry, the Three Rivers spent little time preparing for their mission in Sicily. By the time that the first tanks landed on the beaches at Pachino on 10 July 1943, it can be said that the Three Rivers were technically proficient at the lower tactical levels while doctrinally unsure of their employment. This situation, created by their haphazard training program, generated an opportunity for regimental junior leaders to demonstrate their ability to innovate tactically based on the principles of fire and movement and take the initiative on the battlefield.

While the Three Rivers conducted some training in Canada prior to their arrival in England, it had little impact on the overall shape of the Regiment's tactical or technical capabilities. Despite being mobilized in September 1939, equipment and personnel constraints meant that the Regiment did not conduct any facet of tank training until March 1940. At this point, they still did not have tanks to train with as the Canadian government was more focused on other aspects of the war. However, the future armoured soldiers made the best of their time and training consisted of Three Rivers soldiers marching around a field, pretending to be armoured vehicles and using semaphore signals to pass movement orders, not unlike the German armoured training in the 1930s.⁴⁶ It was not until August 1940 that the soldiers saw a tank for the first time. The Three Rivers moved to Camp Borden and took

⁴⁶ Charles Prieur, *War Chronicles 1939-1945* (n.p.), accessed 27 July 2019, <http://www.12rbc.ca/nouvelle/450/127-chroniques-de-guerre-1939-1945-du-three-rivers-regiment-tank-par-charles-prieur>, 28 Mar 1940; W.D. 12 CATR, March 1940.

possession of fifteen Renault tanks from the First World War. The soldiers then had to spend twenty-four hours conducting maintenance on these obsolete tanks in order to conduct one hour of training, which consisted of demonstrations of fire positions and troop level movements.⁴⁷ By the time that the Regiment embarked for Britain on 19 June 1941, little training had been completed that could qualify the Three Rivers as a competent armoured unit. Nevertheless, they had at least begun taking steps towards understanding the basics of their trade.⁴⁸ Officially welcomed into the United Kingdom on 1 July 1941, the Three Rivers quickly received their first Matilda tanks, were incorporated into the First Canadian Army organization, and began their training in earnest.⁴⁹

The Three Rivers training in tank warfare between 1941 and 1943 consisted of three different types of training: theoretical, tactical, and technical. Theoretical training consisted of developing a soldier's understanding of the overarching doctrine as well as the tactics, techniques, and procedures to be employed on the battlefield. Tactical training was the practical application of those theoretical concepts. Troops deployed on exercises in order to practice attacks, manoeuvres, and other tactical operations. Technical training referred to the physical operation of weapon systems and vehicles. For a tank unit, this meant mastering gunnery and driving skills.

⁴⁷ Wallace, *Dragons of Steel*, 141; Prieur, *War Chronicles*, 3 August 1940; W.D. 12 CATR, August 1940. Fire Position is a term used to describe the adoption of a static location on the ground from which to fire. The ideal firing position is known as a hull down, so-called because the tank advances into position behind a rise in the ground. The tank hull remains hidden behind the ground and is therefore protected from enemy fire. The turret and main gun remain exposed and are able to traverse to cover the vehicle's arcs of fire. Troop level movement refers to the differing methods by which a troop of tanks (3 tanks until 1944) advances across the battlefield. The preferred method involves the bounding or movement of one portion of the troop while the other portion remains in static firing positions covering their movement.

⁴⁸ W.D. 12 CATR, June 1941.

⁴⁹ W.D. 12 CATR, July 1941.

For the Three Rivers, theoretical training consisted of lectures, instructional films, cloth model exercises, and tactical exercises without troops (TEWT).⁵⁰ Members of the Regiment participated in these training activities throughout their duration in England; however, the majority of their theoretical training occurred during the first four months of 1942. Due to the dual doctrine system adopted by the Canadian Armoured Corps, theoretical training covered topics from both doctrines. While exposure to different methods of armoured warfare is not necessarily a problem, introducing two conflicting approaches of warfare to novice soldiers is a quick way to sow confusion about their role and their priorities on the battlefield. Members of the Regiment participated in cloth model exercises and TEWTs at least once a week during this period and covered a variety of topics such as: “The Tank Troop in the Attack,” “Attacks Against Hastily Organized Positions,” “The Approach March,” “The Role of the First Echelon in the Attack,” “The Infantry-Tank Set Piece Attack,” and “Tank versus Tank Action.”⁵¹ Training films were another popular training tool, with films on “Camouflage,” “Ammo Replenishment,” “Infantry Platoon Attacks,” and “Cruiser Tanks in Action” among those shown to the soldiers of the Regiment.⁵² The Three Rivers also hosted infantry officers on several occasions to discuss cooperative tactics and the appropriate use of each arm on the battlefield.⁵³ It is important to note that these discussions and TEWTs all followed the standard formats established in doctrinal manuals such as the 1935 *Field Service Regulations*. It is also worth noting that the discussions and TEWTs usually only involved the officers and senior non-commissioned officers of the

⁵⁰ A Cloth model exercise is the theoretical practice of military operations conducted on tabletop model kits. It allows soldiers to discuss and practice manoeuvres in order to ensure they understand the principles involved.

⁵¹ W.D. 12 CATR, January-April 1942.

⁵² W.D. 12 CATR, January-April 1942.

⁵³ W.D. 12 CATR, January-March 1942.

Regiment.⁵⁴ While there is no overt evidence that the enlisted soldiers were instructed in any of these tactical discussions, it can be expected that the leadership of the individual troops disseminated their understanding of the tactical principles to their soldiers.

Nevertheless, as useful as discussions and films are for instructing novice soldiers, ultimately, they are not replacements for actual training.⁵⁵ It is one thing to discuss tactics in a drill hall, protected from the elements with comfortable living conditions. It is an entirely different experience to go out into the field and lead a troop when rain comes crashing into your turret, when the sun or the fog makes it difficult to see your objective, when the wind blares and the tank's engine roars through your headset and you cannot hear the information being passed on the radio. The safety of TEWTs also created a tendency within its participants to create complex and wild plans that would rarely work in reality, rather than focusing on the basics of solid, simple planning that accomplish the objective while simultaneously protecting the maximum number of soldiers.⁵⁶

On the surface, the Three Rivers conducted a large number of tactical training exercises that should have prepared them for the realities of combat. Between the commencement of their training in July 1941 and their deployment for Sicily in June 1943, members of the Regiment participated in at least fifteen different exercises ranging in scale from squadron to corps level training. This is a significant amount of training and one could reasonably expect that the Three Rivers would be thoroughly prepared in their role as a close infantry-support army tank battalion. Upon closer examination of these exercises, one finds instead that most of these exercises had little to do with the Regiment's assigned role and

⁵⁴ W.D. 12 CATR, January-April 1942.

⁵⁵ Douglas E. Delaney, *The Soldiers' General: Bert Hoffmeister at War*, (Vancouver: UBC Press, 2005), 22.

⁵⁶ Wallace, *Dragons of Steel*, 164.

instead saw them training as an armoured manoeuvre unit or participating in rehearsed demonstrations.

While 1941 saw little actual tactical training besides a couple of defensive schemes against a simulated German airborne assault, 1942 contained several major exercises.⁵⁷ Beginning in March 1942, the Three Rivers participated in a series of exercises that included Exercise Mickey (30-31 March), Exercise Beaver III (19-25 April), Exercise Beaver IV (9-13 May), Exercise Tiger (26-30 May) and Exercise Harold (27-31 July).⁵⁸ These exercises contained little value in preparing the Three Rivers to cooperate with the infantry. Exercise Mickey was cancelled due to poor visibility, while Exercises Beaver III and IV were little more than tactical road moves.⁵⁹ The final day of Beaver IV did include a brigade level attack with 7th Canadian Infantry Brigade (CIB). Nevertheless, the Three Rivers was committed to the attack in front of the infantry as one would expect to see from a manoeuvre formation, rather than in close cooperation with the infantry to seize an objective.⁶⁰ This trend continued with Exercise Tiger. The first four days of the exercise saw no action for the Three Rivers tanks. However, on the final day, all three squadrons of the Three Rivers became heavily engaged during a meeting engagement with an enemy armoured column.⁶¹ The Regiment was committed into the attack without any infantry support. Yet again, rather than being employed as an army tank battalion as they were designed, they were committed as if they were part of a homogenous tank manoeuvre formation. The emphasis of this exercise was clearly that tanks were expected to fight and kill other tanks, not support the

⁵⁷ W.D. 12 CATR, August-September 1941.

⁵⁸ W.D. 12 CATR, March-July 1942; W.D. 1 CATB, March-July 1942.

⁵⁹ W.D. 12 CATR, March-May 1942.

⁶⁰ W.D. 12 CATR, 13 May 1942.

⁶¹ W.D. 12 CATR, 30 May 1942. A meeting engagement is where two advancing forces meet each other unexpectedly on the battlefield.

infantry in the seizing of an objective. Although the Three Rivers performed fairly well, the lessons learned from these exercises conflicted with their subsequent employment in Sicily. Exercise Harold at the end of July saw the Regiment committed to an attack alongside the 11th Canadian Army Tank Regiment (Ontario) as part of a 1st CATB assault. This attack saw 1st CATB once again training as a manoeuvre formation rather than in support of the infantry. While the two armoured regiments captured their objectives, they did not face anti-tank defences during the attack, which would have revealed the necessity of infantry in such operations.⁶²

This is not to say that the Three Rivers did not conduct training with the infantry and other support arms between 1941 and 1943. There were frequent attempts at exercises and there were many training demonstrations. However, not all of the training was equally valuable. A common theme in the tank-infantry cooperation training was the rehearsed demonstration. Three Rivers soldiers, sometimes by themselves and sometimes with the infantry, were ordered to conduct demonstrations of tactical operations, such as the three-wave echelon assault. The soldiers involved studied the plan, then practiced it over and again on the same piece of ground. Finally, on the appointed day, they performed this showpiece manoeuvre for a select crowd, such as the one they conducted on 5 September 1941. Tasked to conduct a tank-infantry attack demonstration, the Three Rivers did so, using their own armoured soldiers to act as dismounts rather than real infantry. Watching this demonstration were Field Marshal Lord Alan Brooke, General Andrew McNaughton, and Brigadier Frank Worthington (then 1st CATB commander). The Three Rivers received high praise for their

⁶² W.D. 12 CATR, 27-31 July 1942.

performance despite the lack of significant training value from this particular demonstration.⁶³

The Three Rivers' infantry-tank cooperation training began with the release of 1st CATB's *Training Instruction No.12, Infantry-Tank Training* on 8 September 1941.⁶⁴ This document followed the tenets laid out in the training manual, *The Employment of Army Tanks in Co-operation with Infantry*, that was released by the War Office in March of the same year. The emphasis was on the close, intimate cooperation between the artillery, tanks and the infantry. The artillery was to support the tank assault who would assault in three waves. The second wave would then move at the infantry's pace in order to provide the maximum amount of protection for the dismounts and enable them to seize the defensive position. The infantry was to follow closely behind the tanks and avoid becoming separated from them.⁶⁵ As a result of this training instruction, the Three Rivers began to interact with units of different arms, leading to a training demonstration with Le Régiment de la Chaudière on 3 November and live fire training with the 72nd Field Regiment in December.⁶⁶

1942 was a slight improvement for tank-infantry training for the Three Rivers. Simulated attacks with the West Nova Scotia Regiment took place in May using transport trucks as tank stand-ins. The live fire Exercise Crump in July focused on intimate support to the infantry as evidenced by the scores of bullet marks marring the armour of the Three Rivers tanks.⁶⁷ The Regiment also participated in Exercise Breaststroke II in October. This was a 1st Canadian Infantry Division live-fire demonstration of an all-arms attack. 1st

⁶³ W.D. 12 CATR, 5 September 1941.

⁶⁴ W.D. 1 CATB, 8 September 1941.

⁶⁵ Wilson, *Development of Tank-Infantry Cooperation*, 87.

⁶⁶ W.D. 12 CATR, November-December 1941.

⁶⁷ W.D. 60 Light Aid Detachment, July 1942.

Canadian Infantry Brigade launched an attack with the support of the Three Rivers, three field artillery regiments, engineers, a support group from the Saskatoon Light Infantry, and several other supporting elements.⁶⁸ There is little information on the exact employment of the tanks within this demonstration, but given that there were several rehearsals prior to the demonstration, it is likely that they were employed in the doctrinal echelon system. Though this was a definite effort towards infantry-tank cooperation, the fact that it was rehearsed and executed as a demonstration under perfect conditions limited the training value.

On 30 November, 1st Canadian Corps released its training program for the following two months. December 1942 and January 1943 were to be dedicated to achieving a “satisfactory standard of cooperation between army tank sub-units and infantry sub-units.”⁶⁹ It is likely that this training program was a response to the combined-arms successes achieved by the British 8th Army commanded by General Montgomery at El Alamein in October 1942. It appears that it required verified proof that close cooperation between the infantry and armour worked before the Canadians and British shifted their training orientation. The Three Rivers divided the training so that each squadron worked with a different division. A Sqn trained with the 1st Canadian Infantry Division, B Sqn with 3rd Division, and C Sqn with 2nd Division.⁷⁰ The training was standardized on a three-day cycle. Day 1 focused on the issuing of the exercise narrative, cloth model exercises, and practicing the issuing of orders. Day 2 focused on assembling the infantry battalion and the tank squadron at a rendezvous where the infantry and the tanks then carried out the exercise at the platoon/troop level. Day 3 saw the tanks and the infantry conduct training at the

⁶⁸ W.D. 12 CATR, October 1942.

⁶⁹ W.D. 12 CATR, 30 November 1942; Prieur, *War Chronicles*, 30 November 1942.

⁷⁰ W.D. 1 CATB, January 1943.

company/squadron level, with after action reviews and analysis concluding the training.⁷¹ As reported by 1st CATB, this training was strenuous and “much was accomplished by both arms as a result but many hardships were suffered in the cold, rain and mud. 1 Cdn Corps reported this training as being the only program that they had laid down that was ever completed.”⁷² This training was the first and only period of time dedicated to infantry-tank cooperation that truly exposed the Three Rivers to the tasks that they would be called upon to perform in Sicily. Of course, the continuous turnover of different units meant that the tankers could not fully develop the level of mutual trust and understanding between the two arms that facilitates excellence on the battlefield. Additionally, only A Sqn trained with the units of the 1st Division that the Three Rivers were called upon to support during the Sicilian Campaign. Finally, it was noted in after-exercise reports that there needed to be further training with regard to interarm communications and radio issues.⁷³ Nevertheless, the repetitive training cemented a basic understanding of the doctrinal function of an army tank battalion.

This training seemed to have sparked a stronger interest in proper infantry-tank cooperation training. The Three Rivers participated in Exercise Spartan in March 1943 with 8th Canadian Infantry Brigade where the two arms attempted to work out who would advance in front of the other depending on different scenarios.⁷⁴ Although they did not come to any significant conclusions, this was undoubtedly a step in the right direction as it demonstrates a professional interest in thinking about different possible tactical scenarios on future battlefields. However, though a positive training experience for the Three Rivers, Exercise Spartan was spent working with an infantry formation that did not deploy to Sicily.

⁷¹ W.D. 12 CATR, 30 November 1942.

⁷² W.D. 1 CATB, June 1943, Appendix – History of the 1st Canadian Army Tank Brigade.

⁷³ Prieur, *War Chronicles*, 12 January 1943.

⁷⁴ W.D. 1 CATB, 1-13 March 1943; Wilson, *Development of Tank-Infantry Co-operation*, 90.

The Three Rivers tactical training from 1941-1943 was doctrinally confused and lacking in focus, intensity, and quality in comparison to the infantry. In contrast to their infantry counterparts of the 1st Division, the Three Rivers did not even conduct specific work-up training for their employment in Sicily. Indeed, in the six months prior to their departure for Operation Husky, they had focused almost completely on the technical basics of their trade. Whereas the infantry had concentrated on battle drill, landing assaults, and mountain fighting, the tankers had trained in the doctrinally mandated echelon assault and their own technical skills.⁷⁵

While the armoured units focused on technical training, the infantry focused on tactical execution in the form of battle drill. Battle drill has been discussed by many other authors who have gone in depth to explore its efficacy and overall impact on Canadian infantry operations during the war, therefore there is no need to go in depth into this topic.⁷⁶ However, the contrast between the infantry adoption of battle drill and the lack of an armoured equivalent merits exploration. At its heart, battle drill “is the reduction of military tactics to bare essentials which are taught to a platoon as a team drill, with clear explanations regarding the objects to be achieved, the principles involved and the individual task of each member of the team.”⁷⁷ Battle drill offered a prepared response to a tactical situation that could be easily understood by all members of the infantry team. The first Canadian courses

⁷⁵ Delaney, *The Soldier's General*, 48.

⁷⁶ For more in-depth examinations and explanations of infantry battle drill, refer to, Stephen Bull & Gordon L. Rottman, *Infantry Tactics of the Second World War* (Oxford: Osprey Publishing Ltd., 2008); John A. English, *A Perspective on Infantry* (New York: Praeger Publishers, 1981); and Wilson, *Development of Tank-Infantry Co-operation*.

⁷⁷ C.P. Stacey, Canadian Military Headquarters, “Report No. 123, Battle Drill Training,” (Directorate of Heritage and History, Department of National Defence, 31 August 1944) 1.

began 30 April 1942 and became an integral part of the infantry training for all units within the 1st Canadian Corps.⁷⁸

Remarkably, armoured units never developed a similar tactical playbook. In 1929, Charles Broad released the “Purple Primer,” which laid down initial battle drills for British armoured units, however these focused on speed and mobility rather than firepower.⁷⁹ In 1931, Broad, now the commander of the experimental armoured brigade, highlighted the need for a set of battle drills and stated that “every drill movement should be based on a probable tactical requirement.”⁸⁰ Nevertheless, despite the obvious need for battle drills, they never materialized. There were several abortive attempts to create an integrated tank-infantry battle drill in 1942 that emphasized the standard three wave attack, but also incorporated the tanks into a support by fire role. Instead of the infantry operating as the fire base upon which armour would manoeuvre, they would operate in reverse with the tanks providing the fire support.⁸¹ Unfortunately, this experiment failed because the two arms were unable to build trust and overcome their individual tactical preferences. The tanks continued to operate as they saw fit, and so did the infantry.⁸² Ironically, this drill became the tactical default in Sicily where the ground precluded tank manoeuvre but still allowed them to affect the battlefield with their superior firepower.

Further deficiencies in Canadian tank training included the failure to prepare their soldiers for urban fighting. Whereas the Canadian infantry had practiced street fighting as early as spring 1942, the Canadian tanks had never done the same.⁸³ In his memoirs, General

⁷⁸ Ibid., 8.

⁷⁹ Larson, *Theory of Armoured Warfare*, 155.

⁸⁰ Macksey, *Tank Warfare*, 88.

⁸¹ John A. English, *The Canadian Army and the Normandy Campaign: A Study of Failure in High Command*, (New York: Praeger Publishers, 1991), 113.

⁸² Wilson, *Development of Tank-Infantry Co-operation*, 80.

⁸³ Stacey, CMHQ, “Report No. 123,” 9.

E.L.M. Burns discussed a conversation he had with Brigadier Worthington who remarked that “one of the standard rules of tank tactics is not to commit tanks to fighting in towns and villages, where they would have no room for manoeuvre, and would be vulnerable to ambush.”⁸⁴ This example reflects a widely-held belief regarding “tank country” rather than the realities of close combat required by infantry-tank cooperation.⁸⁵ This training deficiency was revealed in Sicily where several major engagements occurred in urban environments.

Another notable issue with the training conducted in England was realism. While the forces in England had little choice over the topography in which they trained, they did control the simulated enemy’s tactics. A common tendency in Canadian training was the situating of the “enemy” in locations favourable to the primary training audience.⁸⁶ Rather than placing enemy locations in difficult areas such as reverse slopes that reflected actual German tactical doctrine, they were often located in the open on forward slopes, thus allowing the maximum number of friendly weapon systems to engage them.⁸⁷ Enemy defences also rarely included anti-tank guns which were well known to be an integral part of German defensive positions as discussed in the *Notes from Theatres of War*.⁸⁸ Tanks and their crews act differently when they believe they are untouchable on a battlefield. Therefore, a lack of significant practice against anti-tank defences created bad habits in tank crews who adopted exposed firing positions. These habits were not corrected until they met the Germans in Sicily.

⁸⁴ Burns, *General Mud*, 116.

⁸⁵ William Murphy, “What Is Tank Country?” *Canadian Military History* 7, No.4 (Autumn 1998), 69-70.

⁸⁶ Stacey, CMHQ, “Report No. 123,” 12

⁸⁷ John A. English, *A Perspective on Infantry*, (New York: Praeger Publishers, 1981), 118, 183.

⁸⁸ Wilson, *Development of Tank-Infantry Co-operation*, 89-95.

Given the lack of direction on the tactical side of the Three Rivers training, it is not surprising that they concentrated on perfecting their technical capabilities and soldiering basics. During their two years in England, the Regiment devoted a lot of effort to mastering their gunnery and driving skills. Upon arrival in England in July 1941, the Three Rivers took possession of their Matilda tanks and immediately began sending large numbers of their troops to gain an initial competency in small arms gunnery and tank driving at British training schools.⁸⁹ By August, the Regiment had enough tanks to conduct complex gunnery ranges, including firing on the move and shoots simulating a massed tank squadron supporting an infantry attack.⁹⁰ The Three Rivers continued to send as many soldiers as possible to become qualified on the Matildas and by November, the majority of the Regiment had completed this training. However, November also saw the beginning of the Regiment's transition from the Matilda tank to the Churchill, essentially invalidating a significant portion of the Regiment's technical knowledge of their vehicles.⁹¹ Nevertheless, once a soldier understands the basics of armoured gunnery or tank driving and maintenance, it takes little time to convert that knowledge and familiarize oneself with a new platform. Fortunately for the Three Rivers soldiers, the beginning of 1942 was dedicated to conversion training from the Matilda to the Churchill. By time the major tactical exercises began in March, the Regiment was comfortable and confident in their new vehicle.⁹²

⁸⁹ W.D. 1 CATB, June 1941; W.D. 12 CATR, July 1941.

⁹⁰ W.D. 12 CATR, August 1941.

⁹¹ W.D. 12 CATR, November 1941. The Matilda was a British infantry tank designed to provide direct fire support to infantry formations on the battlefield. However, the Matilda only weighed 25 tons and carried a 40mm gun. Therefore, it was not heavily armoured enough to fill its role, nor was its gun big enough to destroy enemy armoured vehicles or dug in positions. The Churchill was also a British infantry tank. However, the Churchill was much heavier and better armoured, weighing 40 tons. It had a bigger gun as well, carrying a 6 pounder on earlier versions, and a 75mm in later versions. The Churchill also had excellent hill climbing capabilities which made it quite manoeuvrable despite its weight and slow speeds. The Churchill proved to be a reliable and successful infantry tank.

⁹² W.D. 12 CATR, January-March 1942.

While the tactical exercises may have been misleading or confused doctrinally, the Three Rivers participation in gunnery exercises were quite clear in purpose. Having participated in live fire exercises such as the Canadian Corps Field Firing Exercise and Exercise Crump in July 1942, the Regiment understood the need for precision firing in the vicinity of other arms.⁹³ In August, the Three Rivers conducted a regimental live fire exercise. During this exercise, they honed their gunnery skills through intense static shoots at long distance and moving targets. They also conducted mobile battle runs to improve their crews' abilities to shoot while on the move. They even practiced shooting via visual target indication from observer tracer fire. During these shoots, the troop leader was the sole tank to retain radio communications, forcing his subordinate tanks to respond to visual signals and tracer fire in order to lay down accurate fire on their targets, as they were often required to do on the confusing battlefields of Sicily. All reports from this exercise indicate that the Regiment performed quite well and had achieved a high level of technical competence.⁹⁴

The Three Rivers continued to practice and hone their technical skills with the Churchill for the next several months, particularly during the infantry-tank exercises of December 1942 and January 1943. The soldiers felt very confident in their vehicles. However, having been selected to participate in Operation Husky, it was necessary to upgrade the Three Rivers tanks. Thus, at the end of April and the beginning of May, with only two months remaining before the invasion of Sicily, the Three Rivers turned in their Churchill tanks in order to take over the Shermans of the 43rd Battalion, Royal Tank Regiment.⁹⁵ The Three Rivers entered an intense new training program in an effort to quickly

⁹³ W.D. 12 CATR, July 1942.

⁹⁴ W.D. 12 CATR, August 1942.

⁹⁵ W.D. 12 CATR, April-May 1943; W.D. 1 CATB, May 1943. The M4 Sherman was an American built medium tank that weighed 30 tons and carried a 75mm gun. Designed to be easily produced rather than to fulfill

master the technical aspects of their new vehicle. Throughout May and June, the Regiment concentrated on gunnery, driving, and maintenance of their new Shermans. They focused on static shoots at stationary and moving targets at ranges of up to 2500 yards, as well as troop and squadron level battle runs.⁹⁶ They also began waterproofing their vehicles and practiced the loading and off-loading of the tanks from the LSTs in preparation for the coming invasion. Additional training concentrated on soldiering basics such as camouflage, map and compass use, security measures, clearing minefields, and tank tactics.⁹⁷ The month and a half of hard work put in by the Regiment in preparation for their coming task impressed Brigadier Wyman of 1st CATB who commented on their level of preparedness for the rapidly approaching mission.⁹⁸

1.4 – Observers in Tunisia

The Three Rivers training was influenced by British experiences; however, they were not solely influenced by the reports from the battles in the Western Desert. The Tunisian Campaign, taking place between November 1942 and May 1943 when the Axis forces were finally pushed out of North Africa, revealed a very different kind of warfare from that experienced in the Western Desert. In stark contrast to the tanker's paradise of the wide-open deserts of Libya and Egypt, Tunisia was filled with mountains and broken terrain. Wadis criss-crossed the countryside, creating a series of natural obstacles leading into mountain passes and djebels which restricted manoeuvre and canalized formations into narrow ground

a specific role on the battlefield, the Sherman was not as well armoured as the Churchill. However, tank crews liked the Sherman because it was easy to operate, easy to manoeuvre, and easy to repair.

⁹⁶ W.D. 12 CATR, May 1943. A battle run is the term used to describe a range where AFVs engage targets while on the move in order to simulate the rapidity of the mechanized battlefield.

⁹⁷ C.P. Stacey, Canadian Military Headquarters, "Report No 132: Canadian Operations in Sicily, July-August 1943; Part III: The Story of 1 Canadian Army Tank Brigade," (Directorate of Heritage and History, Department of National Defence, 17 April 1945), 3; W.D. 1 CATB, May 1943.

⁹⁸ W.D. 1 CATB, June 1943.

highly favourable for defence. In fact, the Tunisian terrain was remarkably similar to that of Sicily. There was little room for large-scale manoeuvre and can be considered as the opposite of the open tank country envisioned by the “Apostles of Mobility.”

The Tunisian experience did not lead to major doctrinal or training developments in the Canadian Armoured Corps prior to the invasion of Sicily. The Tunisian campaign occurred too close to the beginning of Operation Husky for any formal learning process to have been analysed and adopted by Canadian forces, especially amongst the armoured units. Nevertheless, Tunisia contributed to the Three Rivers’ understanding of armoured warfare in close terrain due to the experiences of their observers. Many members of the 1st Canadian Infantry Division and the Three Rivers participated in an observer program between January and April 1943 and were witness to British operations with the 1st and 8th British Armies. Three Rivers members sent to North Africa to observe the fighting included: Lieutenant-Colonel Booth, Lieutenant Ryckman, and Sergeant Allen with the 17th/21st Lancers of the 6th British Armoured Division in 1st Army; and Lieutenant Dickens and Sergeant Olsen with the North Irish Horse, attached to the 36th Infantry Brigade of 8th Army.⁹⁹ Booth was not a member of the Regiment at this time, but immediately following his return to England from this assignment he took command of the Three Rivers.¹⁰⁰ While the war diaries labelled these members as observers to British operations, they in fact participated in the fighting as members of tank crews. For example, Lt Dickens fought in a troop leader’s tank as part of C Sqn North Irish Horse and was wounded during a minestrike, while Sgt Olsen received a

⁹⁹ W.D. 12 CATR, 1 February 1943; Prieur, *War Chronicles*, 1 February 1943.

¹⁰⁰ W.D. 12 CATR, 18 April 1943.

Mention in Dispatches for his contributions to the North Irish Horse.¹⁰¹ Thus, the observations and experiences of these members were earned from the tip of the spear.

The experiences of the two observer groups were vastly different. The 17th/21st Lancers was an armoured unit belonging to a manoeuvre formation. Their advance through Tunisia did not meet heavy resistance until the Battle of Fondouk Pass (8-9 April 1943). Up until that moment, the only Germans they encountered were in delay positions.¹⁰² Due to their experiences, the Canadian observers were not overly concerned with what they had witnessed up to that point, as evidenced by Lt Ryckman's message to LCol Vining in March 1943. "On the whole, I consider our training and battle practice teach success in actual combat. From what I have seen, mistakes – as shown up on schemes – are the same in battle. Except that, in battle, they're final."¹⁰³ Ryckman was confident in the training that he and his regimental peers had received. However, it is likely that message would have had a completely different tone had it been written after Fondouk Pass. During this attack, the Lancers charged without infantry support into a prepared German anti-tank defence position. The unit was savaged, taking 32 tank casualties, 27 of which were completely destroyed, as well as 11 dead and 32 wounded soldiers.¹⁰⁴

Conversely, the Canadians with the North Irish Horse were exposed to an army tank battalion and experienced a vastly different type of warfare. The Horse, attached to the 36th Infantry Brigade, filled the close support role, yet they did not adhere to the doctrinal approach used during the previous two years in the Western Desert. Instead, they adapted

¹⁰¹ W.D. North Irish Horse, 30 March 1943; Prieur, *War Chronicles*, April 1943.

¹⁰² N.a., "17th/21st Lancers" in *History of the Queen's Royal Lancers*, Queen's Royal Lancers Regimental Website, 2009, Accessed 27 October 2019, https://web.archive.org/web/20090105135846/http://www.qrl.uk.com/h_17_21.html.

¹⁰³ W.D. 12 CATR, 6 March 1943.

¹⁰⁴ N.a., "17th/21st Lancers."

their approach to the complex terrain of Tunisia. The best example of this occurred at the Second Battle of Longstop Hill (23-26 April 1943). Forced to assault a series of djebels, the tanks of the Horse did not attempt to overrun the brigade objectives. Instead, they manoeuvred to different fire positions in order to offer continuous fire support for the assaulting infantry. As the infantry encountered German hard points or snipers, they signalled the tanks who then destroyed or neutralized the enemy position.¹⁰⁵ For the final assault on 26 April, the Horse chose to commit an entire squadron to a fire support task rather than have them assault independently into the teeth of the enemy position. A second squadron conducted intimate support with the infantry in order to clear out and seize their objectives. As described in the North Irish Horse War Diaries:

Immediately the Buffs [an infantry unit] appeared on the north-west slopes they were heavily engaged with mortars and infantry guns. The attack pressed steadily forward, tanks and infantry working together. It became essentially an advance in which small pockets of infantry and tanks helped each other through the rough country. Sometimes a tank would turn its Besa on an MG post that was worrying the infantry, sometimes the infantry would attack an anti-tank gun. Sometimes a tank on the top of a hill would engage an anti-tank gun that was holding up tanks lower down. Upon one occasion a tank and an anti-tank gun surprised each other at a range of 10 yards but the tank got its Besa into action first. It was essentially a slow steady attack in which the individual initiative of the junior commanders on the spot enabled the troops to work their way forward.¹⁰⁶

The Horse and the infantry of 36th Infantry Brigade did not follow the established doctrine, or even the experiences of the desert, but instead allowed their junior commanders to use their initiative to adapt their attack to the ground.

Perhaps the most important contribution of the Tunisian combat experience to the Three Rivers mindset was the importance of adapting one's plan to the terrain. A judicious

¹⁰⁵ W.D. North Irish Horse, 24-26 April 1943.

¹⁰⁶ W.D. North Irish Horse, April 1943 Appendix - Battle of Longstop Hill. A Besa was a 7.9mm machine gun used on British tanks as a coaxial weapon that was located alongside the main gun.

use of the ground is one of the oldest principles in warfare. Yet in the interwar period, the British had instead emphasized the importance of the battle plan rather than the terrain. Instructional manuals told units to subordinate the ground to the plan rather than adapting the plan to the ground.¹⁰⁷ While this approach may have been feasible in the Western Desert, it was impossible to adhere to in the djebels and wadis of Tunisia. The North Irish Horse's use of an entire squadron as a fire base rather than an assault force is indicative of an intelligent reading of the possibilities afforded to them by the ground. Rather than adhere to a strict doctrinal approach, the Horse instead carried out a plan based upon expediency. As stated by historian Bryan Perrett, "For however much one might theorise upon the correct employment of a weapon system, in the end it is geography which dictates tactics."¹⁰⁸ The North Irish Horse's success provided a concrete example of the importance of flexibility and innovation on the battlefield. Three months later the Three Rivers faced similar situations in the complex mountainous terrain of Sicily and relied on the principles demonstrated in Tunisia for success.

1.5 – Two Years Later

On 17 June 1943, the Three Rivers loaded their soldiers and the regimental fleet of tanks and vehicles onto six LSTs, almost two years exactly from when they had departed Canada.¹⁰⁹ During the preceding two years, the soldiers of the Three Rivers Regiment had trained almost continuously for combat. They had received lectures, conducted practice demonstrations and read the reports from North Africa and Tunisia. They believed they were ready. However, they were soon to discover that the role they were now steaming towards in

¹⁰⁷ English, *Failure in High Command*, 116; Wilson, *Development of Tank-Infantry Co-operation*, 82.

¹⁰⁸ Perrett, *Through Mud and Blood*, 19.

¹⁰⁹ W.D. 12 CATR, June 1943.

Sicily was very different than that for which they had spent so much time training. They had spent two long years following inconsistent training goals caused by doctrinal confusion and an “utter lack of guidance” from higher formations and they would soon realize that success would not depend on their ability to execute a doctrinally perfect assault. Instead, they would need to rely on their technical capabilities and the intuition of their junior leadership.

Although the higher formations were still unsure as to how exactly they were to employ their tanks upon the battlefield, the troops and crews of the Three Rivers were confident in their abilities. They would make mistakes, but their basic soldiering and tank skills would see them through and help the 1st Canadian Infantry Division overcome their German opposition.

Chapter Two: Baptisms of Fire

This chapter maps out the initial eight days of service for Canada's first tank force committed to a land campaign in Europe, including those first combat actions against Italian and German units. The initial operations conducted by the Three Rivers after landing at Pachino on 10 July went very smoothly. The Three Rivers soldiers encountered little resistance as they advanced in the lead of the 1st Canadian Infantry Division. As they pushed deeper into Sicily, the Canadians encountered the remnants of the Italian coastal divisions who seemingly had little desire to fight and surrendered in droves.¹ The feared Germans were nowhere to be found (See Map 2.1).

This initial experience of war was rather underwhelming for the Three Rivers soldiers and their compatriots in the 1st Division. However, it fit well into the overall Allied plan for the invasion of Sicily as the Canadians were employed along the left flank of General Bernard Montgomery's British Eighth Army advance. 1st Division was attached to the British 30 Corps under the command of General Oliver Leese whose task was to secure the left flank of 13 Corps as they drove north along the island's coast towards the important port of Catania. Traditional views hold that, as the outside formation in the Eighth Army, the Canadians therefore expected to face little resistance as it was believed that 13 Corps' advance would force the Germans and Italians to quickly withdraw towards Messina or they would be cut off from mainland Italy and be completely destroyed. To support this goal, 30 Corps was ordered to quickly advance on the important central hub of Enna where they could then cut off the Axis forces' ability to manoeuvre formations across the island in support of

¹ W.D. 12th Canadian Army Tank Regiment, 10-13 July 1943.

the operations around Catania.² However, the Germans stopped 13 Corps' drive along the coast and forced Montgomery to shift his efforts to his left flank in an attempt to envelop the enemy from the centre of the island. In contrast to this view, more recent scholarship argues that the Canadian advance into the Enna province was not a secondary task screening the Eighth Army's advance. Rather, it was a serious advance to contact against the fresh 15th Panzer Grenadier Division (15 PzG Div) to prevent them from solidifying a German defensive line through the centre of Sicily (See Map 2.2).³

The Three Rivers truly began their war on 15 July. With the capture of Vizzini by the 51st Highland Division on the evening of 14 July, 1st Division was ordered to take the lead and advance along Highway 124 and 117 towards Enna the following morning.⁴ For the next four days, the Regiment advanced in the lead of 1st Division as they encountered their first real opposition in the form of German units conducting a delay operation towards a main defensive line in the centre of Sicily. The Three Rivers experienced their baptisms of fire at the town of Grammichele on 15 July, followed by engagements south of Piazza Armerina on 16 July, and in the vicinity of Monta della Forma on 17 and 18 July. In those first four days of action, Three Rivers soldiers truly realized the importance of terrain in combat and the impact of the training they received in Britain. Tank gunners demonstrated their mastery of long-range tank gunnery, while troop and squadron leaders realized that they were ill-prepared for combat in canalizing terrain or for close cooperation with the infantry and began learning to adapt to complex combat situations.

² G.W.L. Nicholson, *Official History of the Canadian Army in the Second World War, Vol II The Canadians in Italy, 1943-1945*, Ottawa: Queen's Printer, 1956, 87-88.

³ Lee Windsor, "'The Eyes of All Fixed on Sicily' Canada's Unexpected Victory, 1943," *Canadian Military History* 22, no. 3 (Summer 2013): 17.

⁴ Nicholson, *Canadians in Italy*, 88.

2.1 – The Germans

To understand the combat experiences of the Three Rivers, it is important to first understand the opposition that they faced, for the German operational intent and their units' tactics had a significant impact on their engagements with the Canadians. The Germans had chosen not to defend the Sicilian coastline but instead remained in depth to counter Allied thrusts. With the success of the Allied landings, the Germans and Italians quickly realized that they had to fall back towards more defensible positions in the centre of the island. As a result, the Germans began an ordered withdrawal beginning on 12 July. 15th PzG Div was rushed into an area centred between the towns of Caltanissetta, Valguarnera, and Piazza Armerina. German forces closer to the coast near the Canadian landings pulled back into the area between Vizzini and Caltagirone, which included the town of Grammichele, on 13 July.⁵ By 14 July, units of the Hermann Goering Panzer Division (HG Pz Div) were preparing to pull back towards defensive positions near Mt. Etna far to the north. This division had already suffered significant losses and had reported 630 casualties in the first five days of the Sicilian Campaign.⁶ Squeezed between the two German divisions was the Italian Livorno Division. They had participated in the initial Axis counterattacks against the Allied landings and were withdrawing alongside the HG Pz Div. Although they receive little mention in Canadian war diaries, the Italians participated in nearly every engagement against the Canadians.⁷

⁵ Historical Section (G.S.), Army Headquarters, "Report No.14 – The Sicilian Campaign (July-August 1943), Information from German Sources," (Directorate of Heritage and History, Department of National Defence, 1947), 11.

⁶ Ibid., 12.

⁷ Windsor, "The Eyes of All," 16.

The important result of the opening days of the Battle for Sicily is that the Germans began falling back towards the mountains of central Sicily to prepare a defensive line to stop the Allied advance (See Map 2.3). Along the Canadian axis of advance, the German defensive line was to be based near Leonforte in order to concentrate their limited numbers, weapons and supplies.⁸ Every German position south of that line was to be used to inflict casualties and delay the Allied advance to buy time for reinforcements to arrive from Italy.⁹ They did not intend to hold on to the towns in which they created temporary defensive locations. Success for the Germans in this phase of the campaign could be measured in time and casualties.

To accomplish this goal, the Germans relied on their doctrinal defensive tactics. Organizationally, the Germans preferred defensive positions that tied in anti-tank guns alongside their infantry platoons. A full-strength infantry platoon in 1943 contained 49 soldiers split between four sections, a HQ section, and a three-man 50mm mortar detachment. Each platoon had four light machine guns, seven submachine guns, and twenty-two rifles.¹⁰ Thus, German infantry platoons had a lot of integral firepower. Nevertheless, as demonstrated by the HG Pz Div's report on combat losses, it is likely that the German platoons were no longer at full strength by the time they encountered the Canadians. It is more likely that they had about 35-40 soldiers per platoon. While the HG Pz Div had suffered many casualties in the initial stages of the campaign, 15th PzG Div was still fresh. Therefore, initial Canadian engagements against units from this division probably faced stronger platoons. Regardless of manning issues, the German defensive tactics remained the

⁸ Ibid., 12.

⁹ Ibid., 19.

¹⁰ Stephen Bull & Gordon L. Rottman, *Infantry Tactics of the Second World War*, Oxford: Osprey Publishing Ltd., 2008, 71.

same. The machine gun remained the centre of the defensive position with outposts pushed forward to provide early warning and force the enemy to deploy and expose themselves to the machine guns.¹¹ Intermixed with the machine guns were the German anti-tank guns which were designed to split the enemy infantry from their armoured support as they attacked the German position.¹² The favoured method was to remain concealed until the last possible moment and then to engage the enemy at close range with overwhelming fire in order to maximize casualties.¹³ The machine guns and the mortars would engage the infantry and force them to go to the ground. The anti-tank guns would then destroy their armoured support leaving the infantry exposed and in an unfavourable position.¹⁴ In a typical defensive position, once the enemy infantry were exposed, the Germans would launch counterattacks and either destroy the attacking enemy or force them to retreat. However, in a delaying position, the Germans rarely launched counterattacks because they needed to conserve their manpower and their main goal was to waste the enemy's time rather than destroy them all. These doctrinal German tactics were used in most engagements against the Canadians, however, there are always some variations and exceptions depending on terrain and force availability. For instance, the first Canadian engagement at Grammichele faced an ad hoc delay position from a mix of HG Pz Div and Livorno Division forces trying to buy time for the remainder of their divisions to withdraw north.¹⁵

¹¹ Ibid., 60.

¹² Ibid., 203.

¹³ Ibid., 60.

¹⁴ Ibid., 203, 208-209.

¹⁵ Windsor, "The Eyes of All," 16.

2.2 – Baptism of Fire at Grammichele

Following the capture of Vizzini the evening of 14 July, 1st Canadian Infantry Division was ordered by 30 Corps to take over the advance towards Enna (See Map 2.4). 1st Canadian Infantry Brigade was chosen to lead who then selected the Hastings and Prince Edward Regiment (Hasty Pee) with A Sqn of the Three Rivers as the vanguard. Their first intermediate objective on the way to Enna was the town of Caltagirone, 31 kilometres away along Highway 124.¹⁶ The town of Grammichele was located 18 kilometres from Vizzini, 13 kilometres east of Caltagirone. Given the long distance to their objective, the decision was made to mount the lead companies on the Three Rivers' Shermans and Bren carriers. B Coy was to be the lead infantry company, followed by A Coy. C and D Coys followed behind in trucks. Included in the force were the self-propelled 25-pounder guns of the Royal Devon Yeomanry artillery, and D Tp of 51st Bty from the 1st Anti-Tank Regiment.¹⁷

The lead elements of this force departed at 0600 hours the morning of 15 July with the Three Rivers Reconnaissance Tp (Recce Tp) commanded by Lt Pete Ryckman leading. By 0900 the Canadians exited a narrow mountain pass and gained their first look at the town of Grammichele from about three kilometres away.¹⁸ As described by Major Lord Tweedsmuir, Regimental Second in Command of the Hasty Pees:

Suddenly the narrow valley gave way to a broad open plateau with the town of Grammichele perched like all Sicilian towns on a hill top. The road ran, a straight white

¹⁶ C.P Stacey, Canadian Military Headquarters, "Report No.135, Canadian Operations in Sicily, July-August 1943, Part II: The Execution of the Operation by 1 Cdn Div, Section 2: The Pursuit of the Germans from Vizzini to Adrano 15 Jul - 6 Aug," (Directorate of Heritage and History, Department of National Defence, 4 May 1945), 4-5.

¹⁷ W.D. 12 CATR, 15 July 1943; W.D. 1st Anti-Tank Regiment, 15 July 1943; Nicholson, *Canadians in Italy*, 88; Mark Zuelkhe, *Operation Husky*, (New York: Douglas & McIntyre Publishers Inc., 2009), 182.

¹⁸ Stacey, CMHQ, "Report No.135," 4; Nicholson, *Canadians in Italy*, 89.

ribbon, slightly raised above the cornfields to the foot of the hills three miles farther on, and we could see our carriers far ahead approaching the town.¹⁹

The carriers seen in the distance were those of Ryckman's Recce Tp who were about to become the first Three Rivers soldiers to come into contact with the Germans in Sicily (See Map 2.5).

The Germans of the 4th Flak Regiment from the HG Pz Div established strong defensive positions in the outskirts of Grammichele along the eastern slope of the hill that took advantage of the natural strengths of the terrain. Grammichele offered a commanding view towards the east along the paved Highway 124 as it perched on the top of a hill rising over 75 metres above the surrounding countryside. The road approaching the town was bordered by two deep ditches with corn fields to either side. The ditches ensured that approaching Canadian vehicles were forced to remain on the road. The openness meant nothing could approach the German position without being spotted.²⁰ The German defences included several anti-tank guns, tanks in hull-down firing positions, and machine gun posts.²¹ Since the defending unit was a flak regiment, the Germans also had several multi-barreled 20mm autocannon flak guns employed as ground weapons.²² All of the weapon systems were sited to engage the approaching Canadians in a kill zone only a few hundred metres from the base of the hill. One weakness of the position was that the base of the hill offered defilade²³

¹⁹ Zuelkhe, *Op Husky*, 184.

²⁰ Nicholson, *Canadian in Italy*, 89; Zuelkhe, *Op Husky*, 183.

²¹ W.D. 12 CATR, 15 July 1943; W.D. 1st Anti-Tank Regiment, 15 July 1943. German weapon systems included at least one Panzer Mk III, one Panzer Mk IV, and two PAK 38 50mm AT guns. Reports are based on weapon systems destroyed by the Canadians at the end of the engagement, but the defensive position most likely held additional AT guns and at least one other tank that successfully withdrew with the remainder of the German force.

²² W.D. 12 CATR, 15 July 1943. The German position also included at least three Flakvierling 38 20mm 4-barrel autocannons.

²³ Defilade refers to positions where weapon fire cannot affect any troops who happen to occupy them. These positions offer a combat force the opportunity to reorganize and prepare for further offensive action. In the case of Grammichele, the defilade at the base of the hill occurred because German weapon systems could not depress

to any enemy who succeeded in closing with the defensive position. The strength of the German position ensured that the Three Rivers' first fight with the Germans would provide an unwelcome introduction to combat.

As Lt Ryckman's Recce Tp reached the outskirts of Grammichele on the eastern slope of the hill, the Germans opened fire on them at close range. Three Bren carriers of Recce Tp were quickly hit, two of which immediately caught fire and were put out of action.²⁴ The Germans also exploded a large crater in the road behind Recce Tp, effectively cutting off the carriers and preventing the main body of Shermans and infantry from quickly closing with the German position. While passable to the tanks, this crater blocked all movement of wheeled vehicles and needed to be filled in by infantry throughout the engagement. The Germans then proceeded to engage the main body with anti-tank guns, machine guns, and mortars. A lucky shot from an anti-tank gun ricocheted off the ground and put a shell into the fuel cell of an A Sqn Sherman which promptly caught fire and exploded (See Map 2.6).²⁵

The Canadian tanks and the infantry reacted quickly. The infantry hurriedly dismounted from the tanks and took cover in the ditches by the road. The tank crews then rapidly jockeyed²⁶ to the left of the road and into fire positions along a slight crest. They immediately returned fire but had difficulty identifying targets as the Germans had concealed their positions well. However, Lt Ryckman, maintaining his composure after his own carrier

their barrels low enough to engage. U.S. Army Map Service, *Caltigirone Sheet 273-IV, 1:50,000*, 1943, Accessed at <http://digitalarchive.mcmaster.ca/islandora/object/macrepo%3A84949>.

²⁴ W.D. 12 CATR, 15 July 1943.

²⁵ Zuelkhe, *Op Husky*, 185-186.

²⁶ A jockey is a term related to armoured fighting vehicles (AFV) in which they reverse out of their current position and manoeuvre into a new position. Jockeying is a key component of fighting for AFVs as they are a high value target on the battlefield and attract a large quantity of fire. Jockeying allows an AFV to engage targets and then safely move to another position before they are destroyed by return fire.

was hit and caught fire during the initial contact, began identifying targets for the tanks with tracer fire. Rather than bail out of his vehicle after it had been hit, he remained inside and manned the 0.50 calibre Browning machine gun. Unable to transmit target locations from his damaged radio, he fired his machine gun tracers at several tanks and anti-tank gun emplacements, just as the Three Rivers had practiced in Britain. He continued to do so until the fire in his vehicle was so large that he had no choice but to dismount.²⁷ However, his brave actions were enough for the tanks to identify the enemy positions and engage the Germans.²⁸ Further target indication was given to the tanks by Pte Gunter of the Hasty Pee Intelligence Section. Having identified enemy gun positions that were causing the infantry trouble, Gunter ran through a hail of machine gun fire to the Sherman positions and gave visible direction to Sherman crew commanders of the enemy locations.²⁹ The target indication training in Britain had paid off. Responding to the direction provided by Ryckman and Gunter, the A Sqn Shermans demonstrated superb gunnery skills and engaged and destroyed two German Panzers which, being in hull-down positions, only had their turrets exposed. They also destroyed two anti-tank guns, three flak guns, and suppressed numerous machine gun posts.³⁰

While the tanks engaged German defensive positions, the infantry began manoeuvring into position to assault the town. B Coy pushed along the ditch to the right of the road into the defilade at the base of the hill while receiving enemy mortar and machine gun fire. A Coy advanced along the left of the road to the base of the hill where they then slipped left into exposed firing positions to offer fire support for the other companies of the

²⁷ W.D. 12 CATR, 15 July 1943.

²⁸ Stacey, CMHQ, "Report No.135," 5. Lt Ryckman received a Military Cross for his actions at Grammichele.

²⁹ Ibid. Pte Gunter received a Military Medal for his actions at Grammichele.

³⁰ W.D. 12 CATR, 15 July 1943.

battalion.³¹ C and D Coys were ordered to conduct a wide left flanking movement around the town.³² Covered by the supporting fire of A Coy and A Sqn, the self-propelled guns of the Royal Devon Yeomanry, and the 51st Battery anti-tank Guns, B Coy of the Hasty Pees reorganized at the base of the hill and assaulted into town.³³ By noon, B Coy had cleared the centre and C and D Coys completed their flanking movement and cleared the southern edge (See Map 2.7).³⁴

A Sqn's baptism of fire had been furious but successful. Over three hours, the Canadians had forced the withdrawal of the Germans from Grammichele. The Three Rivers had destroyed one Pz MkIII, one Pz MkIV, two PAK 38 anti-tank guns, three Flakvierling 38, and several machine gun posts.³⁵ In combination with the Hasty Pees, the Three Rivers had devastated the German delay position. A captured German soldier's diary reveals the intensity with which the Canadians fought as he despairingly asked himself, "why do they fight so ferociously?"³⁶ This German soldier further elucidated the dire straits that the Canadians forced the Germans into at Grammichele. "Their tanks are enormous and their infantry keeps coming in spite of everything we do."³⁷ The result was that the soldier was "encircled, whole company pretty much wiped out."³⁸ While this soldier managed to withdraw from Grammichele to fight again, many of his comrades did not. The exact number of German casualties is uncertain but at least 30 were killed or captured along the southern

³¹ Stacey, CMHQ, "Report No.135," 5.

³² Zuelkhe, *Op Husky*, 185.

³³ Nicholson, *Canadians in Italy*, 89; Zuelkhe, *Op Husky*, 186; Farley Mowat, *The Regiment*, Toronto: McClelland and Stewart Ltd., 1973, 73-74.

³⁴ Nicholson, *Canadians in Italy*, 89. W.D. 12 CATR, 15 July 1943; Charles Prieur, *War Chronicles 1939-1945: Three Rivers Regiment (Tank)*, (N.p.), Accessed 27 July 2019 at <http://www.12rbc.ca/nouvelle/450/127-chroniques-de-guerre-1939-1945-du-three-rivers-regiment-tank-par-charles-prieur>, 15 July 1943.

³⁵ W.D. 12 CATR, 15 July 1943.

³⁶ W.D. Saskatoon Light Infantry, Appendix July 1943.

³⁷ *Ibid.*

³⁸ *Ibid.*

edge of town, indicating that as many as two times that number were likely casualties along the eastern slopes in the main combat zone.³⁹ Fractured communications in the German command system meant that the German Corps HQ did not even learn of the engagement at Grammichele until two days later on 17 July.⁴⁰ The German attempt to delay the Canadian advance was a clear failure and cost the Germans too many soldiers and weapons sorely needed elsewhere. In contrast, the cost to the Canadians was relatively light. The Three Rivers suffered one soldier killed, and nine wounded, while the Hasty Pee took fifteen wounded. Equipment losses included the three Bren carriers of Recce Tp, one Sherman, and two ammo trucks and a 17-pounder gun tractor from 51st Bty of the 1st Anti-Tank Regiment.⁴¹

The engagement at Grammichele reveals something of the benefits and detractions of the Three Rivers' training in Britain. On one hand, their fire support to the infantry was excellent. Accurate and massed tank fire destroyed a significant number of enemy weapon systems, including two well-aimed shots on German tanks in hull down firing positions as part of an ambush. The fundamental training of the Three Rivers set A Sqn up for success. On the other hand, their lack of integrated training with the infantry meant that when it came time for the infantry to clear the town, instead of moving in with intimate tank support, the infantry went in alone. Had the Germans made a serious effort to hold the town, the Hasty Pee would likely have experienced significant casualties and further delays as they encountered hard points that only the tank's superior gun could handle effectively. Clearing the town would have required a well-supported attack and turned into a slow, deliberate

³⁹ Stacey, CMHQ, "Report No.135," 5.

⁴⁰ AHQ, "Report No.14," 18.

⁴¹ W.D. 12 CATR, 15 July 1943; W.D. 1st Anti-Tank Regiment, 15 July 1943; Nicholson, *Canadians in Italy*, 89.

affair, helping the Germans to achieve their delay goals. That the Three Rivers did not move into an intimate support role is not surprising however, as their training in Britain had not prepared them to launch a hasty attack in a close urban environment as part of a combined-arms team.

Nevertheless, Three Rivers crews also demonstrated an excellent appreciation of the terrain and adapted their actions to take advantage of it. They identified the best piece of ground available to them upon contact with the enemy and manoeuvred into it as quickly as possible. Their adoption of these protected firing positions is likely the reason that they did not take any further vehicle casualties after the surprise of the initial ambush. Taking advantage of the ground to remain in protective firing positions while providing fire support to the infantry also negated the strength of the German defensive position which was designed to catch armour manoeuvring in the open as per their own doctrinal armoured tactics. As a general comment on Allied armour use in Sicily, the Germans were slightly confused by the fact that the Canadians did not “seek out pronounced tank country” and instead remained committed to infantry support.⁴² Grammichele was one such event that contributed to this perception. Overall, A Sqn’s baptism of fire can be considered a success. Their fundamental gunnery skills played a key role in defeating the Germans at Grammichele. By no means were their reactions to their first battle perfect, but the Three Rivers continued to learn and develop over the coming days. In particular, the importance of terrain to tank warfare became more and more ingrained in their approach to combat. The limitations of tanks in the mountains of Sicily were revealed the following day during their next engagement in the vicinity of Piazza Armerina.

⁴² AHQ, “Report No.14,” 36.

2.3 – Ambush South of Piazza Armerina

The road to Piazza Armerina followed on the heels of the Canadian success at Grammichele. The Canadians continued their advance towards the important crossroads at Enna. The 48th Highlanders with a squadron from the Three Rivers took over as the Canadian divisional vanguard and pushed west along Highway 124 to capture the abandoned town of Caltagirone just after midnight in the early hours of 16 July. General Simonds then ordered 2nd Canadian Infantry Brigade to take the lead. He identified the town of Piazza Armerina as an intermediary objective on route to Enna and demanded a hard push by 2nd Brigade with the support of the Three Rivers and the Royal Devon Yeomanry to take advantage of the Canadian momentum.⁴³

The brigade vanguard consisted of the Loyal Edmonton Regiment (Eddies) and C Sqn from the Three Rivers. The morning of 16 July, C Coy mounted on the Three Rivers tanks with the remainder of the infantry battalion following behind on transport trucks.⁴⁴ They advanced west and passed through the town of San Michele di Ganzeria without opposition. The Canadians then turned north onto Highway 117 and headed towards Piazza Armerina.⁴⁵ By noon, the vanguard was located five kilometres south of town and entered a steep, narrow gully. Waiting for them in the surrounding hills was the next German delay position.

The Germans had selected an excellent piece of terrain to effect their next delay. Roughly five kilometres south of Piazza Armerina, Highway 117 passed over a narrow plateau that quickly descended into a deep gully. The ground became steeper and more mountainous and was essentially impassable to vehicles. The only path forward was on the

⁴³ Nicholson, *Canadians in Italy*, 90-92; Zuelkhe, *Op Husky*, 196.

⁴⁴ W.D. Loyal Edmonton Regiment, 16 July 1943.

⁴⁵ Nicholson, *Canadians in Italy*, 93.

highway itself. Rising to either side of the road were two large hills with commanding views of the road to the south. The road also bent sharply to the right at the foot of the gully creating a canalized passage perfect for an ambush of a mechanized force.⁴⁶

2nd Battalion of the 104th Panzer Grenadier Regiment (104th PzG Regt) from the 15th PzG Div defended this area. The battalion was spread over a series of mountains with an estimated company located in the vicinity of the ambush area and the remainder of the battalion in depth on high features approximately one and a half kilometres further north. They had sited their artillery and mortars to fire on the highway once an ambush was launched. To ensure that the Canadians remained in their kill zone, they also wired explosives to blow a crater into the road right at the turn in the road. Machine gun nests were well concealed and dug into the hill or mounted in houses to the right of the road and were positioned to be able to sweep the entire length of the highway in the kill zone.⁴⁷ In its totality, the German ambush position could have been pulled directly from a military training manual. They had tight, canalizing terrain, a means of cutting off escape from the kill zone, and multiple weapon systems sited to inflict damage on the Canadians.

C Coy and the Three Rivers tanks entered this ambush zone about midday on 16 July. As they descended into the steep gully, they noticed a smoke signal launched near a house on the hillside to their right. The infantry quickly investigated but found nothing to indicate the presence of Germans at that time.⁴⁸ Unfortunately, this was very clearly a signal to the German defenders that the Canadians were about to enter their kill zone. Having decided there was nothing further to investigate, the Canadian column continued moving along the

⁴⁶ U.S. Army Map Service, *Piazza Armerina Sheet 268-II SE, 1:25,000*, 1943, Accessed at <http://digitalarchive.mcmaster.ca/islandora/object/macrepo%3A84235>.

⁴⁷ Stacey, CMHQ, "Report No.135," 9; Nicholson, *Canadians in Italy*, 93

⁴⁸ W.D. Loyal Edmonton Regiment, 16 July 1943; Stacey, CMHQ, "Report No.135," 9.

highway. All of a sudden, three German machine guns opened fire from the hillside to the Canadians' right and a crater was blown in the road ahead.⁴⁹ There was no choice but for the column to come to a halt, with the lead tanks now stuck inside a gully with no room to manoeuvre and heavy German fire falling on to their exposed positions. C Coy quickly dismounted and took cover along the edges of the gully as German artillery and mortars began to drop shells inside the kill zone.⁵⁰ The Canadians were not in a good position.

Fortunately, not all the tanks and infantry had been pinned down inside the gully. 3 Troop under the command of Lt Melvin was far enough back that they could still manoeuvre along the edge of the road. They pushed to the right flank, oriented themselves on the machine gun nests and began to return fire with 75mm High Explosive rounds. In conjunction with anti-tank guns and mortars from the Eddies, and anti-tank guns from 90th Bty of the 1st Anti-Tank Regt, 3 Troop successfully knocked out at least one machine gun post located in a house.⁵¹ Further to the rear, Lt Stelfox's 4 Troop was ordered to move onto the high ground on the left flank in order to identify and destroy the German mortars causing so much trouble in the kill zone. Unfortunately, the ground was impassable to the tanks and instead of identifying the enemy mortars, they began to receive mortar fire themselves. In addition to the enemy indirect fire, 4 Troop had to contend with friendly fire. Short rounds from the Royal Devon Yeomanry blew the track off the lead tank and forced the crew to bail out. Looking to mount onto another tank and pull back to safety, this crew was caught in the open by German mortars and were all killed or wounded. The Three Rivers situation was fraught with confusion. To make matters more difficult, the tank gunners in the forward half

⁴⁹ W.D. Loyal Edmonton Regiment, 16 July 1943.

⁵⁰ W.D. Loyal Edmonton Regiment, 16 July 1943; W.D. 12 CATR, 16 July 1943.

⁵¹ W.D. 12 CATR, 16 July 1943; W.D. Loyal Edmonton Regiment, 16 July 1943; Stacey, CMHQ, "Report No.135," 9.

of the squadron caught in the initial ambush soon realized they could no longer elevate their guns high enough to engage the remainder of the German positions along the hill.⁵² The tanks to the rear were still able to suppress some machine gun posts but were unable to manoeuvre to furnish more support.

With the tanks no longer able to provide effective support, the Eddies were forced to rely predominantly on artillery support. The forward company was still pinned down inside the kill zone, however the depth companies were able to deploy to either side of the road and assault the surrounding hills. They successfully cleared the initial ambush zone and then discovered that there were German positions in-depth. The Eddies proceeded to manoeuvre and seized two large high features to the north of the initial ambush zone by 2100.⁵³ At this point the Germans withdrew north to Piazza Armerina (See Map 2.8).

The entire engagement against the Germans south of Piazza Armerina lasted nine hours. Some argue that the Germans conducted a successful delay on the Canadian advance as they wasted an entire day's worth of forward momentum.⁵⁴ They successfully neutralized the Canadian tanks in battle with the skillful use of ground without even having damaged one, as the only Sherman casualty was the result of friendly fire. The Canadians also took a fair number of personnel casualties. Although the Eddies war diary describes the day's casualties as "light," the engagement cost the infantry battalion six killed and twenty-one wounded soldiers.⁵⁵ The cost to the Three Rivers was three dead and eight wounded tankers.⁵⁶ Nevertheless, despite the delay imposed by the Germans, it also cost them a

⁵² W.D. 12 CATR, 16 July 1943.

⁵³ W.D. Loyal Edmonton Regiment, 16 July 1943; Stacey, CMHQ, "Report No.135," 9.

⁵⁴ Nicholson, *Canadians in Italy*, 94.

⁵⁵ W.D. Loyal Edmonton Regiment, 17 July 1943.

⁵⁶ W.D. 12 CATR, 16 July 1943.

significant number of casualties. Although the exact number is unconfirmed, it is estimated that the Canadians inflicted a company's worth of casualties on the Germans, in addition to capturing "a number of prisoners of war said to include Germans, Italians, Jugo-Slavs, Czechs and Alsatians."⁵⁷ Thus, while the Germans were successful in delaying the Canadians, they also took heavy losses that were not easily replaced which was to the advantage of the Canadians.

The action south of Piazza Armerina was predominantly an infantry action. The Three Rivers tanks' contribution to the Eddies' success consisted mostly of suppressing enemy fire that allowed the infantry to overcome the initial German battle positions. However, this action revealed the importance of the junior leader in tank combat. Faced with an intense and confusing situation where most of his comrades and support were stuck inside an ambush kill zone, Lt Melvin's initiative drove him to order his troop into an exposed position where he could lay fire against the Germans. While it seems like a very simple action that any decent soldier would also do, it is important to remember that this was the first combat action for the tankers of C Sqn. They had little relevant training for this type of scenario and the topography of the ground precluded a normal tanker response against an ambush. However, the initiative shown by a junior troop leader succeeded in destroying at least one German position, suppressed several other enemy positions allowing the infantry to cross the kill zone, and also demonstrated a fundamental understanding of the need to adapt tank combat to the complex terrain of Sicily. Unable to assault the German positions, Lt Melvin ensured that his vehicles were in a position where his gunners could employ their excellent technical skills against a well-prepared enemy defensive position. While the

⁵⁷ Stacey, CMHQ, "Report No.135," 10.

infantry bore the brunt of the fighting on 16 July, the actions of a tank troop leader had an impact on the initial outcome and helped set the stage for further Canadian success.

2.4 – Monta della Forma

While the Germans withdrew from the vicinity of Piazza Armerina around 2100 on 16 July, the Canadians did not finish clearing the town, which was home to the 16th Italian Corps Headquarters, until 0600 on the morning of the 17th.⁵⁸ 3rd Canadian Infantry Brigade was then ordered to pass through 2nd Brigade and carry on the advance which did not resume until 1200. According to the Official History, the action at Piazza Armerina had delayed the Canadian advance by 24 hours.⁵⁹ Hoping to make up some time from the delay of the previous day, 3rd Brigade's goal was to continue to advance north along Highway 117 towards the intersection of the highway with a road leading to the town of Valguarnera.

2nd Battalion of the 104th PzG Regiment, the same unit that had delayed the Eddies the previous day at Piazza Armerina, and a detachment from the Italian Livorno Division occupied strong defensive positions at the intersection of these routes.⁶⁰ The wider German goal was still to impose a delay on the Canadians, but to achieve this, the 104th PzG Regt needed to form a strong area defence⁶¹ hinged on the dominating hill known as Monta della Forma. The Canadians had pressured the German withdrawal and more time was needed to complete preparations on their defensive positions near Leonforte. The Germans had no choice but to commit a larger force to a static area defence at the highway intersection to buy the time they desperately needed. The road approaching the intersection was bordered by

⁵⁸ Ibid., 11.

⁵⁹ Nicholson, *Canadians in Italy*, 94.

⁶⁰ Stacey, CMHQ, "Report No.135," 12.

⁶¹ An area defence is a form of defensive operation with the goal of holding terrain in order to deter the enemy from achieving their goal.

steep high features to either side. The canalized ground ensured that as the Canadians entered the German kill zones, there would be minimal options for them to bypass the German positions. The Germans, reinforced by a detachment from the Italian Livorno Division, established machine gun nests and mortar posts covering the approaches from the south.⁶² They also placed anti-tank guns, and light Italian and French-built tanks along the slopes of Monta della Forma. It was a formidable defensive position. Additionally, the Germans pushed combat outposts south to continue delaying the Canadian advance.⁶³

Resuming the advance at 1200 on 17 July, The Carleton and York Regiment (CYR) of 3rd Brigade and B Sqn of the Three Rivers pushed north along Highway 117. The lead company was mounted on the Three Rivers tanks. As they moved along the highway north of Piazza Armerina, the Canadians encountered more open terrain than they had seen in the previous few days. Citrus groves sprawled across the flat plateaus.⁶⁴ At 1330, the column approached a bridge about four kilometres south of the German defensive position, only to discover that the Germans had destroyed it as part of their delay. With no bypass route easily available, the Canadians called for engineer support and waited three hours while the engineers built a diversion around the destroyed bridge. The column continued its advance at 1630.⁶⁵

However, almost as soon as the Canadians resumed their move to the north, they suddenly came under fire from a German machine gun nest located on a slight pimple to the left of the road as it curled around a dried-up riverbed one kilometer from the destroyed

⁶² Windsor, "The Eyes of All," 21.

⁶³ W.D. 12 CATR, 17 July 1943; CMHQ, "Report No.135," 13.

⁶⁴ Zuelkhe, *Op Husky*, 201; U.S. Army Map Service, *Piazza Armerina Sheet 268-II, 1:50,000*, 1943, Accessed at <http://digitalarchive.mcmaster.ca/islandora/object/macrepo%3A84442>.

⁶⁵ W.D. 12 CATR, 17 July 1943.

bridge. The CYR soldiers reacted quickly, dismounted from the tanks and took fire positions along either side of the road. Additional enemy fire from mortars began to come down from the vicinity of Monta della Forma.⁶⁶ The Three Rivers oriented themselves towards the northwest and began engaging enemy positions (See Map 2.9). What occurred after the initial contact remains unclear due to conflicting reports from the different unit war diaries. The CYR reported that the tanks “were of no help to our infantry.”⁶⁷ Meanwhile, the Three Rivers war diary stated that they manoeuvred along the open terrain to the northwest of the road and successfully engaged enemy positions in the vicinity of Monta della Forma in the direction of Enna from excellent hull down positions. They even complained that the infantry failed to exploit the opportunity provided by their gunnery and break through the German position.⁶⁸ Instead, the CYR followed the brigade plan and continued their advance along the road towards the north clearing out subsequent enemy positions until they were stopped one kilometer from the intersection where the Germans had established their main defensive position.⁶⁹ It is unlikely that this narrative will ever be completely understood without a new source coming to light in the future. However, the lack of clarity in this situation actually provides important insight into the decision-making processes of both the infantry and the tanks.

The infantry mindset is demonstrated through their reaction to German fire. Upon encountering the enemy machine gun nest, the infantry automatically went to ground. Once the initial position was overcome, the CYR pushed north along the road towards the brigade objective where the ground began to turn into the now familiar mountainous terrain once

⁶⁶ W.D. 12 CATR, 17 July 1943.

⁶⁷ W.D. Carleton and York Regiment, 17 July 1943.

⁶⁸ W.D. 12 CATR, 17 July 1943.

⁶⁹ W.D. Carleton and York Regiment, 17 July 1943.

again. This close terrain offered cover and protection from enemy fire which is a comforting factor for unarmoured infantry. The CYR used this ground to excellent effect and inflicted significant casualties on the Germans. In contrast, the Three Rivers had finally reached terrain that was favourable to tanks. As described in their war diary, “the ground in this area was very good for manoeuvre, very hilly, but offered good hull-down positions.”⁷⁰ Just like the failed attempt to create a combined battle drill between infantry and armour during their training in 1942, the Three Rivers once again chose to operate in the fashion that benefited them the most, rather than subordinating themselves to the infantry. B Sqn found open terrain and good firing positions and manoeuvred to those rather than follow the infantry into the close terrain along the road further to the north. The fire coming from the German positions at Monta della Forma also offered a long-range gunnery battle like they had prepared for in Britain. Even the commanding officer of the Three Rivers, LCol Booth, ignored the CYR advance, manoeuvred his vehicle into the open ground to the northwest of the road and directed a concentration of B Sqn fire onto Monta della Forma on the German depth positions. Nevertheless, despite the Three Rivers decision to engage their own targets and the CYR’s perception that the tanks had been “of no help,” in fact, the tanks had successfully engaged positions from the Italian Livorno Division detachment. Following the engagement, Booth conducted a reconnaissance of the tank engagement area and discovered that they had forced the Germans and Italians to withdraw from the position and abandon an Italian self-propelled gun, two anti-tank guns, a French machine gun tank, and two Italian light tanks.⁷¹ However, the fact that the Three Rivers had not conducted their engagement in close co-operation with the infantry meant that there was no one to take advantage of their success.

⁷⁰ W.D. 12 CATR, 17 July 1943.

⁷¹ W.D. 12 CATR, 17 July 1943.

The CYR were concentrated on their own fight. Thus, the claims of both the CYR and the Three Rivers hold some merit. The Three Rivers had not been of much help to the CYR advance and the CYR did not exploit the Three Rivers fire support because both arms failed to coordinate their activities. Despite the opinions of both units on the shortcomings of each other, the reality of the situation is more complex. The Three Rivers wanted someone to exploit their success, but the CYR were caught up in their own fight. Therefore, it is highly unlikely they could have easily disengaged, manoeuvred far to the west, and then put in a flanking attack on Monta della Forma. Additionally, there was a brigade level intention to launch a flanking attack with the West Nova Scotia Regiment (WNSR) who had come up in behind B Sqn on the battlefield. However, that plan was scrapped in favour of having the WNSR support a Royal 22e Régiment (R22R) attack on the intersection later that night.⁷²

The end of 17 July left the Germans in control of the intersection although they had taken many casualties. They were reinforced throughout the night and the next morning by elements of the 1st Battalion of the 104th PzG Regiment. However, on 18 July, 3rd Brigade launched a brigade level attack with the R22R driving straight into the teeth of the German position along the road to fix the attention of the defenders, while the CYR flanked the position to the east through the mountains, and the WNSR flanked the position by manoeuvring around the western slopes of Monta della Forma. Farther to the east, the Canadians of 1st Brigade had seized the town of Valguarnera (See Map 2.10). The German defenders were essentially encircled and had no choice but to hurriedly withdraw to the north

⁷² W.D. West Nova Scotia Regiment, 17 July 1943.

along rough paths after having blown up critical supply and fuel dumps.⁷³ The Canadians had defeated the last major delay position south of the German defensive line at Leonforte.⁷⁴

2.5 – The Baptism Ends

The Three Rivers engagements at Grammichele, Piazza Armerina, and Monta della Forma stand as three separate baptisms of fire. Although Grammichele was the first Canadian engagement against the Germans, each of those three actions was the first experience of war for the three individual tank squadrons. A Sqn at Grammichele engaged a well-prepared defensive position with a mix of tanks, anti-tank guns, machine guns, and mortars. C Sqn at Piazza Armerina was the victim of a vicious and well sited ambush that prevented the tanks from being employed to their fullest capabilities. B Sqn at Monta della Forma chose to engage long range depth targets and manoeuvre in the open ground in lieu of providing intimate support to the infantry in close, mountainous terrain. Three different squadrons had three vastly different experiences. Yet, despite the differences of the individual engagements, there were similarities in performance that indicate the standard to which Three Rivers soldiers were trained, the importance of their junior leaders, and the impact of terrain on decision-making.

Poor coordination with the infantry was prevalent in two of the three engagements. At Grammichele, the tanks of A Sqn had an opportunity to provide intimate support as B Coy of the Hasty Pees entered the town. That they failed to do so in favour of remaining outside of the town was the result of the armoured doctrinal mindset that taught tankers to avoid entering built up areas and seek open ground to manoeuvre against enemy positions. Their

⁷³ Windsor, “The Eyes of All,” 22.

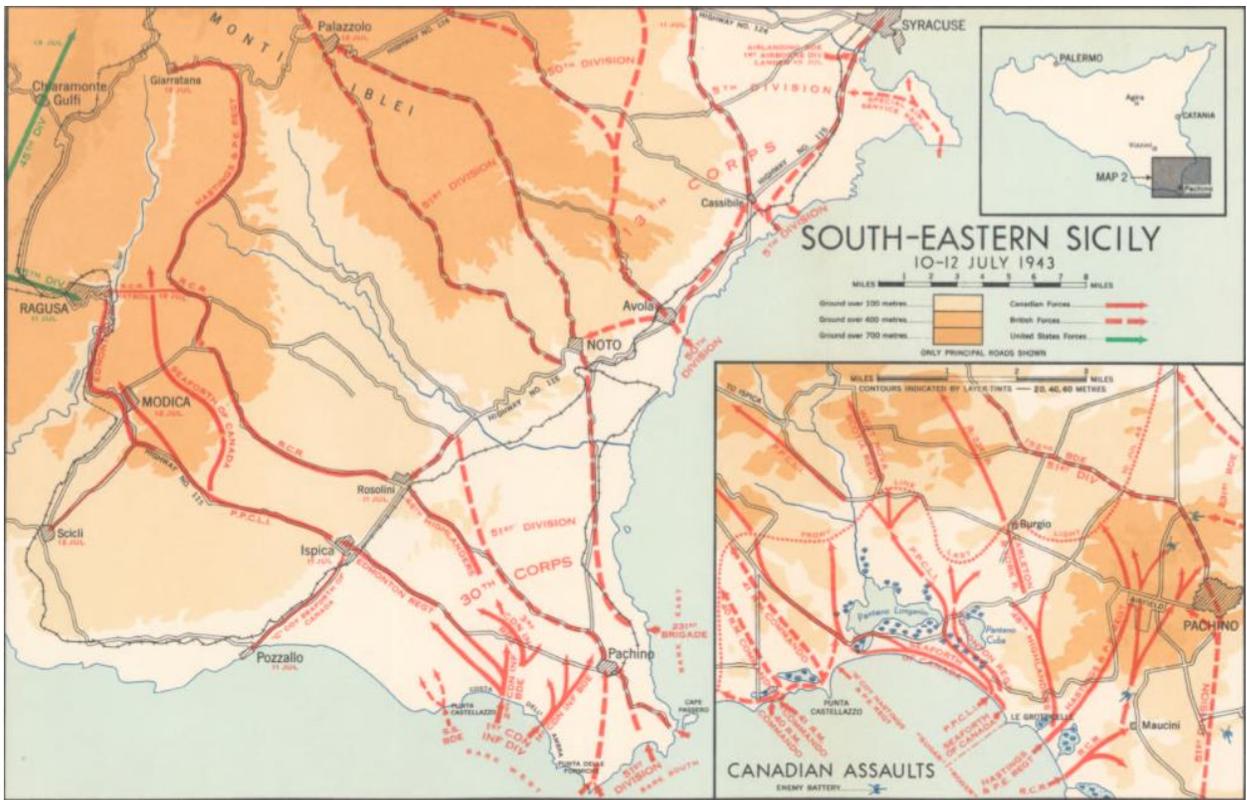
⁷⁴ Nicholson, *Canadians in Italy*, 96-100.

doctrine also taught them to emphasize engagements against larger weapon systems such as tanks rather than work closely with infantry attempting to seize objectives. This can be seen in B Sqn's actions at Monta della Forma where instead of supporting the CYR advance along the highway, they manoeuvred independently to positions in the more open terrain where they could engage long-range depth targets. At this point in the campaign, they fell back to the familiarity of their doctrinal training rather than adapt to the needs of the combat situation.

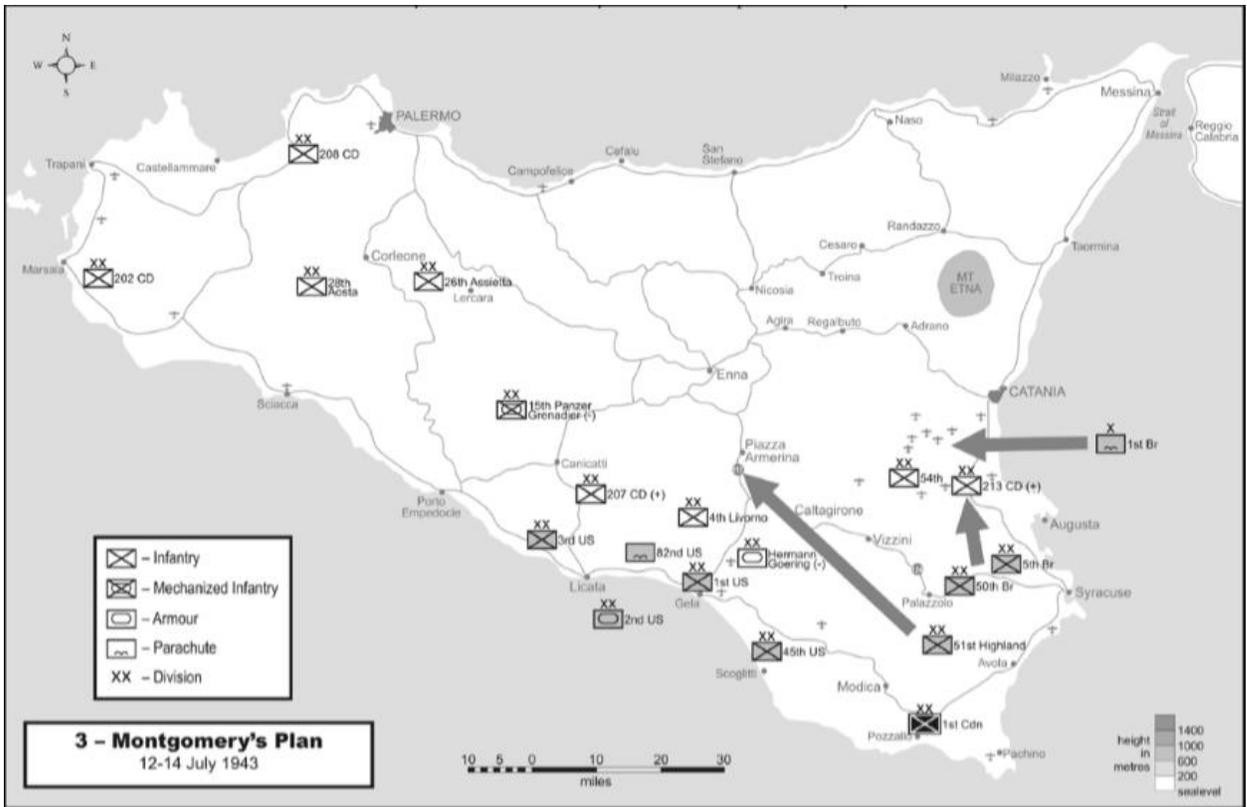
That is not to say that the Three Rivers training was a detriment to their combat responses as the technical capabilities of their gunners and drivers enabled the junior leaders to make good tactical decisions that maximized their value in difficult situations and terrain. Given that the three engagements they fought occurred in unfavourable terrain, the Three Rivers troop leaders adapted to the battlefields upon which they found themselves. The approach to Grammichele was a kill zone that maximized the effects of the German weapon systems. It was therefore a good decision by the leaders of A Sqn to quickly manoeuvre themselves out of the kill zone and onto a terrain feature which offered good firing positions. Instead of remaining at the mercy of the German anti-tank guns, they adapted to the situation and were able to destroy several weapon systems thanks to the brave efforts of Lt Ryckman and Pte Gunter in identifying German positions. The ambush at Piazza Armerina was particularly trying for the Three Rivers tanks as the terrain limited their capacity to engage targets high above them. Nevertheless, Lt Melvin's decision to move his troop into a position where it was able to support the infantry is indicative of Three Rivers leaders' ability to quickly analyze terrain and manoeuvre their vehicles to positions of fire support. The fight at Monta della Forma supports the assessment of the Three Rivers ability to analyze terrain.

Although their decision to manoeuvre in the open ground may not have been the best choice in terms of the overall tactical fight, it does demonstrate an understanding of terrain, firing positions, and the self-awareness to place their vehicles in locations that played to their strengths in long-range gunnery.

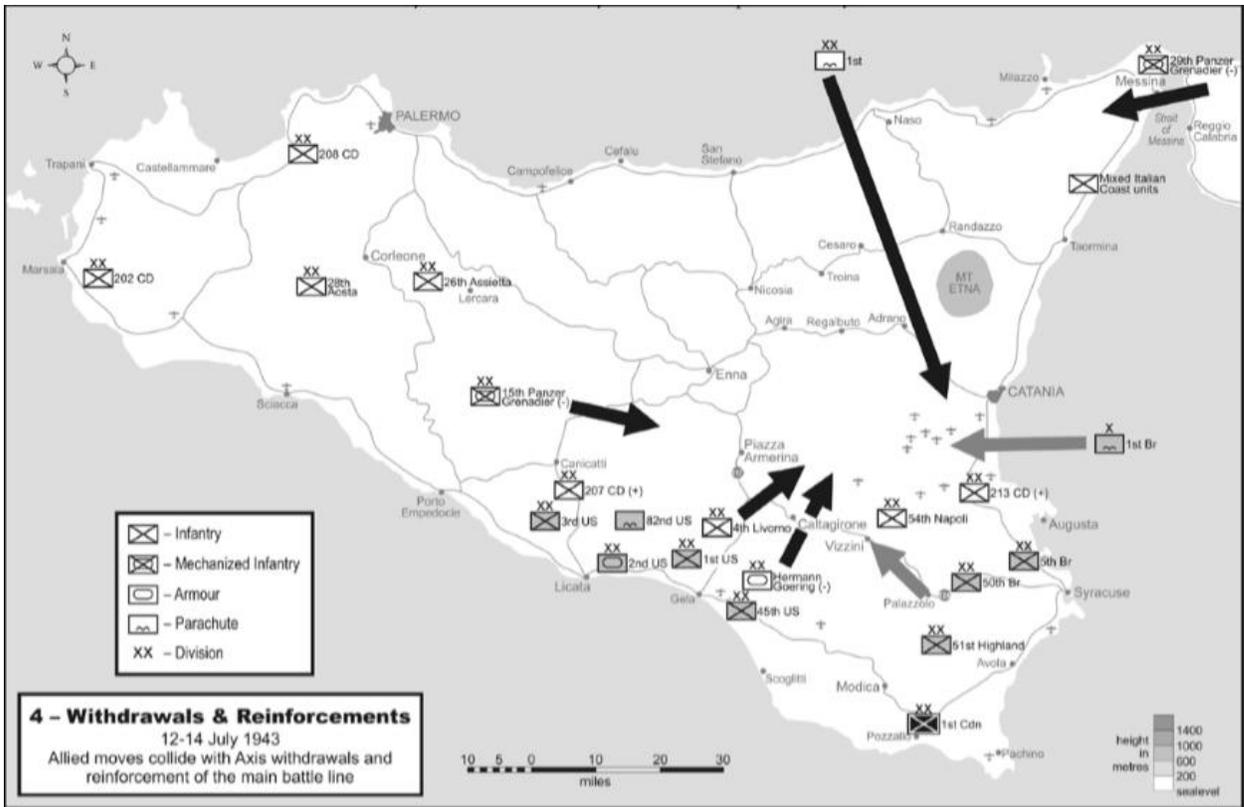
Overall, a closer look at the baptisms of fire at Grammichele, Piazza Armerina, and Monta della Forma reveal that the Three Rivers leaders and soldiers landed in Sicily with the necessary capabilities to adapt and fight in unfavourable terrain, but still had areas to improve on to attain maximum fighting effectiveness. Their first successes against German delay forces helped to set the conditions for the looming battle along the main German defensive line in Enna Province. The Three Rivers would continue to build upon their hard-fought combat experience as they entered the next phase of the campaign over the following ten days.



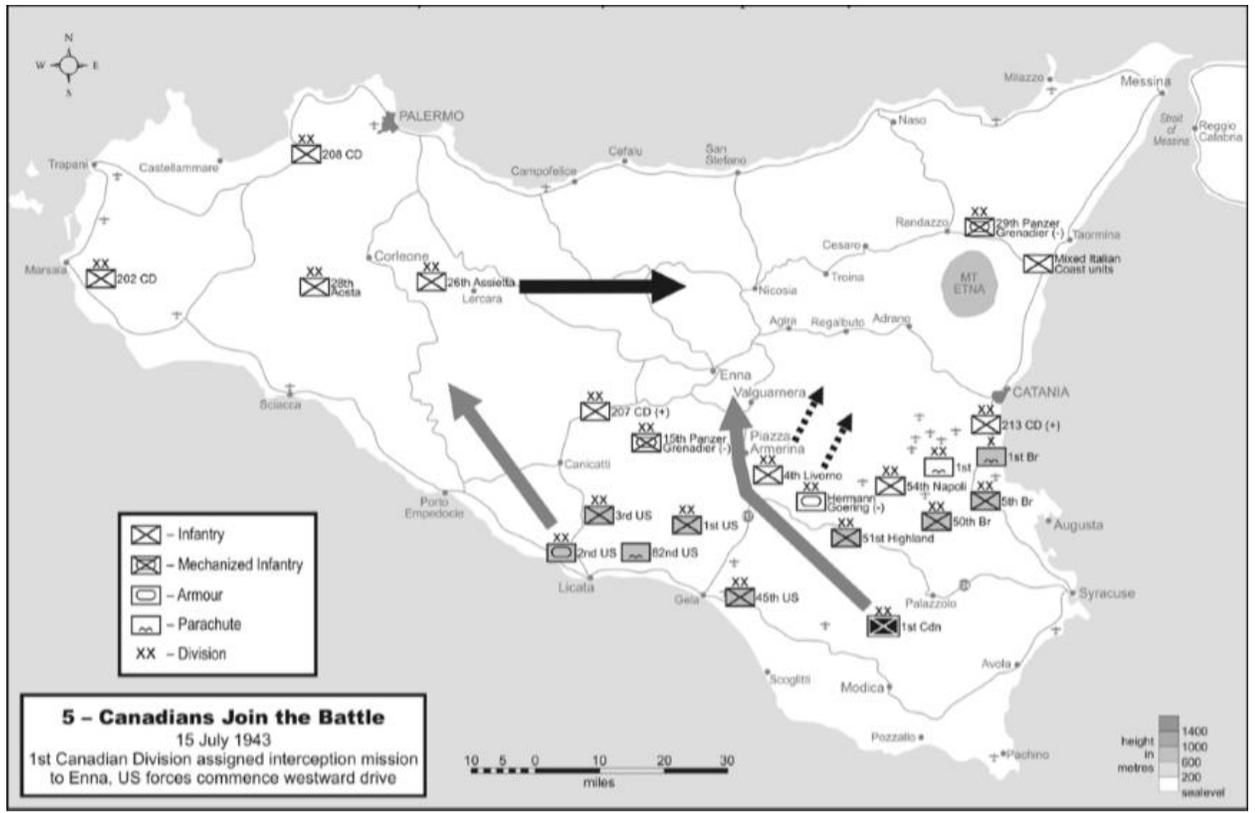
Map 2.1 – Canadian Invasion of South-Eastern Sicily 10-12 July 1943 (Map from Nicholson, *Canadians in Italy*)



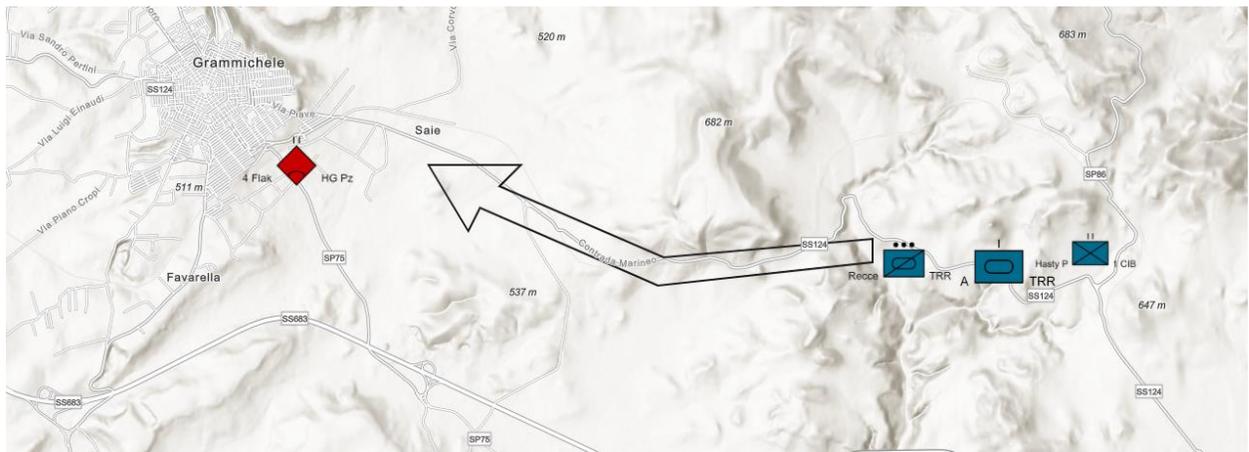
Map 2.2 – British 8th Army Planned Advance (Map from Windsor, “The Eyes of All,” *CMH* 22.3)

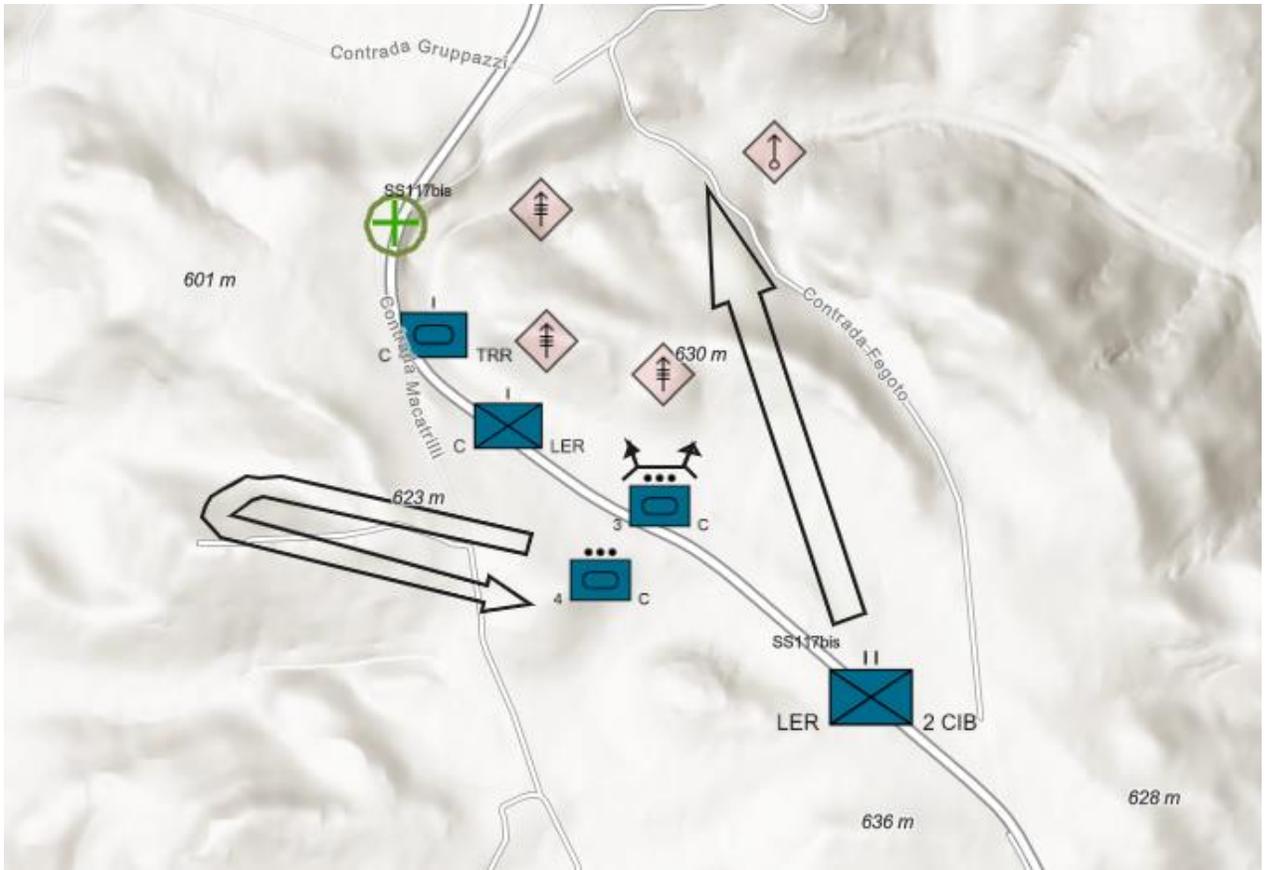


Map 2.3 – German Withdrawals and Reinforcements (Map from Windsor, “The Eyes of All,” *CMH* 22.3)

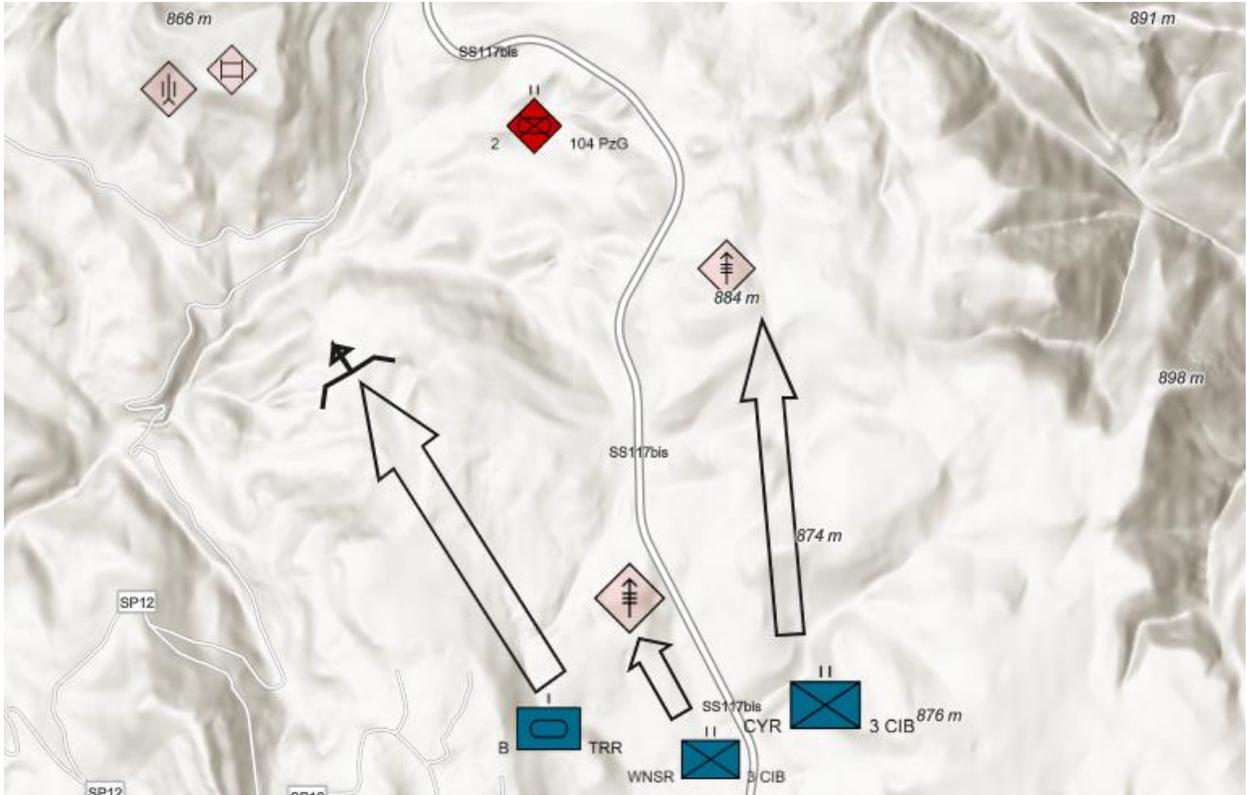


Map 2.4 – Canadians Join the Battle (Map from Windsor, “The Eyes of All,” *CMH* 22.3)

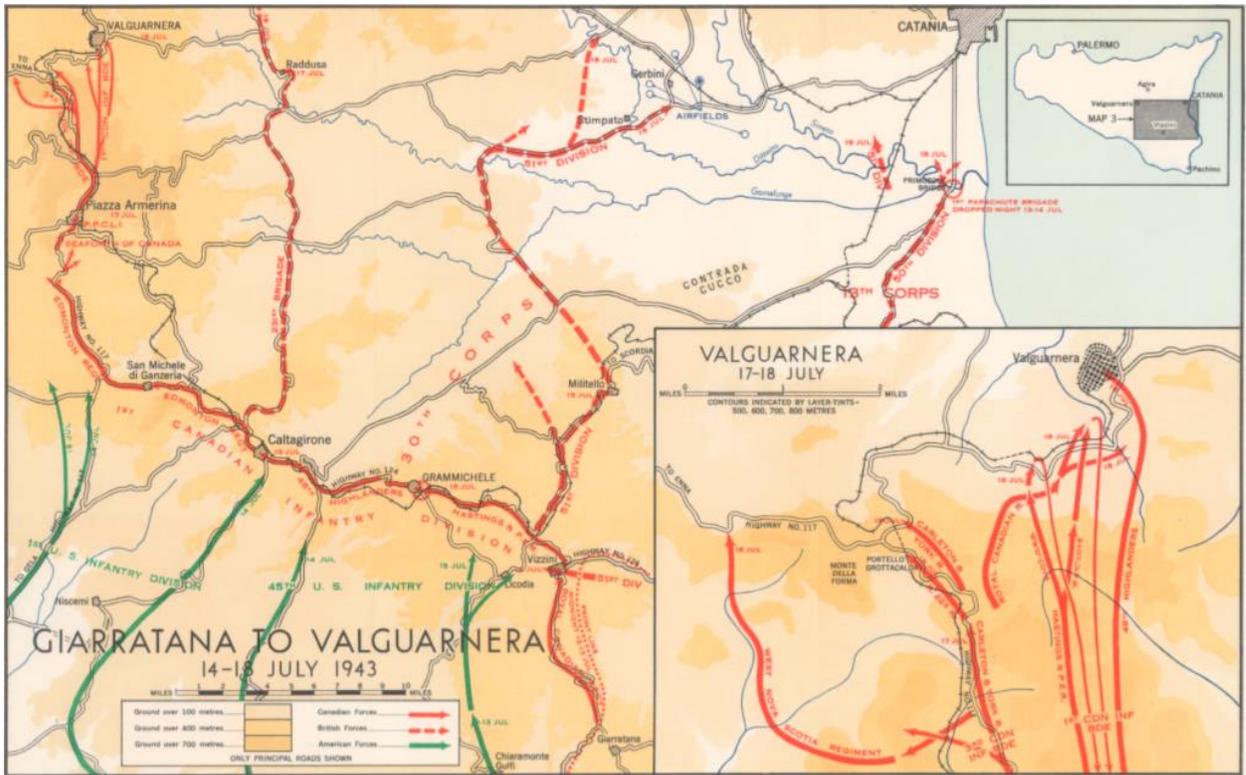




Map 2.8 – Ambush and Reaction South of Piazza Armerina, 16 July 1943 (Map created by Andrew Garrie)



Map 2.9 – Separation of Forces at Montagna della Forma, 17 July 1943 (Map created by Andrew Garrie)



Map 2.10 – Canadian Advance, 14-18 July 1943 (Map from Nicholson, *Canadians in Italy*)

Chapter Three: Learning to Fight in the Mountains

The next phase of the Three Rivers Regiment's experience in Sicily unfolded on even more mountainous ground and against stiffening Axis opposition. German reports captured by Canadians reveal that after the first eight days of combat during the Sicilian Campaign, the German soldiers of the 15th Panzer Grenadier Division (15th PzG Div) were ordered to fall back and establish a defensive line between Bonpietro and Leonforte.¹ Axis counterattacks failed to destroy the initial Allied landings and they needed to establish defensive positions in the centre of the island to buy time for reinforcements to arrive from Italy. The 15th PzG Div's delay battles between 16 and 18 July 1943 were designed to give more time to defenders and enable them to finish building their defences in the vicinity of Leonforte. It is important to note that while the 15th PzG Div had transitioned to conducting a static area defence along the Bonpietro-Leonforte line, the overall German intent was that this defence would delay the Allied advance through the centre of the island and thus prevent German forces from being cut-off in the north-west of the island and allow the 29th Panzer Grenadier Division to arrive in Sicily and bolster the Axis defences.²

The German transition to static defences along the Bonpietro-Leonforte line meant that the approaching Canadians entered a new phase of the campaign. Following a restructuring of army level boundaries between the British and Americans on 18 July, the Canadians no longer aimed for Enna but instead turned north towards Leonforte and ultimately Agira. MGen Guy Simonds accordingly ordered 1st and 2nd Canadian Infantry Brigades to capture the towns of Assoro and Leonforte on 19 July. The new phase

¹ Army Headquarters, "Report No.14 – The Sicilian Campaign (July-August 1943), Information from German Sources," (Directorate of Heritage and History, Department of National Defence, 1947), 13.

² G.W.L. Nicholson, *Official History of the Canadian Army in the Second World War, Vol II The Canadians in Italy, 1943-1945*, (Ottawa: Queen's Printer, 1956), 117; Lee Windsor, "'The Eyes of All Fixed on Sicily' Canada's Unexpected Victory, 1943," *Canadian Military History* 22, no. 3 (Summer 2013): 7.

necessitated harder, bolder plans to overcome significant German defences located in difficult mountainous terrain. While the infantry could more easily adapt their battle plans and manoeuvre off roads and around the mountains (although this type of manoeuvre often meant losing their artillery support), the Three Rivers had limited options to move off main roads to provide critical direct fire support to the attacking infantry. Boldness and innovative thinking by individual crew commanders and troop leaders became essential to the Three Rivers during the engagements at Assoro and Leonforte on 22 July 1943, as well as during the fights at Nissoria and Agira between 24 and 28 July. It was during these engagements that the soldiers of the Three Rivers demonstrated a clean break from their doctrinal training and fully immersed themselves in adapting and fighting according to the situation.

3.1 – Assoro and Leonforte

For the first engagements during this defensive phase, 1st Canadian Infantry Division found itself at the eastern edge of the defensive line along the Leonforte Ridge. This ridge presented a formidable challenge as it towered over the approach routes from the south. The ridge peaks at its eastern edge where the town of Assoro sits 900 metres above sea level. The road leading into Assoro from the south crosses a pyramid shaped hill that rises from the flat Dittaino River valley and stands only 300 metres above sea level. 3 kilometres to the northwest, the town of Leonforte stands on a flat plateau 600 metres above sea level, which is 200 metres higher than the approach to the town from the south. The entire ridge is shaped like a “C” with the two towns located on opposing ends. A deep gully separated the two ends, leaving only a narrow ridgetop connecting them. German defenders along the top of the ridge commanded a dominating view of the approaches to the town. Additionally, a ravine

runs along the southern edge of the ridge and acts as another barrier to an enemy assault.³ Not only is the ridge taller than the surrounding countryside to the south, it is also very steep, rocky, and terraced with loose soil, all of which make the ridge difficult to climb.⁴ Obvious entries to the ridge consisted of only two roads: one to Leonforte, and one to Assoro. These roads are switchbacked and windy (especially in front of Assoro), offering the defender easy engagement zones against an attacker.⁵ The natural defences of the ridge made this an ideal position for a static area defence (See Map 3.1).

The 104th Panzer Grenadier Regiment, reinforced with an Italian battalion and artillery, took advantage of this excellent natural defensive position.⁶ Having withdrawn from their delay positions between 16 and 18 July, all three battalions of the regiment had fallen back into the prepared defensive position along the Leonforte Ridge.⁷ It is estimated that there were at least 500 soldiers in the vicinity of the town of Leonforte.⁸ Using that figure as a guide, it is likely that one battalion was committed to the defence of Leonforte and a second to the town of Assoro. The third battalion was likely in reserve to the north of the ridge, ready to reinforce the line as needed. The Germans along the ridge dug themselves into pits and caves along the forward slopes. Lots of scrub brush along the slopes of the ridge meant these positions were well camouflaged and difficult to spot until they opened fire. Adhering to their standard defensive doctrine, the German soldiers had many machine guns placed in

³ U.S. Army Map Service, *Leonforte Sheet 268-I NE, 1:25,000*, 1943, Accessed at <http://digitalarchive.mcmaster.ca/islandora/object/macrepo%3A84267>.

⁴ Nicholson, *Canadians in Italy*, 101.

⁵ C.P Stacey, Canadian Military Headquarters, "Report No.135, Canadian Operations in Sicily, July-August 1943, Part II: The Execution of the Operation by 1 Cdn Div, Section 2: The Pursuit of the Germans from Vizzini to Adrano 15 Jul - 6 Aug." (Directorate of Heritage and History, Department of National Defence, 4 May 1945), 20.

⁶ Windsor, "The Eyes of All," 25.

⁷ Nicholson, *Canadians in Italy*, 112.

⁸ Mark Zuelkhe, *Operation Husky*, (New York: Douglas & McIntyre Publishers Inc., 2009), 246.

these forward positions. They also had mortars placed in depth positions, pre-sited to engage the approach routes with deadly indirect fire. Anti-tank guns in Assoro were located in depth in case of enemy penetration as the steep slopes meant these guns could not depress their barrels enough to engage approaching targets without becoming exposed to return fire. The reverse was true in Leonforte where the terrain permitted easier engagement zones. Regimental artillery was held to the north-east ready to send artillery strikes against approaching vehicles along the main routes.⁹ Finally, the Germans also sent out combat outposts to the south of the main position with the purpose of ambushing the approaching Canadians, forcing them to waste time and deploy to counter the threat, and then withdrawing to minimize their own casualties.¹⁰

The 1st Division advance towards the Leonforte Ridge occurred along two axes, with 2nd Brigade advancing on the left towards Leonforte and 1st Brigade on the right towards Assoro. Each brigade had a squadron from the Three Rivers attached. A Sqn advanced with 2nd Brigade and C Sqn with 1st Brigade. Both brigades crossed the Dittaino River and followed the roads towards their respective objectives, and both encountered minor delaying positions from German combat outposts. The lead elements from C Sqn also ran into a minefield which damaged the tracks and bogie wheels of nine tanks and forced the remainder of the squadron to halt in place, including six other tanks who were already in the minefield.¹¹ The crews attempted to remove the mines by hand in order to allow the fitters from their supporting mechanic detachment to retrieve the vehicles and repair damage. The

⁹ W.D. 1st Canadian Infantry Brigade Headquarters, 19-22 July 1943; W.D. 2nd Canadian Infantry Brigade Headquarters, 19-22 July 1943; W.D. 48th Highlanders, 21-22 July 1943; W.D. Hastings and Prince Edward Regiment, 20-22 July 1943; W.D. Loyal Edmonton Regiment, 21-22 July 1943; W.D. Saskatoon Light Infantry, 20 July 1943.

¹⁰ W.D. Loyal Edmonton Regiment, 19-20 July 1943; W.D. Seaforth Highlanders of Canada, 19-20 July 1943; Windsor, "The Eyes of All," 25.

¹¹ W.D. 12th Canadian Army Tank Regiment, 19 July 1943.

Three Rivers soldiers picked up over 200 mines but then came under mortar fire and had no choice but to seek shelter in their tanks overnight for the next five hours. All vehicles were eventually recovered and repaired for future operations but were unavailable for the fight in Assoro as repairs were not completed until 1600 on 22 July after the town had been captured by 1st Brigade.¹²

While C Sqn was stuck in the minefield, the infantry of the Royal Canadian Regiment continued the advance and seized two high features about four kilometres south of Assoro. On the following day, to the west, a combination of tanks from A Sqn and infantry from the Princess Patricia's Canadian Light Infantry successfully seized a high feature, known as Monte Desira Rossi, which gave them observation onto the town of Leonforte.¹³ By the end of 20 July, the Canadians were in sight of both objectives and prepared for assaults to seize them the following day. It is important to state here that the attacks on Leonforte and Assoro were part of one overall 1st Division battle. However, due to terrain and formation boundaries, these two engagements are often discussed as separate actions because there were limited interactions between 1st and 2nd Brigades during the fighting along the ridge.¹⁴ For ease of understanding the Three Rivers contributions and actions to these engagements, this chapter will first examine the impact of C Sqn on 1st Brigade's attack on Assoro, followed by A Sqn's contribution to 2nd Brigade's assault on Leonforte.

¹² W.D. 12 CATR, 19 July 1943; W.D. 60 Light Aid Detachment, 19-22 July 1943; Jack Wallace, "Shermans in Sicily: The Diary of a Young Soldier, Summer 1943," *Canadian Military History* 7, No. 4, 65.

¹³ W.D. Princess Patricia's Canadian Light Infantry, 20 July 1943.

¹⁴ Nicholson, *Canadians in Italy*, 103-110; Stacey, CMHQ, "Report No.135," 22-35. Zuelkhe, *Op Husky*, Chapters 14-16.

3.2 – “Foolhardy enough to take tanks up there” – Climbing the mountains at Assoro

In Canadian military history, the story of the Battle of Assoro (20-22 July) is the story of the Canadian infantry. The Three Rivers, still recovering and repairing vehicles from their venture into a minefield on 19 July, did not contribute at all on 20 and 21 July. While they reorganized, the 1st Brigade infantry continued their attacks. The Hastings and Prince Edward Regiment were assigned the task of launching the first assault on the heights of Assoro. Eschewing a daylight frontal attack along the only road into town, the Hasty Pees decided on a bold flank attack. Manoeuvring in the low ground to the east of the ridge, the infantry climbed the terraced cliffs during the night of 20 July. While a portion of the battalion climbed the hill, the remainder of the battalion, consisting of the support weapons platoons, carriers, mortars, anti-tank guns, and resupply, waited along the road in transports, ready for a green signal flare to indicate they should join in the attack and hopefully catch the German defenders between two forces. At 0300, a green signal flare ignited over Assoro.¹⁵ The Hasty Pee vehicles began rolling towards the town. However, the flare belonged to the Germans who used green signal flares as a signal to call down pre-sited mortar fire.¹⁶ Therefore, the Canadian column drove into a well-sited kill zone and several vehicles were destroyed by machine gun and mortar fire. The infantry took several casualties as well.¹⁷ While the battalion support had withdrawn back to the south, the main Hasty Pee force continued to climb and, by daybreak, reached the summit of the highest point of the ridge (See Map 3.2). From that location they were able to prevent German reinforcements from coming up onto

¹⁵ W.D. 1st Anti-Tank Regiment, 20 Jul 1943.

¹⁶ Stacey, CMHQ, “Report No.135,” 31.

¹⁷ For further reading on the Hasty Pees’ portion of the Battle of Assoro, see: W.D. Hastings and Prince Edward Regiment, 19-22 July 1943; Farley Mowat, *The Regiment*, Toronto: McClelland and Stewart Ltd., 1973; Stacey, CMHQ, “Report No.135,” 30-35; Nicholson, *Canadians in Italy*, 101-107; Zuelkhe, *Op Husky*.

the ridge and call down artillery concentrations on German movements north of the town. They held their ground throughout the day of 21 July despite no food, water, or extra ammo until resupplied by a detachment of RCR that night.

Despite the Hasty Pees' success in seizing the summit of the mountain, their precarious position required an additional Canadian attack to seize the main entrance to town and relieve the infantry. Accordingly, Brigadier Howard Graham, commander of 1st Brigade, ordered the 48th Highlanders to launch an attack. Once again, a daylight attack was determined to be too dangerous and the 48th Highlanders spent the day of 21 July moving forward to assembly areas along the reverse slopes of hills south of Assoro. They planned their attack for the early hours of 22 July. The rifle companies were to climb the ridge from the southwest, avoiding the road, and seize the high features that surrounded the town.¹⁸ The attack launched shortly after midnight and the infantry quickly found themselves under heavy fire from machine gun posts and mortars. Fortunately, they were to receive some support from the tanks of C Sqn.

1 Troop, under the command of Lt B.G. "Slim" Waldron, was ordered to push forward to support the Highlander attack. Unfortunately for Waldron, his tanks could not go cross-country to directly support the infantry. Instead they needed to follow the only road north, directly into the teeth of the German positions that had savaged the Hasty Pee column the day before.¹⁹ Advancing along the road and climbing the first hill south of Assoro, 1 Troop quickly cleared the enemy positions located on that hill. The report from the Three

¹⁸ W.D. 48th Highlanders, 21-22 July 1943.

¹⁹ W.D. 12 CATR, 21 July 1943. The 12 CATR war diary records the action in support of the 48th Highlanders as having occurred on 21 July. However, this is an error as reports by other units confirm that the 48th Highlander attack occurred on 22 July with the support of the Three Rivers tanks; U.S. Army Map Service, *Leonforte Sheet 268-1 NE, 1:25,000*, 1943, Accessed at <http://digitalarchive.mcmaster.ca/islandora/object/macrepo%3A84267>.

Rivers war diary reveals the intensity of that morning's fight, as well as the difficulties of Waldron's troop in manoeuvring into a position of fire from which they could support the Highlanders.

The ridges, along the approaches to Assoro, were heavily defended by mortar and machine gun fire, which the infantry could not locate. The deadly fire from these concealed positions had blocked the roads with dead vehicles of all types. To even show a portion of one's anatomy to these ridges meant a terrific fusilage of enemy fire. The approach to the mountain positions held by the enemy consisted of a winding road, with many "U" turns. The outside of the road was unprotected and with sheer drops of two or three hundred feet in many places. It looked impossible, but Lieut Waldron, Commanding No. 1 Troop, led his troop up a boulder strewn cutting and, with steady blasts of 75mm H.E., succeeded in clearing the enemy from their positions, in the many coves in the mountain side.²⁰

The boldness of the Three Rivers tankers in climbing their tanks to the side of the mountain took the Germans completely by surprise. "The enemy had not considered that anyone would be foolhardy enough to take tanks up there. They were mistaken... and paid for it."²¹ The well-concealed German positions along the ridge had threatened to stop the 48th Highlanders advance, but the arrival of Shermans in such an unexpected spot meant they had a shooting gallery with their main guns onto those German positions. Due to the fact that the Germans had assumed tanks would be unable to contribute to the Canadian attack, they had kept their anti-tank guns in depth in Assoro, rather than along the forward edges where they could have responded to the Shermans. Despite the success of Waldron's troop in silencing the German positions, they did not have direct communication with the Highlanders. They had to send transmissions over the radio to their squadron leadership, who then had to pass the message on to the Three Rivers HQ. The message then had to be relayed to the 1st Brigade HQ who would then finally send it to the Highlanders HQ. Coupled with transmission issues with the

²⁰ W.D. 12 CATR, 21 July 1943.

²¹ Ibid.

infantry's radios, there was quite a delay between Waldron's actions and the beginning of the infantry's assault. As a result, the Three Rivers tanks had to remain in position until 1100 hours at which point the infantry finally received word they had the required direct fire support and "advanced under the covering fire of the tanks and secured the ridge."²² By the late afternoon, the town of Assoro had been seized by the 48th Highlanders and the Hasty Pees (See Map 3.3).²³

The use of tanks at Assoro reveals a couple of points about the innovativeness of Three Rivers junior leaders when confronted with a complex problem. Tanks are considered of minimal use in mountain fighting because they cannot operate with the kind of mobility that provides one of their major advantages. They are generally confined to narrow roads that restrict their ability to find and adopt firing positions. Additionally, the enemy has usually prepared a kill zone for all vehicles who must follow these canalizing paths. However, as demonstrated by Waldron and his troop, bold tank commanders with confidence in their vehicles and their crew, accompanied by a strong ability to read the ground, can overcome these tactical challenges to provide excellent fire support and help destroy enemy defensive positions. Rather than adhere to an orthodox viewpoint on tanks in mountains, Waldron adapted his plan to the ground, and rather than attempt to participate in an assault on the town, established his troop as a firebase. This task he carried out to great effect, revealing the importance of direct fire support to the attacking infantry. As stated by Lt Jack Wallace of C Sqn, "Tanks, even when deployed in penny-packets or individually, were a great asset in so-called non-tank country."²⁴ Of course, Waldron did not accomplish this all by himself, but as

²² Ibid.

²³ W.D. 48th Highlanders, 22 July 1943.

²⁴ John F. Wallace, *Dragons of Steel: Canadian Armour in Two World Wars*, (Burnstown: General Store Publishing House, 1995), 181.

part of a crew and a troop. The precarious position his troop's tanks adopted would not have been possible without the skilful handling of their vehicles by the tank drivers. These soldiers manoeuvred around boulders and rocks up a steep incline with the understanding that a wrong turn could send the entire tank off the side of the mountain. Success at Assoro stemmed as much from the driver's and gunner's technical capabilities as it did the commander's boldness. Additionally, the psychological impact of tanks appearing in firing positions deemed "impossible" cannot be underestimated in overcoming a stubborn defender who was confident that their use of the ground had negated such a powerful weapon on the battlefield. There is nothing as terrifying in battle than an enemy appearing from an unexpected direction where one is unprepared to counter their attack. When one combines Waldron's appearance on the mountainside with the Hasty Pees' seizure of the rear of Assoro, and the 48th Highlanders infiltration of the front of the position, there is little doubt that there was a serious psychological effect on German defenders. While Waldron's fire support achieved great effect against the German positions, there remained issues with communication between the tanks and the infantry. Despite accomplishing their task as a firebase upon which the Highlanders could manoeuvre, ineffective communications between the Three Rivers and the 48th Highlanders caused delays in exploiting the effects achieved by the tanks. This was a systemic issue based on the unreliable infantry radio sets which also were incompatible with the tank radios, thus forcing all communications to pass through the brigade to go between units. Ultimately, despite the communication issues, the C Sqn tanks performed well on the morning of 22 July and demonstrated their value as part of a combined-arms attack in mountainous terrain.

3.3 – Flying Column in Leonforte

On the 2nd Brigade front, the advance towards Leonforte commenced the morning of 20 July with the Loyal Edmonton Regiment securing a crossing over the Dittaino River eight kilometres south of their objective.²⁵ The advance was slowed by a crater in the road that required engineer support to create a diversion.²⁶ The PPCLI and a troop of tanks from A Sqn captured Monte Desira Rossi with a commanding view towards Leonforte in the afternoon and facilitated the advance of the Seaforth Highlanders of Canada to a position just south of the ridge.²⁷ The day of 21 July saw the Seaforths trade fire with German positions along the southern edges of the ridgeline. Daylight proved to be too dangerous to launch an attack so the Seaforths planned to assault Leonforte that evening. Unfortunately, during the preparatory artillery fire on the town prior to the Seaforth attack, a few short rounds fired by Canadian guns landed in the vicinity of the Seaforths' Battalion Headquarters, killing four soldiers and wounding or concussing several others, including the CO LCol Bert Hoffmeister. Due to the confusion in the Seaforths' leadership, Brigadier Chris Vokes, 2nd Brigade Commander, postponed the assault on Leonforte and ordered the Eddies to take over the attack.²⁸

The Eddies stepped off for their attack at 2100 the night of 21 July. The bridge crossing the ravine just south of Leonforte had been destroyed by the Germans as part of the defensive plan, combined with the complexity of a night attack in complex terrain that the Canadians were not prepared for meant the Eddies had to make their attack without close support from Three Rivers tanks. The Eddies descended into the ravine and then followed it

²⁵ W.D. Loyal Edmonton Regiment, 20 July 1943.

²⁶ Stacey, CMHQ, "Report No.135," 23.

²⁷ W.D. Seaforth Highlanders of Canada, 20 July 1943.

²⁸ Ibid.

until they could climb the ridge and attack into town. Two companies were committed forward into the streets of Leonforte and initial opposition was light. However, as A Coy came to the centre of town, the Germans launched a determined counterattack with infantry and tanks. Over 100 Eddies, including the Battalion Commander, LCol Jim Jefferson, were cut off without communications and would remain there for the rest of the night and into the next day. The remainder of the Eddies were scattered by the counterattack but eventually found their way back to Canadian lines throughout the night.²⁹

Initial reports on the Eddies' situation in Leonforte were bleak and disturbing. However, as more soldiers returned to Canadian lines throughout the night, the situation clarified. Brigadier Vokes ordered a flying column to penetrate into the town and relieve the beleaguered Eddies. The column was to consist of C Coy of the PPCLI, 2 Troop from A Sqn of the Three Rivers, and L Troop from the 90th Bty of the 1st Anti-Tank Regiment.³⁰ The flying column was an interesting combined-arms approach to the problem of fighting inside an urban environment. The speed of the tanks would ensure that the infantry could quickly gain access into Leonforte. The infantry were then to dismount and follow closely behind the tanks who would provide cover and fire support. Each arm needed to rely on the other to achieve success. As such, the plan was for the infantry to be mounted on the tanks and anti-tank guns with the remainder to follow close behind on foot. Fire support was to be provided by 4 Troop of A Sqn who had spent the night occupying hull down firing positions overlooking the ravine and supported the engineers who had built a forty-foot Bailey Bridge under intense machine gun and mortar fire. By 0200, the bridge was completed and ready for

²⁹ W.D. Loyal Edmonton Regiment, 21 July 1943. Stacey, CMHQ, "Report No.135," 27.

³⁰ Nicholson, *Canadians in Italy*, 109.

the flying column to cross.³¹ The attack was initially laid on for 0600 but heavy mortar fire delayed the assault.³²

The column's start was pushed back to 0900, however, in the meantime 4 Troop continued to engage German positions along the ridge.³³ Unfortunately, the Germans continued to drop heavy mortar fire on the Three Rivers position. Lt Douglas McIntyre, 4 Troop Leader, was standing on the rear deck of his Sherman observing and adjusting his troop's fire. McIntyre was severely wounded when a mortar shell burst nearby and shortly thereafter, he succumbed to his wounds.³⁴ McIntyre's death illustrates the dangers to which the tank commanders exposed themselves so that they could provide the best support possible. Despite the casualties and intense German fire, the flying column launched at 0900. They advanced rapidly across the Bailey Bridge and sped their way up the hill towards the town.³⁵ With the tanks of 4 Troop, the 90th Bty guns and the support weapons from the divisional support unit, the Saskatoon Light Infantry, firing intensely onto the ridge, the German defenders had to keep their heads down. The speed of the column also reduced the amount of time the Germans had to react. As a result, the Canadians entered Leonforte at the cost of only one minor casualty to machine gun fire (See Map 3.4). As stated in the historical report of the battle, "surprise and speed had made the attack most effective."³⁶

The Canadian column pushed towards the centre of the town. The infantry dismounted and the tanks continued to lead the advance. However, the tanks soon became

³¹ W.D. 12 CATR, 22 July 1943.

³² Stacey, CMHQ, "Report No.135," 27-28.

³³ Nicholson, *Canadians in Italy*, 109.

³⁴ W.D. 12 CATR, 22 July 1943.

³⁵ Charles Prieur, *War Chronicles 1939-1945: Three Rivers Regiment (Tank)*, (N.p.), Accessed 27 July 2019 at <http://www.12rbc.ca/nouvelle/450/127-chroniques-de-guerre-1939-1945-du-three-rivers-regiment-tank-par-charles-prieur>, 22 July 1943.

³⁶ Stacey, CMHQ, "Report No.135," 28.

embroiled in a tank on tank fight which left the infantry from the PPCLI and the anti-tank guns to trade rounds with the Germans across the main plaza in Leonforte.³⁷ German machine gun posts were located in buildings and on roof-tops, making every move forward dangerous. The anti-tank guns remained with the infantry to provide fire support and reported that they fired at least 20 rounds of High Explosive into buildings with machine gun nests.³⁸ The excellent co-operation between the infantry and the anti-tank guns facilitated the relief of the Eddies by 0945. The PPCLI pushed the remainder of their battalion into town and the two arms continued to work well together, successfully clearing the remainder of Leonforte by the late afternoon. One of the infantry companies, alongside L Troop from 1st Anti-Tank Regiment, sealed the northern end of town and cut-off German reinforcements from entering Leonforte.³⁹ The PPCLI then seized the heights surrounding Leonforte by 1730 and forced the withdrawal of the 104th PzG Regt from the Leonforte ridge.⁴⁰

While the infantry and anti-tank guns continued to clear the town, 2 Troop ended up in a running battle against the German tanks in the streets of Leonforte. Advancing slowly along the main street, the Three Rivers tanks were ambushed at short range by a Panzer MkIII. Fortunately, Sgt Bob Campbell of 2 Troop proved quicker on the draw and destroyed the German tank at a range of ten yards.⁴¹ However, the burning tank now blocked the route forward and the Three Rivers were forced to bypass via side routes.⁴² Sgt Campbell found himself engaged again by a German tank waiting in ambush and received a hit to his right

³⁷ Lee Windsor, Marc Milner, and Roger F. Sarty, *Loyal Gunners: 3rd Field Artillery Regiment (The Loyal Company) and the History of New Brunswick's Artillery, 1893 to 2012*, (Waterloo, Ontario: Wilfrid Laurier University Press, 2016), <http://www.deslibris.ca/ID/452284>, 290.

³⁸ W.D. 1st Anti-Tank Regiment, 22 July 1943.

³⁹ Windsor, Milner & Sarty, *Loyal Gunners*, 290.

⁴⁰ Stacey, CMHQ, "Report No.135," 28; Nicholson, *Canadians in Italy*, 109.

⁴¹ Prieur, *War Chronicles*, 22 July 1943.

⁴² W.D. 12 CATR, 22 July 1943.

sponson which penetrated his hull armour and set fire to his ammunition. The crew quickly extinguished the fire and got their tank back in the fight. Campbell and his German opponent then played a game of cat-and-mouse as they manoeuvred through the downtown streets attempting to gain the advantage over the other. Campbell finally succeeded in sending an armour-piercing round through the turret of the Panzer MkIII. This did not destroy the enemy tank but damaged it badly enough that it retreated to the north of Leonforte.⁴³ The enemy tank was found abandoned the following day.

The momentum of the Canadian attack and indeed wider Canadian pressure on the whole Leonforte-Assoro ridge complex forced the Germans to begin a withdrawal. 2 Troop pushed northward to set up ambushes and cut off German tank escape routes. Their effort paid off and a third German tank was destroyed by fire from Lt Lou Maraskas and Sgt Campbell.⁴⁴ Having neutralized the armoured threat in Leonforte, 2 Troop carried on its advance in the northern end of town. However, an 88mm anti-tank gun waited on the main road and destroyed Sgt John Gallagher's tank with two rounds. The driver, Tpr Joseph Norman was badly burned and died later that day. The remainder of the troop quickly avenged the destruction of Gallagher's tank by destroying the enemy gun with a round of 75mm High Explosive.⁴⁵ The intense fight in the streets of Leonforte resulted in three German Panzer MkIII's and one 88mm anti-tank gun destroyed at the cost of one Canadian Sherman in addition to infantry and artillery losses inflicted on both sides.

The running tank battle in the streets of Leonforte demonstrates a lack of prepared doctrine for the complex situation of Leonforte. The requirement to relieve an encircled

⁴³ Prieur, *War Chronicles*, 22 July 1943.

⁴⁴ *Ibid.*

⁴⁵ W.D. 12 CATR, 22 July 1943; Prieur, *War Chronicles*, 22 July 1943; Stacey, CMHQ, "Report No.135," 28; Zuelkhe, *Op Husky*, 268.

friendly force in an urban environment was never practiced during their training in Britain. Additionally, the armoured corps' neglect of infantry-tank training in anything other than the standard three wave echelon attack meant they did not have any doctrinal drills on which to base their attack into an urban setting. Thus, the tanks initially led the advance through the streets. While the assault on Leonforte succeeded, the way it was achieved was haphazard. The infantry had done well for their portion of the battle and cleared the German infantry from the ridge, while the Three Rivers had performed well in the armoured battle and destroyed or forced the withdrawal of the German tanks. Unsurprisingly, the tanks concentrated on the armoured battle and their sole focus was on hunting tanks. Their training in Britain had conditioned them to address tank threats above all others. On top of that, the hard fight faced by the PPCLI and the Three Rivers demonstrated that urban operations are extremely difficult. Every street, every corner, every house, and every room are dangerous to the attacker. It is of the utmost importance for different arms to work together to mitigate the risks such as being ambushed by an anti-tank gun when rounding a corner. Infantry could have spotted it ahead of time and allowed the tanks time to create a plan to deal with the situation.

As demonstrated by the German counterattack the night of 21 July, a well-integrated attacking force can leverage the firepower and protection of armoured vehicles to overcome stubborn defensive positions that threaten the vulnerable infantry.⁴⁶ There was most likely a coordinated plan between the Canadian infantry, armour, and anti-tank guns to capture Leonforte, however there is currently no evidence that states to what detail the tanks were included in the plan to clear the town. The lack of such evidence indicates there was a

⁴⁶ W.D. Loyal Edmonton Regiment, 21 July 1943.

communication disconnect or, at the very least, poor coordination between the infantry and tank planning cycles. This problem was exacerbated by the same radio communication problems as seen at Assoro between Lt Waldron and the 48th Highlanders. Rapid situational changes in Leonforte meant that the slow communication methods between the PPCLI and the tanks could not keep pace with the realities of combat in Leonforte. Too much happened too quickly and so the infantry concentrated on their fight, and the tanks on theirs. As a result, the Canadian fight on 22 July succeeded more from quick reactions and individual skill than from a well-coordinated attack. Excellent gunners and crew commanders enabled the Three Rivers to survive and win close-range ambushes. Nevertheless, the tanks ended up chasing other tanks through the town rather than directly supporting the PPCLI attack. Fortunately for the PPCLI, they had the anti-tank guns in support to blow up German hard points. The tank support to the infantry operation inside of the town came mostly from the fact that they drew the attention of the German tanks away from the Canadian infantry, thus reducing the problem set the infantry encountered. Regardless of these points of analysis, the Canadians achieved success and seized and secured the town of Leonforte.

The battles at Leonforte and Assoro were difficult and intense as reflected in the casualty figures on both sides. While official German reports of their casualties are missing, Canadian intelligence reports from the period suggested that the 104th PzG Regt was essentially wrecked. It was estimated that the 1st Battalion of the 104th PzG Regt suffered at least 385 casualties. 2nd Battalion lost another 237 casualties. Casualty figures for the 3rd Battalion were unknown but the Canadians took over 100 POWs from that battalion alone. Total prisoners captured by Canadians numbered 435 soldiers of different nationalities. These losses are compounded by those the 104th PzG Regt suffered at Monta della Forma and

Valguarnera.⁴⁷ However, the Germans were not alone in bearing heavy casualties. The Canadians suffered over 275 casualties between the infantry of 1st and 2nd Brigades and the tankers of the Three Rivers.⁴⁸ The difference in casualty rates is remarkable considering the strength of the German defensive positions along the ridge and the fact that the Canadians had to assault in very canalizing terrain. It is commonly accepted that attackers will sustain more casualties than the defenders. However, at Leonforte and Assoro, the Canadians inflicted three times the number of casualties than they sustained. This disproportionate ratio speaks not only to the excellent fighting at Leonforte-Assoro, but to their earlier successes against the German delay positions that stole much needed preparation time from their defences.

The Germans were not prepared to have their defensive line pierced so quickly by Allied forces as revealed by their extensive casualties. They had been confident in their defensive preparations and imagined they would have held for several days longer. In fact, the Canadian breakthrough at Leonforte and Assoro bust a hole in the larger German defensive line and convinced German command to withdraw 15th PzG Div to the general line of Campofelice-Gangi-Regalbuto.⁴⁹ Additionally, reinforcements from the 15th and 29th PzG Divs were rushed forward to try and contain the Canadian advance which had ruptured their defensive line.⁵⁰ The German withdrawal and reinforcement along a new main defensive line defined what was to happen in the following days as the Canadians advanced beyond Leonforte along Highway 121 towards Mount Etna. The Allied advance was no longer a

⁴⁷ Stacey, CMHQ, "Report No.135," 34.

⁴⁸ Nicholson, *Canadians in Italy*, 110.

⁴⁹ AHQ, "Report No.14," 13.

⁵⁰ Windsor, "The Eyes of All," 26.

pursuit against withdrawing Axis forces, but a concerted effort to destroy enemy forces remaining on Sicily (See Map 3.5).⁵¹

3.4 – Crucible at Nissoria

MGen Simonds wasted no time in preparing for subsequent actions after the fall of Leonforte and Assoro. In the late afternoon on 22 July, Simonds ordered 1st Brigade to attack towards the key road junction town of Agira located thirteen kilometres east of Leonforte. 2nd Brigade was to form a firm base towards the north in support of the 1st US Infantry Division who were advancing towards Nicosia. 2nd Brigade also prepared for a large Axis counterattack towards Leonforte as the American advance was a few days behind the Canadians and Canadian intelligence suspected that elements of the 15th and 29th PzG Divs and the Italian 28th Aosta Division were preparing to push south from Nicosia.⁵² Additionally, the 231st Brigade (Malta) were placed under Canadian command to threaten Agira from the south. The plan called for 1st Brigade to capture Agira in one day on 23 July. Then the 231st Brigade and 3rd Brigade were to lead the Canadian advance further east towards the town of Regalbuto.⁵³ The attack was delayed by one day due to heavy mortar fire on 23 July which prevented the Canadian units from organizing as required for the attack.⁵⁴ However, despite Simonds' plan to capture Agira in one day, the battle lasted five long days from 24-28 July (See Map 3.6).

The difficulty the Canadians faced in breaking through the position at Agira has been heavily criticized by military historians. Historian William McAndrew believed that the

⁵¹ Ibid., 27.

⁵² Ibid., 26.

⁵³ The 231st Brigade (Malta) was attached to 1st CID on 20 July in order to give more weight to the Canadians who were now the main effort of 30th Corps and the 8th Army. Nicholson, *Canadians in Italy*, 120.

⁵⁴ W.D. 48th Highlanders, 23-24 July 1943; W.D. Royal Canadian Regiment, 23-24 July 1943.

Canadian doctrine of attritional firepower was the reason it took five days to succeed.⁵⁵ Rather than exploit opportunities and successes, the Canadians stopped and reorganized before continuing attacks which allowed the Germans to prepare for the next wave of assaults. Additionally, some historians have viewed the Battle at Agira as a severe reverse for the Canadians because they believed that the Canadians were stopped by German delay positions of inferior numbers rather than actual defensive positions. Further blame was placed on the commitment of one battalion at a time against the German defences which negated the Canadian numerical superiority.⁵⁶ Grant Barry's reassessment of the action at Agira challenges the established narrative and demonstrated that the German defences between the town of Nissoria and Agira were not delay positions, but static area defences based on the remnants of the 104th PzG Regt that had been pushed out of Leonforte. In addition to the 104th, the Germans were augmented by Italian soldiers and artillery, and later in the battle, an entire battalion from the 15th Panzer Grenadier Regiment was rushed west to reinforce the position.⁵⁷ The reinforcement of the positions with tanks and additional infantry indicates that the Germans intended to hold the ground, not just waste the time of the Canadian advance.⁵⁸ Even though the 1st Brigade did not achieve tactical success by defeating the German defensive positions, they met the larger strategic intent of "grinding down Axis strength."⁵⁹

⁵⁵ William McAndrew, "Fire or Movement? Canadian Tactical Doctrine, Sicily – 1943," *Military Affairs* 51, No. 3 (July 1987): 140-145.

⁵⁶ Nicholson, *Canadians in Italy*, 120-135.

⁵⁷ Grant Barry, *1st Canadian Infantry Division and the Battle for Agira: A Reconsideration of an Incomplete Historical Consensus*, (N.p. MA Thesis, University of New Brunswick, 2006), 1-3, 67. 15th PzG Regt belonged to the 29th PzG Div. Therefore Canadian pressure on Agira actually required the commitment of another formation's resources to try and relieve the Canadian pressure.

⁵⁸ *Ibid.*, 72, 82.

⁵⁹ *Ibid.*, 68.

The Canadians were unprepared for the strength of the German defences because their campaign experience taught them to expect defensive positions in hilltop towns like Agira. Additionally, intelligence reports believed that there were no major German positions until a high feature located just to the west of Agira.⁶⁰ What the Canadians faced instead was a series of defensive positions along three different spur ridges running perpendicular to the axis of advance along the knife-edge ridge bearing Highway 121 (See Map 3.7). On the high features, the Germans had infantry dug in with machine guns and mortars. They also had anti-tank guns sited to sweep Highway 121, which given the canalizing terrain, was the only feasible route forward for the Canadian vehicles advancing east from Leonforte. The Germans also had tanks dug in to positions to add firepower.⁶¹ The Canadians were unaware of the extent of these defences because Recce Sqn from the 4th Princess Louise Dragoon Guards was unable to complete their reconnaissance east of Nissoria due to mortar fire.⁶²

Nissoria was a small, unobtrusive town located halfway between Leonforte and Agira. Just to the east of the town was the first of the north-south spur ridges, known as Monte di Nissoria. It runs perpendicular to Highway 121, which passes over a rocky saddle between the two ends of the ridge. While the Germans left Nissoria unoccupied, they had occupied Monte di Nissoria and had anti-tank guns sited to fire through gaps in buildings and along the exposed highway. The rocky nature of the ridge also restricted vehicle movement so that the Canadian vehicles and tanks were forced to drive along the road.⁶³

⁶⁰ Ibid., 63; W.D. 12 CATR, 24 July 1943. The sole exception was the action at Monta della Forma/Grottacalda. However, that was an important terrain feature and a crossroads that lent strength to the German defensive position.

⁶¹ Nicholson, *Canadians in Italy*, 120-135. U.S. Army Map Service, *Agira Sheet 269-IV NW, 1:25,000*, 1943, Accessed at <http://digitalarchive.mcmaster.ca/islandora/object/macrepo%3A84288>

⁶² Nicholson, *Canadians in Italy*, 121. W.D. 4th Princess Louise Dragoon Guards, 23-24 July 1943.

⁶³ Nicholson, *Canadians in Italy*, 122.

The Canadian attack along Highway 121 towards Nissoria and Agira began at 1500 on 24 July. A series of artillery concentrations from five field regiments and two medium regiments were fired according to a strict timetable designed to offer maximum fire support to the advancing infantry. The artillery was set to lift its concentrations 200 yards every two minutes.⁶⁴ At the same time the artillery began to drop, the RCR stepped off behind the tanks of A Sqn who advanced with 1 Troop on the right, and 5 Troop on the left. The remainder of the squadron followed in behind the lead troops along the highway. Based on the direction of the Brigade Commander Brigadier Graham, and the plan devised by the RCR CO, LCol Ralph Crowe, and the A Sqn commander, Maj Jack Pearson, the leading tanks were ordered to advance on as broad a front as possible and move cross-country rather than over the roads. The plan for the tanks to “deploy as much as possible” indicates that the Canadians expected to meet some form of enemy resistance along Highway 121, if not an entire battalion defensive position.⁶⁵ The initial advance went well, and the Three Rivers tanks successfully destroyed a Panzer MkIII to the northwest of Nissoria en route. By 1615, the Canadians reached Nissoria (See Map 3.8).⁶⁶

The planned advance for the Three Rivers tanks and infantry followed the combined-arms attack doctrine of the day with the tanks leading and the infantry following close behind. However, the terrain was inconducive to such an approach and the tank crew commanders were forced to react to the situation in accordance with the realities of the ground (See Map 3.9). Due to the lack of reconnaissance in the vicinity of Nissoria from the previous day, the Canadians were unaware of a low wall that surrounded the town or the fact

⁶⁴ W.D. 12 CATR, 24 July 1943; W.D. 1st Division Royal Canadian Artillery, 24 July 1943.

⁶⁵ W.D. 12 CATR, 24 July 1943.

⁶⁶ W.D. 12 CATR, 24 July 1943.

that the ground drops away from Nissoria along the northern edge of town and forced the Canadian tanks to drive into Nissoria by the main road. Only one tank, belonging to the 1 Troop Leader Lt T. Downey, bypassed the town to the south, tagging along in support of the infantry. Downey successfully supported the initial RCR push toward Monte di Nissoria south of the highway by engaging and destroying a machine gun nest and a mortar post. However, he soon lost communication with both the infantry and his own squadron. He then waited in location for an hour before deciding to rejoin his squadron.⁶⁷ Much like the situation at Assoro and Leonforte, the lack of direct radio communications proved an issue between the tanks and the infantry who had identified further German positions and needed assistance in clearing them out. However, having no direct contact with A Sqn tanks, the infantry requested help through their brigade radio net and waited for a response. Unfortunately, by the time the message was passed to the Three Rivers, they were too hotly engaged to help the RCR, which was their prime responsibility.⁶⁸

While Lt Downey bypassed Nissoria to the south, the remainder of A Sqn was canalized into the town via the main road. The Canadians passed through the town with the tanks leading, however as they neared the eastern edge, a German anti-tank gun opened fire from between two houses. At least five rounds landed among the Three Rivers column although no significant damage was incurred before the leading vehicle returned fire and destroyed the German gun. German mortar and artillery fire also began crashing down around Nissoria. The infantry following behind the tanks took cover without informing the tank crews and A Sqn continued driving east.⁶⁹ The two arms became separated from one

⁶⁷ W.D. 12 CATR, 24 July 1943.

⁶⁸ W.D. 1 CIB, Intlog 24 July 1943.

⁶⁹ W.D. 12 CATR, 24 July 1943.

another and when the RCR continued to advance towards the southern half of the ridge, they did so without tank fire support from the squadron that was busy firing at targets on Monte Nissoria. This separation was a common trend throughout the Sicilian Campaign and the Three Rivers identified this as a problem that needed to be corrected. In a study group with the 14th Canadian Army Tank Regiment (Calgary) conducted after the end of the campaign, the Three Rivers identified the most important point of working with the infantry as being to “never put tanks before infantry.”⁷⁰ The Three Rivers tankers noted that anytime the tanks preceded the infantry, the moment fire began to rain down, the infantry went to ground and were “of no more use during the action.”⁷¹ Conversely, if the tanks followed the infantry, then when enemy fire was encountered the infantry would go to ground, but still proceed to engage the enemy and identify targets for the tanks to engage with direct fire support.

The separation of the infantry from the tanks led to two separate fights at Nissoria. While the tanks continued alone along Highway 121, the RCR continued their own advance and ran into the solid defences of the ridgeline to both the north and the south of the highway. D Coy, tasked with attacking Monte di Nissoria in the north, were stopped immediately by German fire and remained in the outskirts of Nissoria.⁷² C Coy, advanced into the teeth of the southern defences and were stopped in their initial attack. A and B Companies were then committed towards the south and, taking advantage of the distraction provided by the Three Rivers tanks farther north, slipped into a gully that went around the southern flank of the German defensive position. C Coy then disengaged from the Germans and followed A and B Companies. Those three companies eventually found themselves

⁷⁰ W.D. 12 CATR, Appendix 14 August 1943.

⁷¹ Ibid.

⁷² W.D. Royal Canadian Regiment, 24 July 1943.

kilometres behind the German positions, however they had no radio communications with the battalion or the brigade. These companies succeeded in taking up fire positions that overlooked the highway in the rear of the German position and fired on German reinforcements moving forward in transport trucks and inflicted many casualties.⁷³ Eventually, short on ammunition and without any reliable method of contacting their battalion leadership due to the omnipresent radio problems, the three RCR companies withdrew back to the west on 25 July having suffered 16 killed and 27 wounded.⁷⁴

The tank-infantry separation also impacted the tank portion of the engagement at Nissoria. Once clear of the town around 1620, the tanks continued east in single file along the highway. It is unclear who made the decision to have the tanks carry on alone but it is likely that the Squadron Commander, Maj Pearson decided to carry on along Highway 121 with the belief that D Coy would also carry on the advance towards their objective just to the north of the highway on Monte di Nissoria. A Sqn made it about one kilometre from the eastern edge of Nissoria to where the highway begins to pass up the saddle over the ridge.⁷⁵ Once the lead tanks had reached this location, at about the same time D Coy from the RCR began their attack, German anti-tank guns opened up from the heights of Monte di Nissoria. The fourth tank in the column was immediately hit and set on fire. The Germans then destroyed the ninth tank in the column, effectively splitting the sqn into three groups.⁷⁶ The rocky nature of the terrain surrounding the road also meant that the tanks caught between the two burning vehicles were unable to extract or push forwards. Additionally, without their accompanying

⁷³ Ibid.

⁷⁴ W.D. Royal Canadian Regiment, 24-25 July 1943. Among the dead was LCol Crowe who, having lost comms with his battalion, advanced alone with his HQ party onto the southern ridge feature where the Germans opened fire.

⁷⁵ W.D. 12 CATR, 24 July 1943; U.S. Army Map Service, *Agira Sheet 269-IV NW, 1:25,000*, 1943, Accessed at <http://digitalarchive.mcmaster.ca/islandora/object/macrepo%3A84288>.

⁷⁶ Prieur, *War Chronicles*, 24 July 1943.

infantry, the Shermans were unable to launch a combined-arms counterattack against the German position. Instead, the A Sqn tanks were sitting targets for the German anti-tank guns, who used the situation to put one tank after another out of commission. Fortunately, the tanks at the rear of the column were able to withdraw backwards under the cover of smoke fired by 2 Troop from in depth while attempting to extract Three Rivers casualties from their wrecked or abandoned tanks. Three Rivers casualties from the kill zone were four dead and thirteen wounded, which included Maj Pearson. A total of ten vehicles were knocked out by German guns, four of which were completely destroyed.⁷⁷

While the remainder of A Sqn struggled to survive in the German kill zone, the lead three tanks and their crews demonstrated superior fighting capabilities on the mountainside, using the terrain, their initiative, and their basic tactical skills to inflict heavy damage on the Germans. After being cut-off when the fourth vehicle in the column was hit, the three leading tanks, including Sgt Les Allen from 1 Troop, and Sgt W.S. Stewart and Cpl P.J. Caesarine from 5 Troop, made the best of it. Faced with the choice of continuing the fight or finding some way to return to friendly lines, they chose to fight. Initially reacting to the anti-tank fire from their left, Allen, Stewart, and Caesarine returned fire and succeeded in knocking out four 88mm anti-tank guns. Allen then took the initiative to create a composite troop and ordered the other two to join him on his troop radio net. Approaching the bend in the saddle, Allen requested permission from his squadron Battle Captain, Capt A. Bilodeau, to conduct a foot reconnaissance to gain a better idea of what waited for him on the far side. He received permission and took a covered approach to see over the ridge to the east. He discovered a

⁷⁷ W.D. 12 CATR, 24 July 1943; Prieur, *War Chronicles*, 24 July 1943.

German harbour⁷⁸ that included several tanks, anti-tank guns, half-tracks, carriers, transport, and supply vehicles. Allen returned to his tank and ordered his composite troop around the bend. Using fire and manoeuvre, Allen took the first bound supported by the other two crews and as they came around the corner, Allen destroyed two tanks and a truck. Stewart blew up a carrier and a half-track, while Caesarine accounted for another carrier. The remainder of the German vehicles scrambled eastwards towards safety.⁷⁹

The composite troop carried on its advance and approached another blind corner on the winding road. This time Allen attempted to take the corner by force, but a self-propelled gun and a tank lay in wait. Allen traded several rounds with the Germans before he withdrew back around the corner. Analyzing the terrain, Allen discovered a steep, rocky, goat path along the right side of the ridge. He took his troop along this questionable path and bypassed the German ambush. The Canadian tanks engaged the position and forced them to withdraw once again. The use of the goat path illustrates the boldness of Allen as a crew commander. He remained open to the possibilities of the terrain around him and when presented with a difficult option, he took it and successfully outmanoeuvred his opponent. This manoeuvre is also a credit to the technical skill of the tank drivers who navigated the rocky path. Allen's troop continued towards the east, the Canadian tanks then received anti-tank fire from an unknown direction, but based on an analysis of the terrain, the fire likely came from the next ridgeline to the east.⁸⁰ Allen and his compatriots laid down fire in the direction of this ridge but soon began to run low on ammo. Unable to carry on the advance alone this deep in the

⁷⁸ A harbour refers to a group of military vehicles parked together to facilitate security and resupply. Harbours are often parked in woodlines to help with concealment, however the terrain in Sicily did not allow such an arrangement. A major detraction from the use of harbours is the fact that, if discovered, they make excellent targets for enemy aircraft, artillery, or armour.

⁷⁹ W.D. 12 CATR, 24 July 1943; Prieur, *War Chronicles*, 24 July 1943.

⁸⁰ W.D. 12 CATR, 24 July 1943; U.S. Army Map Service, *Agira Sheet 269-IV NW, 1:25,000*, 1943, Accessed at <http://digitalarchive.mcmaster.ca/islandora/object/macrepo%3A84288>.

German positions, Allen ordered the tank crews to dismount and go in search of the infantry to exploit their success. The crew commanders and drivers were to remain with their vehicles. The crews set out on foot to find the RCR, but heavy enemy fire in the area drove them back to Canadian lines at Nissoria. Unable to turn their opportunity into further success, Allen and his troop crew commanders remounted their vehicles at dusk and returned to Canadian lines under cover of darkness and friendly smoke screens (See Map 3.10).⁸¹

Sgt Allen's composite troop illustrates the capabilities of junior leaders within the Three Rivers. Cut-off from friendly forces in a German kill zone, Allen, Stewart, and Caesarine maintained their composure, continued to fight and manoeuvre in restrictive terrain, and inflicted severe damage on the German defending forces. They penetrated the German defensive line and were in a position where they could have supported a coordinated attack with the infantry to seize and capture the ridge. However, the breakdown in direct communications between the RCR and the Three Rivers hindered their ability to coordinate and take advantage of an enemy weak spot. It is worth noting that the communication problem equally meant that Allen's troop could not alter their actions to help support the infantry companies who had outflanked the German position to the south. Neither arm knew what the other was doing. As a result of the communications issues, the separation of the infantry from the tanks demonstrated that the doctrinal approach to fighting in the mountains needed to be adapted. Tanks leading in the mountains without adequate communications resulted in disjointed attacks with the infantry and a separation into individual engagements rather than mutually supporting attacks. Direct fire support was where the tanks could be best employed in such restrictive terrain. The lesson was well learned during this engagement and

⁸¹ W.D. 12 CATR, 24 July 1943; Prieur, *War Chronicles*, 24 July 1943; Stacey, CMHQ, "Report No.135," 46. Sgt J.A. Allen was awarded the Military Medal for his actions at Nissoria.

became ingrained in the Three Rivers for the remainder of the campaign and a definite improvement could be noted after the crucible of Nissoria.

That next day, on 25 July, 1st Brigade launched two separate hasty battalion attacks with the Hasty Pees and the 48th Highlanders south and north of the Highway 121 respectively. The Hasty Pees attempted to seize the ridge by a flank attack from the south. However, the Germans had reinforced their position overnight with tanks. The Hasty Pees lost 80 casualties and could not get a hold on the ridge. In the afternoon, the 48th Highlanders attempted to take Monte di Nissoria from the north. They successfully climbed part way up the ridge to a false crest where they were exposed to fire from the German defenders. They too were unable to complete their mission and suffered 13 killed and 31 wounded soldiers.⁸² Although these attacks failed to seize their objectives, they succeeded in gaining better information on the strengths and disposition of the German defences. The Three Rivers did not participate in the fighting on 25 July as A Sqn pulled back west of Nissoria and spent the day recovering vehicles and reorganizing. A Sqn was so damaged that C Sqn was called forward on 26 July to replace them for the next attack to be launched by 2nd Brigade.⁸³

3.5 – Lions, Tigers, and Bears, Oh My

The morning of 26 July MGen Simonds ordered 2nd Brigade to take over the advance. They were to move forward from their unit harbours near Leonforte and Assoro and launch an attack that evening. Finally understanding the strength of the German defensive positions east of Nissoria, Brigadier Vokes of 2nd Brigade reorganized the battlefield into a series of objectives in order to better manage the commitment of his forces and coordinate with other

⁸² Nicholson, *Canadians in Italy*, 125-126.

⁸³ W.D. 12 CATR, 25 July 1943.

arms. The first objective, named Lion, was the same ridge just east of Nissoria that 1st Brigade had such a difficult time with over the previous two days. The second objective, Tiger, was located on a thin spur ridge about one kilometre to the east of Lion. The third objective, Grizzly was farther east, about one kilometre west of Agira, and consisted of two ridges separated by Highway 121 (See Map 3.11). Finally, the town of Agira would be the last objective.⁸⁴ The 2nd Brigade plan was for the PPCLI to capture Objectives Lion and Tiger in close co-ordination with a series of timed artillery barrages. Once achieved, the Seaforth Highlanders would advance forward and capture Grizzly. The brigade would then exploit towards Agira as the situation presented itself.⁸⁵

The infantry advance included massive artillery support. In comparison to the 1st Brigade attacks where the artillery support averaged just under 60 rounds per gun, the 2nd Brigade advance would be supported by five regiments with a total of 80 guns firing 139 rounds each.⁸⁶ There was to be an initial two-minute barrage of rapid, concentrated fire at the brigade start line, followed by fifteen minutes of normal fire until they began a series of lifts. For the capture of the first objective, there was to be a series of sixteen successive lifts of 100 yards every three minutes. The last line would then have five minutes of fire to seal off the objective. The artillery was then to pause for thirty minutes in order to give time for the reserve PPCLI companies to move forward and continue the advance towards Tiger. The artillery would commence again with another series of twelve lifts of 100 yards every three minutes until the infantry had arrived on the objective.⁸⁷

⁸⁴ Nicholson, *Canadians in Italy*, 128; W.D. 2 CIB, Appendix 17 July 1943; U.S. Army Map Service, *Agira Sheet 269-IV NW, 1:25,000*, 1943, Accessed at <http://digitalarchive.mcmaster.ca/islandora/object/macrepo%3A84288>.

⁸⁵ W.D. 2 CIB, Appendix 17 July 1943.

⁸⁶ Nicholson, *Canadians in Italy*, 129.

⁸⁷ W.D. 2 CIB, Appendix 17 July 1943; W.D. 1st Division Royal Canadian Artillery, 26 July 1943.

The artillery began firing right on schedule at 2000 on 26 July. The attacking forces sidled up close to the protective fire and stepped off as the artillery began lifting fire. The engineers and infantry went first into the attack with the tanks of 4 and 5 Troops from C Sqn following behind.⁸⁸ 2nd Brigade had seemingly learned from the experiences of 1st Brigade two days earlier about the need for infantry to precede the tanks into battle in close terrain. They launched a deliberate and well-planned assault that concentrated on the use of firepower to achieve success. The lead C and D Coys from the PPCLI advanced close behind the artillery fire with one company each designated to cross the low ground and seize the ridge on both sides of the highway. They quickly overran the German defenders who were overwhelmed by the weight of the artillery fire and captured Objective Lion at 2040 (See Map 3.12).⁸⁹ The lead infantry companies remained in place as the two reserve companies, A and B, moved forward to capture Objective Tiger. Unfortunately, the infantry lost their way in the dark in one of the valleys between the spurs of Lion and Tiger and were unable to take advantage of the intense artillery barrage when it resumed its lifts. The separation between the infantry and artillery allowed the German defenders on the next ridge to return to their defensive positions once the artillery had passed and engage the advancing Canadians, effectively halting their forward momentum.⁹⁰

The stalled PPCLI advance led Brigadier Vokes to order his second battalion, the Seaforth Highlanders, to begin their advance and capture Tiger. The order came to the Seaforths at midnight and required time for them to march towards the launch point for their attack on Tiger.⁹¹ This delay gave the Three Rivers tanks and the guns of the 90th Anti-Tank

⁸⁸ W.D. 12 CATR, 26 July 1943; Prieur, *War Chronicles*, 26 July 1943.

⁸⁹ W.D. PPCLI, 26 July 1943; Stacey, CMHQ, "Report No.135," 54; Nicholson, *Canadians in Italy*, 129.

⁹⁰ W.D. PPCLI, 26 July 1943.

⁹¹ Nicholson, *Canadians in Italy*, 129.

Battery the opportunity to move forward onto Lion in the dark and adopt positions where they could support the infantry. The Three Rivers even moved a troop of tanks forward of Lion and adopted hull down firing positions just to the north of the highway.⁹² From this location they were able to engage German machine gun nests, mortar posts, and various tank and anti-tank gun positions on the next ridge. C Sqn was clearly adhering to their sole role as fire support for the advancing infantry. Once the Seaforths reached the front lines they ran into difficulties in overcoming the German defences. As the night was quite dark, it was difficult to see these positions before they opened fire on advancing Canadians. The fire was quite intense as machine gun rounds continuously bounced off the tanks' armour, and the C Sqn Commander, Maj Pat Mills, asked permission to LCol Leslie Booth to withdraw to the west. Maj Mills wished to pull back to get away from the German fire as well as to follow the doctrinal procedure that had tank forces rally to the rear at night to reorganize and resupply. However, Brigadier Vokes happened to be located with LCol Booth when the request came over the radio and vehemently denied permission to the C Sqn tanks. He reasoned that if the infantry had to stay up there in the fire, then the better armoured tanks could as well. Maj Mills was upset with the response but followed orders.⁹³ This anecdote demonstrates that junior leaders realize success on the battlefield, but sometimes still require the steady hands of senior commanders to provide direction. Once again, as the Germans revealed their positions along the forward slopes, the Three Rivers crews quickly brought their weapons to bear on the muzzle flashes and proceeded to destroy the enemy.⁹⁴ Thanks to the efforts of the

⁹² W.D. Seaforth Highlanders of Canada, 26-27 July 1943.

⁹³ Chris Vokes, *My Story*, (Ottawa: John Maclean Gallery Books, 1985), 114-115.

⁹⁴ Stacey, CMHQ, "Report No.135," 55.

Three Rivers Shermans, the Seaforths were able to carry on their advance and by 0445 on 27 July they reported that their lead elements were on Objective Tiger.

Shortly thereafter, the lead Seaforth platoon discovered that the Germans had established strong defensive positions on the reverse slope of Tiger which were immune to the direct fire support from the Three Rivers. In the darkness, a Seaforth platoon was stopped cold by several machine gun nests to their front. They conducted several patrols to flank these positions and discovered that the machine gun nests were three Panzer MkIV tanks. They communicated the enemy positions to 1 and 2 Troops under the commands of Lt Slim Waldron and Capt E.W. "Ted" Smith respectively. The troop leaders manoeuvred their tanks in the dark to be able to catch the German tanks in the flanks with fire. Once the first light appeared on the horizon, the Three Rivers soldiers opened fire and destroyed all three enemy tanks.⁹⁵ With the last major weapon systems cleared out by tank fire, the infantry, now including the wayward A and B companies of the PPCLI, continued to clear the objective of infantry and at 1100, the Seaforths announced that they had captured Objective Tiger (See Map 3.13).⁹⁶

⁹⁵ W.D. 12 CATR, 26-28 July 1943; W.D. Seaforth Highlanders of Canada; 26-27 July 1943; W.D. 2 CIB, Appendix 17 July 1943; Stacey, CMHQ, "Report No.135," 61; Vokes, *My Story*, 115; Wallace, "Shermans in Sicily," 66. There is confusion over the date and location of the Three Rivers destruction of the three Pz MkIV tanks. The Three Rivers WD listed the event as occurring on 26 July but gave grid references to positions that indicated it occurred nearer to Objective Grizzly. The CMHQ Report No. 135 believed this and took it to mean that the Three Rivers had advanced by themselves into the low ground between the two high features of Objective Grizzly. There are conflicting reports from the Seaforth WD, the 2 CIB WD, Vokes' memoirs, and Wallace's diary that state that this action occurred during the assault on Objective Tiger. The weight of evidence suggests that this incident occurred on Objective Tiger as there is no apparent reason for there to have been a Seaforth platoon directly in front of the Three Rivers at Grizzly given that they had ceded the northern half of the objective to the Eddies, and had conducted a right flanking of Mt Fronte to the south of Grizzly. Additionally, the tanks of C Sqn had already shown themselves reticent to be so far forward at night when in the company of the infantry, therefore it is highly unlikely they would have advanced by themselves into an exposed position between the two high features of Grizzly. Defensively, it also made little sense for three German tanks to be located there, whereas being dug into a reverse slope defensive position, such as at Tiger, was a commonly accepted doctrinal practice.

⁹⁶ W.D. Seaforth Highlanders of Canada, 27 July 1943; W.D. PPCLI, 26-27 July 1943.

The capture of Objective Tiger can be considered one of the first occasions where the Three Rivers and the infantry practiced effective cooperation during an assault. Rather than advancing by themselves and choosing their own targets, the Three Rivers maintained communications with the Seaforth soldiers, listened to target identification practices, and destroyed troublesome enemy positions accordingly. The tanks were an integral component of the infantry success at Tiger. They had adapted themselves to the situation (even when that change was forced upon them by higher command) and provided the direct fire support the infantry clearly needed. Even more impressively, the tanks engaged targets in the dark and achieved success. Night engagements were extremely difficult at the time given that night optics did not exist. Fortunately, Lion and Tiger were close enough together to allow effective night firing based on muzzle flashes. Thus, finding and engaging targets solely based on tracer fire and muzzle flashes exemplifies the level of technical skill achieved by many gunners within the Regiment.

With Tiger captured, the support arms moved up to positions of fire and observation along the ridge. The Three Rivers had excellent observation towards the distant Objective Grizzly as well as into the low ground to the north and their gunners employed their technical capabilities to great effect. They noticed two MkIV tanks attempting to escape to the north in the low ground. The first succeeded in getting into dead ground⁹⁷ before it could be fired upon, but the second was quickly bracketed by fire and destroyed.⁹⁸ In addition to the tank, C Sqn Shermans destroyed a tracked carrier, a supply truck, and several machine gun posts.

⁹⁷ Dead ground refers to terrain that is out of the line of sight from a position of observation. Usually found on reverse slopes of hills or on the far side of large terrain features or woodlines.

⁹⁸ W.D. Seaforth Highlanders of Canada, 27 July 1943.

Dismounted infantry were also engaged and sent fleeing towards safety.⁹⁹ The Germans of the 104th PzG Regt were on the run.

The 2nd Brigade successes between 26 and 27 July had finally broken the battered Panzer Grenadiers of the 104th PzG Regt. 1st Division Intelligence estimated that between the three battalions of the Regiment, there were no more than 600 effectives remaining. The 1st and 2nd Battalions who had borne the brunt of the fighting against the Canadians during the past ten days were down to no more than 400 soldiers together. The number was likely even lower than that. 3rd Battalion, while having had less engagements against the Canadians, were in just as dire straits. They were pulled east of Agira with no more than 200 effective soldiers. It is estimated that 200 Germans were killed and over 300 taken prisoner from the 104th PzG Regt during the fight for Agira. The numbers of wounded are unknown but given the numbers of dead, it is likely they took between 400-600 wounded. These losses necessitated the emergency reinforcement of Agira and Objective Grizzly by the 1st Battalion of the 15th PzG Regt.¹⁰⁰

The Canadians did not wait long to exploit their success on Tiger. The Seaforths stepped off to begin their assault on Grizzly at 1400 on 27 July. The initial plan was for D Coy to assault north of the highway onto the features known as Monte Crapuzza and Cemetery Hill, while A Coy was to seize the feature to the south, named Monte Fronte. Each company was to be supported by a troop from C Sqn.¹⁰¹ When the two companies advanced, they met increasingly heavy fire from a company of German Panzer Grenadiers who occupied both high features. D Coy was stopped cold in its advance. A Coy realized that a

⁹⁹ W.D. 12 CATR, 26 July 1943; Stacey, CMHQ, "Report No.135," 56.

¹⁰⁰ Barry, *Battle for Agira*, 103; Stacey, CMHQ, "Report No.135," 64; Nicholson, *Canadians in Italy*, 131-134.

¹⁰¹ W.D. Seaforth Highlanders of Canada, 27-28 July 1943; Nicholson, *Canadians in Italy*, 131; Barry, *Battle for Agira*, 96.

frontal attack on the hill was impossible and decided to conduct a right flanking on Monte Fronte. The support fire from the Shermans became important at this juncture as indicated by the Seaforth's War Diaries, "The tanks are firing on the objective and causing great havoc amongst enemy MG positions."¹⁰² Not only did the tanks cause damage on the objective, but they kept the German defenders' attention occupied towards the west, rather than towards the south where A Coy was conducting its bold flanking movement. The Three Rivers remained along the knife-edge ridge of Highway 121 and performed their direct fire role in the exact fashion needed to support the infantry. Once on the objective, the Seaforths had a hard fight that lasted until morning, but they succeeded in capturing Monte Fronte by 0600 28 July (See Map 3.14).¹⁰³ To the north, the Eddies were ordered forward by Brigadier Vokes to take Monte Crappuza and Cemetery Hill. Their attack began at 0300 28 July and by 0855 they had seized their objective. The way was now open for the Canadians to attack Agira.¹⁰⁴

The PPCLI were ordered forward to finish the battle that had started four days earlier. It took some time to reorganize support assets for the final push, and reconnaissance assets were sent forward to scout Agira. Early assessments determined that the town appeared empty. A bombing wave was called off from their air support and the PPCLI entered Agira at 1430.¹⁰⁵ A troop from C Sqn entered the town behind the infantry to provide support. About halfway through the town the Canadians were suddenly fired upon by Germans with machine guns mounted on rooftops and in windows. The Three Rivers troop advanced forward and the troop leader, Lt D.M. "Beez" Gordon, attempted to dismount his Sherman to have a face-to-face conversation with the infantry to determine where he should employ his troop. At this

¹⁰² W.D. Seaforth Highlanders of Canada, 27 July 1943.

¹⁰³ Ibid.

¹⁰⁴ W.D. Loyal Edmonton Regiment, 27-28 July 1943.

¹⁰⁵ W.D. PPCLI, 28 July 1943; Nicholson, *Canadians in Italy*, 133.

point, he was hit by sniper fire and severely wounded.¹⁰⁶ His troop quickly pulled out of Agira and adopted firing positions on the outskirts of town. From this location they offered long range firing support to the PPCLI who were battling house-to-house. As machine gun nests on rooftops and upper story windows held up the PPCLI advance, the Shermans launched High Explosive rounds to help clear them out.¹⁰⁷ The Three Rivers tankers were still clearly uncomfortable with close support of the infantry in urban environments. Given their acceptance of the fire support role over the previous few days, it is unsurprising that the wounding of their troop leader caused the remainder of the troop to withdraw from town and return to long-range fire support tasks. By 1630 the PPCLI had cleared Agira proper, however German defenders still occupied positions on ridges and features to the east of town that would be cleared by the 231st Brigade later in the day from the south.¹⁰⁸

The Battle for Agira was over, and it had taken a heavy toll on both sides. The Canadians suffered 438 casualties between 1st Brigade, 2nd Brigade, and the Three Rivers. These do not include the 300 casualties taken by the 231st Brigade in their cutoff operations to the south of Agira or the nearly 100 casualties of 3rd Brigade operating further east along the Dittaino River Valley.¹⁰⁹ The Three Rivers suffered 4 dead and 13 wounded and lost four tanks completely destroyed. The Germans lost an estimated 325 killed and had 430 soldiers captured by the Canadians. While the numbers of wounded soldiers are unknown, the total figures are probably two to three times the number of German dead. Additionally, 260 Italians were captured by the Canadians throughout the battle.¹¹⁰ The destruction of the

¹⁰⁶ Wallace, "Shermans in Sicily," 66; W.D. PPCLI, 28 July 1943.

¹⁰⁷ Stacey, CMHQ, "Report No.135," 62.

¹⁰⁸ Nicholson, *Canadians in Italy*, 133.

¹⁰⁹ *Ibid.*

¹¹⁰ *Ibid.*, 133-134.

German positions at Agira forced them to withdraw farther east to the town of Regalbuto. Wider Allied pressure led German High Command to order an evacuation from Sicily. For the rest of the campaign the Germans were merely fighting for time to withdraw their forces. Their failure to hold their defensive line throughout Sicily meant that the German commanders had no choice but to begin an orderly withdrawal towards Messina and mainland Italy. However, the Allies did not yet know this, and the stubborn defences encountered at Agira led them to believe that the Germans were continuing to defend Sicily at all costs.¹¹¹

3.6 – A Hard Ten Days

As could be expected, ten days of hard fighting in the mountains had demonstrated a marked improvement in the tactical skills of the Three Rivers. The confined nature of the terrain prevented the tanks and the infantry from conducting assaults as they had trained doctrinally in Britain. As a result of the difficulties of the rugged terrain, the Three Rivers learned to play to their strengths and concentrated on their fundamental soldiering skills to overcome Axis opposition. Troop leaders and squadron commanders emphasized direct fire support as their key contribution to the combined-arms team. Rather than assaulting alone, or risk separation with the infantry as occurred at Nissoria, the Three Rivers made the establishment of an effective fire base their critical task. Excellent long-range gunnery gave the tankers an advantage over their German counterparts in defensive positions. High Explosive shells became their favourite tool, compared to armour-piercing rounds. They were used effectively to help Canadian infantry by blasting enemy machine gun positions

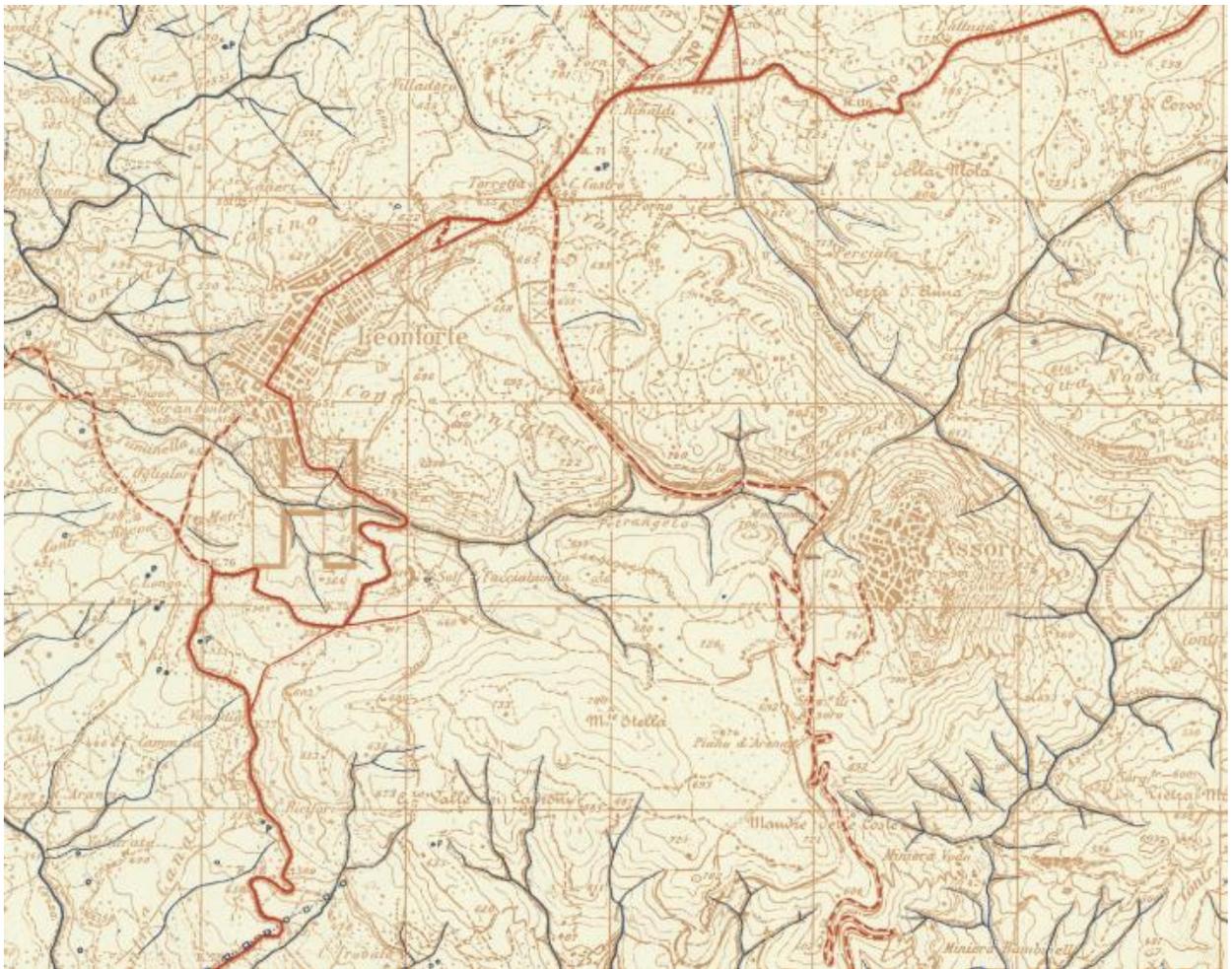
¹¹¹ AHQ, "Report No.14," 10.

during assaults during the day and at night. But it was not gunnery alone that allowed the Three Rivers to be so effective on the battlefield. The harsh terrain of the Sicilian mountains is the antithesis of the manoeuvrable terrain in which armoured troops loved to operate. Yet, the drivers of the Shermans succeeded in moving their vehicles into seemingly impossible positions, such as with Waldron's Troop at Assoro. Bold manoeuvre on the battlefield allowed the Three Rivers tanks to be one of the most dangerous opponents to the Germans. Finally, good initiative, strong determination and leadership from the crew commanders and troop leaders created opportunities to inflict severe damage on the enemy. Whether it was Sgt Campbell's cat-and-mouse chase through the streets of Leonforte, Sgt Allen's manoeuvring at Nissoria, or Capt Smith's nighttime engagements with enemy tanks, the junior leaders of the Three Rivers continued to perform at a high level that facilitated further Canadian successes.

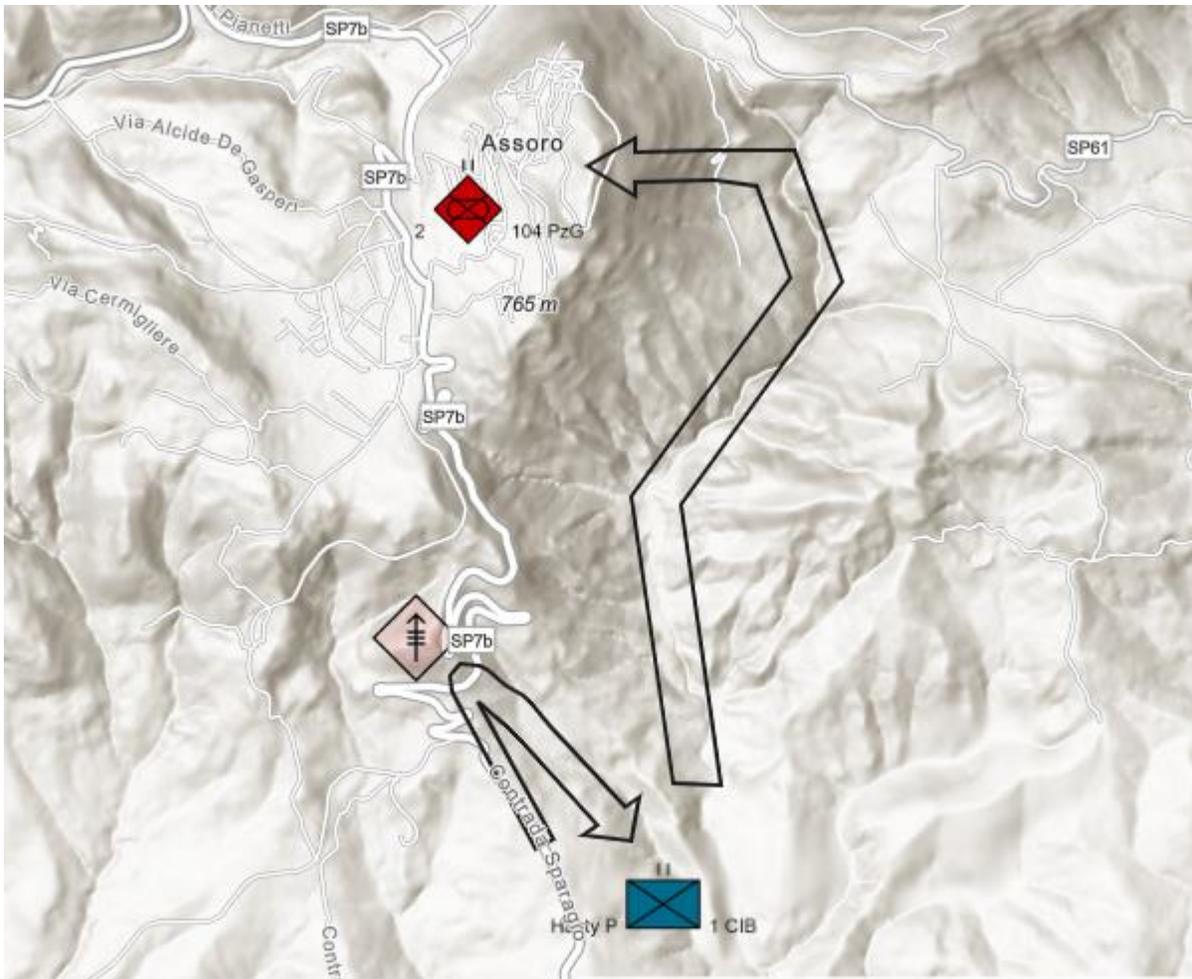
While the Battles of Assoro, Leonforte, and Agira demonstrated the inherent strengths of the Three Rivers junior leadership and their crew members, they also revealed critical weaknesses, especially regarding infantry-tank cooperation. While the terrain dictated that tanks could only be used as fire support in most cases, in those where the ground allowed intimate support between the two arms, the invariable breakdown in communication divided subsequent action into separate tank and infantry battles. Neither arm can be wholly blamed for the poor coordination. Stemming from the lack of adequate interarm and urban training prior to their arrival in Sicily, both the tanks and the infantry responded differently to unfamiliar situations. At Leonforte, a flying column into an urban setting was completely outside the doctrinal mindset. However, once inside the town, the Three Rivers became distracted by their hunt for German tanks, rather than remaining close to the infantry to

provide them direct fire support to overcome hard points and difficult positions. The attack was one of the greatest successes in the Sicilian Campaign, however it could have been improved with better cooperation between the tanks and infantry. The advance at Nissoria also proved to be a poor example of tank-infantry cooperation. With the infantry having gone to ground due to enemy fire, the leading tanks did not stop to provide intimate support, but instead carried on with their own tasks, resulting in the ambush in the Monte di Nissoria kill zone, and the infantry's inability to get on to the objective. And while Sgt Allen's push into the depths of the German defensive position was quite damaging and destructive to the Germans, without infantry support to exploit, his success was only temporary.

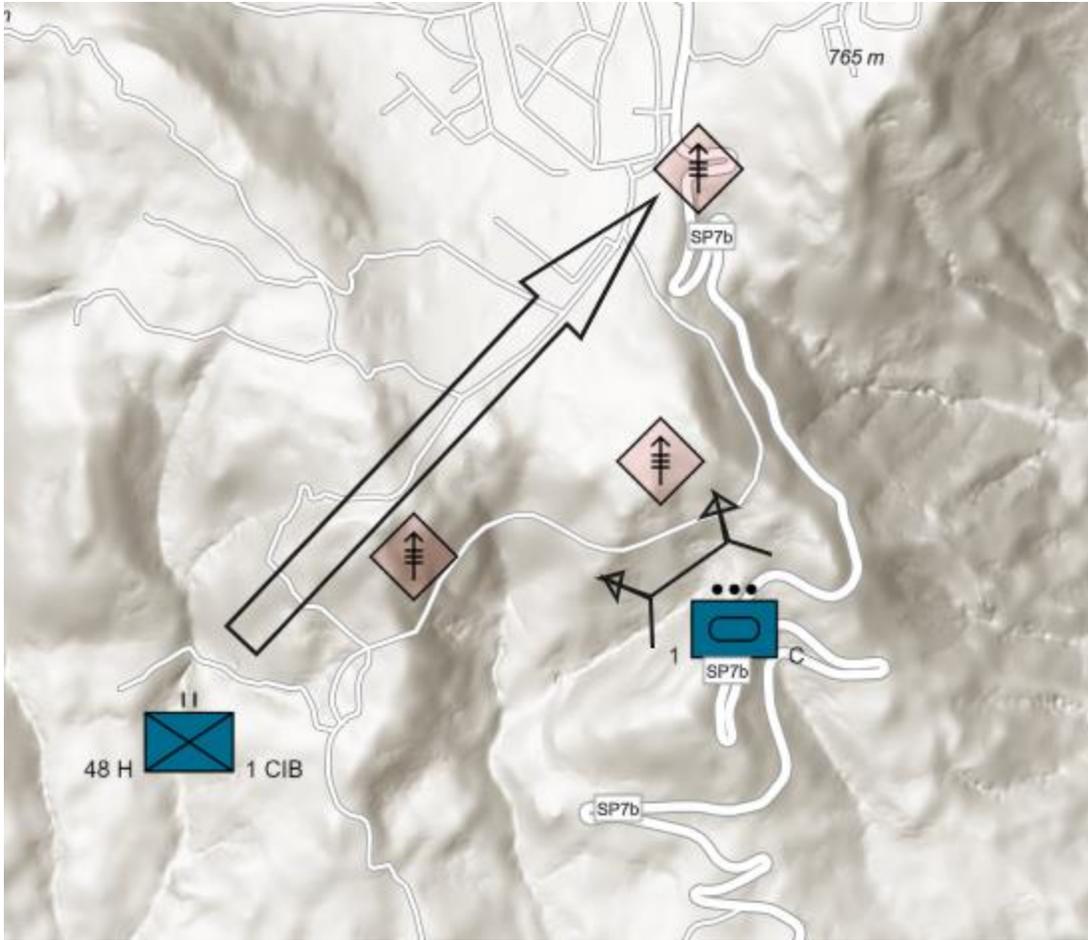
These occurrences demonstrated the importance of providing solid, reliable fire support and clear passage of information to the infantry. It became evident to the Three Rivers with the successes of C Sqn in helping the Seaforth Highlanders seize Objectives Tiger and Grizzly. The tanks did not need to roam around the battlefield, but instead occupy good firing positions along the main roads where they could draw the German attention away from the flanking infantry and destroy any exposed German positions. The strength of the tanks in Sicily was their firepower, not their mobility. By adapting their tactical techniques to emphasize their strengths and technical capabilities, they were able to bring their firepower to bear against the enemy at critical moments. The lessons learned from Assoro, Leonforte, and Agira would continue to be applied, adapted, improved, and implemented as they carried on with the remainder of their campaign, particularly as they advanced against the German defenders in Regalbuto to the east.



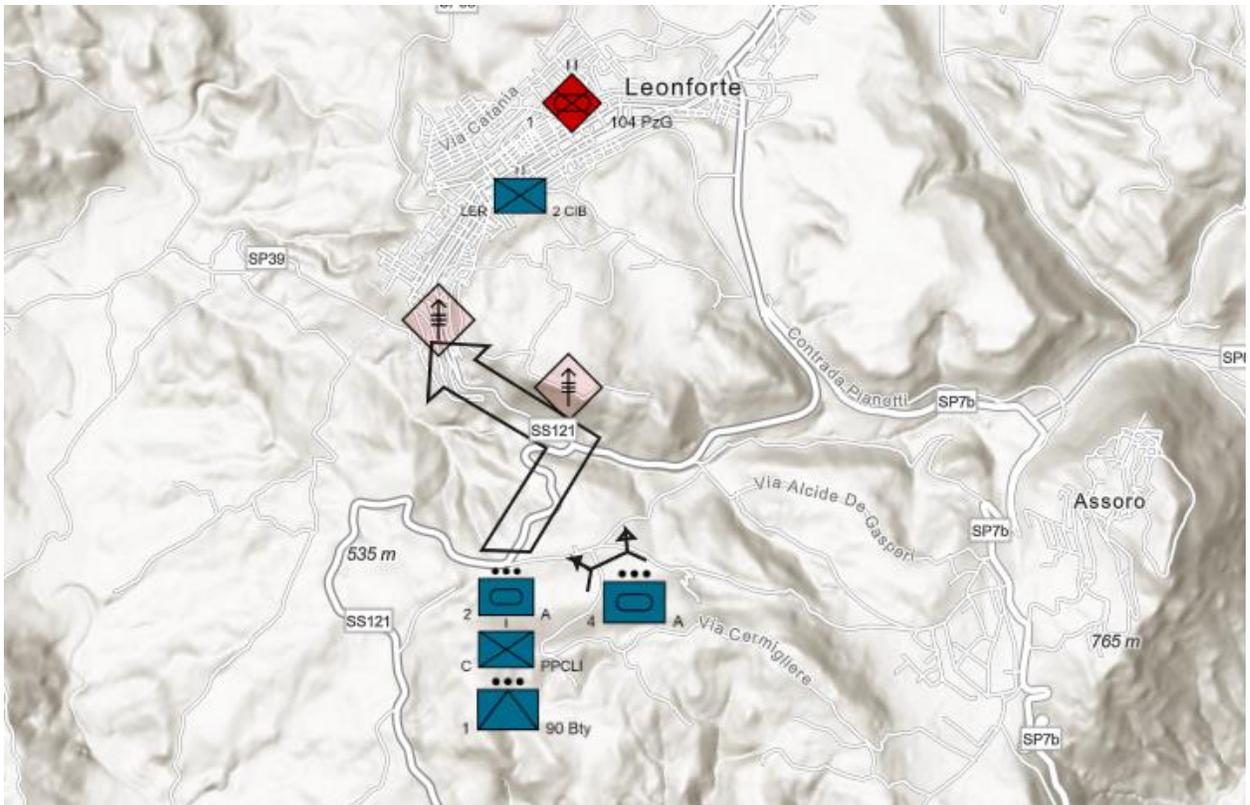
Map 3.1 – 1:25,000 Topographical Map, Leonforte and Assoro



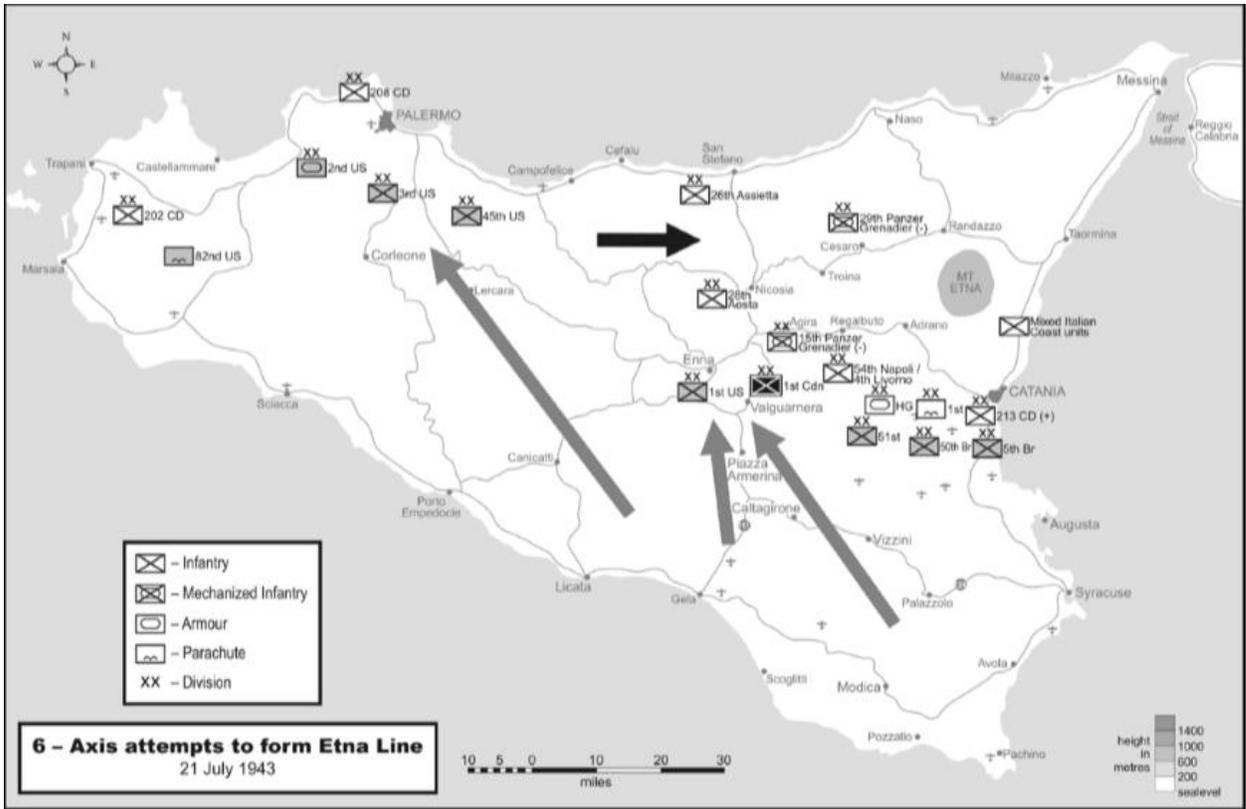
Map 3.2 – Hasty Pees Seize the Summit, 20 July 1943 (Map created by Andrew Garrie)



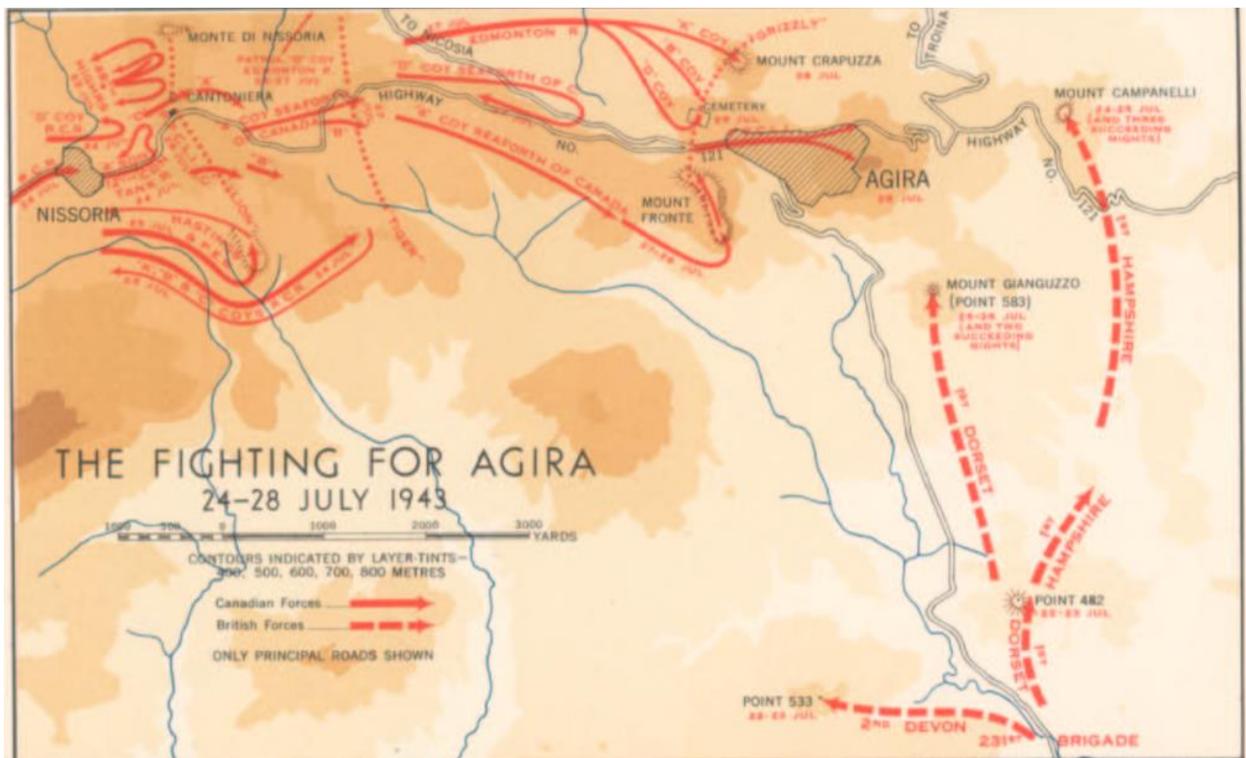
Map 3.3 – Lt Waldron’s Fire Support, 22 July 1943 (Map created by Andrew Garrie)



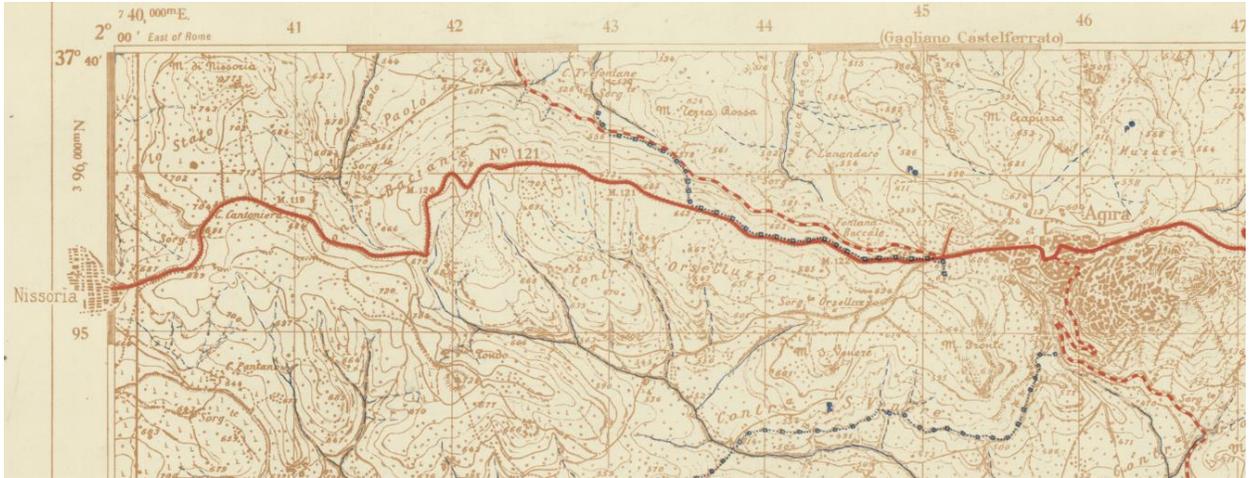
Map 3.4 – Flying Column into Leonforte, 22 July 1943 (Map created by Andrew Garrie)



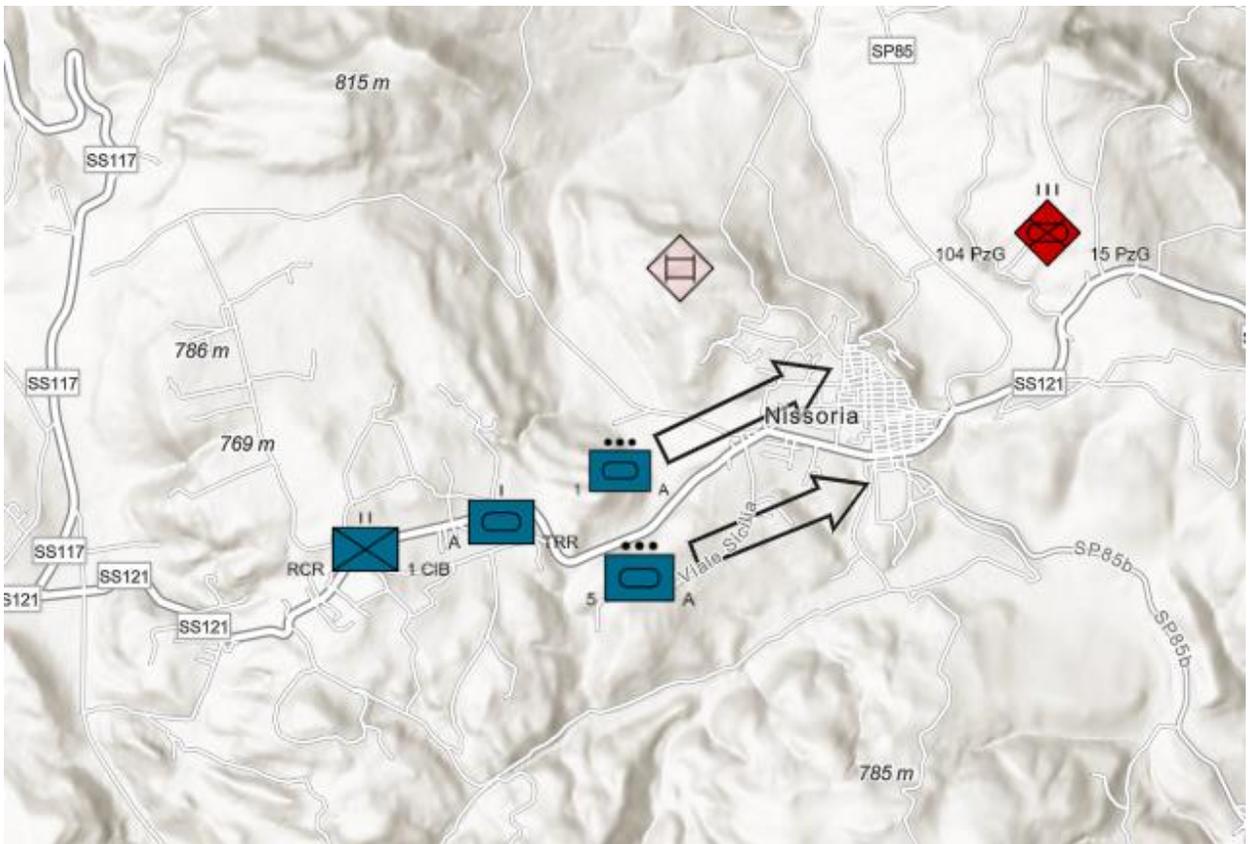
Map 3.5 – Axis Forces Withdraw to Etna Line (Map from Windsor, “The Eyes of All,” *CMH* 22.3)



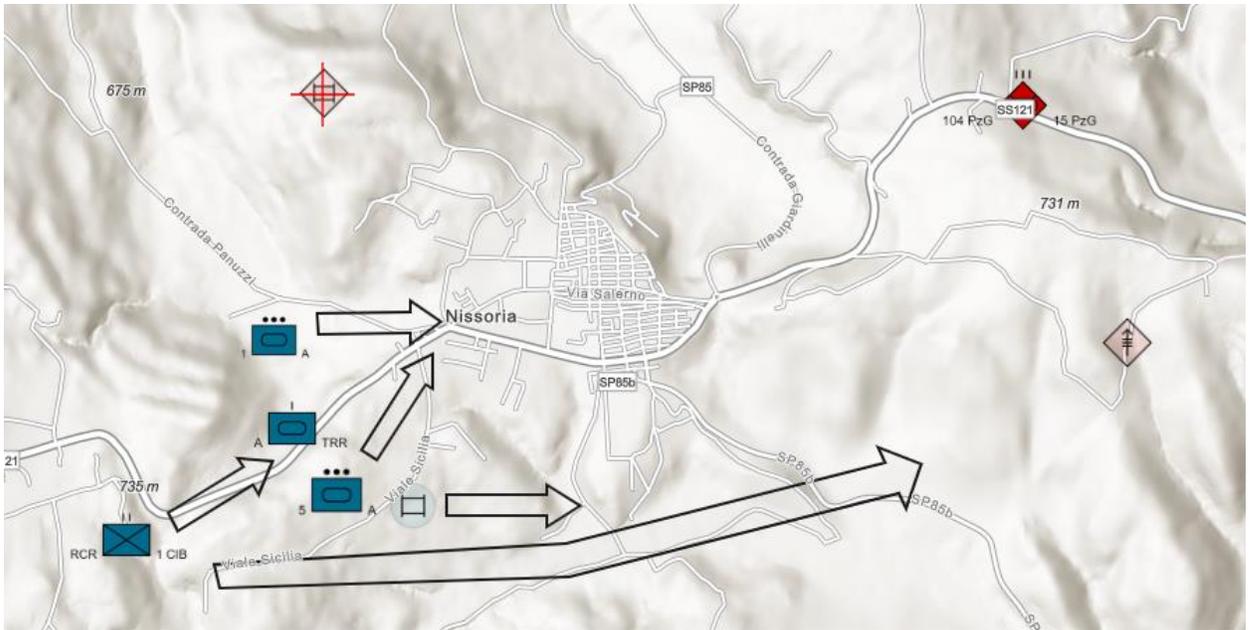
Map 3.6 – The Fighting for Agira (Map from Nicholson, *Canadians in Italy*)



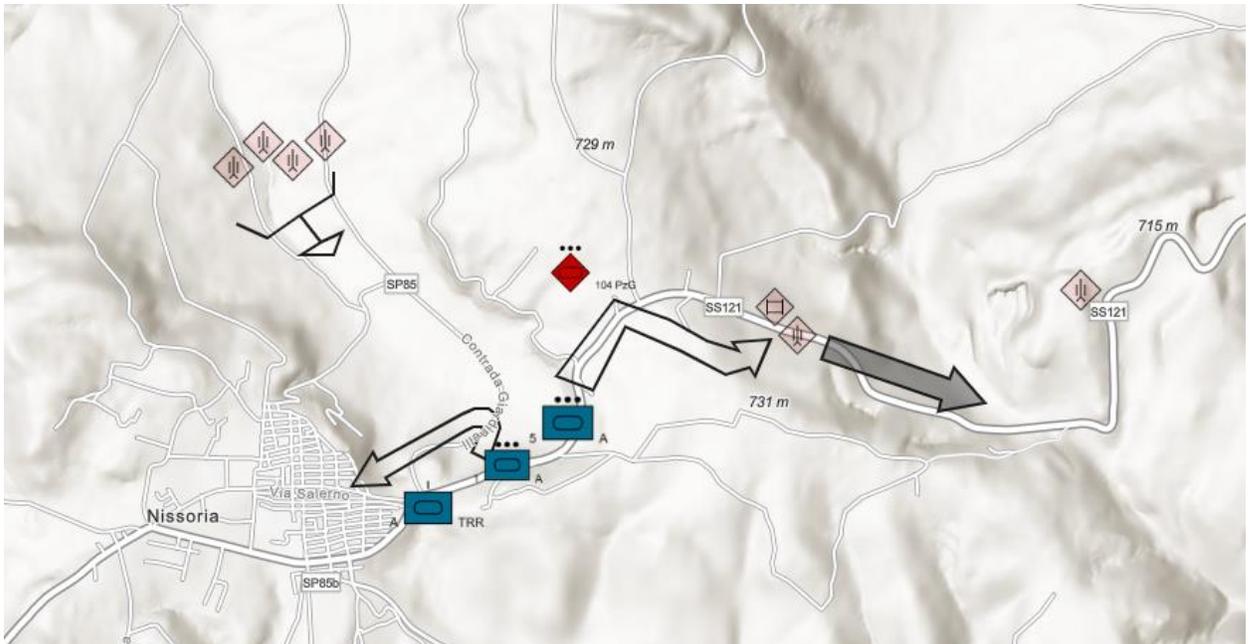
Map 3.7 – 1:25,000 Topographical Map, Nissoria and Agira



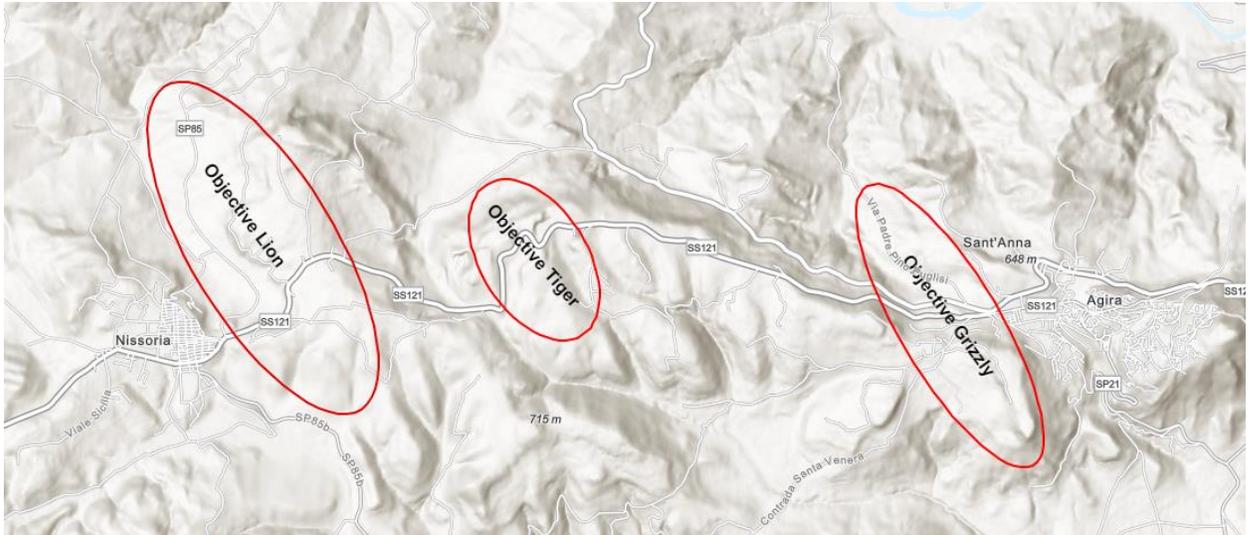
Map 3.8 – Approach to Nissoria, 24 July 1943 (Map created by Andrew Garrie)



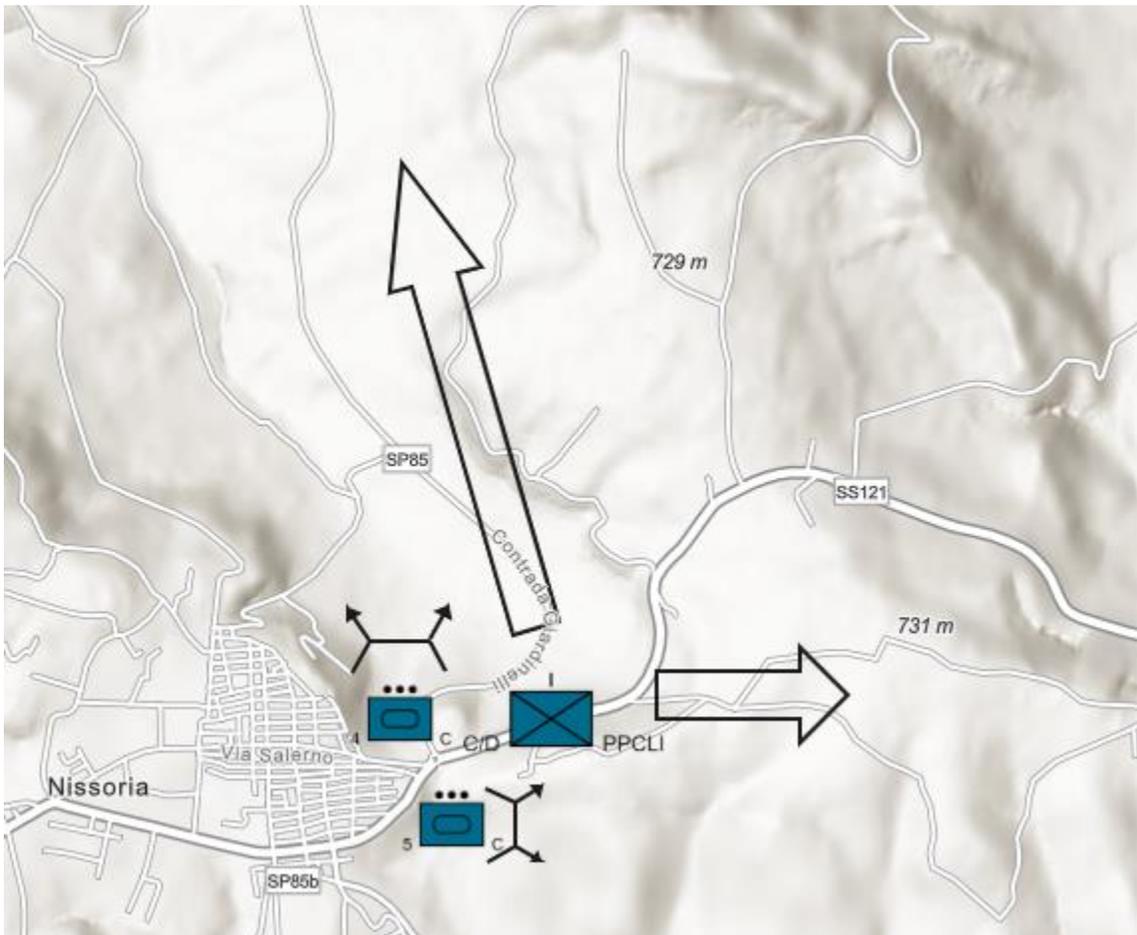
Map 3.9 – Attack Through Nissoria, 24 July 1943 (Map created by Andrew Garrie)



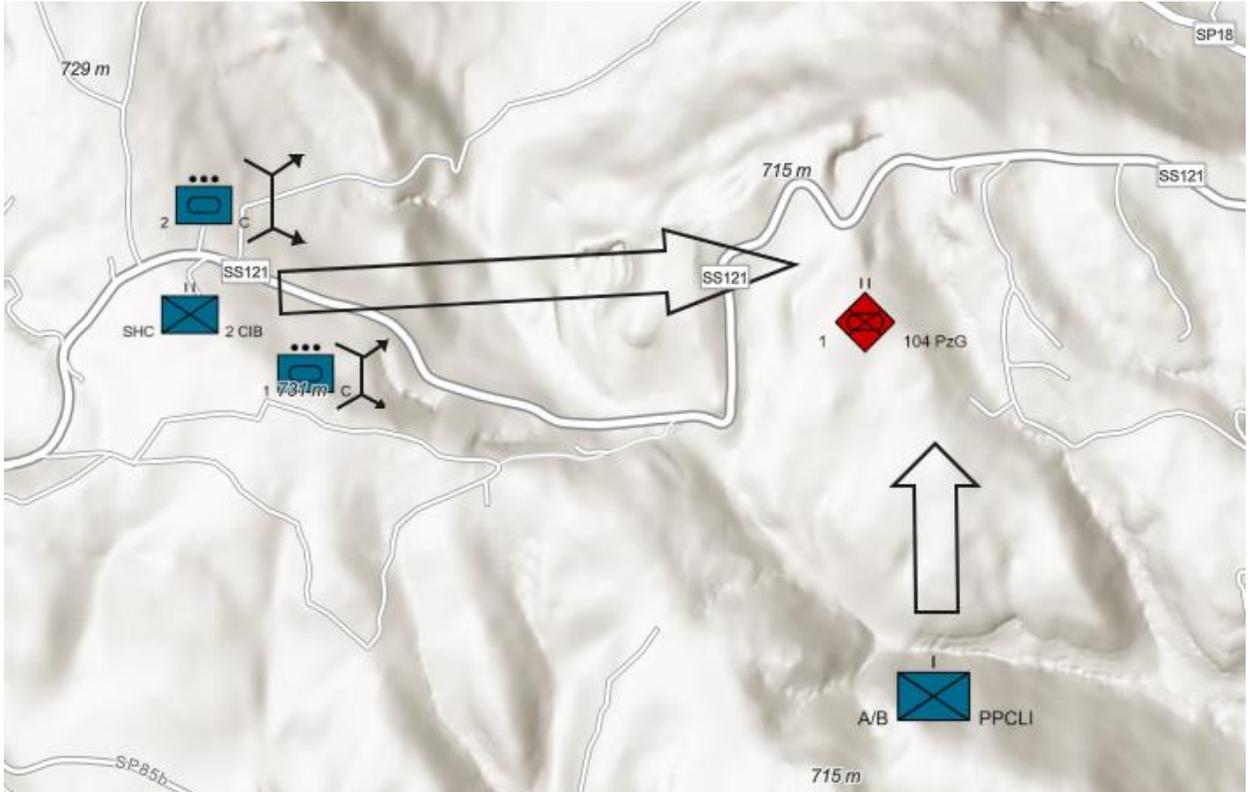
Map 3.10 – A Sqn Engagement at Monte di Nissoria, 24 July 1943 (Map created by Andrew Garrie)



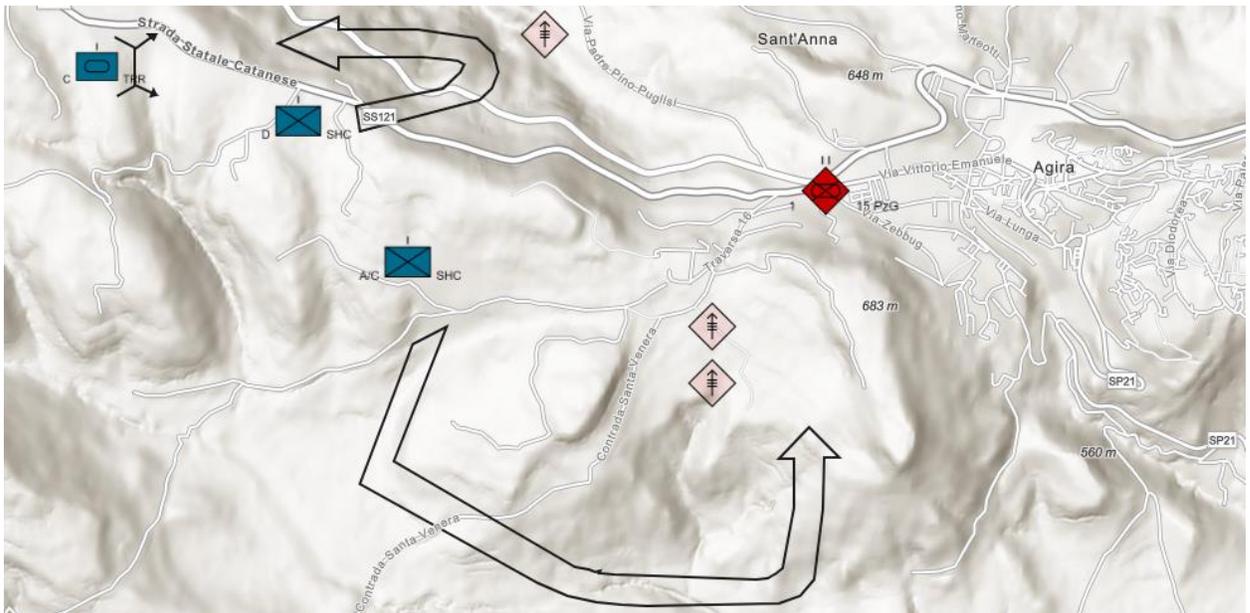
Map 3.11 – 2 CIB Objectives: Lion, Tiger, Grizzly, 26-28 July 1943 (Map created by Andrew Garrie)



Map 3.12 – Capture of Objective Lion, 26 July 1943 (Map created by Andrew Garrie)



Map 3.13 – Capture of Objective Tiger, 27 July 1943 (Map created by Andrew Garrie)



Map 3.14 – Capture of Objective Grizzly, 28 July 1943 (Map created by Andrew Garrie)

Chapter 4: The Final Stretch

The Canadian victory at Agira opened the final stretch of the Sicilian Campaign. Although they did not know it at the time, the Three Rivers had only eight days of combat remaining for them on the island. The previous eighteen days had turned the inexperienced Three Rivers tankers into savvy, veteran soldiers. Their intelligence and competence allowed them to adapt and succeed in complex combat engagements in some of the most difficult terrain imaginable. The Three Rivers had matured as a combat force since they arrived in Sicily on 10 July. No longer did they operate as a separate arm but instead, during the actions at Regalbuto, the crossing of the Salso River, and the advance to the Simeto River, the Three Rivers accepted the restrictions of the terrain and embraced their role as fire support for their infantry comrades. This maturation became a great resource for the advance of 1st Canadian Infantry Division as they sought to overcome the final stubborn German defences of the so-called Etna Line.

1st Division's advance formed part of the Eighth Army plan, known as Operation Hardgate, to break through the final German defensive line based around Mt Etna.¹ General Oliver Leese's 30 Corps was ordered to capture the town of Adrano and break the German line, forcing them to withdraw towards Messina. 13 Corps on the Catania Plain was to be prepared to follow the withdrawing Germans along the east coast, while the United States Seventh Army advanced eastwards on Messina from Troina and along the northern coast. Two divisions from 30 Corps were to be employed to attack Adrano: the 78th Division attacking from Centuripe along the south of Highway 121, and 1st Division attacking east from Regalbuto along the northern bank of the Salso River. The third division in 30 Corps,

¹ G.W.L. Nicholson, *Official History of the Canadian Army in the Second World War, Vol II The Canadians in Italy, 1943-1945*, (Ottawa: Queen's Printer, 1956), 139.

the 51st Highland Division was to make a supporting attack to the east on the neighbouring town of Paterno. The 78th Division was responsible for capturing Adrano, while 1st Division would support the attack from the high ground west of the Simeto River.² Of course, for the 1st and 78th Divisions to launch their attacks from Regalbuto and Centuripe required them to physically get there. 231st (Malta) Brigade, who remained under Canadian command after the capture of Agira, and the 1st Canadian Infantry Brigade advanced east and captured Regalbuto on 2 August. To the south, 3rd Canadian Infantry Brigade operations supported by B Sqn of the Three Rivers had marched through the Dittaino River valley in a parallel advance to 1st Division's attack on Agira. 3rd Brigade was then temporarily placed under 78th Division command between 29 July and 3 August. 3rd Brigade captured a bridgehead across the Dittaino River at Catenanuova on 30 July and then screened 78th Division's left flank as they advanced on Centuripe. 78th Division captured Centuripe on 3 August, the day after Regalbuto fell into Canadian control. With the capture of those objectives, General Leese's 30 Corps could enact its part of Operation Hardgate and the Canadians would engage in their final days of combat in the Sicilian Campaign (See Map 4.1).

4.1 – Breaking Regalbuto

With the 104th Panzer Grenadier Regiment essentially destroyed at Agira, they were pulled out of combat operations by their parent formation, 15th Panzer Grenadier Division, who then fell back onto a defensive line running north of Regalbuto to the town of Gagliano. The Hermann Goering Panzer Division held the line from the town of Regalbuto south to Catenanuova. Thus, Regalbuto became the linchpin between two different German divisions. Regalbuto was defended by the Hermann Goering Armoured Engineer Battalion reinforced

² Ibid.

by a squadron of tanks, artillery batteries, and elements of the 3rd Parachute Regiment.³ The position at Regalbuto was considered critical as noted in the German command's war diaries which stated that, "if it [was] not possible to hold the pivot Regalbuto, the left wing [would] have to be taken back on the bridgehead position."⁴ The Engineer Battalion also received the following explicit direction:

In all orders concerning the bridgehead position it must be made absolutely clear that the present position must be held at all costs. Any instructions for withdrawal are preparatory. There must be no doubt about this point. The abandonment of the present position and a fighting withdrawal to the bridgehead position will only be carried out on express orders from division.⁵

The Germans put every last effort into holding Regalbuto because withdrawal was not an option. Combat outposts were pushed west to disrupt movement along Highway 121. The German main defensive positions were on three high features that overlooked the town as, unlike most other Sicilian communities, Regalbuto was situated within a valley (See Map 4.2). The bulk of the German defences were located on a long, thin ridge to the southwest of town that ran parallel to Highway 121. The Germans oriented their defences to the west along this feature, known as Regalbuto Ridge, and dug in machine gun, mortar, and sniper posts. To the northwest of town, German infantry occupied a walled cemetery along a small ridge known as Mt Serione. Finally, to the east of town and across a steep, narrow valley from Regalbuto Ridge, German

³ C.P Stacey, Canadian Military Headquarters, "Report No.135, Canadian Operations in Sicily, July-August 1943, Part II: The Execution of the Operation by 1 Cdn Div, Section 2: The Pursuit of the Germans from Vizzini to Adrano 15 Jul - 6 Aug," (Directorate of Heritage and History, Department of National Defence, 4 May 1945), 85; Nicholson, *Canadians in Italy*, 146.

⁴ Army Headquarters, "Report No.14 – The Sicilian Campaign (July-August 1943), Information from German Sources," (Directorate of Heritage and History, Department of National Defence, 1947), 15.

⁵ Nicholson, *Canadians in Italy*, 147. The "bridgehead position" referred to the final German defensive line in the vicinity of Mt. Etna, the large volcano located in the north-east of Sicily. Once the Germans fell back to this defensive line, there would be little choice but to withdraw from the island as soon as possible. In the Canadian sector, this final German position centred on the town of Adrano, 23 kilometres to the east of Regalbuto.

paratroopers occupied a dominating feature known as Tower Hill. The remaining infantry established defensive positions in the buildings of the town itself. The tanks were located centrally in town in preparation to counter Canadian and British attacks.⁶

Regalbuto was central to 1st Canadian Infantry Division as well. MGen Simonds sought to quickly capture the town and then exploit in the direction of Adrano in support of Operation Hardgate.⁷ On 28 July, he ordered the 231st (Malta) Brigade to get astride Highway 121 east of Agira and prepare to manoeuvre to the east. The advance on Regalbuto is underrepresented in Canadian literature as the actions occurring on route to the town on 29 and 30 July were conducted primarily by the British soldiers of the 231st Brigade and no major combat engagements took place.⁸ Nevertheless, the tanks of A Sqn from the Three Rivers were heavily involved and important to the advance and subsequent attacks on Regalbuto.⁹

A Sqn's involvement with the 231st Brigade began on 28 July while the Battle for Agira was still ongoing. By then they had recovered from their setback on 24 July at Nissoria and were once again ready for action. A Sqn was attached to the British and met up with them in the afternoon of 28 July. The Dorsetshire Regiment (Dorsets) of the 231st Brigade

⁶ U.S. Army Map Service, *Agira Sheet 269-IV 1:50,000*, 1943, Accessed at <http://digitalarchive.mcmaster.ca/islandora/object/macrepo%3A84936>.

⁷ Nicholson, *Canadians in Italy*, 139.

⁸ This oversight began with the official CMHQ Report No.135 and was then adopted and carried on in the Official History and subsequent works. For the purposes of larger narratives such as the Official History, the combat actions of the 231st Bde and A Sqn of the Three Rivers on 29/30 July 1943 were too minor to dedicate too much time for narrative and analysis. However, for the purposes of this paper, such minor engagements help build a picture of tactical combat developed and practiced by tankers in restrictive terrain.

⁹ Nicholson, *Canadians in Italy*, 146-152. CMHQ, "Report No.135," 85-86. This report is slightly better than the Official History as it does include paragraphs acknowledging the locations of the British attacks and some of the issues they encountered during the advance between 29 and 30 July, however they are of minimal detail. In fact, the German defenders received more attention than the British of the 231st Bde. The tanks of A Sqn are mentioned in one line only. This trend has carried in other works on the Canadians in Sicily such as Mark Zuelkhe's *Operation Husky*.

launched an attack on a high feature to the east of Agira, known as Mt Campanelli.¹⁰ This attack was an excellent example of a combined-arms attack. The artillery dropped shells on the German positions, enabling the A Sqn tanks to advance and lay down suppressing fire on German machine gun and mortar positions. This, in turn allowed the infantry to safely get onto the objective. Several ditches and dried riverbeds prevented the tanks from manoeuvring forward onto the hill itself, so they remained in support from the low ground, firing high explosive rounds from hull down positions to destroy enemy defences and support the infantry onto the objective.¹¹ Thus, the A Sqn crews supported the infantry attack with fire rather than manoeuvre. The Dorsets captured Mt Campanelli by the evening and the remainder of the brigade prepared to advance east the following morning.

231st Brigade advanced on Regalbuto with the Hampshire Regiment (Hampshires) north of Highway 121, and the Dorsets on the south. A Sqn followed in support along the highway rather than leading the advance.¹² The attack formation for the advance on Regalbuto elucidates the development and acceptance of the Three Rivers fire support role. Having similarly led the way during the advance towards Agira on 24 July in what they presumed was a pursuit of a retreating enemy, the A Sqn tanks became separated from the infantry and were badly damaged. The engagement at Nissoria lay heavily on the minds of A Sqn's leadership as they advised 231st Brigade for the planned advance to the east in what also appeared to be a pursuit.¹³ As a result, the tanks followed behind the infantry rather than

¹⁰ U.S. Army Map Service, *Agira Sheet 269-IV 1:50,000*, 1943, Accessed at <http://digitalarchive.mcmaster.ca/islandora/object/macrepo%3A84936>.

¹¹ Reginald Thomas Gilchrist, *Malta Strikes Back: The Story of 231 Infantry Brigade* (Aldershot: Gale & Polden, 1946), 92-93. Interestingly, the 12 CATR War Diaries state that A Sqn did not link up with 231st Bde until 29 July. However, Gilchrist's Brigade history clearly states that the Canadian tanks were heavily involved in the action at Mt. Campanelli. It is likely that the correct information was not recorded by the regimental I.O Lt. Roberts, as A Sqn was detached to 231st Bde, with whom they remained until 2 August.

¹² W.D. 12th Canadian Army Tank Regiment, 29 July 1943; Gilchrist, *Malta Strikes Back*, 92-93.

¹³ W.D. 12 CATR, 29 July 1943.

in line with them or to their front. Very clearly, the Three Rivers were no longer beholden to the doctrinal echelon advance. The attack launched in the morning of 29 July and met minimal opposition aside from some scattered demolitions on bridges. The brigade advanced over three kilometres before a serious demolition held up the advance. The infantry carried on to either side of the highway, but their battalion support vehicles could not pass the obstacle. The A Sqn crews successfully bypassed the obstacle and then manoeuvred to a high feature which the highway passed over, ending their comparatively easy advance.¹⁴

The German covering force lay in wait east of this high feature along the sides of the roads, well concealed in the brush of the olive and almond groves. The Germans waited in small groups until the advancing British infantry were at close range and then opened fire at the last minute to inflict maximum casualties before attempting to withdraw.¹⁵ While the opposition was rather “light,” the British took several casualties and their advance was slightly delayed. The Dorsets ended up having to attack another high feature to the east known as Mt Stupari to clear out the Germans and resume the advance.¹⁶ The advance would have taken longer without the support of the A Sqn tanks. Having remained behind on the first high feature where the highway passed over, A Sqn positioned two troops along the crest to provide fire support.¹⁷ There was little cover, so the tanks took turns manoeuvring between the reverse slope and their firing positions to minimize their exposure to the heavy enemy mortar and artillery fire.¹⁸ From those positions Canadian crews edged over the crest to

¹⁴ Gilchrist, *Malta Strikes Back*, 93-94.

¹⁵ *Ibid.*, 94.

¹⁶ *Ibid.*

¹⁷ W.D. 12 CATR, 29 July 1943.

¹⁸ U.S. Army Map Service, *Agira Sheet 269-IV 1:50,000*, 1943, Accessed at <http://digitalarchive.mcmaster.ca/islandora/object/macrepo%3A84936>.

engage the German positions. Reginald Gilchrist, the 231st Brigade Intelligence Officer, and the author of the brigade history recorded:

There is a tremendous noise as, from time to time, the tanks come out of the cutting and fire at the ground in front of the Hampshires with everything they have got. I can see their tracer fire searching the area. Battles are usually disappointing spectacles, but this scene might have been set by Hollywood. The tanks have no cover – they are in full view. Their tracer fire is like a firework display and in the noise it is almost impossible to hear oneself speak.¹⁹

With the help of the A Sqn tank crews, the Hampshires captured their objective. At the same time, the Dorsets on the right captured Mt Stupari which offered an excellent view towards the west end of Regalbuto Ridge 1200 metres away, and the town of Regalbuto 2250 metres away. The new positions controlled by the British soldiers also offered hull down firing positions for the tanks who moved up in line to provide fire support for the next phase of the attack (See Map 4.3).

Beyond Mt Stupari was the brigade's next objective, Regalbuto Ridge. The initial plan to capture this hill called for the Hampshires to attack and seize it the night of 29 July. Unfortunately, German forward observers identified the Hampshires' forming up point and dropped rocket fire on them, inflicting heavy casualties and wiping out an entire platoon. The battalion continued their advance but walked into the teeth of the German defences on the ridge, consisting of numerous machine gun posts.²⁰ The attack was called off after casualties mounted. The brigade commander, Brigadier Roy Urquhart, instead spent 30 July conducting reconnaissance of the German position in preparation for an attack later that night.²¹ Throughout the day, the only action between the two opposing sides consisted of the Germans dropping

¹⁹ Gilchrist, *Malta Strikes Back*, 94.

²⁰ *Ibid.*, 96-97.

²¹ *Ibid.*

sporadic mortar fire on Allied positions, Canadian artillery registering fire on future targets, and the A Sqn crews engaging positions along Regalbuto Ridge. With only enough space for two troops to adopt firing positions at a time, A Sqn pushed into hull downs just north of Mt Stupari and fired high explosive rounds at sniper nests and machine gun posts along the ridge.²² They relied on their gunners' skills to engage enemy defences at long range, which softened the German position, and more importantly, drew the German attention towards the west. The A Sqn fire base gave the Germans the impression that the next attack by the 231st Brigade would arrive from the west just like the Hampshires' attack from the night before as all of their defensive positions continued to fire to west, even when that night's attack commenced on their flank.²³

Brigadier Urquhart was reticent to oblige the Germans with another frontal attack on Regalbuto Ridge. Instead, he sent the Devonshire Regiment (Devons) on a long, flanking movement around the north of the ridge (See Map 4.4). Stepping off after sunset, the Devons manoeuvred in the low ground between Regalbuto Ridge and Mt Serione. They then launched three concurrent attacks on the German positions along the ridge. By 0235 hours on 31 July, the Devons had captured the entire length of Regalbuto Ridge and dug in to consolidate their success.²⁴ This was fortunate as the Germans launched a heavy counterattack at first light with two companies of Hermann Goering Engineers and paratroopers supported by tanks. The use of the German tanks in a fire support role rather than in a direct assault looked more like recent Three Rivers

²² W.D. 12 CATR, 30 July 1943.

²³ Gilchrist, *Malta Strikes Back*, 101.

²⁴ Gilchrist, *Malta Strikes Back*, 98-101.

tactics rather than the German doctrinal combined-arms attack. However, the terrain along the east end of the ridge did not allow tanks to climb the steep slopes.²⁵ The Devons located on the eastern edge of the ridge came under heavy high explosive fire from the German tanks located in Regalbuto. The German infantry pressed the Devons hard and inflicted over 100 casualties throughout the morning. However, the British soldiers held on and beat off the counterattack by the end of the morning.²⁶ German casualties are unknown, but were likely fairly heavy as there is at least one report from the Devons that indicated the Germans attacked by individual sections and those that closed with the British positions suffered up to seventy-five percent casualties.²⁷

The Devons' capture of Regalbuto Ridge offered a firm base for the 231st Brigade to commit the Dorsets for an attack on Tower Hill and on Mt Serione at 1145 hours. The attack on Tower Hill, designated as a reconnaissance in force, was stopped cold by the well-entrenched Germans.²⁸ Despite stiff resistance in the vicinity of the walled cemetery, the British captured Mt Serione.²⁹ The Dorsets also encountered German tanks employed as mobile pill boxes or strong points from Regalbuto. The Germans proved quite adept at integrating their tanks into their defensive positions as they drove their Panzers into the buildings of Regalbuto from the rear.³⁰ This clever tactic provided the German tanks concealment from view and cover from fire.

²⁵ U.S. Army Map Service, *Agira Sheet 269-IV 1:50,000*, 1943, Accessed at <http://digitalarchive.mcmaster.ca/islandora/object/macrepo%3A84936>.

²⁶ Gilchrist, *Malta Strikes Back*, 102-105.

²⁷ *Ibid.*, 105.

²⁸ Gilchrist, *Malta Strikes Back*, 106; Nicholson, *Canadians in Italy*, 149.

²⁹ Gilchrist, *Malta Strikes Back*, 107; Nicholson, *Canadians in Italy*, 149. Nicholson reported the Devons as having made the attack on Tower Hill while Gilchrist states it was D Coy from the Dorsets. Considering the heavy casualties sustained by the Devons during the capture of Regalbuto Ridge, Gilchrist's assessment is likely the accurate description.

³⁰ Gilchrist, *Malta Strikes Back*, 108; W.D. 12 CATR, 31 July 1943.

Fortunately for 231st Brigade, A Sqn Sherman crews proved to be equally clever. Three Rivers tankers zeroed in on the hiding spots of the German tanks with the aid of target indication from members of 231st Brigade. They then set their high explosive rounds to delay and fired them into the buildings concealing German armour. Rather than exploding upon contact, the high explosive rounds penetrated the walls of the buildings and exploded inside, thereby collapsing buildings on top of the Panzers.³¹ It is unclear how many of the estimated eight German tanks were destroyed by this tactic, but at the very least, the German Panzers had to be dug out of buildings and moved to different locations to carry on the battle. Canadian tank crews also received target indications from British infantry and destroyed several machine gun nests and sniper posts located in buildings throughout the town.³² On one occasion, Brigadier Urquhart personally directed Sherman fire which destroyed a German ammunition dump.³³ The Three Rivers gunners demonstrated exceptional skill during this engagement. Firstly, their capacity to hit difficult and well camouflaged targets at long range revealed their competence as direct fire specialists. Secondly, their method of dropping buildings on top of the German defenders demonstrated a capacity for clever and ruthless thinking at the crew and troop levels. They were presented with a difficult problem, determined a response, and then skillfully carried out their plan. Nevertheless, skillful gunnery by the Three Rivers was not enough to destroy or drive out all the enemy in Regalbuto on 31 July.

³¹ W.D. 12 CATR, 31 July 1943.

³² W.D. 12 CATR, 31 July 1943.

³³ W.D. 12 CATR, 31 July 1943.

The following day proved to be equally difficult in the stubborn fight for Regalbuto. The 48th Highlanders and the tanks of A Sqn moved up to support a new Dorset attempt to seize Regalbuto on 1 August.³⁴ A Sqn tank gunfire and Canadian artillery enabled the Dorsets to press the Germans into town as far as the main marketplace. Unfortunately, once the Dorsets moved into the narrow streets out of sight of their covering fire, the Germans launched small scale counterattacks and infiltrated behind the British forward companies. The Dorsets pulled out of Regalbuto by noon to avoid being cut-off by the German tanks and infantry.³⁵ Farther to the south, The Royal Canadian Regiment of 1st Canadian Infantry Brigade arrived to expand the attack on Tower Hill. However, this attack went as poorly as the Dorset attack the previous day and could not overcome German positions on the commanding hill.³⁶

Concerned by the continuous failure of frontal attacks on the positions of Regalbuto, MGen Simonds ordered 1st Brigade to launch a flanking movement south of town. The Hasty Pees stepped off late at night on 1 August and captured a series of unoccupied high features south of Tower Hill. From there, they continued northward towards Tower Hill, slowed by barren mountainous terrain. The German paratroopers occupying the objective were not forced to withdraw until 2000 hours on 2 August.³⁷

While the Hasty Pees conducted their southern flanking effort, the remainder of the 231st Brigade, including the attached 48th Highlanders and A Sqn, prepared to provide a firm fire base and fixing force from their locations west of the town. A

³⁴ Nicholson, *Canadians in Italy*, 149. The 48th Highlanders were temporarily placed under the command of 231st Bde for the capture of Regalbuto. They relieved the Dorsets at Mt Serione at dusk on 31 July, thus freeing the Dorsets to launch an attack on Regalbuto the following morning.

³⁵ W.D. 12 CATR, 1 August 1943; Gilchrist, *Malta Strikes Back*, 108.

³⁶ Nicholson, *Canadians in Italy*, 150.

³⁷ *Ibid.*, 151-152.

substantial aerial and artillery bombardment was planned to precede the assault scheduled to take place on Regalbuto in the evening of 2 August.³⁸ As it turned out, Dorset and 48th Highlander patrols discovered that the Germans withdrew from Regalbuto during the night of 1-2 August.³⁹ The Highlanders had been ordered to capture the town during that now unnecessary final assault, but the Dorsets refused to cede the credit for Regalbuto's capture after they had done all of the hard fighting for it. They slipped in first and painted their Maltese Cross formation badge on the buildings before the Canadians arrived.⁴⁰ The Three Rivers did not engage the enemy that day as the Germans had already withdrawn before they could be cut off and destroyed.⁴¹ The Germans may have slipped away, but Regalbuto belonged to the 1st Division, partly due to the support of the Three Rivers tanks (See Map 4.5).

The action around Regalbuto demonstrated the Three River's acceptance of the fire support role. They did not seek out their own targets but remained in close contact with their accompanying infantry to deliver fire support on demand against targets discovered by riflemen out in front. The ground prohibited most cross-country manoeuvre, so instead they adopted the best fire positions they could, even when those positions exposed them to enemy fire. A Sqn remained prepared to use their 75mm guns to help support the 231st Brigade's attacks during the advance on Regalbuto itself.

Despite the fire support provided by the Three Rivers, the engagement at Regalbuto once again revealed an inherent weakness in the 1943 Commonwealth tank-infantry relationship. While fire support from afar certainly enabled the infantry to

³⁸ Ibid., 151.

³⁹ Ibid.; Gilchrist, *Malta Strikes Back*, 108.

⁴⁰ Gilchrist, *Malta Strikes Back*, 109.

⁴¹ W.D. 12 CATR, 2 August 1943.

penetrate initial German positions and into their defences at the edge of Regalbuto, the unwillingness of tank crews to follow the infantry inside left the infantry unable to blast through fortified buildings and strongpoints, and vulnerable to enemy counterattacks, especially when supported by armour. The Dorsets' attacks into Regalbuto on 31 July and 1 August failed due to the presence of German armour, a threat that could have been mitigated if Three Rivers Shermans advanced into town close behind the infantry and prepared to react quickly. While remaining outside of town had worked at Grammichele, the difference in the German tactical posture meant it did not work against the well-prepared German defence at Regalbuto. At Grammichele, the smaller German delaying force did not intend to hold on indefinitely. As a result of the combination of armoured doctrine and the lack of urban operations training prior to the campaign, this facet of tactical armoured warfare remained a weak point in the Three Rivers skillset and would not improve until the Battle of Ortona in December 1943.⁴²

4.2 – Crossing the Salso River

The capture of Regalbuto by 1st Canadian Infantry Division on 2 August and Centuripe by the 78th Division on 3 August overcame German defences on the dominant high ground west of Adrano. All that remained in between were scattered companies of German infantry and paratroopers rushed forward to contain the Canadian and British advance on the last German-held roads at the foot of Mount Etna.⁴³ The Germans had few remaining troops to defend against the Canadian

⁴² Nicholson, *Canadians in Italy*, 326.

⁴³ CMHQ, "Report No. 135," 96; Nicholson, *Canadians in Italy*, 154; Lee Windsor, "'The Eyes of All Fixed on Sicily' Canada's Unexpected Victory, 1943," *Canadian Military History* 22, no. 3 (Summer 2013): 29. German forces consisted of the recently raised 382nd PzG Regt, and the 1st and 3rd Battalions of the 3rd Parachute Regt.

advance, and the terrain there turned against them as well. East of Regalbuto, the Salso River, flowing from west to east towards Adrano, intersected with the Troina River running from the north to the south and gave birth to a flat, fertile valley plain over three kilometres wide.⁴⁴ While the valley was bordered by steep, rugged mountains, the width of the plain meant that the Germans could not hold the valley with the few troops they had available. Instead, they concentrated their defences in the mountainous terrain to the north of the river. From there, they could attempt to impede the advance of the Canadians, but there was little expectation that they could stop them in their tracks.⁴⁵

The Canadians sought to take advantage of this terrain by employing 2nd Canadian Infantry Brigade to explore crossings of the Salso River as early as 31 July. During the Regalbuto action, 2nd Brigade patrolled the northern bank of the Salso River.⁴⁶ After the fall of Regalbuto, 2nd Brigade could focus more effort and resources to the Canadian advance there along the inter-Army boundary with US forces. The Eddies attacked Hill 736 on the west bank of the Troina River on 3 August and the Seaforth Highlanders stepped off that same evening to clear the eastern part of that objective known as Point 344. By morning of 4 August, the Seaforths were hotly engaged against a stiff German defence consisting of soldiers from the 382nd Panzer Grenadier Regiment. The Seaforth's Commanding Officer LCol Bert Hoffmeister called for armoured support from the Three Rivers for his attacking infantry.⁴⁷

The 382nd PzG Regt were tasked with protecting the north side of the Salso River Valley to prevent the Canadians from linking up with the Americans further north advancing on Troina.

⁴⁴ U.S. Army Map Service, *Bronte Sheet 261-II 1:50,000*, 1943, Accessed at <http://digitalarchive.mcmaster.ca/islandora/object/macrepo%3A84928>; U.S. Army Map Service, *Paterno Sheet 269-I 1:50,000*, 1943, Accessed at <http://digitalarchive.mcmaster.ca/islandora/object/macrepo%3A84933>.

⁴⁵ Nicholson, *Canadians in Italy*, 154.

⁴⁶ *Ibid.*

⁴⁷ W.D. Seaforth Highlanders of Canada, 3-4 August 1943; Nicholson, *Canadians in Italy*, 156-157.

4 and 5 Troops of C Sqn, led by Lt Jack Wallace and Lt D.K. “Mickey” Dawson respectively, were sent in response to Hoffmeister’s call for aid. Early on 4 August, they took their troops north of Regalbuto and crossed the Salso River via a railway bridge that the Germans had left intact.⁴⁸ The two troop leaders were told to make contact with friendly forces north of the river, but they were not given a location and therefore wandered the battlefield in hopes of stumbling into friendly lines before running into the enemy. Wallace’s 4 Troop led the way along the railway tracks to avoid hitting mines on either side. Eventually, the tankers heard machine gun fire coming from the hills to their northeast. The Shermans climbed the hill and found themselves mixed in with the Seaforth HQ after which LCol Hoffmeister personally identified enemy locations for Wallace and Dawson’s troops to fire away with some 30 rounds of high explosive.⁴⁹ The tanks then advanced behind the infantry to support the attack on Point 344. The two troops occupied a small crest where they established a cross-fire and kept the German positions under complete enfilade. Wallace stated that, “[Dawson] was in a perfect position to blast away at the Germans. If they tried to escape his shell fire, they walked into mine. They couldn’t move either way without catching hell.”⁵⁰ Between the two troops, the tanks knocked out an anti-tank gun tractor fleeing north on the Troina road, numerous machine gun nests, at least two mortar posts, several artillery observers, and many entrenched infantry positions.⁵¹ Once

⁴⁸ W.D. 12 CATR, 3 August 1943; W.D. 2nd Canadian Infantry Brigade, Intelligence Log, 3 August 1943; Jack Wallace, “Shermans in Sicily: The Diary of a Young Soldier, Summer 1943,” *Canadian Military History* 7, No. 4, 67. Dates for this action are conflicting between the different units. The Three Rivers WD and Jack Wallace’s diary report the action as having taken place on 3 August while the Seaforth and 2 CIB WDs state that it occurred on 4 August. Based on the radio communications recorded in the 2 CIB Intelligence log for both 3 and 4 August, the tank engagement north of the Salso River occurred on the morning of 4 August.

⁴⁹ W.D. Seaforth Highlanders of Canada, 4 August 1943; Wallace, “Shermans in Sicily,” 67.

⁵⁰ Wallace, “Shermans in Sicily,” 67.

⁵¹ Wallace, “Shermans in Sicily,” 68; W.D. 12 CATR, 3 August 1943.

again, 4 and 5 Troop crews gave fire support rather than directly assaulting the enemy position. Even though the ground allowed a doctrinal echelon attack, the Three Rivers continued to play to their strengths in direct fire rather than risk errors in a tank-infantry combined attack.

Greatly aided by the destructive efforts of Wallace's and Dawson's troops, the Seaforths successfully captured Point 344 by 1100 and could then dominate the Canadian bridgehead over the Salso River. Additionally, the Seaforths now controlled the road linking Adrano to the town of Troina.⁵² The Three Rivers War Diary also recorded that, "later in the day [Wallace and Dawson] occupied the high ground controlling the complete Salso bridgehead – the road from Troina and the bridgehead towards [Adrano]."⁵³ They were joined by the remainder of C Sqn later that afternoon to solidify the position. The Canadians now controlled enough of their northern flank that they could begin their push east towards Adrano.⁵⁴

While not a major engagement on the scale of Assoro or Agira, the Three Rivers support for the Seaforths at the Salso bridgehead exemplifies that the acceptance of the fire support role existed throughout the Regiment. A Sqn had demonstrated at Regalbuto that their primary impact on the battlefield came through fire support. The two troops of C Sqn demonstrated the same at the Salso. Building on their successes at Agira in support of the Seaforths, the C Sqn troop leaders offered the same level of support in the same fashion to facilitate the infantry's success. The tank commanders trusted their gunners to wreak havoc on the German positions through fire rather than

⁵² W.D. Seaforth Highlanders of Canada, 4 August 1943; W.D. 12 CATR, 3 August 1943.

⁵³ W.D. 12 CATR, 3 August 1943.

⁵⁴ Ibid.

physically assaulting the position with their vehicles. For C Sqn, this action was to be the final act of their tactical development in Sicily as they remained as flank protection for 1st Division during its final days of combat on the island.⁵⁵

4.3 – The Final Battle

The Seaforth success on 4 August set the conditions for the next phase of Canadian operations in the advance towards Adrano. MGen Simonds foresaw a quick dash from the Troina River east to the Simeto River running north-south just to the west of Adrano (See Map 4.6).⁵⁶ The advance was to be made over an undulating plain filled with orange groves wedged between the Salso River on the south, and two commanding peaks to the north known as Mt Revisotto and Mt Seggio.⁵⁷ While the mountains were strongly defended by German soldiers, both Simonds and Brigadier Vokes, commander of 2nd Brigade, viewed a thrust across the plain as a worthwhile risk. According to Simonds, “the spurs running southwards from these main features defilade the undulating country in the river valley itself.”⁵⁸ Thus, German defenders located in the mountains would be less able to fire on Canadians advancing through the low ground. As a result of this rare opportunity to employ tanks, Simonds attached the entire Three Rivers Regiment to 2nd Brigade for the advance to the Simeto River.

Vokes issued his orders for the attack at 2100 hours on 4 August. He gave overall command of the attack to LCol Leslie Booth, Commanding Officer of the Three Rivers. Vokes envisioned a combined-arms battle group consisting of the Three

⁵⁵ Ibid.

⁵⁶ W.D. 2 CIB, Appendix 11 August 1943; Nicholson, *Canadians in Italy*, 159.

⁵⁷ U.S. Army Map Service, *Bronte Sheet 261-II 1:50,000*, 1943, Accessed at <http://digitalarchive.mcmaster.ca/islandora/object/macrepo%3A84928>; U.S. Army Map Service, *Paterno Sheet 269-I 1:50,000*, 1943, Accessed at <http://digitalarchive.mcmaster.ca/islandora/object/macrepo%3A84933>.

⁵⁸ W.D. 2 CIB, Appendix 11 August 1943.

Rivers (minus C Sqn who were guarding the northern flank), the Seaforth Highlanders, a squadron from the 4th Princess Louise Dragoon Guards (4 PLDG) for reconnaissance, two troops of anti-tank guns from the 1st Anti-Tank Regiment, and artillery support from two field regiments and one medium regiment. This mixed grouping of units became known as Booth Force. Vokes ordered Booth Force to seize the high ground on the west bank of the Simeto River.⁵⁹ From this feature, Canadian forces could overlook the town of Adrano and control access to it from all western and northern approaches. German paratroopers from the 3rd Parachute Regiment waited for the Canadians on that high ground.⁶⁰ The paratroopers were positioned along the rocky slopes with snipers, mortars and machine guns. However, they had no anti-tank weapons along the valley or on the high ground just west of the Simeto River.⁶¹ Additionally, a recce squadron from 4 PLDG was ordered to make contact with 78th Division units in the vicinity of the small village of Carcaci located astride the Troina-Adrano Road on the west bank of the Simeto, just north of the Salso River.⁶²

Booth and Hoffmeister planned to assemble Booth Force at first light on 5 August on the east bank of the Troina River in behind the cover of a large hill. They would advance at 0600 hours led by the 4 PLDG recce sqn and a troop of anti-tank

⁵⁹ W.D. 12 CATR, 4 August 1943; W.D. 2 CIB, 4 August 1943; W.D. Seaforth Highlanders of Canada, 4-5 August 1943.

⁶⁰ CMHQ, "Report No.135," 96. Both 1st and 3rd Battalions of 3rd Para Regt had been located in the vicinity of the Canadian sector, however it is likely that no more than an understrength battalion was located on the actual Booth Force objective. The remainder were likely located in the mountains further to the north.

⁶¹ W.D. 12 CATR, 5 August 1943; Nicholson, *Canadians in Italy*, 163. The lack of AT defences made the Canadians believe they had achieved tactical surprise with their tank attack along the Salso River valley. However, it is equally as likely that the Germans had concentrated their AT defences farther to the north in the vicinity of the town of Troina where the Americans were making a concerted effort to seize this incredibly important position in the German defensive line. Troina was defended by the 15th PzG Div who also controlled the 3rd Para Regt along the Simeto River. Limited resources meant 15th PzG Div had to make important decisions on where they would employ their most valuable weapon systems.

⁶² W.D. 4th Princess Louise Dragoon Guards, 5 August 1943.

guns. They were ordered to scout the axis of advance and probe for enemy positions. B Sqn of the Three Rivers was to lead the main body with C Coy Highlanders from the Seaforths riding on their decks. Another troop of anti-tank guns followed B Sqn. A Sqn came next in the order of march with A Coy mounted on their tanks. Following behind the two tank squadrons came the Seaforth mortar platoons, the HQ of both regiments, and two Seaforth reserve companies (See Map 4.7). The leading tanks were to bound towards the objective, moving south of the Troina-Adrano Road before swinging north of Carcaci to attack the objective, the high feature overlooking the Simeto River, from the south where the hill had a gentler gradient than its western side. Orders were issued to most of Booth Force at Hoffmeister's HQ at 0200 hours on 5 August. Booth briefed the remainder of his tank and recon commanders at the Three Rivers HQ at 0300 hours and ordered his unit to commence movement towards the forward point for 0430 hours.⁶³ The Canadians of Booth Force slept very little that night.

The Three Rivers departed their harbour location according to schedule and advanced towards the Salso and Troina River crossings as well as their rendezvous point with the Seaforths. The tanks crossed the same railway bridge that their comrades in C Sqn had passed over the day before and made their timing with the Seaforths.⁶⁴ However, the attack was delayed slightly when the 4 PLDG's light armoured vehicles became stuck on the railway bridge and had to bypass using an engineer-built crossing of the Salso River. Nevertheless, the recon vehicles eventually started their advance just before 0700 hours.⁶⁵ In the meantime, the Seaforths began mounting on their assigned

⁶³ W.D. 12 CATR 4-5 August 1943; W.D. Seaforth Highlanders of Canada, 4-5 August 1943; W.D. 4 PLDG, 5 August 1943.

⁶⁴ W.D. 12 CATR 5 August 1943.

⁶⁵ W.D. 4 PLDG, 5 August 1943.

Three Rivers Shermans in preparation for the main advance. By 0740, 4 PLDG recce troops confirmed that there were no Germans west of the objective and that the ground to the south and southwest of the objective was ideal for a Canadian attack. Another Dragoon Guards patrol linked up in Carcaci with elements of the London Irish from the 78th Division. The main body began their advance towards the objective while the recce squadron continued to scout the German positions on the hill.⁶⁶

B Sqn led the way for Booth Force advancing by bounds through orange groves towards the Simeto River. Recce squadron's reporting proved accurate and Booth Force encountered no enemy resistance during their initial push to the east. Advancing tanks shelled enemy positions identified on the objective continuously. B Sqn advanced while A Sqn Shermans kept up the covering fire. As the force closed to one kilometre from the objective, the tanks of both squadrons halted under the cover of the orange groves and dismounted their infantry before they began to take fire from German positions on the hill.⁶⁷ This proved to be a wise decision as the defenders had received orders to wait until the Canadian infantry came within 500 yards of their position before opening fire with mortars and machine guns so that they could inflict maximum casualties.⁶⁸

Booth Force then split into two groups. B Sqn and the dismounted infantry of the Seaforths circled around to the right of their axis of advance, seeking out the best avenue of approach onto the hill (See Map 4.8). A Sqn remained on the left flank of the attack and pushed forward to the east to adopt firing positions. Much like the North

⁶⁶ W.D. 12 CATR 4-5 August 1943; W.D. Seaforth Highlanders of Canada, 4-5 August 1943; W.D. 4 PLDG, 5 August 1943.

⁶⁷ W.D. 12 CATR, 5 August 1943; W.D. Seaforth Highlanders of Canada, 5 August 1943.

⁶⁸ W.D. 4 PLDG, 5 August 1943.

Irish Horse attack at Longstop Hill in Tunisia, A Sqn established a firebase to mercilessly shell the objective to support the advance of other Booth Force elements. B Sqn on the right flank manoeuvred around the battlefield attempting to identify further German positions. The Three Rivers War Diary recorded that, “it was found the best way to deal with them was to have the tanks scout around the terrain and clean out all suspicious looking places with 75mm HE and with blasts of machine gun fire.”⁶⁹ The tactic worked well as “the paratroops were loathe to give away their positions to the tanks, as they knew that once they were spotted there was little chance for them.”⁷⁰ While the tanks hammered away at the Germans, the infantry slowly made their way forward to assault the hilltop position. The infantry enjoyed a fairly easy approach march as “there [wasn’t] much firing from the enemy so far. The tanks [were] making them keep their heads down.”⁷¹

At 1040 hours, the infantry began their advance. Behind them, the B Sqn tanks rolled at walking speed, firing over their heads and ensuring the Germans kept their heads down. The tanks kept pace with the infantry until they reached a water filled ditch which they could not cross. While the infantry easily passed the obstacle, the tanks remained in position and continued shelling the enemy position.⁷² Once the Seaforths entered the tankers’ arcs of fire and made it impossible to shoot safely at the hilltop, the tank crews turned east and occupied positions overlooking the Simeto River and the town of Adrano. From there they sealed off the east side of the river and any

⁶⁹ W.D. 12 CATR, 5 August 1943.

⁷⁰ Ibid.

⁷¹ W.D. Seaforth Highlanders of Canada, 5 August 1943.

⁷² W.D. Seaforth Highlanders of Canada, 5 August 1943; Douglas Delaney, *The Soldier’s General: Bert Hoffmeister at War* (Vancouver: UBC Press, 2005), 68.

German movement to or from the hill in that direction. The leading Seaforth companies (C and A) seized their objective but the German position was large enough that they required an attack to be sent in by D Coy along their right side. D Coy advanced onto the hill supported by two troops from B Sqn located on a lower hill. These Shermans performed the same support as they had with the attacks of C and A Coys earlier, by advancing at walking pace behind the infantry and shelling German targets over their heads. By 1600, the infantry controlled the objective and the Three Rivers tanks manoeuvred onto the hill to solidify the defensive position and control the approach routes to Adrano across the Simeto River.⁷³

The Booth Force attack had been a resounding success. They seized their objective, conducted the link-up with 78th Division at Carcaci, and severely damaged their German opponents. Achieving all of this cost the Three Rivers two soldiers killed by snipers and the Seaforths an additional 11 dead and 32 wounded.⁷⁴ There are no recorded figures for German losses that day, but Canadians reported that the majority of the defenders were killed for there were dead bodies all over the objective. 12 prisoners were captured, and the remainder of the force fled to the northeast along the river.⁷⁵ Estimates of the size of the force encountered were also unclear as the Three Rivers reported that the objective was held by a Brigade Group due to the amount of telephone wires emanating from this feature towards different defensive positions.⁷⁶ However, 4 PLDG participants believed that the enemy amounted to no more than a

⁷³ W.D. Seaforth Highlanders of Canada, 5 August 1943; W.D. 12 CATR, 5 August 1943.

⁷⁴ W.D. 12 CATR, 5 August 1943; Nicholson, *Canadians in Italy*, 161.

⁷⁵ W.D. Seaforth Highlanders of Canada, 5 August 1943; W.D. 4 PLDG, 5 August 1943.

⁷⁶ W.D. 12 CATR, 5 August 1943.

reinforced company.⁷⁷ Given the ease with which the Canadians pinned down the Germans and overran their positions, the German position may have been the HQ for either the 1st or 3rd Battalion of the 3rd Parachute Regiment. Therefore, the position was probably occupied by either a reinforced company as 4 PLDG believed, or the survivors of an entire understrength battalion.⁷⁸ Thus, this was the only Canadian attack in Sicily that achieved the three to one numerical advantage set out as the ideal in a doctrinal attack against an isolated and hastily prepared German position.

The Booth Force success was witnessed by both MGen Simonds and General Bernard Montgomery, GOC of the British 8th Army. Both generals were notoriously hard to impress yet they remarked that the advance to the Simeto was the “most ideal tank and infantry action ever seen by them.”⁷⁹ Such praise coming from Montgomery, who had witnessed many such attacks as 8th Army commander in the Western Desert and Tunisia, was evidence that Booth Force had done an excellent job. However, it is important to note that the Canadians accomplished such an “ideal tank and infantry action” without conforming to established armoured doctrine and against the weakest opposition they encountered in Sicily. As Chapter One revealed, the 1942-1943 ideal infantry-tank attack called for the lead tank squadron to assault the objective alone, followed by the second tank squadron and the infantry. Combat experience in Sicily against a well-equipped and skillful enemy fighting in rugged country overturned the theory. Instead, the Three Rivers used one of their squadrons as a fire base while another advanced behind the assaulting infantry. Fire support, and the physical assault

⁷⁷ W.D. 4 PLDG, 5 August 1943.

⁷⁸ Without further documentation or accurately reported casualties, it is impossible to verify the actual size of the enemy engaged by Booth Force on their objective.

⁷⁹ W.D. 12 CATR, 5 August 1943.

behind the infantry marked their contribution to the attack, rather than classic cavalry “shock action,” contrary to established British and Canadian armoured doctrine. Therefore, Montgomery and Simonds were impressed by results and not dogmatic adherence to doctrinal principles. The advance to the Simeto River confirms how the Three Rivers adopted direct fire support to assaulting infantry as their primary task on the rugged Sicilian battlefield. In combination with the all-important indirect artillery barrage, Three Rivers direct fire provided critical fire support to the infantry by filling in timing gaps between the end of an artillery barrage and before the infantry arrival on the objective. Thus, they ensured the infantry received continuous support, particularly as the tankers could see and adapt their fire to the situation more rapidly than the artillery batteries. The enemy therefore had little opportunity to rise from the bottom of their trenches to fire back. The restrictive terrain of Regalbuto and the crossing of the Salso meant that the Canadian tankers had little choice but to employ themselves as fire bases, while the open, rolling terrain of the Salso River valley gave them more options where they could have returned to the tactical principles that they were taught in Britain. That they chose to continue in the fire support role exemplifies their commitment to that task as well as the impact that the Sicilian terrain had upon their tactical development. Additionally, it helped that this choice played to their strengths as demonstrated by the repetitive successes achieved by their gunners in hitting long range and difficult targets.

Another measure of Booth Force success at the Simeto River was their excellent use of radio communications throughout the battle.⁸⁰ Communication

⁸⁰ Delaney, *The Soldier's General*, 68.

between the infantry and the armour had been a particular weak point throughout the Sicilian Campaign where issues arose during the engagements at Grammichele, Montadella Forma, Leonforte, Assoro, and especially Nissoria. That troublesome experience convinced Hoffmeister and Booth to control the battle together from Booth's tank. Hoffmeister had an infantry radio set attached to Booth's command vehicle and was therefore able to listen to radio traffic from both arms and immediately respond to the changing situations.⁸¹ It should be noted that the ground for this attack enabled the short range infantry radios to operate more effectively than in more mountainous terrain as had been encountered in previous engagements. Furthermore, Booth maintained excellent communications with both the reconnaissance elements from 4 PLDG and his artillery observers. The artillery provided initial support during the advance as the remainder of Booth Force advanced towards the Simeto River. Booth was also extremely pleased with the information coming back from his reconnaissance assets as they accurately identified targets for both his tanks and the artillery to engage.⁸² Finally, the infantry sections from the Seaforths, especially those involved during the D Coy assault, did an excellent job at using visual signals, including tracer fire to identify and communicate German targets for the supporting Sherman crews.⁸³ By shoring up their ever-present interarm communication weaknesses, the Three Rivers achieved a level of success beyond what they had accomplished in previous engagements in the Sicilian Campaign.

⁸¹ W.D. Seaforth Highlanders of Canada, 5 August 1943.

⁸² W.D. 4 PLDG, 5 August 1943; W.D. 12 CATR, 5 August 1943.

⁸³ W.D. Seaforth Highlanders of Canada, 5 August 1943.

4.4 – Blooded Vets

The Booth Force capture of the German position above the Simeto marked the last combat engagement for the Three Rivers in Sicily. It marked the culmination of the Regiment's transition from inexperienced, doctrine bound soldiers to blooded veteran tankers ready to adapt to any challenge posed to them on the battlefield. Over the course of the final eight days of combat, the Three Rivers realized that their strength as a tank unit rested with the skill of their commanders and drivers in choosing good firing positions, and their gunners' abilities to exploit those firing positions to destroy difficult targets at long range.

Days earlier, the Battle for Regalbuto marked the adaptation based on A Sqn's experiences at Nissoria. Instead of advancing alone with little contact with the infantry, they instead remained behind and in constant contact with their advancing infantry counterparts, and thus able to offer precise fire support on demand. A Sqn engaged and destroyed targets and buildings at long ranges where their enemies often could not even return direct fire. However, Regalbuto also exemplified the Three Rivers' (and by extension, the wider armoured doctrine's) aversion to operations within urban environments as their choice to remain at a distance to Regalbuto prevented the infantry from taking advantage of their support against German armour deep within the town. C Sqn's crossing of the Salso River in support of the Seaforths also exemplified the Three Rivers acceptance of their fire support role as they aided the infantry in the capture of an important high feature. The culmination of the Three Rivers' development is demonstrated during Booth Force's advance to the Simeto River. There Three Rivers crews could finally manoeuvre in open ground to firing positions from

which they could support the infantry assault on the last high ground overlooking the Simeto River. Correcting previous deficiencies in communications enabled the Three Rivers gunners to pin down and destroy numerous paratrooper positions and facilitate the capture of the final objective by their infantry counterparts.

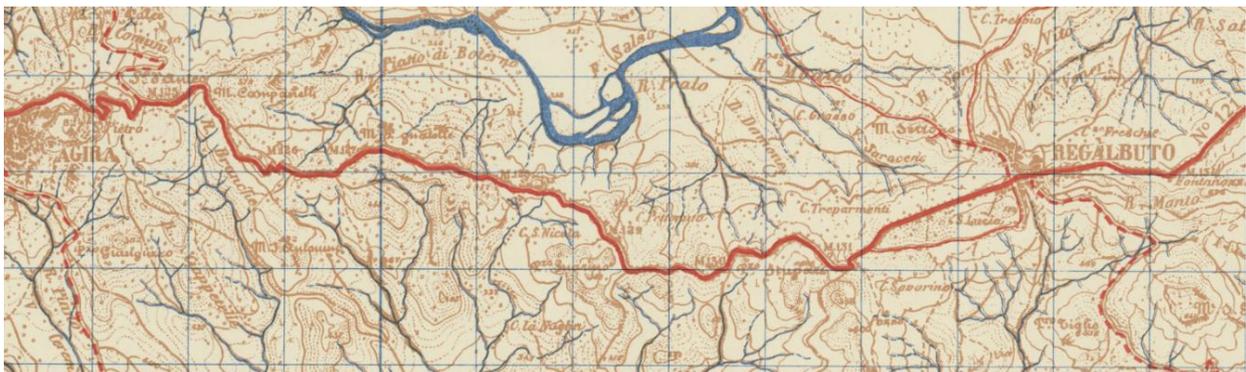
1st Canadian Infantry Division combat operations finished the following day on 6 August. The Loyal Edmonton Regiment and the Princess Patricia's Canadian Light Infantry completed the capture of Mt Revisotto and Mt Seggio. The Royal 22^e Régiment also conducted an unopposed crossing of the Simeto River the night of 5-6 August.⁸⁴ Meanwhile, the Three Rivers pulled back to a harbour and began conducting much needed maintenance on their fleet of Shermans. This period also gave the soldiers a chance to relax and rest from the hectic pace of the advance through the centre of Sicily, and particularly their last intense day of combat.⁸⁵ The end of combat operations brought a time to transition to a period of rest, resupply, reorganization, and reflection on the battles that they had fought.

⁸⁴ Nicholson, *Canadians in Italy*, 162-164.

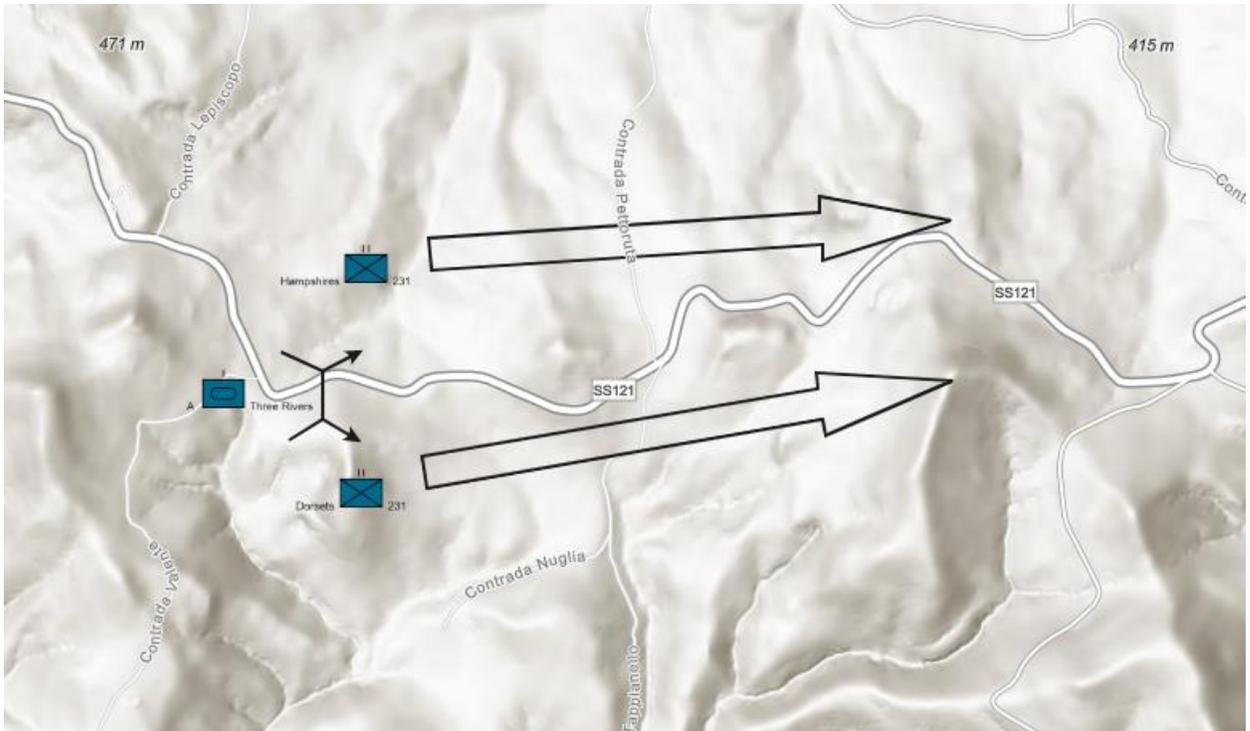
⁸⁵ W.D. 12 CATR, 6-8 August 1943.



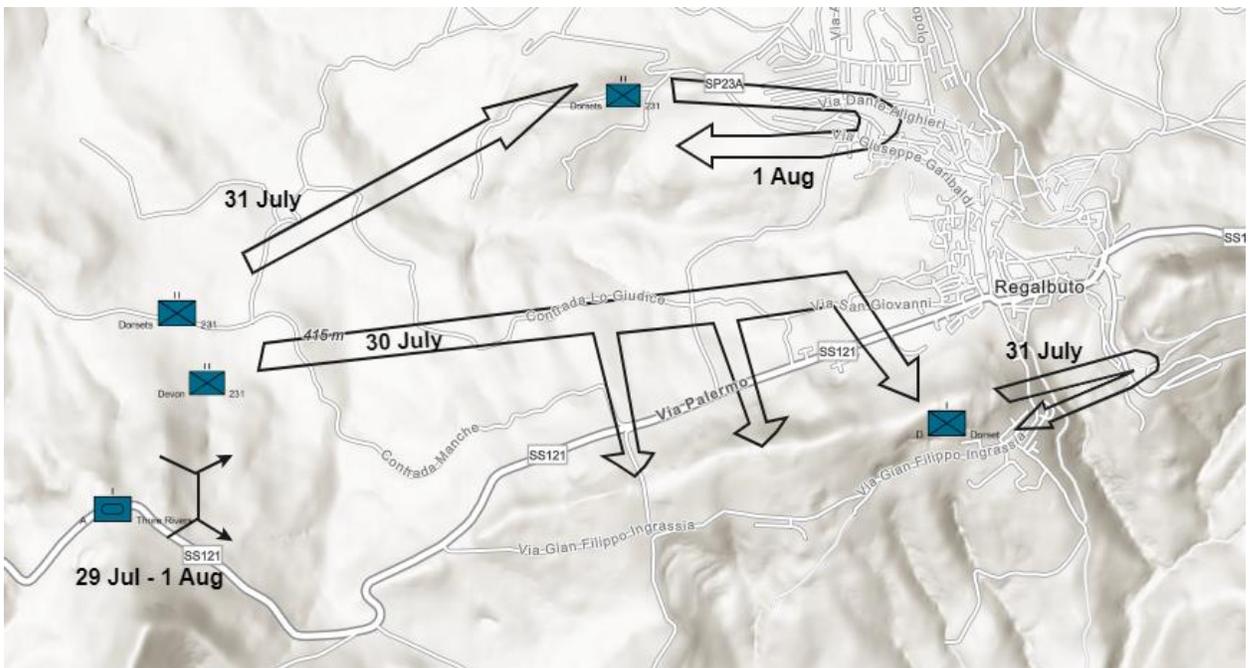
Map 4.1 – 1st Division Advance 19 July- 7 August 1943, Valguarnera to the Simeto
 (Map from Nicholson, *Canadians in Italy*)



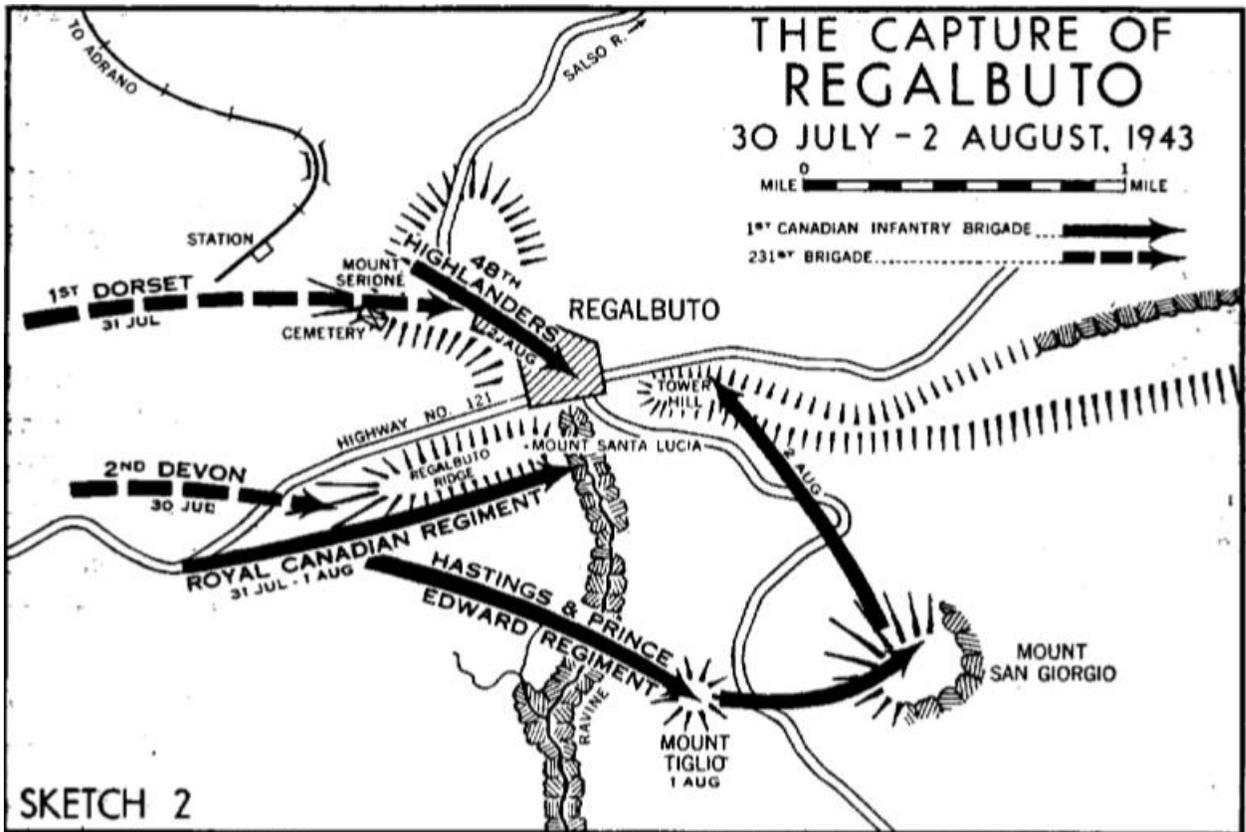
Map 4.2 – 1:50,000 Topographical Map, Regalbuto



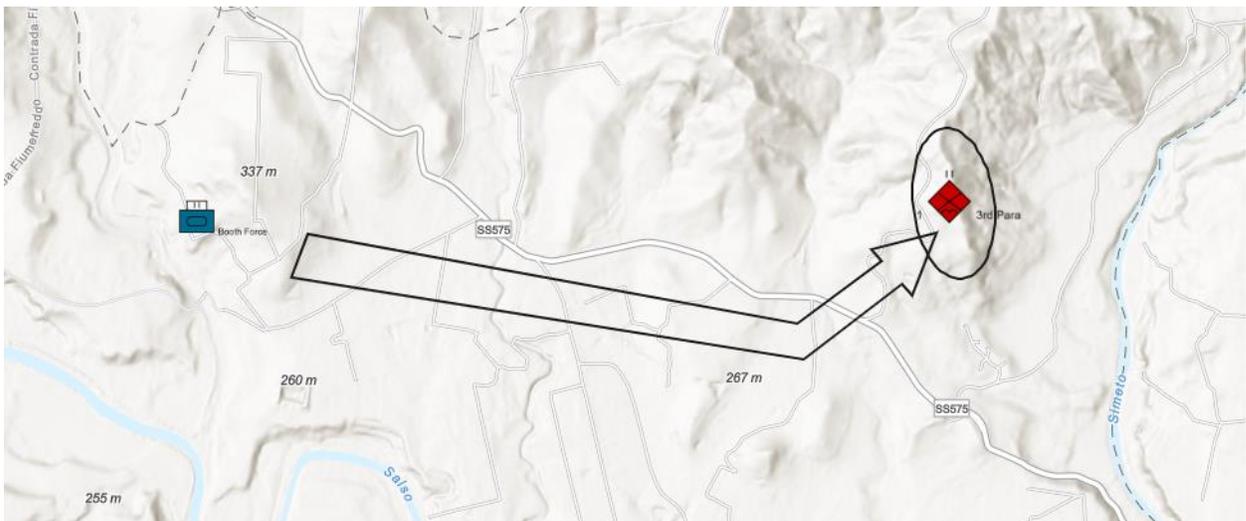
Map 4.3 – 231st Brigade Advance on Mt Stupari, 29 July 1943 (Map created by Andrew Garrie)



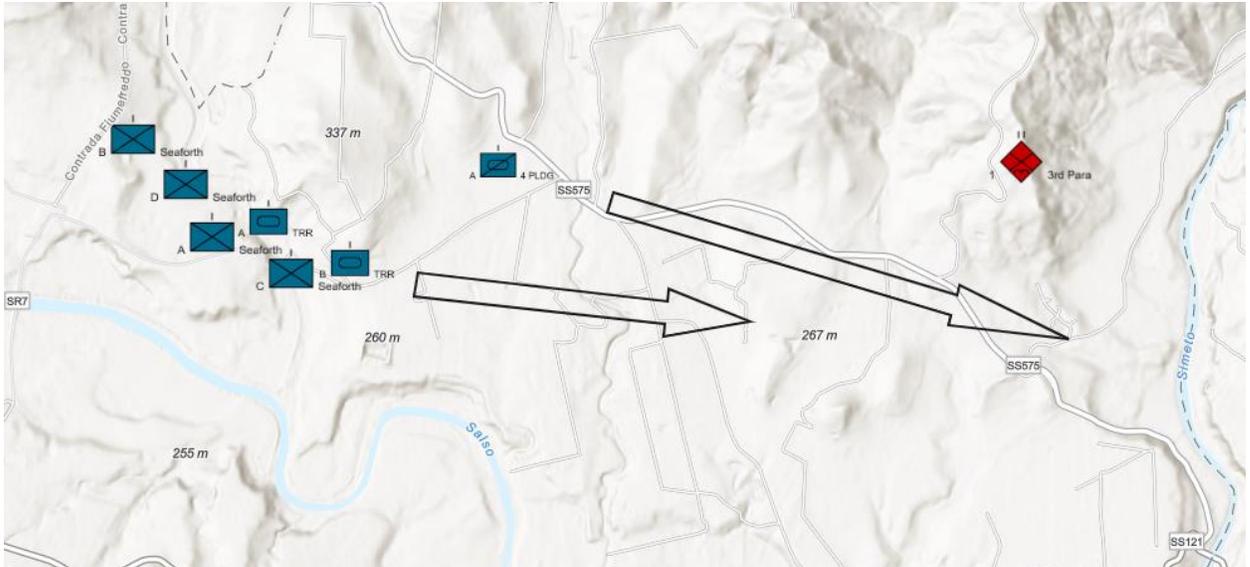
Map 4.4 – 231st Brigade Attacks on Regalbuto Supported by A Sqn, 30 July-1 August 1943 (Map created by Andrew Garrie)



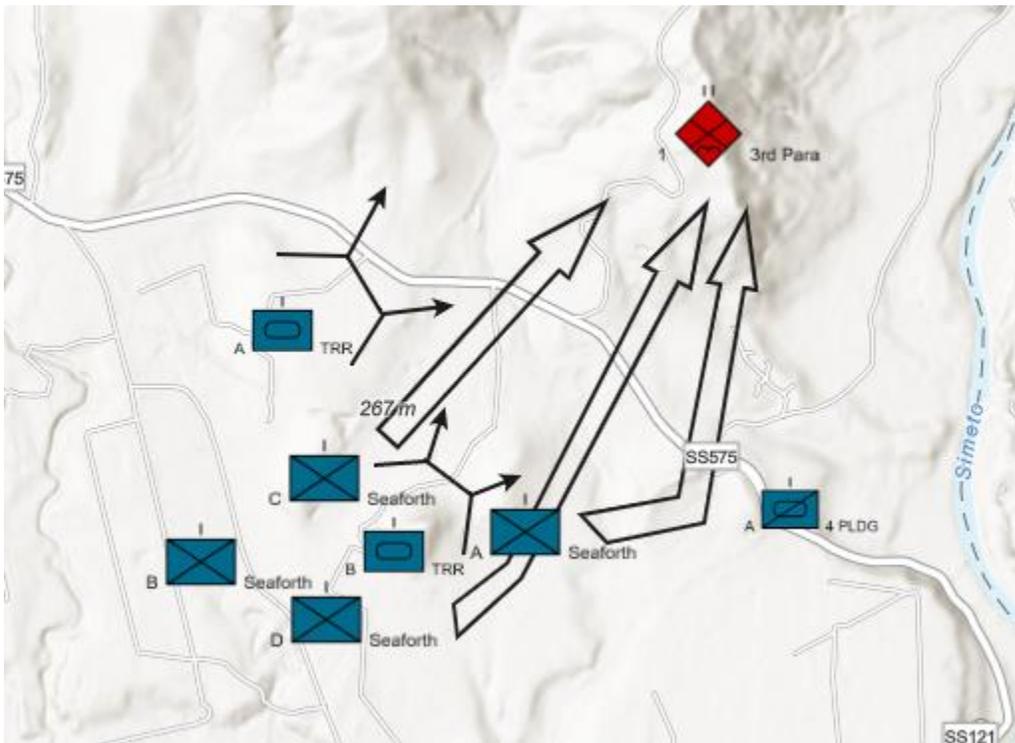
Map 4.5 – Capture of Regalbuto, 30 July- 2 August 1943 (Map from Nicholson, *Canadians in Italy*)



Map 4.6 – Booth Force Objective, 5 August 1943 (Map created by Andrew Garrie)



Map 4.7 – Booth Force Advance, 5 August 1943 (Map created by Andrew Garrie)



Map 4.8 – Booth Force Attack, 5 August 1943 (Map created by Andrew Garrie)

Conclusion – Rest and Reflection

After 5 August 1943, the fighting was over for members of the Three Rivers Regiment, but it took another ten days before the Axis forces completely abandoned Sicily. During those final ten days of the Sicilian Campaign, the Three Rivers enjoyed a period of rest. They landed on the island less than a month earlier, yet twenty-seven days of nearly continuous combat must have felt infinitely longer to the tankers who fought alongside the 1st Canadian Infantry Division in the scorching heat of the Sicilian sun. From the beaches of Pachino to their final actions along the Simeto River, the Three Rivers had driven and fought over 230 kilometres on winding, switch-backed roads through the mountains and over knife-edge ridges. The campaign had taken its toll on the now hardened tank soldiers. Between their first action against German defenders at Grammichele and the final attack to clear out German paratroopers overlooking Adrano, the Three Rivers suffered 21 dead and 64 wounded soldiers.¹ This may seem miniscule in comparison to the 2434 casualties suffered by the remainder of the 1st Canadian Infantry Division.² However, it would be callous to overlook the impact each of those casualties had upon their comrades. Tank crews are an incredibly intimate grouping of people and the loss of someone with whom one spent nearly every minute of every day when it was so “unbearably hot in the tanks that... we wore only our undershorts,” should never be underestimated.³

The end of the fighting in Sicily was not just a time to rest and recover. It was also an opportunity for the Three Rivers soldiers to professionally reflect on their experiences and share them with their compatriots in the rest of 1st Canadian Army Tank Brigade under

¹ CMHQ, “Report No.135,” 143.

² Ibid., 128. Canadian casualties were reported as 485 killed, 1796 wounded, and 153 missing. This accounted for 1/5th of all Allied casualties which were reported at 12843.

³ Jack Wallace, “Shermans in Sicily: The Diary of a Young Soldier, Summer 1943,” *Canadian Military History* 7, No. 4, 68.

whose command they returned on 11 August 1943.⁴ That day the Three Rivers officers attended a conference to discuss their battle experiences with the less experienced units of the brigade. These discussions, and their final recommendations, were recorded in the Three Rivers War Diary. One of the initial discussions included the value of infantry advancing in front of the tanks during an attack against an enemy force defending in harsh terrain inconducive to manoeuvre. As stated in the discussion notes, “infantry should invariably precede tanks until engaged, when tanks can take on enemy by observation of fire.”⁵ The Three Rivers veterans recounted cases when the enemy opened fire while Canadian tanks were in front, separating them from the infantry and disrupting the attack.⁶ Their emphasis and experiences at Monta della Forma and Nissoria challenged the doctrine they learned in the United Kingdom. Those engagements demonstrated that the separation of tanks from the infantry resulted in separate fights where the two unique arms could not benefit from each other. In the case of Nissoria the price of separation was heavy casualties. At the root of the issue was the poor communication capacity between the two arms, especially when the infantry went to ground under fire. The Three Rivers’ frustration with the infantry resulted from not knowing what the infantry were doing when they deviated from prior plans, whether out of necessity or seeking to exploit opportunities. Their viewpoint seemed to be reinforced by the comparable Three Rivers successes achieved by C Sqn supporting 2nd Canadian Infantry Brigade attacks at Agira, A Sqn’s advance to Regalbuto, and Booth Force’s advance to the Simeto River. On all those occasions the infantry preceded the tanks during assaults on enemy positions and the Canadians produced more effective results where

⁴ W.D. 12th Canadian Army Tank Regiment (Three Rivers), 11 August 1943.

⁵ W.D. 12 CATR, Appendix 13 – Brigade Conference Discussion Notes, August 1943.

⁶ Ibid.

rifle sections and tank crews assisted each other to win the day. The Three Rivers' maturation and growth as a unit helped them develop tactical procedures to support the infantry that emphasized their technical strengths.

Discussions over dissatisfaction with infantry-tank cooperation at the 1st CATB conference led to the next question regarding the need for infantry commanders to ride with tank commanders to maintain communications and situational awareness between the two arms. The Three Rivers officers even specifically suggested that tank radios be pushed to the infantry units so that continuous communications could be maintained. The tankers understood the poor quality infantry radio sets were the source of many of their issues during the Sicilian Campaign as "while inf comms will break down frequently, failure of the tks comms are extremely rare."⁷ The battles at Grammichele, Monta della Forma, Assoro, Leonforte, and Nissoria all proved that the inability to rapidly connect to the infantry by radio inhibited timely reactions to minimize casualties and exploit opportunities. Despite the technical limitations of radio sets available to them that summer, Canadian soldiers nevertheless discovered some workarounds, as at Grammichele, Objective Tiger, and the crossing of the Salso River, where infantrymen risked their lives to run through fire to physically show the tank commanders where their support was needed. Only in the final battle at the Simeto River did the two arms hit on a winning solution of collocating the infantry and tank commanders and their radios together to link together and mutually benefit from their respective battlefield capacities.

The conference also touched upon the Three Rivers discomfort with urban operations. The Three Rivers tankers believed that tanks should not be used in the initial attack on a

⁷ Ibid.

town because of their vulnerability from the “many defiles which might easily result in a knocked out tank blocking up the road.”⁸ The loss of vehicles at Grammichele and Leonforte, and of Lt Gordon in Agira, taught the Regiment the dangers of operating in urban terrain. These losses created a reticence to attack into urban areas, even when their infantry comrades desperately needed their help, as with 231st Brigade in Regalbuto. The Three Rivers were never taught how to operate in villages and towns during training in Britain and so they began learning the hard way in Sicily. Nevertheless, despite their clear dislike for this type of fighting, they clearly understood that at times there was a need for them to participate in urban operations, and they must find ways to minimize the associated risks, including following the infantry into towns rather than preceding them or going alone. This recommendation further emphasized the Three Rivers’ original point of the need for the infantry to lead tanks into combat in terrain inconducive to manoeuvre.

Not all the discussion on 11 August concentrated on Three River weaknesses in the Sicilian Campaign. The regimental leadership emphasized the need for direct fire support to be integrated into infantry assaults. Specifically, the Three Rivers told the other brigade units to train their crews to be prepared to engage targets at 3000 yards (2750 metres) when firing individually, and to engage targets up to 8000 yards (7300 metres) under controlled group fire.⁹ Those ranges demonstrate an incredible belief in their gunnery skills and in the value of the Sherman tank’s 75mm gun with high explosive ammunition. Accuracy at these ranges is exceptionally difficult, as crews had little more fire control help than a magnified gun sight, barely allowing them to see the target at those distances. The Three Rivers had clearly identified their greatest asset in combat to their armoured peers. Time after time in Sicily,

⁸ Ibid.

⁹ Ibid.

making skillful use of their tanks as highly mobile, armoured heavy gun platforms proved to be their most important skill and contribution. From their first major engagement at Grammichele, all the way to their final attack at the Simeto River, the Three Rivers continuously demonstrated their ability to hit and neutralize or destroy difficult targets at long ranges. They even successfully engaged German defensive positions at night, such as occurred at Objective Tiger where C Sqn troops destroyed enemy positions solely by firing at enemy muzzle flashes. Indeed, the Three Rivers successes in Sicily stemmed most of all from their mastery of fundamental soldiering skills during training and, for an armoured soldier, no skill is more fundamental than gunnery.

Solid fundamental soldiering skills were not the Three River's only reason for success in the Sicilian Campaign. Strong leadership from the junior officers and the non-commissioned officers played an extremely important part in overcoming the challenges of complex terrain and resilient enemy defences. After all, one can have the world's greatest tank gunner, but if his leader and crew commander cannot find a way to get his gun onto a target, then he is effectively useless. The first question that the CO of the 14th Canadian Army Tank Regiment (Calgary) asked LCol Booth during the brigade discussion revolved around how command worked within the division. In response, Booth told him that the division commander decides how many tanks he wants allocated to brigades and then allows the tank unit CO to assign individual squadrons as he sees fit. The CO's job is then to ensure that the brigade commanders do not inappropriately employ those squadrons. Booth saw his role as protecting his subordinate commanders from overzealous infanteers and left the planning and execution of the tank operations to the squadron commanders, and by

extension, the individual troop leaders.¹⁰ Authority and planning was delegated to the lower levels within the unit, which meant that decision-making on the battlefield often came directly from the soldiers at the sharp end of the fight. Three Rivers engagements at Grammichele, Piazza Armerina, Assoro, Leonforte, Nissoria, Agira, Regalbuto, and the crossing of the Salso River all demonstrated the impact of the junior leadership on Canadian operations. The harsh terrain prohibited the massing of the entire regiment in all but their final battle at the Simeto River, therefore requiring a decentralization of authority. This proved to be fortunate as it enabled those junior leaders to make bold, innovative decisions that allowed the Three Rivers soldiers to overcome their opponents in difficult engagements, much like Waldron's troop at Assoro. The harsh, unfamiliar, mountainous terrain of Sicily provided constant challenges to the Three Rivers leaders, and none of their previous training had adequately prepared them to operate under such conditions. Therefore, they adapted the doctrine they were taught to make sense with the realities of the ground. It is to the credit of the Three Rivers leaders that they could analyze the terrain, develop a plan to turn it to their advantage, and then decisively execute the plan to achieve success.

The end of the 1st CATB conference concluded the Three River's chapter on combat in Sicily. From then on, their focus shifted to the coming battles in Italy where their tactical competence would be put to more difficult tests. The Battle for Sicily may have been over for the Three Rivers but more questions remain beyond the combat stories. For Canada's Sicilian Campaign is not about one unit, or one arm. The infantry did not win battles alone, nor did the Three Rivers. MGen Guy Simonds captured the truth in a 1943 CBC radio interview:

What I want to emphasize is that all these operations have been successful because each arm and service has gone full out to do its share-and though the

¹⁰ Ibid.

spectacular actions sometimes fall to individual units, and the infantry carry the brunt of the fighting, the ultimate success has resulted because of the contributions made by all.¹¹

General Simonds understood that ultimate success on the battlefield resulted from every arm doing its part. This includes not just the combat arms or the combat support arms, but all of the combat service support units in the background.¹² While the infantry, the tanks, and the air crews generally get all of the glory (although in Sicily the glory belonged to the infantry), they cannot operate without the appropriate support. This includes the maintenance crews that keep the tanks running, that repair damaged vehicles, or even extract tanks that are stuck on the battlefield. They are absolutely essential participants in mechanized warfare. So too are the logisticians who work to ensure that the frontline troops receive ammunition, fuel, rations, water, and any other necessary supplies on an ever-moving battlefield. A tank without bullets or fuel is about as useful as a large lump of steel. The critical nature of these tasks to mechanized warfare makes it interesting that the Three Rivers war diaries rarely mentioned combat service support. Even the 60th Light Aid Detachment, whose diaries were included with the Three Rivers diaries, rarely went into any detail about their activities during the Sicilian Campaign beyond the numbers of recovered and destroyed vehicles.¹³ Nevertheless, the Three Rivers did discuss the logistical challenges of combat operations in the brigade discussions. These questions delved into specific requirements such as how often air and fuel filters needed to be cleaned, what types of oils and greases were used, how much vehicle cannibalization was required, and how much ammunition was used on their biggest

¹¹ W.D. 2nd Canadian Infantry Brigade Headquarters, Appendix 15 August 1943.

¹² Combat arms: infantry and armour;
Combat Support: artillery, anti-tank, engineers, and heavy weapons fire support
Combat Service Support: mechanics, logisticians, health services, etc.

¹³ W.D. 60th Light Aid Detachment, July-August 1943.

day of expenditures (1800 rounds of high explosive, was the reply).¹⁴ Thus, the armoured units obviously understood the importance of their logistical support, but did little to recognize it in their reports. All of this is to say that there remains a side of mechanized warfare that needs to be explored. Especially in the Canadian context in Sicily, which was the first sustained tank-infantry combined-arms operation in Canadian history.

This study of the Three Rivers Regiment's role in Sicily has also unlocked further questions worthy of exploration. The continuously recurring problem of infantry-tank communications requires further examination to determine to what extent this impacted not just Sicilian operations but the wider Allied war effort, or what this problem says about the evolution of communications technology during the Second World War. The systemic nature of this problem has implications for our historical understanding of the development and acceptance of the Allied firepower-centric strategy of attrition as they moved from the strategic defensive from 1940 to 1942, to the strategic offensive from 1943 to the end of the war.

Another important concept to consider further is the Second World War use of armoured units in mountain and urban operations. The Three Rivers proved in Sicily that tanks could operate in the mountains and that, although reticent to do so, armoured units can be valuable in an urban engagement. This concept is important to study as Sicily was the beginning of a new phase in the Allied campaign against Axis forces. The invasion of Sicily marked the first sustained operation where Axis forces consistently remained on the defence. Between July 1943 and the fall of Nazi Germany in May 1945, Axis forces remained on the strategic defensive which led to their

¹⁴ W.D. 12 CATR, Appendix 13 – Brigade Conference Discussion Notes, August 1943.

operational and tactical forces to shift more and more into defensive postures. Thus, the raging tank battles of the Western Desert, or on the Ukrainian and Russian steppes along the Eastern Front were no longer the norm. Instead, Allied operations needed to pry the Germans from their defensive positions just as the Three Rivers and the 1st Canadian Infantry Division did in the Sicilian mountains and villages. The shift in the strategic balance of the war therefore necessitated a shift in tactical and operational deployments of armoured forces. As a result, the very concepts of what constitutes “tank country” and “tank warfare” needed to be re-evaluated in response to the wider strategic picture. It is also important to delve into a wider examination of tactical level tank warfare to explore and contrast these themes.

Finally, Sicily was only the beginning for the Three Rivers. They continued to fight almost continuously for another twenty-one months after the end of combat operations in Sicily. There remains so much more of the Regiment’s exploits to closely examine and analyze. For instance, how did their Sicilian experiences prepare them for subsequent combat in Italy at Termoli or Ortona? The Three Rivers fought with three different armies and several different divisions throughout the war. Thus, what were the implications of working in multinational formations such as with the 8th Indian Division during the breaking of the Gustav Line? Was the Three Rivers’ method of tank warfare compatible with that of other Canadian armoured units upon their deployment to Northwest Europe in March 1945? Were the lessons they learned in Sicily applicable in a different theatre of war with a different strategic situation? Sicily was just the first of the battle honours earned by the 12th Canadian Army Tank Regiment (Three Rivers) during the Second World War. They were to earn twenty-two

more based on their experiences in Sicily where they learned the value of strong technical capabilities and the importance of adaptive junior leaders who take the initiative on the battlefield.

Bibliography

Primary Sources

- 1st Anti-Tank Regiment War Diary. July-August 1943. RG 24, Library and Archives Canada.
- 1st Canadian Army Tank Brigade War Diary, RG 24, Library and Archives Canada.
- 1st Canadian Infantry Brigade Headquarters War Diary. July-August 1943. RG 24, Library and Archives Canada.
- 1st Canadian Infantry Division Royal Canadian Artillery War Diary. July-August 1943. RG 24, Library and Archives Canada.
- 2nd Canadian Infantry Brigade Headquarters War Diary. July-August 1943. RG 24, Library and Archives Canada.
- 4th Canadian Armoured Brigade War Diary. RG 24, Library and Archives Canada.
- 4th Princess Louise Dragoon Guards War Diary. July-August 1943. RG 24, Library and Archives Canada.
- 12th Canadian Army Tank Regiment (Three Rivers) War Diary. RG 24, Library and Archives Canada.
- 48th Highlanders War Diary. July-August 1943. RG 24, Library and Archives Canada.
- 60th Light Aid Detachment. RG 24, Library and Archives Canada.
- Carleton and York Regiment War Diary. July-August 1943. RG 24, Library and Archives Canada.
- Hastings and Prince Edward Regiment War Diary. July-August 1943. RG 24, Library and Archives Canada.
- Loyal Edmonton Regiment War Diary. July-August 1943. RG 24, Library and Archives Canada.
- North Irish Horse War Diary. March-April 1943. Accessed 25 October 2019.
http://www.warlinks.com/armour/north_irish_horse/nirish_43.php.
- Princess Patricia's Canadian Light Infantry War Diary. July-August 1943. RG 24, Library and Archives Canada.
- Royal 22^e Régiment War Diary. July-August 1943. RG 24, Library and Archives Canada.
- Royal Canadian Regiment War Diary. July-August 1943. RG 24, Library and Archives Canada.
- Saskatoon Light Infantry War Diary. July-August 1943. RG 24, Library and Archives Canada.

Seaforth Highlanders of Canada War Diary. July-August 1943. RG 24, Library and Archives Canada.

West Nova Scotia Regiment War Diary. July-August 1943. RG 24, Library and Archives Canada.

No author. *Canadian Militia Training Pamphlet No.1*. Ottawa: J.O. Patenaude, I.S.O., 1940. Accessed 27 November 2019.
<https://archive.org/details/CanadianMilitiaTrainingPamphletNo.11940Issue>.

Maps

U.S. Army Map Service. *Agira Sheet 269-IV NW, 1:25,000*. 1943. Accessed 15 October 2019. <http://digitalarchive.mcmaster.ca/islandora/object/macrepo%3A84288>.

———. *Agira Sheet 269-IV, 1:50,000*. 1943. Accessed 15 October 2019.
<http://digitalarchive.mcmaster.ca/islandora/object/macrepo%3A84936>.

———. *Bronte Sheet 261-II, 1:50,000*. 1943. Accessed 15 October 2019.
<http://digitalarchive.mcmaster.ca/islandora/object/macrepo%3A84928>.

———. *Caltigirone Sheet 273-IV, 1:50,000*. 1943. Accessed 15 October 2019.
<http://digitalarchive.mcmaster.ca/islandora/object/macrepo%3A84949>.

———. *Leonforte Sheet 268-I NE, 1:25,000*. 1943. Accessed 15 October 2019.
<http://digitalarchive.mcmaster.ca/islandora/object/macrepo%3A84267>.

———. *Paterno Sheet 269-I, 1:50,000*. 1943. Accessed 15 October 2019.
<http://digitalarchive.mcmaster.ca/islandora/object/macrepo%3A84933>.

———. *Piazza Armerina Sheet 268-II SE, 1:25,000*. 1943. Accessed 15 October 2019.
<http://digitalarchive.mcmaster.ca/islandora/object/macrepo%3A84235>.

———. *Piazza Armerina Sheet 268-II, 1:50,000*. 1943. Accessed 15 October 2019.
<http://digitalarchive.mcmaster.ca/islandora/object/macrepo%3A84442>.

Historical Reports

Historical Section (G.S), Army Headquarters. “Report No. 14, The Sicilian Campaign (July-August 1943), Information from German Sources.” Directorate of Heritage and History, Department of National Defence, 1947.

C.P. Stacey, Canadian Military Headquarters. “Report No. 123, Battle Drill Training.” Directorate of Heritage and History, Department of National Defence, 31 August 1944.

———. “Report No. 126, Canadian Operations in Sicily, July-August 1943, Part I: The Preliminaries of Operation ‘Husky’ (The Assault on Sicily).” Directorate of Heritage and History, Department of National Defence, 16 November 1944.

———. “Report No. 127, Canadian Operations in Sicily, July-August 1943, Part II: The Execution of the Operation by 1 Cdn Inf Div, Section 1: The Assault and Initial Penetration

Inland.” Directorate of Heritage and History, Department of National Defence, 16 November 1944.

———. “Report No. 132, Canadian Operations in Sicily, July-August 1943 Part III: The Story of 1 Cdn Army Tk Bde.” Directorate of Heritage and History, Department of National Defence, 27 February 1945.

———. “Report No. 135, Canadian Operations in Sicily, July-August 1943, Part II: The Execution of the Operation by 1 Cdn Inf Div, Section 2: The Pursuit of the Germans from Vizzini to Adrano 15 Jul-6 Aug.” Directorate of Heritage and History, Department of National Defence, 4 May 1945.

Secondary Sources

Atkinson, Rick. *The Day of Battle: The War in Sicily and Italy, 1943-1944*. New York: Henry Holt and Company, 2007.

Barry, Grant N. *1st Canadian Infantry Division and the Battle for Agira: A Reconsideration of an Incomplete Historical Consensus*. Unpublished MA Thesis, University of New Brunswick, 2006.

Bidwell, Shelford; & Graham, Dominick. *Fire-Power: British Army Weapons and Theories of War 1904-1945*. Barnsley: Pen & Sword Books Limited, 2004.

Burns, E.L.M. *General Mud: Memoirs of Two World Wars*. Toronto: Clarke Irwin, 1970.

Bull, Stephen, & Rottman, Gordon L. *Infantry Tactics of the Second World War*. Oxford: Osprey Publishing Ltd., 2008.

Carver, Michael. *The Apostles of Mobility: The Theory and Practice of Armoured Warfare*. London: Weidenfeld and Nicolson, 1979.

Cook, Tim. *The Necessary War: Canadians Fighting the Second World War 1939-1943*. Toronto: Penguin Canada Books Inc., 2014.

Delaney, Douglas E. “Hoffmeister in his Proving Ground: Sicily, July-August 1943.” *Canadian Military History* 12, no. 3 (Summer 2003). Accessed 2 May 2019. <https://scholars.wlu.ca/cmh/vol12/iss3/3>.

Delaney, Douglas E. *The Soldiers' General: Bert Hoffmeister at War*. Vancouver: UBC Press, 2005.

Donaldson, Keith L.G. *Thunder in the Mountains: 1st Canadian Armoured Brigade in Italy, 1943-1944*. Unpublished MA Thesis, University of Calgary, 2008.

- Ellis, John. *Brute Force: Allied Strategy and Tactics in the Second World War*. London: André Deutsch Limited, 1990.
- English, John A. *A Perspective on Infantry*. New York: Praeger Publishers, 1981.
- English, John A. *The Canadian Army and the Normandy Campaign: A Study of Failure in High Command*. New York: Praeger Publishers, 1991.
- French, David. *Raising Churchill's Army: The British Army and the War against Germany, 1919-1945*. Oxford: Oxford University Press, 2000. Accessed 12 September, 2019. ProQuest Ebook Central.
- Gilchrist, Reginald Thomas. *Malta Strikes Back: The Story of 231 Infantry Brigade*. Aldershot, Eng.: Gale & Polden, 1946.
- Graham, Dominick; & Bidwell, Shelford. *Tug of War: The Battle for Italy, 1943-1945*. New York: St. Martin's Press, 1986.
- Granatstein, J.L. "Hoffmeister in Italy." *Canadian Military History* 2, no. 2 (1993): 57-64.
- Harris, J.P. *Men, Ideas, and Tanks: British Military Thought and Armoured Forces, 1903-1939*. Manchester: Manchester University Press, 1995. Accessed 30 June 2019. <http://catdir.loc.gov/catdir/enhancements/fy0601/95021173-d.html>.
- Hayes, Geoffrey. "The Canadians in Sicily: Sixty Years On." *Canadian Military History* 12, no. 3 (Summer 2003). Accessed 2 May 2019. <https://scholars.wlu.ca/cmh/vol12/iss3/3>.
- Jarymowycz, Roman Johann. "Canadian Armour in Normandy: Operation 'Totalize' and the Quest for Operational Manoeuvre." *Canadian Military History* 7, no. 2 (Spring 1998): 19-40.
- Jarymowycz, Roman Johann. *Tank Tactics: From Normandy to Lorraine*. Boulder: Lynne Rienner Publishers, Inc. 2001.
- Larson, Robert H. *The British Army and the Theory of Armored Warfare, 1918-1940*. Newark: Associated University Presses, 1984.
- Macksey, Kenneth. *Tank Tactics*. Surrey: Almark Publishing Co. Ltd., 1976.
- Macksey, Kenneth. *Tank Warfare*. London: Granada Publishing Limited, 1971.
- Marteinson, John, & McNorgan, Michael R. *The Royal Canadian Armoured Corps: An Illustrated History*. Toronto: Robin Brass Studio, 2000.
- Martel, Charles. *In the Wake of the Tank*. London: Sifton, Praed & Co., Ltd., 1935.

- McAndrew, William. "Fifth Canadian Armoured Division: Introduction to Battle." *Canadian Military History* 2, no. 2 (1993): 43-55.
- McAndrew, William J. "Fire or Movement? Canadian Tactical Doctrine, Sicily – 1943." *Military Affairs* 51, no. 3 (July 1987): 140-145.
- Molony, C.J.C. *The Mediterranean and Middle East, vol. 5, The Campaign in Sicily, 1943 and the Campaign in Italy, 3 September 1943 to 31 March 1944*. London: Her Majesty's Stationery Office, 1973.
- von Moltke, Helmuth. *Moltke on the Art of War: Selected Writings*. Edited by Hughes, Daniel J. Toronto: Random House Ballantine Publishing Group, 1993.
- Moule, David. "The Burns-Simonds Debate Revisited the Canadian Defence Quarterly and the Principles of Mechanized Warfare in the 1930s." *Canadian Military History* 22, no. 1 (Winter 2013). Accessed 5 May 2019. <http://scholars.wlu.ca/cmh/vol22/iss1/3>.
- Mowat, Farley. *The Regiment*. Toronto: McClelland and Stewart Limited, 1973.
- Murphy, William. "What is Tank Country?" *Canadian Military History* 7, no. 4 (Autumn 1998): 69-70.
- No author. "17th/21st Lancers" in *History of the Queen's Royal Lancers*. Queen's Royal Lancers Regimental Website, 2009. Accessed 27 October 2019. https://web.archive.org/web/20090105135846/http://www.qrl.uk.com/h_17_21.html.
- Nicholson, G.W.L. *Official History of the Canadian Army in the Second World War, Vol II The Canadians in Italy, 1943-1945*. Ottawa: Queen's Printer, 1956.
- Ogorkiewicz, Richard M. *Armoured Forces: A History of Armoured Forces and Their Vehicles*. London: Arms and Armour Press, 1970.
- Perrett, Bryan. *Knights of the Black Cross: Hitler's Panzerwaffe and its Leaders*. New York: St. Martin's Press, 1986.
- Perrett, Bryan. *Through Mud and Blood: Infantry/Tank Operations in World War II*. London: Robert Hale, 1975.
- Pratt, William John. *1 Canadian Armoured Brigade and the Battle of Lake Trasimene, 20-28 June 1944*. Unpublished MA Thesis, University of New Brunswick, 2010.
- Prieur, Charles. *War Chronicles 1939-1945: Three Rivers Regiment (Tank)*. n.p. Accessed 27 July 2019. <http://www.12rbc.ca/nouvelle/450/127-chroniques-de-guerre-1939-1945-du-three-rivers-regiment-tank-par-charles-prieur>.

- Raddall, Thomas H. *West Novas: A History of the West Nova Scotia Regiment*. Liverpool, N.S: Thomas H. Raddall, 1947.
- Simpkin, Richard. *Tank Warfare: An Analysis of Soviet and NATO Tank Philosophy*. London: Brassey Publishers, 1979.
- Sheppard, E.W. *Tanks in the Next War*. Chatham: Mackays Limited, 1938.
- Tooley, Robert William. *Invicta: The Carleton and York Regiment in the Second World War*. PhD Dissertation, University of New Brunswick, 1988.
- Vokes, Chris. *My Story*. Ottawa: John Maclean Gallery Books, 1985.
- Wallace, John F. *Dragons of Steel: Canadian Armour in Two World Wars*. Burnstown: General Store Publishing House, 1995.
- Wallace, Jack. "Shermans in Sicily: The Diary of a Young Soldier, Summer 1943." *Canadian Military History* 7, no. 4 (Autumn 1998): 63-68.
- Wilson, David A. "The Canadian Role in Operation 'Charnwood' 8 July 1944: A Case Study in Tank/Infantry Doctrine and Practice." *Canadian Military History* 8, no. 3 (Summer 1999): 7-21.
- Wilson, David Allan. *The Development of Tank-Infantry Co-operation Doctrine in the Canadian Army for the Normandy Campaign of 1944*. Unpublished MA Thesis, University of New Brunswick, 1992.
- Windsor, Lee. "'The Eyes of All Fixed on Sicily' Canada's Unexpected Victory, 1943." *Canadian Military History* 22, no. 3 (Summer 2013): 4-34.
- Windsor, Lee, Milner, Marc and Sarty, Roger F. *Loyal Gunners: 3rd Field Artillery Regiment (The Loyal Company) and the History of New Brunswick's Artillery, 1893-2012*. Waterloo, Ontario: Wilfred Laurier University Press, 2016.
<http://www.deslibris.ca/ID/452284>.
- Windsor, Lee. *Steel Cavalry: The 8th (New Brunswick) Hussars and the Italian Campaign*. Fredericton: Goose Lane Editions, 2011.
- Zuelkhe, Mark. *Operation Husky*. New York: Douglas & McIntyre Publishers Inc., 2009.

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