

**Factum ex Scientia:
I Canadian Corps Intelligence during the Liri Valley Campaign,
May – June 1944**

by

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Abstract

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Studies on Canadian Army military intelligence remain sparse in Canadian military historiography. This study is unique in that it focuses on the development, doctrine, and influence of intelligence within the I Canadian Corps throughout the Liri Valley battles during the Italian Campaign. It will be argued that I Canadian Corps intelligence achieved notable overall success in helping to break the Hitler Line by providing comprehensive and relatively up-to-date information on enemy dispositions and strengths which helped commanders and staff planners properly prepare for the operation. This success was attributable to three main factors: excellent intelligence personnel selection and training; the successful mentorship of I Canadian Corps intelligence by Eighth Army's intelligence cadre; and the overall effectiveness of 1st Canadian Infantry Division's intelligence organization which had been in the Mediterranean theatre since July 1943. Notwithstanding these successes, a number of faults within the Canadian Corps intelligence system must also be explained, including the poor performance of 5th Canadian Armoured Division's intelligence organization during the pursuit up the Liri–Sacco Valleys, and the mediocre execution of Corps counter-battery and counter-mortar operations. This study will demonstrate how an effective intelligence organization must augment existing army doctrine and how it can mitigate, though not completely eliminate, battlefield uncertainty. Further, it will also demonstrate that a comprehensive lessons-learned process must be undertaken to continually refine existing intelligence doctrine and procedures, with frequent training programs inculcating personnel in this doctrine. Taken as a whole, this study is unique as it is one of only several studies devoted solely to developing a greater understanding of a little-understood, and often forgotten, staff function within the Canadian Army during the Second World War.

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Factum ex Scientia (Action from Knowledge).



Table of Contents

| | |
|---|-----|
| Abstract..... | ii |
| Acknowledgements..... | iii |
| Table of Contents..... | v |
| List of Maps..... | vi |
| List of Abbreviations..... | vii |
| Introduction..... | 1 |
| Chapter One: Canadian Army Intelligence 1914 - 1939, and the Restoration and Training of the Intelligence Corps | 15 |
| Chapter Two: Intelligence Organization and Sources - Unit to Formation Level..... | 28 |
| Chapter Three: The Development of 1st Canadian Infantry Division, I Canadian Corps and 5th Canadian Armoured Division Intelligence Prior to the Liri Valley Campaign..... | 55 |
| Chapter Four: Intelligence Planning for the Liri Valley Campaign..... | 88 |
| Chapter Five: Intelligence During the Advance to and Breaking of the Hitler Line..... | 106 |
| Chapter Six: Intelligence in the Pursuit Up the Liri - Sacco Valleys..... | 143 |
| Conclusion: The Lessons Learned Process – "Kingsmill's Killers" improve I Canadian Corps Intelligence..... | 166 |
| Bibliography..... | 183 |

List of Maps

| | |
|---|-----|
| Figure One: German Switchlines, Late 1943..... | 64 |
| Figure Two: The Italian Front, 11 May 1944..... | 92 |
| Figure Three: The Gustav and Hitler Lines..... | 95 |
| Figure Four: The Breakout from the Hitler Line..... | 144 |
| Figure Five: The Battle for Rome..... | 157 |
| Figure Six: The Gothic / Green Line..... | 178 |

List of Abbreviations and Acronyms

Air OPs - Air Observation Posts

APIS - Air Photographic Interpretation Section

Bn - Battalion

Bde - Brigade

Brig. - Brigadier General

BIC - British Intelligence Corps

Cdn - Canadian

CIC - Canadian Intelligence Corps

1 CIB - 1st Canadian Infantry Brigade

2 CIB - 2nd Canadian Infantry Brigade

3 CIB - 3rd Canadian Infantry Brigade

11 CIB - 11th Canadian Infantry Brigade

12 CIB - 12th Canadian Infantry Brigade

5 CAB - 5th Canadian Armoured Brigade

1 CID - 1st Canadian Infantry Division

5 CAD - 5th Canadian Armoured Division

CIC - Canadian Intelligence Corps

CMHQ - Canadian Military Headquarters

COS - Chief of Staff

Col. - Colonel

C2 - Command and Control

C3 - Command, Control and Communications

CO - Commanding Officer

CB - Counter-Battery

CBO - Counter-Battery Office

CM - Counter-Mortar

CMO - Counter-Mortar Office

DMI - Director of Military Intelligence

DMT - Directorate of Military Training

Div - Division

FOO - Forward Observation Officer

GOC - General Officer Commanding

GS - General Staff

GSO - General Staff Officer

GSO 1 Int - General Staff Officer, 1st Grade, Intelligence

GSO 2 Int - General Staff Officer, 2nd Grade, Intelligence

GSO 3 Int - General Staff Officer, 3rd Grade, Intelligence

CG+CS - Government Code and Cipher School

Gren - Grenadier

HQ - Headquarters

HB - Hostile Battery

I(a) - Combat / Operational Intelligence

I(b) - Field Security / Counter Intelligence

I(c) - Field Censorship

I(s) - Signals Intelligence

I(x) - Intelligence Administration

Inf - Infantry

ICOT - Information Cut Off Time

IO - Intelligence Officer

IORA - Intelligence Officer, Royal Artillery

INTREP - Intelligence Report

INTSUM - Intelligence Summary

LO - Liaison Officer

LAC - Library and Archives Canada

Lt - Lieutenant

LCol - Lieutenant Colonel

Lt. Gen. - Lieutenant-General

MG - Machine Gun

Maj. Gen. - Major General

MAIU - Mediterranean Army Interpretation Unit

Mtn - Mountain

MOREP - Mortar Report

NCO - Non-Commissioned Officer

#1 Cdn SWS - Number One Canadian Special Wireless Service, Type "B"

OP - Observation Post

O Group - Orders Group

ORBAT - Order of Battle

OR - Other Rank

Pz - Panzer

PG - Panzer Grenadier

PW - Prisoner of War

Regt - Regiment

RAF - Royal Air Force

Sgt - Sergeant

SHELREP - Shell Report

SIGINT - Signals Intelligence

SITREP - Situation Report

SCU - Special Communication Unit

SLU - Special Liaison Unit

SW - Special Wireless

SWS - Special Wireless Service

WD - War Diary

WIC - War Intelligence Course

WI - Wireless Intelligence

Introduction

The existence of popularized (and romanticized) cases of intelligence blinds many to the realities of modern combat – that intelligence in war is a mundane, time-consuming and often frustrating process which frequently confuses, as much as clarifies, the course of battle and war. – David Glantz, *Soviet Military Intelligence in War*¹

In the whole of (the) Intelligence method there is of course a proper mingling of the reporting of facts and the appreciation of future courses, but it is wrong to place the stress on the appreciation of what it would be best for the enemy to do. That has its place but our first job is to state the evidence we have of what the enemy is in fact doing. – Col. Peter Wright, First Canadian Army Final Intelligence Report, July 1945²

Although some elements remain contentious, the history of the Canadian Army in the Second World War has largely been written. The unit histories have been explored, the story of the common soldier reified, its generalship scrutinized, and its operational effectiveness dissected. Despite this, studies on Canadian Army military intelligence, including its procedures, training, doctrine, and its influence on operations, remain sparse in Canadian military historiography. Perhaps this is unsurprising for intelligence is a very specialised function performed by a select few staff officers and other ranks (OR) operating within military headquarters (HQ). During the Italian campaign, as it marched into the gauntlet of the Liri Valley, I Canadian Corps – with its two divisions, the 1st Canadian Infantry Division (1 CID) and the 5th Canadian Armoured Division (5 CAD) and its attached Corps and Army troops – comprised approximately 42,000 troops in total. Perhaps 500 to 600 personnel were employed full time in intelligence work, constituting less than two percent of the total Corps. Since Canadian military historians have focused their efforts on military operations, combat effectiveness, or the soldier experience, it is understandable that there would be less attention paid to such a small specialised staff function. Further, most military historians discuss intelligence only if it played an obvious role in a battle – this is especially true if a so-called "intelligence failure" led to a catastrophe. Other historians have been drawn to more

¹ David Glantz, *Soviet Military Intelligence in War* (London: Frank Cass Publishing, 1990), 1.

² LAC, RG 24, Vol. 12179 - First Canadian Army Final Intelligence Report, July 1945.

sensational aspects of intelligence during the Second World War, such as the Special Operations Executive (SOE) or breaking the German Enigma machine codes.

This study will focus on the development, doctrine and influence of intelligence within I Canadian Corps throughout the Liri Valley battles of May–June 1944 during the Italian Campaign. More specifically, it will examine the activities of part of the command staff called "I(a)", or at times called combat or operational intelligence. I(a) was responsible for providing commanders with balanced, accurate and up-to-date appreciations of the situations, capabilities and intentions of the opposing enemy force.³ The main case study for this thesis will be on intelligence at the corps and divisional level, at times delving into the brigade level, from the advance to and breaking of the Adolf Hitler Line on 23 May 1944 to the conclusion of the Corps' operations in the Liri–Sacco Valley, when it was ordered into Eighth Army's reserve on 4 June. It will be argued that I Canadian Corps intelligence achieved notable overall success in helping to break the Hitler Line by providing comprehensive and relatively up-to-date information on enemy dispositions and strengths, which helped commanders and staff planners properly prepare for the operation. This success was attributable to three main factors: excellent intelligence personnel selection and training; the successful mentorship of I Canadian Corps intelligence by British Eighth Army's intelligence cadre; and the overall effectiveness of 1 CID's intelligence organization. Yet there were a number of faults within the Canadian Corps intelligence system which must also be explained, such as the poor performance of 5 CAD's intelligence organization during the pursuit up the Liri–Sacco Valleys, and the mediocre execution of Corps counter-battery and counter-mortar operations. It will demonstrate how an effective intelligence organization must augment existing army doctrine and how it can mitigate, though not completely eliminate, battlefield uncertainty. Further, it will also demonstrate that a comprehensive lessons-learned process must be undertaken to continually refine existing intelligence doctrine and procedures, with frequent training programs inculcating personnel in this doctrine. Taken as a whole, this study is unique as it is

³ Kevin Leslie Jones, "Intelligence and Command at the Operational Level of War - The British Eighth Army's Experience during the Italian Campaign of the Second World War, 1943 - 1945", PhD Thesis, University College (London), 2005, 62-63. There were other aspects of the intelligence staff, including "I(b)", or field security later to be called counter intelligence, "I(c)", or field censorship, "I(s)" or wireless intelligence (an important aspect that interacted regularly with "I(a)") and "I(x)", which was the administrative wing of the intelligence function.

one of only several studies devoted solely to developing a greater understanding of a little-understood, and often forgotten, staff function within the Canadian Army during the Second World War.

Intelligence history poses certain challenges with regards to sources. Scholar Kevin Leslie Jones correctly points out that documentation revealing the raw material gleaned from principle operational intelligence sources is often limited and fragmentary; the bulk of battlefield-generated intelligence was communicated verbally, or in a more easily perishable written form, and subsequently destroyed.⁴ Fortunately, the Library and Archives Canada (LAC) possesses a large number of Intelligence Summaries (INTSUMs) and Intelligence Reports (INTREPs) in the War Diaries (WDs) of the individual formations studied. Much of the intelligence gleaned from a day's operations was encapsulated within these documents. The fact that many WDs were maintained by the formation and unit intelligence officers (IO) is also fortuitous, especially with regards to a number of 1 CID's brigades, as some IOs were very meticulous in their intelligence record keeping. Unfortunately, much like senior British IOs in the Italian campaign, their counterpart senior Canadian IOs seem not to have left behind private papers or memoirs. However, the First Canadian Army Final Intelligence Report, written at the end of the war, does have excerpts written by a number of senior Canadian IOs.⁵ Further, there are a number of interviews with Canadian intelligence personnel available at the Canadian War Museum (CWM).⁶ Lieutenant General (Lt. Gen.) Eedson Louis Millard (ELM) Burns, commander of I Canadian Corps from March to November 1944, kept both a personal war diary and wrote memoirs after the war in which he actually discussed those factors, including intelligence, which influenced his decisions. A number of after-action reports written after the Liri Valley campaign by Burns, Major General (Maj. Gen.) Chris Vokes, commander of 1 CID, Maj. Gen. Bert Hoffmeister, commander of 5 CAD, and the senior

⁴ Jones, "Intelligence and Command", 20-21.

⁵ LAC, RG 24, Vol. 12179 - First Canadian Army Final Intelligence Report, July 1945.

⁶ CWM, Oral History Program, "Interview with Gerald A. Mendel", 6 January 2006; "Interview with George Molnar", 29 November 2006; "Interview with Fred Pollak", 28 September 2000; "Interview with Hyman Yanofsky", 13 September 2000; "Interview with Reg Dixon", 20 October 2000.

IO of I Canadian Corps, Major Darcy Kingsmill, also give some clues as to the decision-making processes and problems faced by these individuals.

The historiography of the Italian campaign during the Second World War is extensive, and a number of works cover the Canadian experience. Certainly G.W.L. Nicholson's 1956 *Official History of the Canadian Army in the Second World War, Vol.2: The Canadians in Italy, 1943 - 1945* is a staple for any Italian Campaign researcher.⁷ However, Nicholson's discussion about intelligence is very light, with most references to it being used to drive the narrative, not to analyze intelligence itself. Although works such as Daniel Dancock's 1991 *D-Day Dodgers* and Mark Zuehlke's several works on the Italian campaign are based on a large number of interviews and are highly readable, they are too anecdotal and focused at conveying the "soldier experience" to be useful to an historian looking at operational-level intelligence.⁸ The same could be said for a number of regimental histories and memoirs from the Italian campaign. Laurence Wilmot's *Through the Hitler Line: Memoirs of an Infantry Chaplain* relates a number of anecdotal accounts of the West Nova Scotia Regiment's intelligence section, including points in the battle where Chaplain Wilmot actual acted as a runner for the battalion's intelligence staff.⁹ C. Sydney Frost's *Once a Patricia: Memoirs of a Junior Infantry Officer in World War II* has a number of excellent examples of the operation of a battalion scout - sniper platoon, including a number of accounts of patrolling during the Italian campaign.¹⁰ Robert L. McDougall's *A Narrative of War: From the Beaches of Sicily to the Hitler Line with the Seaforth Highlanders of Canada, 10 July 1943 – 8 June 1944* and Robert Tooley's *Invicta: The Carleton and York Regiment in the Second World War* have little to say about intelligence activities in the battalion, though *Invicta* does have some good descriptions of

⁷ G.W.L. Nicholson, *Official History of the Canadian Army in the Second World War, Vol 2: The Canadians in Italy, 1943 - 1945* (Ottawa: Queen's Printer and Controller of Stationery, 1956).

⁸ Daniel Dancocks, *The D-Day Dodgers: The Canadians in Italy, 1943 - 1945* (Toronto: McClelland & Stewart, 1991); Mark Zuehlke, *Operation Husky: The Canadian Invasion Of Sicily* (Vancouver: Douglas & McIntyre, 2008); *Ortona: Canada's Epic World War II Battle* (Vancouver: Douglas & McIntyre, 1999); *The Gothic Line: Canada's Month of Hell in World War II Italy* (Vancouver: Douglas & McIntyre, 2003); *The Liri Valley: Canada's World War II Breakthrough to Rome* (Vancouver: Douglas & McIntyre, 2003).

⁹ Laurence Wilmot, *Through the Hitler Line: Memoirs of an Infantry Chaplain* (Waterloo: Wilfrid Laurier University Press, 2003), 41.

¹⁰ C. Sydney Frost, *Once a Patricia: Memoirs of a Junior Infantry Officer in World War II* (St. Catharines, Ontario: Vanwell Publishing Ltd, 1988).

patrolling activity.¹¹ Much like Nicholson, Lee Windsor's *Steel Cavalry: The 8th (New Brunswick) Hussars and the Italian Campaign*, uses limited excerpts about intelligence to drive the narrative forward.¹² *The Memoirs of General Jean V. Allard*, the commander of the Royal 22e Regiment during the attack on the Hitler Line, did talk about intelligence but mostly in a critical, non-objective manner as he believed that his unit was recklessly thrown against the Hitler Line on 19 May 1944 due to poor intelligence (see Chapter Five).¹³ George Kitching's memoirs, *Mud and Green Fields: The Memoirs of Major-General George Kitching*, had few excerpts about intelligence, in particular during his time as the senior staff officer of 1 CID; in fact, the only conspicuous example of intelligence in his memoir during his times in Italy was his belief that he was provided Ultra information several times.¹⁴

A number of operational studies of the Canadian Army in Italy exist, though all have limited discussions on intelligence. Michael Pearson Cessford's 1996 PhD thesis "Hard in the Attack: The Canadian Army in Sicily and Italy, July 1943 - June 1944" is useful for analyzing the combat effectiveness of Canadians in the Italian campaign, as it traces the training, doctrine and leadership of the Canadians from England to Sicily to Italy. Cessford ultimately concludes that Canadian soldiers at the unit level were highly effective, though leadership at the formation level was at times weak.¹⁵ While Lee Windsor's 1996 Masters Thesis, "'Quansem Ilep': I Canadian Corps Breaks the Gothic Line, Summer 1944", and his 2006 PhD thesis, "Anatomy of Victory: I Canadian Corps, Allied Containment Strategy and the Battle for the Gothic Line", deal mostly with the Gothic Line battles that I Canadian Corps fought in August to September 1944, they still demonstrate the Canadian Army's growing fighting efficacy

¹¹ Robert L. McDougall, *A Narrative of War: From the Beaches of Sicily to the Hitler Line with the Seaforth Highlanders of Canada, 10 July 1943 – 8 June 1944* (Ottawa: The Golden Dog Press, 1996).; Robert Tooley, *Invicta: The Carleton and York Regiment in the Second World War* (Fredericton, New Brunswick: New Ireland Press, 1989).

¹² Lee Windsor, *Steel Cavalry: The 8th (New Brunswick) Hussars and the Italian Campaign* (Fredericton, New Brunswick: Goose Lane Editions, 2011).

¹³ Jean V. Allard, *The Memoirs of General Jean V. Allard* (Vancouver: University of British Columbia Press, 1988), 75-78.

¹⁴ George Kitching, *Mud and Green Fields: The Memoirs of Major-General George Kitching* (St. Catharines, Ontario: Vanwell Publishing, 1992), 160-161. It is very likely that Kitching had been provided Y intelligence by General Miles Dempsey in October 1944, not Ultra. The other instance in the book, being provided intelligence by Eighth Army COS Brig. Sir Harry Floyd in the latter stages of the Italian campaign, was very likely Ultra information.

¹⁵ Michael Pearson Cessford, "Hard in the Attack: The Canadian Army in Sicily and Italy, July 1943 - June 1944", PhD Thesis, Carleton University (Ottawa), 1996.

during the Italian campaign.¹⁶ Further, "Anatomy of Victory" has much to say about the wider strategic role that the Canadian Corps played in pinning down and systematically destroying high-quality German divisions in Italy so that these formations could not be sent to Northwest Europe to counter Allied operations there (Windsor claims the Italian campaign was the "long right flank" of the Normandy breakout).¹⁷ Douglas Delaney's books on senior Canadian commanders, including *Corps Commanders: Five British and Canadian Generals at War, 1939-45* and *A Soldier's General: Bert Hoffmeister at War*, have few things to say about intelligence as Delaney is focused on studying the numerous factors which impact command, intelligence being but one aspect to consider.¹⁸

There are few volumes which deal with the actual system and function of Canadian Army intelligence. S.R. Elliot's 1981 book, *Scarlet to Green: A History of Intelligence in the Canadian Army, 1903 – 1963*, is the most prominent book on the subject. Yet, due to space constraints and the time span it covers, it devotes but 40 pages to the Italian campaign.¹⁹ Despite its publication date, Elliot's manuscript was not completed until the early 1970s, before the release of the Ultra secret (see below), and even much of the intelligence material such as INTSUMs, into the public domain.²⁰ Harold A. Skaarup's 2005 *Out of Darkness - Light: A History of Canadian Military Intelligence. Vol.1, Pre-Confederation to 1982* claims to be the sequel to *Scarlet to Green*. However, Skaarup fully admits that Elliot's work is *the* historical work on the subject of Canadian Army Intelligence before 1963 and the book utilizes little of the latest scholarship available to develop further analysis of Canadian military intelligence.²¹ David O'Keefe's 1996 MA Thesis "Bitter Harvest: A Case Study of Allied Operational Intelligence for Operation Spring, Normandy, July 25, 1944" is a relatively recent analysis of

¹⁶ Lee Windsor, "Quansem Ilel: I Canadian Corps Breaks the Gothic Line, Summer 1944", MA Thesis, Wilfrid Laurier University (Waterloo), 1996; Lee Windsor, "Anatomy of Victory: I Canadian Corps, Allied Containment Strategy and the Battle for the Gothic Line", PhD Thesis, University of New Brunswick (Fredericton), 2006.

¹⁷ Windsor, "Anatomy of Victory".

¹⁸ Douglas Delaney, *Corps Commanders: Five British and Canadian Generals at War, 1939-45* (Vancouver, BC: UBC Press, 2011); Douglas Delaney, *The Soldier's General: Bert Hoffmeister at War* (Vancouver, BC: UBC Press, 2005).

¹⁹ S.R. Elliot, *Scarlet to Green: A History of Intelligence in the Canadian Army, 1903 - 1963* (Toronto: Canadian Intelligence and Security Association, 1981), 179-218.

²⁰ Harold A. Skaarup, *Out of Darkness - Light: A History of Canadian Military Intelligence. Vol.1, Pre-Confederation to 1982* (Lincoln, New England: Universe Books, 2005), xix, xxix; David O'Keefe "Bitter Harvest: A Case Study of Allied Operational Intelligence for Operation Spring, Normandy, July 25 1944", MA Thesis, University of Ottawa, 1996, 22-23, 26.

²¹ Harold A. Skaarup, *Out of Darkness*.

Canadian Army intelligence.²² However, it only focuses on one operation during the Normandy campaign with a strong emphasis on the influence of Ultra intelligence on Lt. Gen. Guy Simonds's operational decisions. One excellent non-Second World War monograph on Canadian Army intelligence is Dan Richard Jenkins's 1999 PhD thesis, "Winning Trench Warfare: Battlefield Intelligence in the Canadian Corps, 1914 - 1918", about the origins and development of Canadian Army Intelligence during the First World War.²³

Scholarship on British intelligence during the Second World War is plentiful, although only five authors who strongly influenced this thesis will be mentioned. When the existence of Ultra intelligence was revealed in the early 1970s, and the knowledge released that British, Polish, and American code breakers had been reading German Enigma high-grade cipher transmissions during the war, it helped to usher in a new phase of intelligence history scholarship. Perhaps the mainstay of any study of British Intelligence during the Second World War is Sir Francis Harry Hinsley's (et al.) five-volume series, *British Intelligence in the Second World War: Its Influence on Strategy and Operations*, published sequentially from 1979 to 1990.²⁴ Hinsley, a former wartime IO who worked in Britain at Bletchley Park's Government Code and Cipher School (GC+CS), where he assisted in the breaking and analysis of Enigma intelligence, utilized archival sources previously unreleased until the late 1970s to discuss the development of the British Intelligence Corps, and the influence of intelligence, in particular signals intelligence (SIGINT), and its impact on major strategic and operational decisions. Another Bletchley veteran, Ralph Bennett, is well known for his books on intelligence, such as *Ultra in the West: The Normandy Campaign 1944-45* and *Ultra and Mediterranean Strategy*.²⁵ Another Bletchley veteran, Frank Birch, wrote a two-volume series, *The Official History of British SIGINT, 1914 - 1945*, which is very informative about the founding days and development of British SIGINT. Unfortunately it does not reveal much about the Italian

²² O'Keefe, "Bitter Harvest".

²³ Dan Richard Jenkins, "Winning Trench Warfare: Battlefield Intelligence in the Canadian Corps, 1914 - 1918", PhD Thesis, Carleton University (Ottawa), 1999.

²⁴ F.H. Hinsley et al., *British Intelligence in the Second World War: Its Influence on Strategy and Operations, Vols.1, 2, 3 Part 1, 3 Part 2, and Vol.4* (London: Her Majesty's Stationery Office, 1979 - 1990).

²⁵ Ralph Bennett, *Ultra in the West: The Normandy Campaign 1944-45* (London: Hutchinson, 1979); *Ultra and Mediterranean Strategy* (London: Hamish Hamilton, 1989); *Behind the Battle: Intelligence in the War with Germany, 1939 - 1945* (London: Pimlico, 1999).

campaign.²⁶ Intelligence historian John Ferris has written extensively on British intelligence during the First and Second World Wars. His works have certainly helped further the understanding and influence of British military intelligence on operations.²⁷

Kevin Leslie Jones's 2005 PhD thesis, "Intelligence and Command at the Operational Level of War - The British Eighth Army's Experience during the Italian Campaign of the Second World War, 1943 - 1945", was of great utility for this thesis. Jones investigates whether senior British Eighth Army commanders in the Italian Campaign, including Bernard Montgomery, Oliver Leese, and Richard McCreery, made intelligence-led decisions or chose to conduct their campaigns according to their own operational designs.²⁸ For example, Jones explores the idea that perhaps Leese ignored topographical intelligence that any operations in the Liri Valley and along the Adriatic sector north of the Gothic Line were not conducive to rapid advances with armour, leading to limited Allied advances during these battles. Such decisions were well beyond what senior commanders in the I Canadian Corps could influence. They were given orders, boundaries, and certain operational goals to achieve and were expected to "crack on" with it. Of course, there was a certain flexibility to implement these orders as Canadian commanders saw fit and those decisions, and the manner in which Canadian Corps intelligence operated, is the main concern of this thesis.

What is intelligence? Colonel (Col.) Peter Wright, the senior intelligence officer (IO) within the First Canadian Army during the Northwest Europe Campaign, stated at the end of the war that the two primary jobs of intelligence are to report what is known of the enemy and to use the resources of intelligence to find out more.²⁹ In a general sense, intelligence organizations

²⁶ Frank Birch, *The Official History of British SIGINT, 1914 - 1945, Vol.1, Part 1* (Milton Keynes, UK: The Military Press, 2004); *The Official History of British SIGINT, 1914 - 1945, Vol. 1 (Part 2) and Vol.2* (Milton Keynes, UK: The Military Press, 2007).

²⁷ John Ferris, "Image and Accident: Intelligence and the Origins of the Second World War, 1933 - 1941" in *Intelligence and Strategy: Selected Essays* (New York: Routledge, 2005); John Ferris, "The British Army and Signals Intelligence in the Field during the First World War", *Intelligence and National Security*, Vol.3, 4, 1988; John Ferris, "The British Army: Signals and Security in the Desert Campaign, 1940 - 1942" in *Intelligence and Strategy: Selected Essays* (New York: Routledge, 2005); John Ferris, "Ralph Bennett and the Study of Ultra", *Intelligence and National Security*, Vol.6, 2, 1991; John Ferris, "The 'Usual Source': Signals Intelligence and Planning for the Eighth Army Crusader Offensive, 1941", *Intelligence and National Security*, Vol.14, 1, 1999; John Ferris, "Intelligence and Overlord: A Snapshot from 6 June 1944" in *The Normandy Campaign, 1944: Sixty Years On* (New York: Routledge, 2006).

²⁸ Jones, "Intelligence and Command".

²⁹ LAC, RG 24, Vol. 12179 - First Canadian Army Final Intelligence Report, July 1945. (Hereafter "LAC, First Canadian Army Final Intelligence Report".)

receive direction on what they should focus their collection efforts on, collect large amounts of information from numerous sources, organize and store it so it is easily retrievable, compare and analyze this information for relevance and accuracy, build an understanding of what is occurring and predict what may occur, and deliver this processed information in a usable, simple format in a timely manner in order for intelligence consumers to make informed decisions. Intelligence is not a form of power but a means to guide its use, whether as a force multiplier or by helping one to understand one's environment and options and thus how to apply force or leverage against whom.³⁰ In a military context, intelligence is one of several activities that, if used properly, can help mitigate uncertainty on the battlefield; it provides leverage with which to accentuate the positive effects of military actions, be they offensive or defensive.³¹

Intelligence has significant weaknesses. In particular, intelligence can never grant absolute certainty. It deals in probabilities and likelihoods and, at times, information will not be available on certain issues or situations. Due to working within this "grey region", intelligence is only effective if the personnel involved with it have the intellectual honesty to admit when they made a mistake or when the available evidence is weak.³² Further, intelligence is less effective if its personnel have a less-than-complete understanding of one's own forces; what the enemy is doing is significant only in relation to what one's own forces are doing or planning to do.³³ As such, for intelligence to be truly effective, a strong, positive relationship must exist between intelligence and the commanders, operations and planning staffs whom they are supporting. As Col. Wright outlined, the manner in which intelligence functioned depended a lot on individual commanders and their confidence in their intelligence staffs. Some wanted detailed written estimates, some wanted everything transmitted verbally, some considered intelligence before constructing detailed plans and some did not; some commanders even had no faith in intelligence at all!³⁴

³⁰ John Ferris, "Image and Accident: Intelligence and the Origins of the Second World War, 1933 - 1941" in *Intelligence and Strategy: Selected Essays* (New York: Routledge, 2005), 99.

³¹ David Glantz, *Soviet Military Intelligence in War* (London: Frank Cass Publishing, 1990), 2.

³² LAC, First Canadian Army Final Intelligence Report.

³³ Michael I. Handel, *Intelligence and Military Operations* (Portland, Oregon: Frank Cass and Company, 1990), 1.

³⁴ LAC, First Canadian Army Final Intelligence Report.

Despite its weaknesses, intelligence clearly has its place in the planning and execution of any military operation. Of course, intelligence is not a panacea and other ways to reduce uncertainty on the battlefield include meticulous preparation of contingency plans, the adoption of flexible doctrine, and the careful training and education of soldiers and officers to enable them to improvise at all levels of command.³⁵ Further, caution must be exercised by any intelligence historian as intelligence is but one factor that commanders consider when making a decision and its role should not be exaggerated. Other issues such as logistics (i.e., available resources), the commander's intuition, perceptions of the combat effectiveness of one's own forces, deception, surprise, pressure from higher military commanders and politicians, and even ideology, will affect decision-making.³⁶ Further, determining whether decisions have been made on the basis of intelligence is often difficult. Moreover, even when decisions have been guided by strong intelligence, if a military organization has poor leadership, training, doctrine, or equipment, it could still be defeated. As John Ferris points out, even with good records, historians cannot easily reconstruct intelligence assessments or gauge how specific pieces or sources of intelligence affected operations.³⁷ As such, one of the most important things an intelligence historian must do is have a thorough understanding of the types of sources available to the army. Once this is established, it is important for intelligence historians to identify what intelligence was available to the operational-level commander in question and then to judge its impact on his operational decisions.³⁸

It must be emphasised that though this thesis does discuss a number of key German military decisions and operational movements, it is not a comprehensive overview of German military organization. The brief discussions on the German Army are intended to assess whether or not Canadian intelligence was correct in its assessments. Further, attempts have been made to simplify the often complex order-of-battle (ORBAT) intelligence that I Canadian Corps intelligence dealt with on a daily basis in the Mediterranean theatre. However, to assess Corps intelligence, one has to discuss the German formations that the IOs were closely monitoring. As such, abbreviations for the German formations have been created. German

³⁵ Handel, *Intelligence and Military Operations*, 14.

³⁶ Handel, *Intelligence and Military Operations*, 1-2, 15-16, 67, 69.

³⁷ Ferris, "The British Army and Signals Intelligence in the Field During the First World War", 24.

³⁸ Jones, "Intelligence and Command", 13.

infantry divisions, the mostly horse-drawn backbone of the German Army, are referred to as Inf Div throughout this thesis; for example, 44th Infantry Division is shortened to 44th Inf Div. Infantry divisions usually had three regiments, equivalent to the brigades which existed in Commonwealth divisions. For example, within 305th Inf Div, there existed the 576th, 577th and 578th Grenadier Regiments (Gren Regt), each with three battalions (I, II, and III). As such, the first battalion of the 576th Grenadier Regiment of the 305th Infantry Division is abbreviated as I Bn 576th Gren Regt, 305th Inf Div. Panzer Grenadier Divisions, essentially motorized infantry divisions which were lorry-borne to keep up with armoured formations, usually only had two infantry regiments, but also attached tank elements – for example, the 361st Panzer Grenadier Regiment of 90th Panzer Grenadier Division (361st PG Regt, 90th PG Div). Tank divisions are called Panzer Divisions, and usually had one to two infantry regiments and a dedicated tank regiment – for example, the 26th Panzer Regiment of 26th Panzer Division (26th Pz Regt, 26th Pz Div). Other specialist divisions were also encountered by the Canadians in Italy, such as the infamous and highly competent 1st Parachute Division (1st Para Div), 5th Mountain Division (5th Mtn Div), and 114th Jäger (essentially light infantry) Division (114th Jäger Div). As much as possible, when a unit with a formation is mentioned, the parent Division will be placed in parenthesis for the ease of the reader, i.e., the 200th PG Regt (90th PG Div).

Chapter One of this thesis will cover Canadian intelligence in the First World War and Inter-War Period, and the strong intelligence personnel selection and training system which developed in Britain from 1940 to 1943. Though the Canadian Intelligence Corps (CIC) was not formed until 1942, the intelligence management system which developed at Canadian Military Headquarters (CMHQ) modelled its selection criteria for intelligence personnel on the practices of the British Intelligence Corps (BIC) and much of the training was either conducted by, or closely modelled on, the BIC establishment. Though this system was far from perfect, it gave intelligence personnel a strong basis for understanding the intelligence techniques that they would employ and the German military organization with which they needed to be thoroughly familiar.

Chapter Two will outline the intelligence organization from unit (i.e., battalion) to formation level, and the intelligence sources available to each. It is important to understand the sophisticated organizational framework that Commonwealth intelligence sections employed by 1944. It is also essential to realize the types of information which were accessible to Canadian intelligence staffs and commanders, the manner in which this information was collected, and the strengths and weaknesses of each type of source. Later chapters will discuss how this information may have been interpreted by intelligence staffs and commanders, and what possible impact this information might have had on command decisions. This chapter will also quickly outline the development of Eighth Army's intelligence establishment during the North African campaign since the doctrine developed during this campaign would eventually permeate all Commonwealth formations in Europe.

Chapter Three will outline the development of 1 CID, I Canadian Corps and 5 CAD's intelligence organization. It will be demonstrated that 1 CID's intelligence cadre, closely mentored by three British Corps in Eighth Army and implementing a thorough lessons-learned process, became highly competent at the battalion, brigade, and division level. 1 CID's intelligence cadre would play a very important role in the forthcoming Liri Valley battles under I Canadian Corps. To understand the development of 1 CID's intelligence organization, a brief overview of its operations in Sicily, the Moro River Campaign and Ortona, and finally its static period on the Adriatic sector from January to late April 1944 is essential. This chapter will then transition into the development of intelligence in I Canadian Corps and 5 CAD upon their arrival in the Mediterranean theatre in November 1943. Eighth Army played a pivotal role in inculcating I Canadian Corps intelligence in the successful doctrine learned in North Africa. Conversely, 5 CAD's intelligence cadre seems to not have been fully infused with this doctrine. In many ways, this is likely reflective of the command and control (C2), and staff problems which the division's senior leadership was unable to overcome before the Liri Valley battles. These problems were further exacerbated by the intelligence organization suffering from rapid personnel turnover, poor personnel selection, inexperience, and an inability to properly link intelligence with operations. 5 CAD's problems would prove detrimental during the Liri Valley campaign. This chapter will also introduce Major (Maj.) Darcy Kingsmill, I

Canadian Corps senior IO, who played an important role in shaping and leading the Canadian intelligence establishment during the Italian campaign.

Chapter Four will delineate I Canadian Corps intelligence planning prior to Operation HONKER, Eighth Army's assault against the Gustav and Hitler Lines, and subsequent advance up the Liri Valley. Once again, Eighth Army and XIII Corps provided excellent mentorship, advice, and information to the Canadians, helping I Canadian Corps intelligence to provide relatively up-to-date information, and solid intelligence appreciations on the enemy that they would be facing in the Liri Valley. 1 CID also benefited greatly from the intelligence provided by I Canadian Corps and its competent intelligence cadre utilized this information to its fullest extent.

Chapter Five will outline Canadian intelligence during the Liri Valley battles. It will demonstrate that the intelligence cadre under I Canadian Corps and 1 CID, despite minor mistakes by both operations and intelligence staffs, played a key role in assisting the breaking of the Hitler Line.

Chapter Six will describe I Canadian Corps and 5 CAD's flawed exploitation up the Liri Valley after the breakthrough at the Hitler Line was achieved. 5 CAD was severely hampered by a wide variety of internal command and staff problems, hindering its ability to achieve its operational goals. Though there were numerous reasons for the poor performance of 5 CAD, such as the skill of the German delay operations, Canadian inexperience, a breakdown in C2, and ineffective traffic control, it remains that the performance of the intelligence cadre within the division was also inadequate. In fact, the division's intelligence organization was so mediocre that it was unable to conduct the most basic of intelligence tasks, which seriously impeded the ability of 5 CAD's staff and commanders to understand the enemy they were confronting. As such, this chapter adds new understanding as to how this controversial phase of the operation unfolded and why it was such a failure.

In the conclusion, this thesis will emphasize the lessons-learned period from June to July 1944 while the Canadian Corps was in Eighth Army's reserve. The intelligence cadres in I Canadian Corps, 1 CID and 5 CAD all took steps to rectify the problems noted in the previous

Liri Valley operations, in particular within 5 CAD's intelligence organization. It will be demonstrated that the continued lessons-learned process practiced by the intelligence sections within 1 CID, I Canadian Corps and, finally, 5 CAD helped pave the way for a more effective intelligence organization.

Overall, the intent of this thesis is to build a better understanding of a staff process that is often underrated and, at times, taken for granted in Canadian military history. It not only enhances the wider knowledge of the Canadian experience in war, but also in some way may help guide future intelligence professionals and those who seek their counsel to more effectively integrate intelligence into their decision-making processes.

Chapter One: Canadian Army Intelligence 1914 - 1939, and the Restoration and Training of the Intelligence Corps

The Canadian Corps emerged from the First World War as a highly effective and capable formation. Certainly, one of the main reasons for the success of the Canadian Corps was organizational as national pressure from the Canadian government led the Corps to rarely, if ever, be broken up to fight as individual components, and it remained a homogeneous institution throughout the war.³⁹ Unlike any equivalent British corps, the Canadian Corps kept the same four divisions which allowed for the Corps to be a semi-autonomous formation and facilitated more thorough and rapid standardization of doctrine.⁴⁰ Further, compared to an equivalent British corps, an astute gathering of resources allowed Canadian Corps units and formations more firepower, including more artillery and automatic weapons, one additional battalion per brigade, increased logistical, engineering, and signals assets, and a greater manpower pool of fighting troops and staff officers, including IOs, at each level.⁴¹ By 1917, the doctrine which developed out of an extensive lessons-learned process was one of set-piece attacks with limited objectives, and utilized extensive firepower to suppress enemy positions and to guide infantry onto their objectives. It was designed to mitigate battlefield confusion and the inevitable loss of line communications due to artillery fire, and thus C2, as much as possible.⁴² Further, when the intelligence was imperfect, or when artillery was not able to completely destroy or suppress enemy positions, small-unit tactics overcoming local opposition became central to the Canadian Corps success.⁴³ Without competent, well-trained soldiers, even the most high-quality intelligence is largely ineffective. By the end of 1918, the Canadian Corps had become the "model" British corps by incorporating and learning from the

³⁹ Ian M. Brown, "Not Glamorous, but Effective", *The Journal of Military History*, Vol.58, 3, July 1994, 6-7.

⁴⁰ William Frederick Stewart, "Attack Doctrine in the Canadian Corps, 1916 - 1918", MA Thesis, University of New Brunswick (Fredericton), 1980, 89-90; Bill Rawling, *Surviving Trench Warfare: Technology and the Canadian Corps, 1914-1918* (Toronto: University of Toronto Press, 1997), 6-7; Shane B. Schreiber, *Shock Army of the British Empire: The Canadian Corps in the Last 100 Days of the Great War* (Westport, CT: Praeger Publishers, 1997), 22-23; Ian M. McCulloch, "The Fighting Seventh: The Evolution and the Devolution of Tactical Command and Control in a Canadian Infantry Brigade of the Great War", MA Thesis, Royal Military College, (Kingston), 1997, 8.

⁴¹ Jenkins, "Winning Trench Warfare", 340, 345; Schreiber, *Shock Army*, 22-23, 30-31; John A. English, *The Canadian Army and the Normandy Campaign: A Study of Failure in High Command* (New York: Praeger Publishers, 1991), 16-17; J.E. Hahn, *The Intelligence Service within the Canadian Corps, 1914 - 1918* (Toronto: The MacMillan Company of Canada Ltd., 1930), xxi/xxii, 254-261.

⁴² Jenkins, "Winning Trench Warfare", 13-14.

⁴³ Jenkins, "Winning Trench Warfare", 312.

lessons and doctrine of British Army reformers, and French and German methods of war. During the latter portions of the war, in particular after the battle for Vimy Ridge in 1917 and during the "Hundred Days" campaign in 1918, the Canadian Corps was consistently utilized as the spearhead for most of the British Army's offensives against the Germans.

In order to defeat the Germans and overcome trench warfare, a great deal of detailed and rational planning was needed to conduct even a small break-in into German defensive systems. As such, Canadian intelligence staffs grew in size and sophistication to provide the immense amounts of information needed to support set-piece attacks.⁴⁴ Beginning the war with a nascent intelligence service, the Corps of Guides, the Canadian Corps, with strong British mentorship, eventually developed a highly-competent intelligence system. This system meticulously collected and analyzed masses of varied information on German defences, dispositions, ORBATs, and intentions, and provided value-added intelligence for planning operations. Corps intelligence personnel learned the value of thoroughness and to utilize every piece of information possible derived from a wide variety of sources. Observation posts (OPs) deployed by all HQs provided detailed information on the enemy across No-Man's Land. Extensive patrolling and trench raids gathered even more detailed information. Prisoner of war (PW) interrogation, in particular at divisional level with German-speaking IOs, was a very important source of information. Artillery activity began to be closely tracked on maps, including the detailing of the types of artillery and mortars being utilized.⁴⁵ Corps intelligence also began utilizing new technologies, including the developing art of aerial photographic interpretation. A particularly important development was the increased need for comprehensive artillery intelligence for the more precise use of massed firepower. This also included the increased need for counter-battery intelligence, which led to the development of the Canadian Corps Survey Section, and the refinement of flash spotting and sound ranging techniques.⁴⁶ As early as the summer of 1915, the Corps had developed tactical SIGINT capabilities, such as attempting to monitor enemy line communications.⁴⁷ Intelligence

⁴⁴ Jenkins, "Winning Trench Warfare", pg.iii-iv.

⁴⁵ Hahn, *The Intelligence Service*, Passim.

⁴⁶ Jenkins, "Winning Trench Warfare", 345.

⁴⁷ Elliot, *Scarlet to Green*, 40-41.

personnel carefully recorded and analyzed this information to create detailed intelligence files on the enemy defensive system in specific sectors.⁴⁸ Intelligence files and frequent INTSUMs outlining the latest intelligence findings were distributed on a regular basis to commanders and all other interested parties for planning purposes. By 1917, the Canadian Corps intelligence service had developed a comprehensive lessons-learned process, with a series of regular intelligence conferences and courses being run at the corps, division and even brigade level.⁴⁹

The end of the First World War saw a rapid demobilization of the Canadian Expeditionary Force (CEF). Unfortunately, and unlike the German Army which underwent an extensive lessons learned process during the 1920s,⁵⁰ the demobilization of the CEF led to little or no after-action reviews. Thus, the corporate knowledge of this effective formation went unrecorded, a situation which would have harmful consequences for the Canadian Army in the following two decades.⁵¹ The story of the Canadian Army in the interwar period is a well-known one of minimal funding and neglect, and need not be repeated here.⁵² Intelligence organizations and training in both the Canadian and British militaries were allowed to languish, with both the Canadian Corps of Guides and the British Intelligence Corps dissolving by 1929.⁵³ Staff training in the Canadian Army also languished, with Militia staff courses providing minimal training value, while negligible numbers of officers were sent to the British Army Staff College.⁵⁴ Further, intelligence training in both British and Canadian staff courses was minimal and often non-existent.⁵⁵ As intelligence was often considered a career

⁴⁸ Hahn, *The Intelligence Service*, 235-254.

⁴⁹ Jenkins, "Winning Trench Warfare", 259-260, 285-286.

⁵⁰ James S. Corum, *The Roots of Blitzkrieg: Hans von Seeckt and German Military Reform* (Lawrence: University Press of Kansas, 1992), Passim. Most of Germany's future warfighting philosophy would be developed in the 1920s, based on an examination of lessons from the First World War. See also: David French, *Raising Churchill's Army: The British Army and the War Against Germany, 1919 - 1945* (New York: Oxford University Press, 2000), 173-174.

⁵¹ Schreiber, *Shock Army*, 135, 144.

⁵² For an overview of training matters during this period, see: Stephen John Harris, *Canadian Brass: The Making of a Professional Army* (Toronto: University of Toronto Press, 1988). There was no real worthwhile collective training in the Canadian Militia in the inter-war period due to a lack of funds and deficiency of professionalism of many of the leaders within the organization.

⁵³ Elliot, *Scarlet to Green*, 55-56.; Jones, "Intelligence and Command", 39-40.; Anthony Clayton, *Forearmed: A History of the Intelligence Corps* (London: Brasses Ltd., 1993), 55-61.

⁵⁴ English, *The Canadian Army and the Normandy Campaign*, 97-98.

⁵⁵ O'Keefe, "Bitter Harvest", 39-40, 59-60. Intelligence would begin to be retaught at the Camberley Staff College once the war broke out in 1939.

backwater suitable only for those unfit for command and for men of lesser professional competence, there was a general lack of esteem held for intelligence within the British Army. Intelligence positions which did exist in British units and formations often went unfilled. In an army racked with resource constraints, the importance of intelligence during the First World War was quickly forgotten, and intelligence was seen of tertiary importance as compared to keeping combat units functioning. An institutional belief likely prevailed within the British and Canadian Armies that, if need be, individuals could be quickly selected and trained to perform adequately in intelligence duties.⁵⁶

Although intelligence training was reconstituted in Britain in early 1939, when war was declared in September 1939, both the future British and Canadian Intelligence Corps would have to be entirely reconstructed. The British Intelligence Corps (BIC) was completely resuscitated by late 1940.⁵⁷ But it was not until late October 1942, after a long, drawn-out administrative affair, that the Canadian Intelligence Corps (CIC) was finally authorized to be formed. This delay was mainly caused by many senior Canadian officers believing that forming another specialist corps would cause too much administrative overhead, though cultural biases against intelligence should not be discounted.⁵⁸ Although the rebuilding of an intelligence capability in both armies would take time and experience growing pains, it was also an opportunity to create a highly-functional organization. In the rapid recruitment campaigns, intelligence personnel were largely selected by forward thinking leaders who knew that the key to success was to draw in individuals with strong linguistic, academic, and professional qualifications. The personnel selection was certainly not perfect and neither was the training system. But effective personnel selection was augmented by an increasingly competent intelligence training system run by the British and emulated by the Canadians.

The responsibility for the formation, training and setting of policy for intelligence sections within HQs was that of the Intelligence Company, No. 1 Canadian General Reinforcement Unit

⁵⁶ Hinsley, *British Intelligence, Vol. 1*, 13-14; Elliot, *Scarlet to Green*, 96. Elliot notes that many Canadian officers were also unwilling to transfer into the Canadian Intelligence Corps because of the lack of career opportunities; Jones, "Intelligence and Command", 37.

⁵⁷ Bennett, *Behind the Battle*, 9-15.; Clayton, *Forearmed*, 62-65; Hinsley, *British Intelligence, Vol. 1*, 13-14, 288.

⁵⁸ Elliot, *Scarlet to Green*, 92-94.

(CGRU), Canadian Military Headquarters (CMHQ) located in Britain. This organization helped shape the first intelligence section formed by the 1st Canadian Infantry Division (1 CID) in November 1939 and arranged the training for this group at a British intelligence school at Minley Manor (likely the precursor to the Intelligence School formed at Matlock).⁵⁹ CMHQ's Intelligence Company would continue to recruit and locate training for CIC personnel as further Canadian divisions and corps were formed,⁶⁰ though many Canadian HQs continued to have some BIC presence until 1943.⁶¹ By July 1942, the Intelligence Company also began to expand its intelligence training to Field Security (Ib) and Battalion Intelligence Courses for IOs and ORs, and would eventually take over the training of all British and Canadian IOs for the European campaign by the summer of 1944.⁶² In May 1943, Major (Maj), later Lieutenant Colonel (LCol.), Felix Walter was placed in charge of the organization of the CMHQ Intelligence Company.⁶³ Walter, in conjunction with other senior Canadian CIC officer, such as LCol (later Col.) Peter Wright, the senior IO of the First Canadian Army during the Northwest Europe campaign, would play a major role in guiding and shaping the CIC.

As the British and Canadian Intelligence Corps organized and expanded, they both went on a rapid recruitment campaign. One of the BIC's main aims was to staff itself largely with working professionals, academics, professors, teachers of modern languages, and university students, in particular individuals with a strong understanding of the German and Italian

⁵⁹ LAC, RG 24, Vol. 9810 - Intelligence Courses - Officers - File 2/INT.DUT/1 50-4 - Memorandum by Lt Col G.R. Turner, GSO 1, 1 CID "Course in Intelligence Duties - Minley Manor", 27 December 1939. Six IOs in total from 1 CID were selected to attend a four-week intelligence course at Minley Manor; Memorandum by Lt Col G.R. Turner, GSO 1, 1 CID "Intelligence Course, Minley Manor, 15 - 29 January 1940", 5 January 1940; Memorandum to G.H.Q. Home Forces from Major B.G.S. Mann "Training of Brigade and Battalion IOs", August 1940. By August 1940, out of 22 IOs within 1 CID, eight had attended the Minley course.; Elliot, *Scarlet to Green*, 86.

⁶⁰ LAC, RG 24, Vol. 9810 - Intelligence Courses - Officers - File 2/INT.DUT/1 50-8 - Memorandum from Major J.P. Page, GSO 2 Military Operations and Intelligence "Accommodation - Town of Matlock, Derbyshire", 18 June 1942. Major J.P. Page, Senior IO CMHQ, outlined that due to the increasing demand for IOs due to the formation of both First Canadian Army and II Canadian Corps, the priority was to get the maximum number of students on British intelligence courses.

⁶¹ LAC, RG 24, Vol. 12179 - CMHQ Intelligence Final Report, December 1945. (Hereafter "LAC, CMHQ Intelligence Final Report."); Skaarup, *Out of Darkness*, 51.

⁶² LAC, CMHQ Intelligence Final Report. This was due to the British beginning to focus intelligence training for the war in the Pacific against the Japanese.

⁶³ LAC, CMHQ Intelligence Final Report. Walter was the senior IO at CMHQ from May 1943 to the end of the war. He played a major role in the setting of the CIC's training and policy throughout this time, and corresponded regularly with a large number of CIC officers in both the Northwest Europe and Mediterranean theatres.

languages.⁶⁴ Field Marshall Bernard Montgomery, commander of the Eighth Army and later that of 21st Army Group during the Northwest Europe campaign, stated after the war that civilians often made the best IOs, due to having the "best brain" for that type of work, trained in the "rules of evidence", fertile with great imagination.⁶⁵ Geoffrey Cox, the senior IO with the 2nd New Zealand Division which served with the Eighth Army, believed that the application of the standards of good scholarship, intellectual honesty, and evidentiary thoroughness to the work of military intelligence were the main reasons for the efficiency of British intelligence.⁶⁶

CIC recruitment largely mirrored that of the BIC. During the rapid expansion of the Canadian Army during the Second World War, the distinctions between an obvious "officer class" within the social milieu of the Canadian Army rapidly blurred compared to the prewar Army. The dividing line between officers and ORs was education, with officers, half of whom were ultimately selected from the ranks, almost always having a high school diploma.⁶⁷ Those selected for intelligence duties more often than not had an even higher standard of education or possessed a strong linguistic capability – preferably both. Senior CIC officers, including Col. Wright and LCol. Walters, continued to look for very similar traits for future IOs and intelligence ORs; Col. Wright even believed that the prerequisite for any effective intelligence training to occur was proper personnel selection.⁶⁸ The "ideal IO" was one who possessed an education well above average (i.e., university), possessed experience as a staff officer, had a good grasp of military tactics and could understand German military organization, was a German or Italian linguist who had resided in Europe for an extended period, had previous

⁶⁴ Hugh Skillen, "The Intelligence Corps: Early Field Security Sections and Training for Y and Special Operations Executive" in *The Enigma Symposium, 1998* (Bath, UK: Print in Black Publishers, 1998), 39, 78-79, 81; Jock Haswell, *British Military Intelligence* (London: Wilener Brothers, Ltd, 1973), 169-170; Handel, *Intelligence and Military Operations*, 21, 24; Hugh Skillen, *Knowledge Strengths the Arm: The Background to the Training of Intelligence Officers in the Intelligence Corps in the Second World War and the Sequel to 'Spies of the Airwaves'* (Ipswich, UK: Ipswich Book Company, Ltd, 1991), i.

⁶⁵ Jones, "Intelligence and Command", 108-109.

⁶⁶ Jones, "Intelligence and Command", 66; Handel, *Intelligence and Military Operations*, 26-27. Handel states that in some ways, the IO has more in common with the scholar in search of truth than with the professional military man since he is usually accustomed to detailed, objective and systematic analysis, and, in theory, should be able to take criticism.

⁶⁷ Terry Copp, *Fields of Fire: The Canadians in Normandy* (Toronto: University of Toronto Press, 2003), 15; Brian A. Reid, *No Holding Back: Operation Totalize, Normandy, August 1944* (Toronto: Robin Brass Studio, 2005), 27-28.

⁶⁸ LAC, RG 24, Vol. 10024 - Selection of Int Officers - File 9/QUAL I.O./I 196/27 - Major J.P. Page, GSO 2 Military Operations and Intelligence, CMHQ "Selection of Officers for Intelligence Duties", 1 November 1941; LAC, RG 24, Vol. 10012 – File 9/I.O./I 192/15.; LAC, First Canadian Army Final Intelligence Report.

experience as a battalion or brigade IO, and possessed an ability to synthesize and analyze information in bulk. For ORs, education standards were not as high, but the above-noted qualifications were still valid.

An examination of the background of 68 Canadian IO candidates who attended the British War Intelligence Course (WIC) at Matlock from June 1943 to February 1944 demonstrates that the CIC largely was able to recruit the individuals it sought. Of the 68 surveyed, 24 could be considered "academics" (including university students, school teachers, and professors at universities); 36 could be considered "working professionals" who likely possessed at least their high school diploma, if not higher levels of education (including lawyers, clerks, salesmen, civil servants, and economists / statisticians); five could be considered "tradesmen" (including aircraft technicians, leatherworkers, and electricians); and three could be considered "blue collar workers" (including farmers, mechanics, and factory workers).⁶⁹ Of the several individuals who did not seem to conform to the qualifications which were outlined above, such as the blue collar workers or tradesmen, most possessed a pronounced capability to speak multiple languages, including not just German but Italian, Danish, Dutch, and French, which explains their commissioning into intelligence duties.⁷⁰ Though not part of the I Canadian Corps, looking at the education of a number of officers serving with 4th Canadian Armoured Division as of October 1942 is also instructive. Of 12 officers surveyed employed in intelligence duties operating within the division from battalion to the division HQ, five had at least high school, and seven had university education of some sort, two had Law degrees and one had been in pre-med at the University of Toronto.⁷¹

The mainstay of intelligence training, and the training model for Canadian intelligence courses – for example the intelligence courses ran in Canada at the Royal Military College in

⁶⁹ LAC, RG 24, Vol. 9811 -Policy Training of Intelligence Personnel - War Intelligence Courses – File 2/INT PERS/I. This is based on course lists prepared by BIC members who were administering the WIC at Matlock, Derbyshire from June 1943 to February 1944.

⁷⁰ CWM, Oral History Program, Number 31D 1 Pollak - "Interview with Fred Pollak", 28 September 2000. (Hereafter CWM, "Interview with Fred Pollak".)

⁷¹ LAC, RG 24, Vol. 10012 - Selection of IO (Int Officer) - File 9/I.O./I 192/15 - 4th Canadian Armoured Division "Officers Employed in Intelligence Duties", October 1942.

Kingston⁷² – was the War Intelligence Course (WIC) run at Matlock by the BIC.⁷³ The object of this five-week course was to train IOs for intelligence duties at the brigade and divisional level, and to also prepare them to work at the corps and army level; the training of battalion IOs was the duty of intelligence sections at the brigade level.⁷⁴ The course focused on intelligence duties in the field from battalion to corps level, photo and air intelligence, map reading, message writing, and INTREPs / INTSUMs. There was also a strong focus on understanding the German Army, its organization and tactics, identifications, uniforms, German documents, German tactical signs and handling of PWs. Other subjects included how to conduct ground reconnaissance as a battalion / brigade IO, conduct patrol briefs and debriefs with the infantry, how to write the War Diary, and how to ensure signals security by utilizing codes and ciphers.⁷⁵ Certainly an indicator of the selection of good IO candidates by the Canadian Army was a statement by LCol. Stanley Casson, Assistant Commandant of the Intelligence Training Centre, Matlock in June 1942:

Recent reports on your Canadian students have...been of the same high order as in recent months...Canadians are treated on exactly the same basis as all other students, but it is quite certain that the Canadians you send to us are all exceedingly good. They work hard, they are intelligence (sic) and they are able, and we are grateful for being sent such good men.⁷⁶

Another important aspect of intelligence training was that of interrogation. All potential intelligence candidates were tested for their abilities to speak German, in particular colloquial German. If IO candidates were not up to the linguistic standard but had other qualifications to be an IO, they were sent on the WIC but not to the Interrogation Course which was held at

⁷² Elliot, *Scarlet to Green*, 435-438. Overall, Canadian senior IOs preferred British intelligence training for their personnel; LAC, RG 24, Vol. 9810 - Intelligence Courses - Officers - File 2/INT DUT/I/4 - Memorandum from Major N.E. Rodger, Canadian Liaison Officer, Canadian Corps "Interrogation Courses", 30 October 1941. Rodger believed that a Canadian-based interrogation course was not the best idea and that better results would be obtained in the UK by sending Canadian intelligence personnel to British schools.

⁷³ Hinsley, *British Intelligence*, Vol. 1, 288.

⁷⁴ LAC, RG 24, Vol.9811 - File 2/INT PERS/I - Letter to Lt.Col PER Wright, GSO 1 (Int), First Canadian Army from LCol HM Curteis, Assistant Commandant, School of Military Intelligence, Matlock, Derbyshire, 24 November 1943.

⁷⁵ LAC, CMHQ Intelligence Final Report; LAC, RG 24, Vol.9811 - War Intelligence Courses - Policy Training of Intelligence Personnel - "Courses at School of Military Intelligence"; LAC, RG 24-8, File No.8258-3, Microfilm Reel 5158 - "CDN War Int Course (Overseas) - CMHQ Course 517 - Serial 2", Block Syllabus, 28 December 1944; LAC, RG 24, Vol. 9811 - File 2/INT PERS/I - War Intelligence Courses - Policy Training of Intelligence Personnel.

⁷⁶ LAC, RG 24, Vol.9809 - Intelligence Courses - Officers - Letter from Major J.P. Page, Officer Administering Intelligence Details Overseas to Capt J. Timmerman, O.C. Canadian Intelligence and Field Security Reinforcement Pool, 1 CGRU, 18 June 1942.

Cambridge.⁷⁷ Those who had a nascent understanding of German, be it from university courses or ethnicity, could be sent on a five-week German refresher course in Cambridge which would train students up to the standard needed for interrogation duties. Once linguistic training was completed, these intelligence personnel proceeded on an Interrogation Course of five weeks duration at Cambridge, where they would be taught how to interrogate PWs and exploit enemy documents. Once this training was complete, most of the candidates were sent to PW cages in the UK for practical interrogation work against captured Germans, including PWs from the Afrika Korps, and, if time allowed, to the War Office Military Intelligence Research Station for documents work.⁷⁸ It was soon found that those who did have the German linguistic skills did not always have the temperament for interrogation. By mid-1943, skilled German speakers found unsuitable for interrogation were to become ORBAT analysts.⁷⁹ Overall, it was noted by the Chief of Staff of CMHQ, Lt. Gen. Kenneth Stuart, in May 1944 that the high quality of Canadian interrogators was largely attributable to the excellence of the teaching and material aid obtained at Cambridge.⁸⁰

Another area where an astute recruiting process occurred was the intelligence speciality of air photo interpretation. Candidates for air photo interpretation were preferred to have survey, science, geology, archaeology, and engineering backgrounds, previous experience in photography, patience, and possess a very good visual memory.⁸¹ In May 1945, LCol. Walter compiled a list of air photo interpreter IOs available for further duties. This list is instructive of

⁷⁷ LAC, RG 24, Vol. 9810 - Intelligence Courses - Officers - File 2/INT DUT/I/4 50-7 - Memorandum by Major F.H. Walter, Senior IO, CMHQ "German Language Training for Intelligence Personnel", 8 May 1943; LAC, CMHQ Intelligence Final Report; LAC, RG 24, Vol.10024 - Selection of Int Officers - File 9/QUAL I.O./I - Memorandum by Major J.P. Page, Officer Administering Intelligence Details Overseas, 19 May 1942; Letter by Major J.P. Page to unknown addressee, Officer Administering Intelligence Details Overseas, 6 March 1942.

⁷⁸ LAC, CMHQ Intelligence Final Report; CWM, Oral History Program: Number 31D 6 Mendel - "Interview with Gerald A. Mendel", 6 January 2006; CWM - Oral History Program: Number 31D 7 Molnar - "Interview with George Molnar", 29 November 2006.

⁷⁹ LAC, RG 24, Vol. 9810 - Intelligence Courses - Officers - File 2/INT GERMAN/I 50-9 - Letter from Major F.H. Walter, Senior IO, CMHQ, to Major R. Hartley, 1 July 1943.

⁸⁰ LAC, RG 24, Vol. 9810 - Intelligence Courses - Officers - File 2/INT GERMAN/I 50-9 - Letter from Lt. Gen. K. Stuart to The Under Secretary of State, War Office, Whitehall "German Interrogation Courses - Cambridge", 16 May 1944.

⁸¹ LAC, RG 24, Vol. 10024 - Selection of Int Officers - File 9/QUAL I.O./I 196/27 - Letter to Col. W.W. Murray, DMI DND from Major J.W.H. Halbert "Intelligence Personnel Requirements", 6 January 1943; Series of Memorandums by Major J.P. Page, Officer Administering Intelligence Details Overseas, Mid 1942; LAC, RG 24, Vol. 10024 - File 9/QUAL I.O./I 196/27 - "Officers Suitable for Air Photograph Courses", 9 May 1942; "Selection of Officers for Intelligence Duties (Photo Interpretation)" Memorandum by Major J.P. Page, Officer Administering Intelligence Details Overseas, 6 May 1942.; LAC, RG 24, Vol. 9809 - File 2/INT/I 50-2 - Intelligence Courses - Officers - "Qualifications for Photographic Interpreters", Likely written sometime in mid-1942.

the type of individuals recruited for air photo interpretation. Of 44 air photo interpreter IOs, 18 had science degrees, including nine in agriculture / forestry, 11 had general arts degrees, and 16 had high school equivalencies. As for previous occupations, 18 could be deemed "professionals" (lawyers/stock brokers/managers), 13 had previous occupations where they worked with air photos on a daily basis such as surveyors for a provincial forestry department or oil company or draughtsmen creating maps, five could be considered "tradesmen", four professional photographers or artists, and two either teachers or students.⁸² As such, one-third of the individuals drawn into the air photo interpretation specialty within the CIC imported educational and professional experience which directly benefitted the Intelligence Corps. Once individuals were selected, they proceeded on a five-week air photo Interpretation course held at Matlock, which had opened a Photographic Interpretation Wing in April 1942.⁸³ At this wing, instructors covered such issues as the purpose and methods of air photographic reconnaissance, types of air photos, types of air cameras, how to evaluate and interpret air photos, stereoscopy and air photos, and air photos in the support of artillery and air bombing.⁸⁴

Although it is clear that the CIC was able to recruit a large number of well-educated academics and professionals, the question still remains, did the training that fledgling IOs undergo prepare them for the type of operations that they would have to face? Perhaps the main fault with the intelligence recruiting and training system in Britain was that a notable number of IOs were thoroughly uninformed about their own army. Both Maj. W.H. Broughall, the GSO 2 Int at II Canadian Corps, and Maj. J.M.E. Clarkson, the GSO 2 Int at I Canadian Corps, remarked at war's end that the IOs coming out of reinforcement depots did not understand their own army or how operations were conducted.⁸⁵ This inability to link intelligence to operations severely impeded their ability to make proper assessments on the

⁸² LAC, RG 24, Vol. 10012 - Selection of IO (Int Officer) - File 9/I.O/I/2 - Memorandum by Lt Col Felix Walter "IOs (Photo Interpreters) Available for Reallocation", 19 May 1945.

⁸³ LAC, RG 24, Vol. 9811 - War Intelligence Courses - File 2/INT PERS/I - Policy Training of Intelligence Personnel "Courses at Schools of Military Intelligence"; LAC, RG 24, Vol. 9810 - Intelligence Courses - Officers - File 2/INT DUT/I/4 - Memorandum from the War Office Re: The Opening of a Photographic Interpretation Wing at Matlock, 1 April 1942.

⁸⁴ LAC, RG 24, Vol. 9810 - Intelligence Courses - Officers - File 2/INT DUT/I/4 - "Intelligence Training Wing - Photographic Interpretation", Likely published mid-1942.

⁸⁵ LAC, First Canadian Army Final Intelligence Report - Major W.H. Broughall "Intelligence at HQ II Canadian Corps"; LAC, First Canadian Army Final Intelligence Report - Major J.M.E. Clarkson "Intelligence at HQ I Canadian Corps".

enemy's capabilities and intentions. Clarkson did note that intelligence training was effective in providing intelligence personnel a thorough knowledge of the German army and its ORBATs, but not enough practical knowledge to determine how the Germans would apply this organization against friendly forces. It is interesting to note that these conclusions by Canadian officers were earlier noted by Eighth Army IOs visiting the First British Army in Tunisia in late 1942, a formation which had just recently landed in North Africa for Operation TORCH. It was observed by the Eighth Army IOs that IOs in the First Army focused too much on "scholarship" than soldiering and that, though they had a solid knowledge of how the enemy was organized, they did not have a good understanding as to how they would behave.⁸⁶

This lack of practical knowledge reflected one of the biggest hurdles for the effective recruitment and training of IOs – that of personnel selection balancing military experience with the aptitudes needed for intelligence work. It was observed that many Canadian officers who attended the WIC who had previous regimental experience and a sound knowledge of friendly military organizations had an advantage while many of the IOs who had no previous experience were deplorably ignorant of the organization of friendly arms and formations.⁸⁷ This impeded their ability to operate properly within a formation HQ. One solution was to try to continue to recruit experienced platoon and troop commanders, especially those with combat experience. In fact, many personnel employed in intelligence duties within formations and units continued to wear their respective unit and trade badges.⁸⁸ This was especially true at the battalion and brigade levels, where almost all IOs were selected from units, and it was rare for CIC members to be placed into those positions. Sir David Hunt, a senior British IO who served within the Eighth Army during the North Africa campaign, believed that most intelligence personnel who had experience in "proper" soldiering before serving in an intelligence capacity had a better understanding on how to accomplish intelligence work.⁸⁹ However, LCol. Walter noted that recruitment focusing on previous military experience was

⁸⁶ Bennett, *Behind the Battle*, 123-124.

⁸⁷ LAC, CMHQ Intelligence Final Report.

⁸⁸ LAC, CMHQ Intelligence Final Report.

⁸⁹ Sir David Hunt, *A Don at War*, (London: Frank Cass and Co, Ltd, 1990 - first published in 1966), 68.

not an ideal solution to fill all the intelligence positions in formation HQs, as there was no guarantee that this system would find the individuals who had the skills necessary to do intelligence.⁹⁰ Just because someone could effectively lead an attack or be a "proper" soldier, did not guarantee that they would be an effective IO. In the end, Col. Peter Wright, senior IO of the First Canadian Army, stated it best "The conclusion is that battle experience(d) (IOs) is not essential but desirable, and if it cannot be secured, well-trained and balanced officers with an appreciation of what goes on at the sharp end must be selected."⁹¹

Another point of contention was linguistic capability. Although by April 1944, approximately 50 percent of the CIC's officers and 66 percent of its ORs were fluent German speakers,⁹² being a fluent linguist did not guarantee the intellectual ability to conduct intelligence work.⁹³ Maj. Broughall stated at the end of the war that knowledge of the enemy's language was not in itself a qualification to become a good IO.⁹⁴ Due to long work hours, the effort could be exacting and the ability to think clearly was a prime requisite. Accuracy was essential, and a casual or inaccurate IO was a menace whose errors could cause avoidable casualties. Overall, regimental affiliation or linguistic capability was not the most important factor in determining intelligence effectiveness. Jones frames it best when he states that one can assume that a harmonious working relationship prevailed with all IOs, whatever their professional backgrounds. In theory, they were all united in pursuit of intellectual excellence in intelligence work.⁹⁵ This was the determining factor between an amateur organization, which frivolously chose its personnel and trained them in an ad hoc and poor manner, and one which truly strove for professional competence by actively selecting and training individuals best suited for intelligence work, and then retaining these individuals for an extended period to allow them to professionalize as intelligence experts. It will be demonstrated below that 5 CAD exemplified the amateur type of organization, whereas 1 CID and I Canadian Corps the latter.

⁹⁰ LAC, CMHQ Intelligence Final Report.

⁹¹ LAC, First Canadian Army Final Intelligence Report.

⁹² Elliot, *Scarlet to Green*, 133-134. This is based on the linguistic capabilities from an April 1944 survey of 96 IOs and 301 ORs in the CIC at the time; this does not include non-CIC members conducting intelligence duties. Of these individuals, Elliot believes only 47 IOs and 200 ORs were fluent German speakers.

⁹³ Hunt, *A Don at War*, 68.

⁹⁴ LAC, First Canadian Army Final Intelligence Report - Major W.H. Broughall "Intelligence at HQ II Canadian Corps".

⁹⁵ Jones, "Intelligence and Command", 66.

Thus while intelligence personnel selection and training in Britain was imperfect, it still provided a solid basis of understanding of German organization which was essential to conduct analysis on the adversary. In essence, a balance had to be struck. The very best intelligence personnel had a strong understanding of the military organization in which they were working, including having a strong relationship with the operations staff that they were supporting. But they still were able to continue to exercise their intellectual discipline and creativity learned from their time as civilians. However, what many IOs engaged in operations lacked was a strong concept of how to relate intelligence information to battlefield needs. Unfortunately, Eighth Army intelligence personnel in the war's initial stages would have to learn from mistakes committed by both themselves and, perhaps more importantly, their operations counterparts. Fortunately, during the Italian campaign, 1 CID, and later I Canadian Corps, would benefit directly from Eighth Army's experience.

Chapter Two: Intelligence Organization and Sources - Unit to Formation Level

As our Intelligence resources improve, we come to know more and more about the enemy...but we will never know everything...The limitations on Intelligence come through the limitation on its sources...Above all sources change in value and character. Thus there are many times of bad flying weather, ill fortune or wireless silence when normal sources fail and the answer must be 'I don't know'. – Col. Peter Wright, First Canadian Army Final Intelligence Report, July 1945⁹⁶

Before discussing the Canadian intelligence experience in Italy, it is worthwhile to review how intelligence operated from battalion to army level and, more importantly, the sources which were available to these organizations. This section is *mostly* based on developments which existed by 1944 and do not reflect intelligence doctrine which the British practiced in North Africa from 1941 to 1943. The evolution of Eighth Army's intelligence doctrine will be discussed briefly in the army-level section of this chapter. At the heart of all intelligence organizations remained intelligence analysis – placing all the disparate pieces of information into a collective understanding. Col. Wright stated that the centre of intelligence was the proper appreciation of information, and this called for someone with an operational mind who assessed the information in relation to the battle being fought.⁹⁷ One of the most difficult problems in intelligence organizations was to find individuals with the experience and capacity to look at everything that mattered, to fuse the pieces of information together into a coherent whole, and then present it simply to their commander to inform their decision making. Even the most reliable sources were useless without effective analysis and the best intelligence organizations continued to evaluate and re-evaluate the information that they received in order to produce timely and relevant intelligence. The primary purpose of this intelligence was to inform commanders and their staffs of the enemy's current order of battle (ORBAT) and dispositions so that they could have a strong understanding of the potential enemy they would be confronting in the future and plan accordingly to confront this foe.

⁹⁶ LAC, First Canadian Army Final Intelligence Report.

⁹⁷ *Ibid.*

Intelligence at the Battalion Level

The intelligence system which existed at the battalion level played an important role in collecting information by actual observation of, and contact with, the enemy.⁹⁸ Intelligence at the unit level was very dependent on the personality of the unit Commanding Officer (CO). Some were very supportive of intelligence activities and encouraged their forward companies to cooperate with their intelligence sections. Others, whether it was due to poor experiences with intelligence in the past or just blatant ignorance of intelligence, disregarded their IOs and relegated them to the sidelines of their decision making. For those COs who held intelligence in high regard, their IOs were often right beside them wherever they went.⁹⁹ The relationship was frequently amicable since COs had a strong say in selecting their IOs, who were almost always chosen from the unit they commanded. This could also be a double-edged sword. Douglas Tobler, a former British IO from the North African campaign, noted that if a CO ordered a company commander with no intelligence training to take over the role of IO, it could have detrimental effects on the unit's ability to collect intelligence.¹⁰⁰ IOs at the unit level regularly shared the same hardships of the CO and his staff, including being regularly exposed to significant danger and, at times, even fighting alongside soldiers.¹⁰¹ Unit IOs were not only responsible to their CO. They were responsible for reporting information to the brigade IO, and their close relationship with the brigade intelligence section was essential for the effective operation of intelligence in the brigade. Overall, the value of intelligence at the

⁹⁸ CWM, Oral History Program, Number 31D 1 Dixon - "Interview with Reg Dixon", 20 October 2000. (Hereafter CWM, "Interview with Reg Dixon"); Douglas H. Tobler, *Intelligence in the Desert: The Recollections and Reflections of a Brigade Intelligence Officer* (Victoria, BC, Canada: Morriss Printing Company, 1978). Much of what is understood of the role of intelligence at the unit level in this thesis is based on an interview by the Canadian War Museum of Reg Dixon, an IO within 3rd Canadian Infantry Division who acted as an IO at the battalion, brigade and division levels during the Northwest Europe campaign. Another key source is Douglas H. Tobler, a British IO who worked in a brigade intelligence section during the North African Campaign. These two experiences are reflective of the experiences of unit IOs throughout the Canadian and British Armies; As well, see the website: "Notes of a War-time Infantry Battalion Intelligence Officer", last accessed 22 October 2011, <http://www.lawlerbrown.com/page-32.html>. This website describes the experiences and duties of an IO of the 7th/9th (Highlanders) Battalion, The Royal Scots, and the organization and methods outlined in it are very similar to the ones described by Dixon and Tobler.

⁹⁹ CWM, "Interview with Reg Dixon".

¹⁰⁰ Tobler, *Intelligence in the Desert*, 54.

¹⁰¹ Copp, *Fields of Fire*, 233-234; Elliot, *Scarlet to Green*, 182-183; LAC, CMHQ Intelligence Final Report.

battalion and brigade levels had to be judged by its ability to pinpoint as nearly as possible the enemy's location, weapon systems, identification, and strength.¹⁰²

Unit intelligence sections usually consisted of approximately six individuals, including an IO, an intelligence sergeant who could take the role of IO for a temporary period, and several corporals, including one or two draughtsmen. The intelligence section was in charge of the distribution of maps and air photos for the unit, including issuing traces and diagrams of enemy locations, and other areas of interest. The intelligence section also had to keep situation maps of the unit's front updated, including the suspected locations of the enemy, activity of enemy artillery and mortars, locations of friendly OPs and sub-units, and the unit's patrolling activity. The IO was in charge of organizing the activity of the OPs within the unit, including informing them about what to look out for on the front, and teaching individuals in the OPs about how to record information properly. Using accurate locations of the OPs, the intelligence section, with any attached artillery Forward Observation Officer (FOO) or by itself, could help coordinate artillery and mortar fire, and even air attacks, on the enemy, by outlining target reference points.¹⁰³

One of the most important sources of information for the unit was patrolling. The coordination of patrol activity, in close synchronization with the unit CO, took up a large amount of the unit IO's time, especially in static situations. The CO would designate what company was in charge of what type of patrol, and, using all available information such as diagrams drawn by the unit's draughtsman, maps, and air photos, the intelligence section would brief the patrol before it went out and debrief it upon its return. The patrol's mission and composition would vary from day to day. Sometimes it was a small element sent out to confirm the terrain features on a map such as a bridge, an enemy location, or to capture a PW; sometimes it was a larger fighting patrol designed to conduct a raid on an enemy position or to set up an ambush. The unit intelligence section also helped coordinate patrolling activity with flanking units, and synchronized fire support to ensure patrols were not hit by friendly fire to assist in a patrol's extraction if it got into trouble or to cause a

¹⁰² Tobler, *Intelligence in the Desert*, 65.

¹⁰³ CWM, "Interview with Reg Dixon".

diversion. Certainly reflective of the importance of patrolling was that by the time of the Liri Valley battles, units had been ordered to form a scout platoon consisting of one officer and 30 ORs. These scouts moved ahead of their battalions, to dispose of small enemy detachments, and to report larger enemy concentrations.¹⁰⁴ Another element which the unit IO liaised with was the sniper section, which was essentially briefed as to what the intelligence section was looking for and reported to the IO, but was rarely tasked by intelligence.¹⁰⁵

Another important role played by a unit's intelligence section was the rapid identification of a PW's unit, especially during active operations. This information was vital to pass up the chain of command so that IOs at higher HQs could confirm what enemy units and formations they were facing. Identification was accomplished through initial interrogation of PWs by the IO or a German-speaking member of the unit under the IO's supervision.¹⁰⁶ Examination of PW uniforms often betrayed the rank, formation, and unit of the German PW. Another important source of information was a PW's paybook, which most German soldiers carried with them. In order for successful identification to occur, a solid knowledge of the enemy's ORBAT was essential.¹⁰⁷ Once PWs were identified, IOs were encouraged to pass them back to brigade and then division for further interrogation. Formation IOs preferred that initial interrogations by units and brigades should be conducted to gain identification of units and information of immediate tactical value. It was found at times that if unit IOs attempted interrogation beyond that, it was amateurish and ruined the chances for more in-depth interrogation at higher HQs.¹⁰⁸

Intelligence at the Brigade Level

Brigade and unit IOs were essentially part of a larger intelligence team. A brigade IO's job was to be in continuous liaison with his unit-level colleagues, and, in conjunction with the unit IO, even conduct his own reconnaissance of the front. Much like battalion IOs, brigade IOs

¹⁰⁴ LAC, RG 24, Vol. 10779 - File 234C1.013 (D3) - "1st Canadian Infantry Division in the Liri Valley Battle", 31 July 1944.

¹⁰⁵ CWM, "Interview with Reg Dixon"; LAC, RG 24, Vol.10785 - File 234C1.013(D12) SNIPERS - "Employment of Snipers in Sicilian and Italian Campaigns", Likely publication date - July 1944.

¹⁰⁶ LAC, RG 24, Vol. 9809 - Intelligence Courses - Officers - File 2/INT/I 50-2 - HQ Cdn Corps to all Divisions "Interrogation Course", 23 December 1941.

¹⁰⁷ CWM, "Interview with Reg Dixon".

¹⁰⁸ LAC, First Canadian Army Final Intelligence Report.

were usually selected from a unit from within the brigade, though at times they could be appointed from above, which occurred at least once in I Canadian Corps during the Italian campaign. Tobler believed that IOs originally from units usually made the best brigade IOs as opposed to those IOs directly from the Intelligence Corps who often found themselves out of place at frontline HQs due to their expectation that information would come to them. In fact, IOs at the brigade level and lower had to go seek out information.¹⁰⁹ Certainly this active form of collection by British brigade IOs in North Africa came as a surprise to Canadian IOs in Britain before the Sicilian / Italian campaigns since the latter were accustomed to passively sitting at their respective HQs and waiting for information.¹¹⁰ Tobler notes that one of the predominant issues taught at the Matlock WIC was that the brigade IO should not accompany their CO forward and should stay in the rear to keep their division fully in the picture. This worked well at Matlock, but less well in actual operational conditions.¹¹¹ During orders groups (O Groups), a brigade IO was expected to give an appreciation of the latest enemy defences and likely intentions. But he was also expected to be familiar with the ORBAT and location of his own troops, and even at times issue orders and instructions in the absence of the Brigade Major.¹¹² Overall, a brigade IO's most important job was to be a coordinator of information between the units below him, such as passing air photos and maps from division to the units, and passing intelligence derived from the units to the General Staff Officer 3rd Grade Intelligence (GSO 3 Int) at division above him.¹¹³

Intelligence at the Divisional Level

Intelligence at the divisional level had a wider range of sources available to it, including intelligence support from higher formations such as corps and army, and the intelligence reporting from all of its subordinate brigades and units. This permitted the senior IO, a GSO 3 Int, to make more comprehensive appreciations of the enemy to assist in the planning of

¹⁰⁹ Tobler, *Intelligence in the Desert*, 53-54.

¹¹⁰ LAC, RG 24, Vol. 9811 – 2/INT PERS/I - Capt Kulbach "Memorandum on Bde I.O.'s Duties of 26 Armd Bde", Likely written in early August 1943 and Capt EVAW Ofenheim "Comment on Memorandum on Bde I.O.'s Duties of 26 Armd Bde", 21 August 1943.

¹¹¹ Tobler, *Intelligence in the Desert*, 52-53.

¹¹² *Ibid.*

¹¹³ CWM, "Interview with Reg Dixon".

larger-scale operations. In many ways, divisional intelligence sections were at the forefront of intelligence analysis, providing foundational intelligence assessments upon which higher HQs built their appreciations. To make use of the larger amounts of information available to the division, 1 CID's intelligence staff quickly discovered in the Sicilian campaign that they had to further augment their cadre. As such, the standard staff at 1 CID was that of a GSO 3 Int, a divisional IO, another attached IO from either corps or army, one or more attached liaison officers (LOs), in particular men who could speak Italian, and two or more air photo interpreters working in the Air Photo Interpretation Section (APIS) from Mediterranean Army Interpretation Unit (MAIU) (West). The staff also had a corporal clerk and a sapper / private draughtsman, both of whom had to have a strong understanding of intelligence. Most of the staff would work within the intelligence van, which always was closely located to the operations, and commander's vans.¹¹⁴

Divisional intelligence staff responsibilities were more numerous as compared to their colleagues at lower levels. They were responsible to their commander and the divisional staff, had to report all information to corps, and often had to brief brigade commanders, as brigade IOs did not always understand the wider context and operations underway. To accomplish this, more detailed records had to be kept by the divisional intelligence staff which would compile all available PW, patrol, OP, topographical, and air photo information. The divisional intelligence staff would fuse this information, appreciate it, and either plot it on maps or gridded / mosaic air photos located in the intelligence van on a series of map boards and write regular INTSUMs. This information was also regularly briefed to the commander and operations staff.¹¹⁵

The primary source of information for the division remained PW interrogation and captured enemy documents. As such, divisional intelligence staffs had as many German speakers qualified in interrogation as possible. PWs, with prolonged interrogation, could help reconstruct the enemy's ORBAT, dispositions, doctrine, and confirm intelligence from other

¹¹⁴ LAC, First Canadian Army Final Intelligence Report.

¹¹⁵ LAC, First Canadian Army Final Intelligence Report; CWM, "Interview with Reg Dixon".

sources.¹¹⁶ It took time to gather PWs, send them to the proper areas for interrogation, and glean information from them and captured documents – time which could mean the difference in saving lives. As such, divisional IO interrogators would either make regular visits or even reside at brigade HQs to assist in the daily intelligence work, in particular to interrogate PWs as far forward as possible. Captured documents were often of greater value than PWs, especially when it came to ORBAT analysis; however, it was rare to capture documents of immediate tactical value.¹¹⁷ Most importantly, information passage, especially during mobile phases, was seen by 1 CID's final GSO 3 Int, Capt. George Molnar, as the "quintessence" of success. As such, captured documents were often read over the phone to higher HQs, captured maps were transposed upon the Canadian grid system as soon as possible, and, if necessary, ISUMs, essentially INTREPs sent out on wireless by secure cipher, were issued.¹¹⁸ In addition to PWs and captured enemy documents, Capt. Molnar noted that the most important thing for any IO was to have a solid understanding of the enemy's organization.¹¹⁹

Another important source of intelligence was air photo interpretation. Every division had its own air photo interpretation staff which could order prints from higher HQs and interpret them for the division's particular sector of the front.¹²⁰ Air photos were regularly disseminated forward to brigade staffs and units to assist in their planning. These air photos and the subsequent interpretation could also be used to create defence overprints, essentially a map with very detailed and up-to-date information on enemy positions.¹²¹ Another source of valuable information was air reconnaissance and artillery air observation posts (Air OPs), which at times had direct wireless communication to a division's HQ or artillery staff. When the weather was suitable and airfields were available, these played a very important role during the Italian campaign. However, the German Army developed very good

¹¹⁶ Brad W. Gladman, "Air Power and Intelligence in the Western Desert Campaign, 1940 - 1943", *Intelligence and National Security*, Vol.13, 4, 1998, 149.

¹¹⁷ Jones, "Intelligence and Command", 77-78.

¹¹⁸ LAC, First Canadian Army Final Intelligence Report; Clayton, *Forearmed*, 128.

¹¹⁹ CWM, Oral History Program, Number 31D 7 Molnar - "Interview with George Molnar", 29 November 2006. (Hereafter CWM, "Interview with George Molnar".)

¹²⁰ LAC, First Canadian Army Final Intelligence Report.

¹²¹ CWM, "Interview with Reg Dixon".

camouflage techniques and often moved at night, which compelled air reconnaissance and air photo interpreters to work very hard to define enemy positions.¹²²

A nascent intelligence capability available to divisions by the time of the Liri Valley campaign was that of counter-mortar (CM) organizations. Most infantry casualties in North Africa, Italy, and Northwest Europe were caused by mortars. Allied operational research during the war demonstrated that Germans often utilized mortars and *Nebelwerfers* (essentially highly-mobile rocket artillery) on a large scale, with as many as 40 to 80 mortars and 50 *Nebelwerfers* available to a German division at any one time.¹²³ This operational research discovered that, at times, 57 percent of officer and 70 percent of OR deaths were due to mortars and *Nebelwerfers*, which had an intensely demoralizing effect.¹²⁴ A counter-mortar office (CMO) and smaller brigade CM sections were not set up in 1 CID until February 1944, and attempts to standardize CMOs within I Canadian Corps occurred just before the Liri Valley battles in April 1944.¹²⁵ CMOs faced very specific and difficult challenges. The small profile of these indirect fire weapons made them difficult to detect from the air, while their high trajectories made it possible to conceal them from ground observation, particularly in close country. Further, the signature of mortars was very slight due to the small amounts of noise, smoke, and light that were produced when they were fired, and the ripple effect from *Nebelwerfer* fire made sound-ranging detection difficult.¹²⁶ As such, it was very complicated to detect, locate, and eliminate these weapons with counter-battery fire before they had been moved. Though detection measures such as Air OPs, sound-ranging and flash-spotting were utilized for CM work, the most valuable information came from mortar reports (MOREPs) from front-line troops, which essentially required soldiers to report where they suspected mortar fire was originating from. However, the education process to send in

¹²² Jones, "Intelligence and Command", 78-79.

¹²³ Terry Copp, ed., *Montgomery's Scientists: Operational Research in NW Europe: The Work of Number 2 Operational Research Section within 21 Army Group, June 1944 to July 1945* (Waterloo, Ontario: The Laurier Centre for Military Strategic and Disarmament Studies, 2000), 437.

¹²⁴ Robert Engen, *Canadians Under Fire: Infantry Effectiveness in the Second World War*, (Montreal and Kingston: McGill-Queen's University Press, 2009), 70-71.

¹²⁵ LAC, RG 24, Vol. 13727 - 1st Cdn Inf Div WD - Sep 43 to Feb 44 - 1 CID Staff "Counter Mortar Plan", 12 Feb 44; LAC, RG 24, Vol. 14311 - I Cdn Corps HQ RCA WD - "Counter Mortar", authored by Brigadier M.C. Plow, CCRA, I Cdn Corps, 7 May 1944.

¹²⁶ Copp, *Montgomery's Scientists*, 431.

MOREPs was slow,¹²⁷ and it will be demonstrated below that during the Liri Valley battles, the effectiveness of CM work was generally deficient.

Intelligence at Corps Level

Intelligence at the corps level had even more expanded responsibilities and a wider access to intelligence sources. This was due to corps intelligence having to support a wider arrangement of units and formations, including two or more divisions, and most times an Army Group Royal Artillery (AGRA) consisting of two or more field, medium, and heavy artillery regiments.¹²⁸ Within I Canadian Corps HQ, there was the senior IO in the formation, the GSO 2 Int, who also had the extra responsibility to administer all CIC personnel in the Mediterranean theatre. A GSO 3 Int(a) was his deputy, a GSO 3 Int(b) oversaw field security and three IOs (Ia) were the main intelligence "engine". Almost all intelligence personnel worked within the operations centre, where the other essential staff branches were located, including the GSO 1 (Ops) and his operations staff, and the GSO 2 (Air), who coordinated all air activities for the corps. This arrangement allowed all staff to share map boards, pass information more easily, and develop a common understanding of the battle. Both the GSO 2 Int and GSO 3 Int had overlapping responsibilities and this was done deliberately, so that they could cover each other off during busy periods.¹²⁹ Overall, Maj. J.M.E. Clarkson, who replaced Maj. Darcy Kingsmill as GSO 2 Int in I Canadian Corps in 1945, believed that:

... Intelligence at HQ I Cdn Corps depended upon a few general broad outlines allowing a deal of scope and mutability and NOT tying down its operators to hard and fast rules and demands. A minimum of paperwork consistent with efficiency, a large dependence on telephonic communications – what is commonly known as the "Old Boy Net" – and an insistence on those three prime factors: security of information, continuous personal liaison, and plenty of sleep, was the basis of the intelligence structure.¹³⁰

¹²⁷ LAC, RG 24, Vol.14078 - 2nd CIB WD - Counter Mortar Battery 1 Cdn Div, CM INTSUM #34, March 1944. For example, 1 CID's CMO stated in March 1944 it was essential that front-line troops send more MOREPs in order to effectively eliminate enemy mortars as sound ranging and flash spotting was proving ineffective.

¹²⁸ For instance, I Canadian Corps AGRA, Number One Army Group Royal Canadian Artillery, consisted of one field and three medium artillery regiments.

¹²⁹ LAC, First Canadian Army Final Intelligence Report.

¹³⁰ LAC, First Canadian Army Final Intelligence Report.

Perhaps one of the most important jobs in corps intelligence was the IO (Ia) responsible for maintaining and updating the files on the enemy ORBAT, strengths, and enemy personalities. The ORBAT IO was the main point of contact for the whole corps to answer questions about enemy units and formations then either on or potentially on I Canadian Corps' front. ORBAT files were divided into two parts: identifications and organization. Every known enemy division was filed in these folders, with each regiment within that division given a separate sheet. These files kept track of all unit identifications (at times down to company level), their last known location, date of location, method of identification, and their approximate strengths. On the corps front, Clarkson claimed it was possible to accurately compute the strength of the enemy, including anti-tank gun and artillery strengths, within a half an hour. However, it should be noted that this probably was only true if accurate information was available to make such calculations. Personality files on enemy commanders were kept on a similar basis, a page being allotted per battalion in each division.¹³¹

Corps intelligence was deeply involved in providing targeting intelligence on a daily basis. The second IO (Ia) was responsible for passing on targeting intelligence to the GSO 2 (Air), the corps artillery intelligence staffs, and the Eighth Army's Targeting Section. In conjunction with the GSO 3 Int, the targeting IO also kept maps plotted of potential enemy targets for artillery and air strikes, and enemy dispositions were recorded down to the company level. An important relationship existed between the targeting IO and the artillery intelligence staffs, including the Corps Counter-Battery Office (CBO). The CBO, especially in static periods, could provide a wealth of information on enemy gun locations and artillery activity – vital information if these dangerous weapons were to be suppressed or destroyed during operations. Air photo interpreters at division, corps, and army were intensely involved with the CBO for the discovery of enemy artillery positions. Division air photo interpreters were usually focused on enemy batteries to the immediate front, with corps and army focused on batteries further to the rear.¹³² Close liaison was also emphasized with the GSO 2 (Air) for

¹³¹ LAC, First Canadian Army Final Intelligence Report.

¹³² LAC, RG 24, Vol. 12327 - Intelligence Reports from Central Mediterranean Force - File 4/CMF REPS/1 - Capt AC Kinnear, IO Photo, to Capt RE Wodehouse, GSO 3 (Photo) HQ First Cdn Army "Personal Report as Division IO (Photo) in Italy", Published late January 1944. (Hereafter "LAC, Kinnear Personal IO Photo Report".)

coordinating air support; the GSO 2 (Air) frequently consulted corps intelligence before submitting the next day's tactical strikes and photo reconnaissance missions to Eighth Army, which had overall responsibility for managing air missions. Of particular importance, intelligence, especially wireless intelligence (WI), which indicated any potential counter-attack by German units, was passed through the GSO 3 Int or the targeting IO for immediate action by the corps artillery and air staffs.¹³³ The third IO dealt exclusively with all questions relating to topography, enemy defences, ordering air photos through the GSO 2 Air, supply and demand for defence overprints, and maps. In particular, during peak periods, I Canadian Corps, working in close cooperation with Eighth Army, could theoretically produce and deliver bulk orders of air photos to divisions within two days.¹³⁴ The third IO was also usually a German speaker who handled most of the captured documents.¹³⁵

Throughout the day, both the GSO 2 and GSO 3 Int compiled the daily INTSUM in the highly-successful, three-part format which had been in use in the Eighth Army since August 1942.¹³⁶ Part I, the daily enemy situation, gave operational commanders the essential information they needed to plan. Part II, the identification and organization of enemy units and formations, outlined the important ORBAT information discovered during the day. Part III of the INTSUM usually dealt with updates on enemy weapons, vehicles, tactics, or matters of special interest such as interrogation reports, topographic reports, or information on new enemy formations. Information from other formation INTSUMs often would be inserted in Part III as well. The GSO 2 Int (or his deputy) wrote Part I and the ORBAT IO handled Part II, and the object was to have the INTSUM written by midnight so that intelligence personnel could get to bed. Intelligence clerks, working on a shift schedule, would then disseminate the INTSUM.¹³⁷ INTSUMs were not only excellent forums to disseminate the latest information on the enemy to subordinate, higher, and flanking formations, they were also viewed as a means

¹³³ LAC, First Canadian Army Final Intelligence Report.

¹³⁴ LAC, Kinneer Personal IO Photo Report.

¹³⁵ LAC, First Canadian Army Final Intelligence Report.

¹³⁶ Hinsley, *British Intelligence, Vol.2*, 410-411; Jones, "Intelligence and Command", 95-96; PRO, WO 208/3575. Brig. E.T. Williams "Notes on the Use of Ultra by the Army", 5 Oct 1945. (Hereafter "Williams, Use of Ultra"). Williams, Montgomery's senior IO from August 1942 to the war's end, noted that the original intention of the new INTSUM format was to break away from "I" jargon, and use a more conversational approach, which would get the essence of the matter across to the reader.

¹³⁷ LAC, First Canadian Army Final Intelligence Report.

of recording and consolidating intelligence, creating a background of accumulated knowledge.¹³⁸

Much like divisions, corps intelligence also relied heavily on PW interrogation and, by May 1944, I Canadian Corps had a regular PW interrogation team working at its PW cage. This section of two IOs and an intelligence sergeant confirmed ORBAT information extracted at divisional PW cages with a special focus on further clarifying the location and strengths of enemy formations and units. More specific inquiries would also be solicited, such as determining the type of training German soldiers had received or the length of time they had been at the front.¹³⁹ Every evening, a break-down of the PW intake and the intelligence gleaned from interrogation was submitted to corps intelligence.¹⁴⁰ As with all sources of information, it was important to corroborate PW statements; thus air photos and photo mosaics were often used during interrogations to elicit specific details from PWs.¹⁴¹

The Air Photo Interpretation Section (APIS) was in charge of aerial photographic intelligence for I Canadian Corps and, in conjunction with the APIS at division, was responsible for coordinating the creation of maps and defence overprints, mosaics, the synchronization of flying demands, and air photo orders. The organization had two IO air photo interpreters, a corporal draughtsman, and a lance corporal clerk. The main source of air photos for these sections was a daily air photo sortie flown by the Royal Air Force (RAF) to gain the latest battlefield and hostile battery (HB) intelligence. During upcoming operations, defence overprints were continuously updated as more information became available from air sorties and other information. As divisions had a narrower sector than corps, divisional staffs preferred their own APIS to conduct their own interpretation of air photos and produced defence overprints for their own sector. However, "going maps", which were essentially terrain analyses for vehicular movement, were usually prepared at corps level. Air photos and other forms of aerial reconnaissance were regularly used to corroborate information from

¹³⁸ Jones, "Intelligence and Command", 95-96.

¹³⁹ CWM, "Interview with Reg Dixon".

¹⁴⁰ LAC, First Canadian Army Final Intelligence Report.

¹⁴¹ LAC, Kinneer Personal IO Photo Report.

other sources such as WI and PW information.¹⁴² During the Italian campaign, front-line units found air photos of increasing utility and demand for them increased, largely due to the poor maps which existed for the Italian countryside. Before every main attack, annotated overprints would be distributed down to company and, sometimes, platoon level, not only to outline the latest enemy information but simply to assist in navigation.¹⁴³

One of the most important sources of intelligence for the I Canadian Corps not available to lower formations and units was that of its signals intelligence (SIGINT) or wireless intelligence (WI), a capability provided by its Y Service or Special Wireless Section (SWS), Type "B". SIGINT involves the interception of messages, traffic analysis or the inferences derived from the observations of the procedures and patterns of communications circuits (i.e., stations sending and receiving, broadcast frequencies, call signs, types of ciphers being used), and the solution of codes and ciphers which attempt to prevent exploitation of these messages.¹⁴⁴ Consisting of approximately 100 signals and intelligence personnel,¹⁴⁵ Number One Canadian Special Wireless Service, Type "B" (#1 Cdn SWS) accompanied I Canadian Corps for most of the Italian campaign. Modelled on equivalent British war establishments, this unit was charged with intercepting enemy communications, deciphering coded or enciphered transmissions, translating and interpreting messages, and disseminating the analyzed results to the corps HQ. There were two major aspects to SWS activity – the actual interception of transmissions, conducted by Special Wireless Operators (the SW section), and the interpretation and appreciation of these communications, conducted by intelligence personnel (the WI section). The WI section consisted of three IOs and 12 OR linguists.

Unfortunately, the history of #1 Cdn SWS is fragmented.¹⁴⁶ Although Ronald Gates, who was a Special Wireless Operator serving with the unit during the Italian campaign, published a

¹⁴² LAC, First Canadian Army Final Intelligence Report.

¹⁴³ LAC, Kinnear Personal IO Photo Report.

¹⁴⁴ John Bryden, *Best Kept Secret: Canadian Secret Intelligence in the Second World War*, (Toronto: Lester Publishing, 1993), 6-7.

¹⁴⁵ CWM, "Interview with Fred Pollak".

¹⁴⁶ LAC, RG 24, Vol. 14989 / Vol. 16385 - War Diary 1st Cdn SWS Type "B" December 1940 - December 1941; LAC, RG 24, Vol.16385 - War Diary 1st Cdn SWS Type B July 1941 - February 1942; LAC, RG 24, Vol. 6623 - War Diary 2nd Cdn SWS Type "B"; LAC, RG 24, Vol.14990 - War Diary #3 Cdn SWS, Type "A"; Ronald Gates, *I Was a Spy of the Airwaves: A History of #1 Special Canadian Wireless Section Type "B"*, (Ottawa, Ontario: CFSCE Publications, 2005), ii. The only available WDs of #1 Cdn

brief memoir of his experiences, it provides limited information on the daily activities of the Canadian Y Service in Italy. Even more disappointing, I Canadian Corps intelligence kept two logs and regularly issued two INTSUMs – one log and INTSUM was used to record regular intelligence matters, and the other log and INTSUM to record Top Secret Y intelligence.¹⁴⁷ The latter INTSUMs, distributed to a very small group of individuals and formation HQs on a need to know basis,¹⁴⁸ were likely destroyed shortly after operations ceased. One of the main reasons why there is a lack of records for #1 Cdn SWS was that Y units intercepted high-grade ciphers, including Enigma (further described below) traffic in five or six letter groups,¹⁴⁹ which was subsequently decrypted at the Government Code and Cipher School (GC+CS).¹⁵⁰ Y units such as #1 Cdn SWS played a key role in intercepting Enigma traffic, a highly-secretive intelligence source, along with their main role of providing tactical-level intelligence. As such, thanks to a lack of records, it remains difficult to identify the influence of this intelligence unit on I Canadian Corps operations.

Due to the rapid expansion of British Army Y units and the Canadian Army, on 31 July 1940 Ottawa approved CMHQ to form two Canadian Special Wireless Section, Type "B" units. Selection and training of WI personnel followed similar patterns as outlined in Chapter One. However, WI personnel had to be completely fluent (preferably colloquial) German speakers, officers had to be university-educated British subjects, and ORs had to be naturalized Canadians originating from an enemy country but without any relatives in that country.¹⁵¹

SWS are from its original inception in December 1940 to February 1942, when its WDs were amalgamated into the I Canadian Corps Signals WD, where #1 Cdn SWS's existence is rarely mentioned for the next three years. What is more, and unlike its sister Y Service units #2 Cdn SWS, Type "B" and #3 Cdn SWS, Type "A" which served in Northwest Europe, its records were ordered destroyed at the end of the war on the orders of its commanding officer, Capt. R.G. Murray, though it is unclear why this order was given.

¹⁴⁷ LAC, First Canadian Army Final Intelligence Report.

¹⁴⁸ LAC, First Canadian Army Final Intelligence Report.; Hunt, *A Don at War*, xvii.

¹⁴⁹ CWM, Oral History Program, Number 31D 1 Yanofsky - "Interview with Hyman Yanofsky", 13 Sept 2000. Hereafter "CWM, Interview with Hyman Yanofsky".

¹⁵⁰ Hugh Skillen, "The Intelligence Corps: Early Field Security Sections and Training for Y and Special Operations Executive", *The Enigma Symposium, 1998*, (Bath, UK: Print in Black Publishers, 1998), 75; Hugh Skillen, "SOMTBn: Special Operators Mixed Training Battalion", *The Enigma Symposium, 1998* (Bath, UK: Print in Black Publishers, 1998), 20-21.

¹⁵¹ LAC, RG 24, Vol. 10012 - Selection of IO (Int Officer) – File 9/I.O./I 192/15 - Major Page, Officer Administering Intelligence Details Overseas, 19 June 1942.; Skillen, *Knowledge Strengthens the Arm*, 90; LAC, RG 24, Vol. 10024 - Selection of Int Officers - File 9/QUAL I.O./I 196/27 - Letter to Col. W.W. Murray, DMI DND from Major J.W.H. Halbert "Intelligence Personnel Requirements", 6 January 1943.; LAC, RG 24-12, File Number 20-4-7-Q, Microfilm Reel 5425 "Intelligence Section for a Special Wireless Section Type "B"", 20 May 1941; Gates, *I Was a Spy of the Airwaves*, 29; Norman A. Weir, "Second World War

Preliminary WI training followed standard lines; for instance WI IOs had to attend the War Intelligence Course at Matlock. However, the training deviated from there. By mid-1942, many WI personnel were sent on more specialized training, such as the five-week long Special Axis Armies course at Cambridge or other specialist training at Harpenden and Number Six Intelligence School at Beaumanor. This training emphasized more in-depth knowledge of German military organization, military language and idioms, signal procedures, and the cracking of German three-letter codes and low-grade ciphers (explained below). Before deploying to a theatre of war, WI personnel, as part of their SWS unit, would be stationed on the southern coast of England to gain practical experience in intercepting and breaking German three-letter codes and low-grade ciphers.¹⁵² Overall, this training provided a sound understanding of German fighting formations and their method of communications. But there were still gaps. In particular, up-to-date practical training in German codes and ciphers being utilized in the field was not regularly available in Britain until experienced WI personnel returned from North Africa in early to mid-1943.¹⁵³ #1 Cdn SWS was also highly fortunate, for when it arrived in Italy in early 1944, it benefitted from training under various Eighth Army Y Service units. These SWS had built an extensive backlog of information on enemy formations, including a number of captured Germans code and cipher books.¹⁵⁴

Under the guidance of the GSO 2 Int at Corps HQ and the WI personnel,¹⁵⁵ Special Wireless Operators closely scanned radio frequencies and intercepted wireless traffic. Special Operator training emphasized rapid and accurate recording of telegraph Morse code transmissions,

Canadian Army Signal Intelligence Experiences of Major R.S. Grant", *Canadian Forces Communications and Electronics Newsletter, Special Wireless Edition 446*, 1986, 9.

¹⁵² Skillen, *Knowledge Strengthens the Arm*, 175; LAC, RG 24, Vol. 12546 - File 6/I W INT SEC B/1/2 - "Canadian Personnel for Wireless Intelligence Duties", 20 October 1942; LAC, RG 24, Vol. 9810 - Intelligence Courses - Officers - File 2/INT DUT/I/5 - "Special Wireless Courses (B Type Sec)", Likely published mid-1942; Hugh Skillen, "The Intelligence Corps: Early Field Security Sections and Training for Y and Special Operations Executive", *The Enigma Symposium, 1998* (Bath, UK: Print in Black Publishers, 1998), 86.; Birch, *History of British SIGINT, Vol.1 (Part 2) and Vol.2*, 142-143; Gates, *I Was a Spy of the Airwaves*, 19, 25-28.; LAC, RG 24, Vol. 14989 - War Diary 1st Cdn SWS, Type "B" December 1940 - December 1941; LAC, RG 24, Vol. 16385 - War Diary 1st Cdn SWS Type "B", July 1941 - February 1942.

¹⁵³ Hugh Skillen, "The Intelligence Corps: Early Field Security Sections and Training for Y and Special Operations Executive", *The Enigma Symposium, 1998* (Bath, UK: Print in Black Publishers, 1998), 86; Birch, *History of British SIGINT, Vol.1 (Part 2) and Vol.2*, 188.

¹⁵⁴ LAC, First Canadian Army Final Intelligence Report; CWM, "Interview with Fred Pollak".

¹⁵⁵ LAC, RG 24, Vol. 12546 - File 6/I W INT SEC B/1/2 - "Organisation and Administration No.1 Special Wireless Intelligence Section, Type 'B'", 16 January 1943; Elliot, *Scarlet to Green*, 125-127; LAC, First Canadian Army Final Intelligence Report.

with these messages quickly being passed to the WI section.¹⁵⁶ Plain German language transmissions were also piped directly into the WI section's van for immediate exploitation. Once transmissions were intercepted, the information was copied into a log, passed to the WI party which conducted traffic analysis including checking callsigns, signals procedures, and frequencies in order to identify the enemy unit or formation. This traffic was then passed to a code party which broke the German three-letter codes and low-grade ciphers. German three-letter codes and low-grade ciphers were designed to provide wireless security for a limited period of time to guarantee that transmissions would be out of date by the time they became readable by the Allies.¹⁵⁷ As John Ferris notes, the rise of radio led to a new system of relationships between command, control, communications, intelligence and signals security; certainly, the increased use of reliable wireless communications was essential to the new revolution in mobile warfare in the Second World War. Although wireless allowed for rapid transmission of information leading to more effective action, a delicate balance had to be struck between improvements in army wireless capability, which led to the weakening of its signals security, and the tightening of wireless transmission security, which had the potential to strangle wireless communications.¹⁵⁸ As such, Y units were always trying to exploit the weaknesses of wireless security, while WI sections attempted to break codes and ciphers as quickly as possible before the information became outdated, translating the transmission, analyzing it, and sending the resulting intelligence to corps HQ.

Given time, Special Operators and WI personnel, working with the corps ORBAT analyst, were able to build a strong understanding of German wireless networks by properly logging information and building an extensive, but mobile, database of German callsigns, frequencies, and peculiarities of German units.¹⁵⁹ Combining the interception of plain language and Morse code transmissions, breaking three-letter codes and low-grade ciphers, and direction finding

¹⁵⁶ Skillen, *Knowledge Strengthens the Arm*, 167; John Boylan, "The Experience of Special Operators" in *The Enigma Symposium, 1994* (Bath, UK: Create Publishing Services, 1994), 11; Geoffrey Claridge, "Why-oh-Y?" in *The Enigma Symposium, 1995* (Melksham, UK: The Loose Leaf Compan, 1995), 10.

¹⁵⁷ Birch, *History of British SIGINT, Vol.1 (Part 2) and Vol.2*, 188; Weir, "Intelligence Experiences of Grant", 12.

¹⁵⁸ John Ferris, "The British Army Signals and Security in the Desert Campaign, 1940 - 1942", *Intelligence and Strategy: Selected Essays* (New York: Routledge, 2005), 183.

¹⁵⁹ LAC, First Canadian Army Final Intelligence Report; Williams, "Use of Ultra"; Weir, "Intelligence Experiences of Grant", 11-14, 32.; Birch, *History of British SIGINT, Vol.1 (Part 2) and Vol.2*, 204; Skillen, *Knowledge Strengthens the Arm*, 167.

(DF) equipment to locate enemy transmissions, the Canadian Y service was a very powerful intelligence source. One of its most important functions was that it helped to identify and locate enemy formations, and then predict their expected arrival near I Canadian Corps.¹⁶⁰ Maj. Clarkson even believed that it was impossible for any enemy formation to move in Italy within 100 miles of the Allied forward defence line without corps intelligence knowing about it within six to twelve hours.¹⁶¹ Certainly, I Canadian Corps intelligence valued WI so much that one of the main reasons why it called Eighth Army intelligence on a daily basis was to glean the latest Y intelligence from the Army's SWS unit and compare them with its own. Sir David Hunt, who was an IO at both XIII Corps and Eighth Army during the North African campaign, noted that Y intelligence was of greater value than Ultra during actual battles, due to the time lag involved with the deciphering of Ultra transmissions (further discussed below).¹⁶² Further, Y intelligence was excellent for corroborating other sources, such as air photos or PW information.¹⁶³ However, intelligence derived from wireless traffic did have considerable weaknesses, in particular its effectiveness was often of little use during static situations (i.e., before major battles), due to the German practice of resorting to landline communications.¹⁶⁴

Intelligence at the Army Level

Although this thesis does not deal directly with Eighth Army intelligence, the army-corps intelligence relationship must be explained as it played an influential role in the daily activities of I Canadian Corps. In fact, the Eighth Army imparted to I Canadian Corps a comprehensive war-fighting and intelligence doctrine derived from its North African experiences. Maj. J.M.E. Clarkson emphasized that I Canadian Corps intelligence modelled itself on the broad outlines of the Eighth Army, instead of attempting to "... (embark) upon untried whims and fancies."¹⁶⁵ Unfortunately, space constraints limit the ability to provide a comprehensive narrative about the development of Eighth Army's intelligence doctrine during the North African campaign. As

¹⁶⁰ CWM, "Interview with Fred Pollak".

¹⁶¹ LAC, First Canadian Army Final Intelligence Report.

¹⁶² Hunt, *A Don at War*, xvii/xviii.

¹⁶³ Weir, "Intelligence Experiences of Grant", 11.

¹⁶⁴ Jones, "Intelligence and Command", 82-83.

¹⁶⁵ LAC, First Canadian Army Final Intelligence Report.

such, only salient points will be outlined to emphasize that I Canadian Corps personnel were very fortunate to learn from their parent formation.

The latest historical literature suggests that the British Army entered the Second World War unprepared materially, psychologically, and intellectually to fight the *Wehrmacht*.¹⁶⁶ The German Army had developed an effective combined-arms, mobility-based doctrine with a successful command, control and communications (C3) system.¹⁶⁷ Conversely, British Army doctrine and organization suffered from a number of serious flaws as it entered the North African campaign, in particular an ill-suited C3 system which was brittle and easily broke down,¹⁶⁸ a deplorable signals-security system which was effectively exploited by German Y intelligence,¹⁶⁹ and a misguided war-fighting doctrine which emphasized that formations, in particular armoured units, fight in a dispersed, decentralized fashion. Though this doctrine was initially effective against the largely inept Italian Army, British officers continued to draw the wrong lessons from these and subsequent operations,¹⁷⁰ leading to a series of defeats against Germany's Afrika Korps.

As opposed to their combat arms colleagues, the British Intelligence Corps (BIC), which had rapidly recruited academics and professionals as outlined in Chapter One, likely did not suffer from the intellectual baggage of pre-war British doctrine. British Army intelligence also had influential supporters early in the North African campaign such as Sir Richard Nugent O'Connor and Sir Archibald Wavell.¹⁷¹ Further, British intelligence also rapidly learned valuable lessons about how to properly implement and fuse PW interrogation, Y intelligence, Ultra intelligence, and air photo reconnaissance and interpretation from their experiences in

¹⁶⁶ Timothy Harrison Place, *Military Training in the British Arm, 1940 - 1944: From Dunkirk to D-Day* (London: Frank Cass Publishing, 2000), 171; Shelford Bidwell and Dominick Graham, *Fire-Power: British Army Weapons and Theories of War, 1904 - 1945* (London: George Allen and Unwin Publishers, Ltd., 1982), 4.

¹⁶⁷ Bidwell / Graham, *Fire-Power*, 231-233.

¹⁶⁸ Ferris, "Signals and Security in the Desert Campaign", 186; David French, *Raising Churchill's Army: The British Army and the War Against Germany, 1919 - 1945* (New York: Oxford University Press, 2000), 161-166, 180.

¹⁶⁹ Ferris, "Signals and Security in the Desert Campaign", 218.

¹⁷⁰ French, *Churchill's Army*, 189-190, 212-213, 215; Russell A. Hart, *Clash of Arms: How the Allies Won in Normandy* (Boulder: Lynne Rienne Publishers, 2001), 107-108.

¹⁷¹ Jones, "Intelligence and Command", 49.; John Ferris, "The 'Usual Source': Signals Intelligence and Planning for the Eighth Army Crusader Offensive, 1941", *Intelligence and National Security*, Vol.14, #1, 1999, 85; Handel, *Intelligence and Military Operations*, 27.

France¹⁷² and against the Italians.¹⁷³ Though mistakes were commonly made, British intelligence continued to develop in the battles against the Afrika Korps.¹⁷⁴ In particular, British SIGINT, both in the form of Y and Ultra, became one of the most important sources, providing strong insight about German ORBATs, capabilities, and intentions.¹⁷⁵ In fact, John Ferris demonstrates that the intelligence system created by Operation CRUSADER in the latter portions of 1941 became the model used for all Commonwealth forces throughout the war.¹⁷⁶ Unfortunately, though British commanders continued to be provided with superb intelligence, poor training, doctrine, and weaponry continued to negate this advantage,¹⁷⁷ while the British continued to have an inadequate lessons-learned process to help improve its doctrine.¹⁷⁸

By the First Battle of El Alamein in July 1942 onwards, the war-fighting and intelligence advantage began to shift in Britain's favour. Improved signals security by the end of 1941 helped protect British capabilities and intentions. Signal security was further enhanced when portions of the Afrika Korps' Y service, 621st Signals Company, was overrun during the First Battle of El Alamein which facilitated the reform of British signals security measures and severely hampered German intelligence collection.¹⁷⁹ British Army war-fighting doctrine and C3 structures began to make slow improvements and become more robust, paying dividends by mid-1942.¹⁸⁰ By August 1942, Eighth Army's new commander, General (later Field Marshall) Bernard Law Montgomery, completed the extensive reform needed to defeat the Germans. Montgomery stressed the assimilation of correct lessons from recent experience,

¹⁷² Jones, "Intelligence and Command", 43-45; Bennett, *Behind the Battle*, 51-53; Birch, *History of British SIGINT, Vol.1 (Part 2) and Vol.2*, 20; Hugh Skillen, "SOMTBn: Special Operators Mixed Training Battalion", *The Enigma Symposium, 1998*, (Bath, UK: Print in Black Publishers, 1998), 2-4.

¹⁷³ Birch, *History of British SIGINT, Vol.1 (Part 2) and Vol.2*, 20, 79; Ferris, "The 'Usual Source'", 86-87; Hugh Skillen, *Spies of the Airwaves: A History of Y Sections During the Second World War* (Middlesex, UK: ASTRA Design and Print, 1989), ii; Clayton, *Forearmed*, 114-115.

¹⁷⁴ Bennett, *Behind the Battle*, 47; Hinsley, *British Intelligence, Vol. 1*, 393-394; Clayton, *Forearmed*, 119; Hart, *Clash of Arms*, 113-114.

¹⁷⁵ Ferris, "The 'Usual Source'", 90-91; Hinsley, *British Intelligence, Vol. 1*, 402-403; Bennett, *Behind the Battle*, 84-86; Birch, *History of British SIGINT, Vol.1 (Part 2) and Vol.2*, 46.

¹⁷⁶ Ferris, "The 'Usual Source'", 112-113.

¹⁷⁷ John Ferris, "Intelligence and Overlord: A snapshot from 6 June 1944", *The Normandy Campaign, 1944: Sixty Years On*, (New York: Routledge, 2006), 197-198.

¹⁷⁸ Hart, *Clash of Arms*, 112-113; French, *Churchill's Army*, 223-225.

¹⁷⁹ Birch, *History of British SIGINT, Vol.1 (Part 2) and Vol.2*, 23; Bennett, *Behind the Battle*, 95-96; Hinsley, *British Intelligence, Vol.2*, 404; Hunt, *A Don at War*, xviii/xix; Ferris, "Signals and Security in the Desert Campaign", 228-233.

¹⁸⁰ French, *Churchill's Army*, 232-236; Ferris, "Signals and Security in the Desert Campaign", 201.

methodical planning, set-piece battles, massed centralized firepower (including the use of creeping barrages), integrated use of tactical airpower, the need for inter-service and inter-arm cooperation, and an effective combined-arms tactical approach based on solid infantry-tank cooperation tied with appropriate fire plans,¹⁸¹ and then extensive, realistic combined-arms training in these tactics.¹⁸² Coupled with this, Montgomery inherited a team of intelligence professionals, including the Eighth Army's senior IO Edgar "Bill" Williams, who had been refining their methodologies and doctrine since CRUSADER. Improvements in the operations-intelligence relationship occurred when Montgomery ordered all HQ elements, including intelligence, into a series of closely co-located command posts, which facilitated the sharing of information.¹⁸³ The subsequent battles of Alam el Halfa and the Second Battle of El Alamein aptly demonstrated how an effective intelligence system could be a considerable force multiplier for a competent military force.¹⁸⁴ The pursuit of the Afrika Korps from El Alamein to Tunisia, and the use of intelligence during this campaign, is beyond the scope of this thesis. In any case, Eighth Army emerged from El Alamein with a war fighting philosophy, C3, and intelligence system which would be the doctrinal basis for all Commonwealth formations, including I Canadian Corps, for the rest of the war.¹⁸⁵

The intelligence organization with the Eighth Army was more robust than in any of its corps, and the GSO 1 Int at army had responsibility for guiding the intelligence function within the army, including taking the lead in providing overall appreciations of the enemy. As such, it was essential that the intelligence being provided by the army be discussed with the GSO 2 Int at corps, as this information eventually informed corps commanders.¹⁸⁶ At army HQs, reporting to the GSO 1 Int was a GSO 2 (Ia) who was in charge of keeping everyone within the

¹⁸¹ Stephen Ashley Hart, *Montgomery and 'Colossal Cracks': The 21st Army Group in Northwest Europe, 1944 - 1945*, (Westport CT: Praeger Publishers, 2000), 10, 124.

¹⁸² Bidwell / Graham, *Fire-Power*, 239-240.

¹⁸³ Jones, "Intelligence and Command", 55-56, 67.

¹⁸⁴ Hinsley, *British Intelligence, Vol.2*, 403-407, 411-412, 438-439; Bennett, *Behind the Battle*, 102-107; Williams, "Use of Ultra". Williams notes that Montgomery accepted the intelligence provided by Ultra that the Germans were going to try to sweep the Eighth Army on its southern flank, and prepared the defensive accordingly. Williams also stated "We had had good intelligence before; henceforward we were going to use it."; Skillen, *Spies of the Airwaves*, 148. Eighth Army's Y Service would provide useful information on the movements of key Panzer Divisions by continuously tracking their reconnaissance units and the activities of their workshops; Birch, *History of British SIGINT, Vol.1 (Part 2) and Vol.2*, 159-161.

¹⁸⁵ Hart, *'Colossal Cracks'*, 79-80; Cessford, "Hard in the Attack", 718.

¹⁸⁶ LAC, First Canadian Army Final Intelligence Report.

HQ informed about the activities of the enemy. The GSO 3 (Ia) was the intelligence administration officer, and his responsibilities included seeing that the command vehicle had all the information it required; and keeping the intelligence staff organized. Within the I(a) section, there were two subsections, the German / Italian ORBAT section, and the Topographical Section which was responsible for enemy defences, topographic reports and maps. These staffs essentially had the same function as corps sections tasked with the same duties, but they had more resources.¹⁸⁷

The ORBAT section at army HQ was the main basis for all information about enemy dispositions, organization and strengths for its subordinate formations.¹⁸⁸ All reports, such as PW, WI, civilian interrogation, and INTSUMs, from all formations funnelled into the army ORBAT section, allowing the personnel within this section to build a strong knowledge about the enemy. Further, whereas lower formations were expected to extract items of immediate tactical importance from captured enemy documents, the army ORBAT intelligence section had a more capable documents section consisting of a number of intelligence translators. This section was able to conduct a more thorough examination of captured enemy documents and publications, generally focusing on longer-range considerations with regards to the German Army.¹⁸⁹ The army also had a larger PW cage, and the PWs would be interrogated in a more thorough fashion, with the reporting immediately feeding the ORBAT section. Once these interrogations were completed, PWs were either moved to the Combined Forces Detailed Interrogation Centre (CSDIC) for prolonged interrogation and then on to a permanent PW camp, or sent right away to a permanent camp.

The IO Defences within the Topographical Section spearheaded the analysis of terrain features and the manner in which these integrated within the enemy's defence schemes. Assisted by a number of draughtsmen, this section utilized the attached army APIS (MAIU West) to create overall defence overprints and maps. Combined with the air photo section, this section had a capability to mass produce large numbers of overprints, maps and air

¹⁸⁷ Jones, "Intelligence and Command", 62-63.

¹⁸⁸ 15th Army Group, later the Allied Armies in Italy (AAI), also kept extensive ORBAT records.

¹⁸⁹ LAC, First Canadian Army Final Intelligence Report.

photos which could augment the production capability of subordinate formations. The Topographical Section also had a repository of War Office and other source material related to the Italian mainland. Another useful intelligence section within the army HQ was the small Technical Intelligence group which studied and reported on captured German arms and equipment. The main responsibilities of this group were to inform commanders and staffs of the impact that these weapons would have on future Allied operations.¹⁹⁰

With regards to aerial reconnaissance and air photo coverage, Eighth Army's APIS was a very capable organization and, during certain operations, had up to 12 officers and 26 soldiers – as opposed to the two officers and four soldiers at corps level. Eighth Army's photo interpreters built up extensive experience during the North African campaign, and their growing capability helped its topographic sections map poorly surveyed areas and define German defensive positions.¹⁹¹ The GSO 3 (Photo) at the APIS and the Topographical Intelligence section worked in close conjunction with the GSO (Air) Army. All three were responsible for dividing coverage into zones of observation for aerial reconnaissance. The scope of these zones varied according to the geographical nature of the front, and in accordance with the degree of intensity of observation required. The priority of observation was settled each evening at a conference.¹⁹²

Other important information gathering systems, the "J Service" and "Phantom patrols" (essentially liaison officer parties), were also developed. The J Service was designed to intercept friendly communications of forward units for corps and army HQs, while "Phantom patrols" moved from different forward HQs to gather information and send it higher using their own wireless sets.¹⁹³ At times, the functions of these two services could operate as one entity depending on the situation. The information collected by these services often arrived faster than friendly reports and returns through normal channels.¹⁹⁴ Future 1 CID and II Canadian Corps Commander, Guy Simonds, while touring Eighth Army HQ in North Africa in

¹⁹⁰ LAC, First Canadian Army Final Intelligence Report.

¹⁹¹ Clayton, *Forearmed*, 131.

¹⁹² LAC, First Canadian Army Final Intelligence Report.

¹⁹³ Hinsley, *British Intelligence, Vol.2*, 409-410; French, *Churchill's Army*, 253-254; O'Keefe, "Bitter Harvest", 94.

¹⁹⁴ Clayton, *Forearmed*, 124.

the early summer of 1942, noted that many considered the J Service as one of the most valuable sources of information available and was indispensable to the successful control of troops.¹⁹⁵ Although originally intended to be an information gathering tool at army and corps level, the J Service in the Eighth Army would soon be pushed down to divisions, and even brigades in certain circumstances, by late 1943 and early 1944.¹⁹⁶

Army formations also had an expanded SIGINT capability. SWS Type "A" units which were attached to Army HQs had a larger staff and more resources than Type "B" SWS. Under the direction of the I(s) (Intelligence - SIGINT) staff, Type "A" and "B" sections were coordinated, and each SWS was allocated a different frequency range to monitor, though there was planned duplication of effort in order to achieve the strongest possible coverage of all frequencies. Type "A" SWS focused on more sophisticated German codes and low to medium-grade ciphers, whereas Type "B" SWS operated closer to the front lines and worked on lower-grade code and cipher or plain language traffic.¹⁹⁷ Further, army Type "A" sections employed up to three or four direction finding (DF) stations, coupled with the corps Type "B" sections employing one or two. Working in concert, this allowed for multiple bearings to be taken on German transmission locations which could fix the position of these entities for ORBAT and targeting purposes.¹⁹⁸ Their combined interception and direction finding activities helped keep coverage on most enemy units and formations operating within their range, and there was an open discussion between corps and army WI staffs on a regular basis.

Perhaps one of the most important sources only available at the army level and higher was that of Ultra intelligence. No discussion on intelligence during the Second World War would be complete without discussing this source. Ultra was the code word referring to the material provided by the deciphering of German messages sent in high-grade cipher, using enciphering devices called Enigma.¹⁹⁹ As many studies have focused on discussing this source, only the salient points will be highlighted about Ultra, in particular, how it affected I Canadian Corps.

¹⁹⁵ O'Keefe, "Bitter Harvest", 93-94.

¹⁹⁶ LAC, RG 24, Vol. 10501 – File 214B8.043(D1) - Number One J Squadron Organization, 8th British Army, Publication Date likely early 1944.

¹⁹⁷ Gates, *I Was a Spy of the Airwaves*, 22.

¹⁹⁸ LAC, First Canadian Army Final Intelligence Report.

¹⁹⁹ Hunt, *A Don at War*, xii.

High-grade cipher transmissions were intercepted by Y stations across the European theatre, in particular SWS Type "A" and Type "B" units, and these were transmitted to the GC+CS for decipherment. There, Hut 8 mathematicians broke these high-grade ciphers, and Hut 3 meticulously translated, researched, interpreted, and conducted limited analysis of the messages relevant to the German Army and Luftwaffe.²⁰⁰ It should be noted that the analysts at Hut 3 attempted to keep as much literal accuracy of the messages as possible. Their job was not to assess the broad significance of these items; that task was for the command and intelligence staffs in the field.²⁰¹ Further, the meaning of the signals coming from Hut 3 was rarely self-evident from the translation alone. In fact, much time was spent on ensuring the decrypt's accuracy and it was usually necessary to draw out the significance of Ultra by providing it with proper context and corroboration with other sources.²⁰² Further, as with all SIGINT including Y intelligence, though the German sending his message was normally speaking the truth as he knew it, it was not necessarily true in relation to the situation as a whole.²⁰³

The highest levels of security with Ultra were emphasized and a culture of utmost secrecy around this intelligence source existed. Many were convinced that any slip up of operational security or disclosure to unauthorized personnel could lead to the loss of the source, which would ultimately cost lives; this culture of secrecy continued among indoctrinated individuals for decades after the war.²⁰⁴ Deciphered transmissions would be sent via secure transmission (either by one-time pads or Typex machines)²⁰⁵ to army HQs, with decrypts only being provided to "indoctrinated" individuals, including commanders, key staff and the IOs in the HQ.²⁰⁶ Commanders were under strict orders to not initiate any action which might imperil

²⁰⁰ Birch, *History of British SIGINT, Vol.1 (Part 2) and Vol.2*, 216.

²⁰¹ Ralph Bennett, *Ultra in the West: The Normandy Campaign, 1944 - 45*, (London: Hutchinson and Company, Ltd, 1979), 13-14.

²⁰² Bennett, *Ultra in the West*, xxv, 26-27.

²⁰³ Williams, "Use of Ultra".

²⁰⁴ R.A. Ratcliffe, *Delusions of Intelligence: Enigma, Ultra and the End of Secure Ciphers*. (New York: Cambridge University Press, 2006), 231; Hunt, *A Don at War*, x-xi.

²⁰⁵ Typex machines were essentially oversized typewriters, and were the "Enigma" cipher machines of the British forces and diplomatic corps. Operators would type the messages into the machine, but it would come out in a 5-letter cipher. Conversely, the Typex machine was also a deciphering machine at the receiving end of a transmission.

²⁰⁶ Hugh Skillen, "SCUs and SLUs" in *The Enigma Symposium, 1997*, (Melksham, UK: The Looseleaf Company, 1997), 121, 127-128.

the source by seeming to be ascribable only to the reading of Enigma traffic. If one was to initiate action based upon the information, a source with a lower classification, such as aerial reconnaissance or PW interrogation, had to serve as a cover explanation before action could be taken.²⁰⁷

LCol. (later Brigadier) Edgar Williams, Montgomery's senior intelligence officer, believed that Ultra "put intelligence on the map", reversing the tendency of many British officers to treat intelligence as interesting rather than valuable.²⁰⁸ Due to its accuracy, Ultra often was regarded by many commanders and IOs as the "only" source, which led to other intelligence sources being disregarded.²⁰⁹ However, this was a dangerous attitude to adopt for Ultra was not a "crystal ball" which mitigated all existing intelligence gaps. Unlike Y intelligence, Ultra was frequently slow to arrive in theatre and thus out of date to give a distinct tactical advantage,²¹⁰ especially during mobile operations. Skilled Y intelligence personnel often broke codes and low-level ciphers so fast that it often led to intelligence staffs knowing the immediate or interim intentions of German units by revealing orders being given to German units and their hourly situation reports (SITREPs) even at times before higher German commanders knew them.²¹¹ Ultra's strength was not about gaining a tactical edge on the enemy, but rather building a developing picture of the enemy's overall strength, weaknesses, capabilities, and intentions which produced a more comprehensive understanding of an enemy's ORBAT.²¹² As such, it was best used during the planning stages of operations.²¹³

Although corps-level personnel and below, including its intelligence personnel, were forbidden to view or know about the existence of Ultra, this high-level source did influence I Canadian Corps intelligence in indirect ways. Williams noted that it did not take long for corps

²⁰⁷ Bennett, *Ultra in the West*, 36.

²⁰⁸ Williams, "Use of Ultra".

²⁰⁹ Williams, "Use of Ultra"; Jones, "Intelligence and Command", 16-17.

²¹⁰ Williams, "Use of Ultra"; Birch, *History of British SIGINT, Vol.1 (Part 2) and Vol.2*, 12-13. By the end of 1941, the GSO 1 GSI(s), LCol. Scott, had come to the conclusion that Y intelligence was often a more fruitful source for immediately actionable intelligence than was Ultra.

²¹¹ Hugh Skillen, *The Enigma Symposium, 1999*, (Bath, UK: Print in Black, 1999), 20; Jones, "Intelligence and Command", 84; Williams, "Use of Ultra".

²¹² Ferris "Ralph Bennett and the Study of Ultra", 476-477.; Williams, "Use of Ultra". Williams notes that whenever someone was reading Ultra information, they had to have a good understanding of the enemy's ORBAT in their head and have experience handling the "details" of building intelligence appreciations.

²¹³ Williams, "Use of Ultra".

intelligence staffs to know that army had something "up their sleeves" with regards to a source it was not disclosing.²¹⁴ This placed army intelligence personnel who needed to disseminate Ultra intelligence in some way to make it useful in a predicament. There were a number of solutions to this problem, all of which involved masking the nature and origin of the source. Ultra could be passed to a lower corps or division as an enemy "Operations Order" but this procedure could not be used frequently.²¹⁵ There is no doubt that many times the "Old Boy Net" (i.e., telephone) was used to disclose Ultra information to staffs at corps and below,²¹⁶ most likely in the form of "strong suggestions". The best way to disseminate Ultra information to corps and lower formations was through appreciations and claiming the information came from PW interrogation. In fact, Eighth Army regularly infused Ultra information throughout their INTSUMs. As Williams observed, it "coloured the whole essay",²¹⁷ in particular their assessments of what the enemy intended to do, and the dispositions of enemy formations and units. Further, it is very likely that corps-level INTSUMs were augmented with SIGINT from their SWS Type "B" units, but once again masked by claiming it came from PW interrogation. Overall, I Canadian Corps INTSUMs regularly cited Eighth Army INTSUMs throughout the Italian campaign. As such, the Canadian Corps intelligence staff was indirectly utilizing high-level SIGINT, including Ultra information, on a daily basis.

Jones highlights that the relationship between the army and corps was symbiotic. Corps intelligence staffs were to restrict themselves to rapidly co-ordinating immediate tactical information from all sources into a single appreciation for their commanders and provide this to the army level. The army, utilizing broader sources than the corps, was responsible for providing its corps with a "positive lead" with regards to enemy intentions, strengths, and topography.²¹⁸ Sir David Hunt, who served with the British XIII Corps for a time during the

²¹⁴ Williams, "Use of Ultra".

²¹⁵ Bennett, *Behind the Battle*, xxv.

²¹⁶ Williams, "Use of Ultra". Williams outlined that it was forbidden to discuss Ultra on the telephone overseas – this rule was broken on a daily, even hourly, basis.; O'Keefe, "Bitter Harvest", 26.

²¹⁷ Williams, "Use of Ultra". Williams notes "... there were many occasions when some apparently futile prisoner formed an all too convenient peg on which to hang an essential explanation. There was a daily struggle not to stretch the pretence too far."

²¹⁸ Jones, "Intelligence and Command", 68-69.

North African campaign, emphasized that he had cordial relations with Eighth Army intelligence, which provided the corps with information on the higher levels of the enemy's organization. Hunt stressed that corps intelligence personnel were content to give their commander advice about the enemy dispositions and intentions based on "bread and butter" intelligence, including tactical reconnaissance, air photographs, PWs and captured documents, and the interception of tactical wireless traffic with the Type "B" SWS. These lower-level intelligence sources were of vital importance not only in the field but also at the highest levels of the Allied intelligence system. In fact, it would have been impossible for the GC+CS to interpret the Ultra information without the essential mass of material about ORBATs, personalities and methods of operation which were derived from these lower-level techniques.²¹⁹ Indeed, any formation or unit, if it focused on mastering the basics of this "bread and butter" intelligence, could have a considerable impact on the battlefield. The next chapter will demonstrate that 1 CID, through astute personnel selection and developing a strong lessons-learned and training program, developed a notable ability to collect and process tactical-level intelligence, which would serve both the division and I Canadian Corps well in the future Liri Valley battles.

²¹⁹ Hunt, *A Don at War*, xvi/xvii.

Chapter Three - The Development of 1st Canadian Infantry Division, I Canadian Corps and 5th Canadian Armoured Division Intelligence Prior to the Liri Valley Campaign

During the period in the Mediterranean, Canadian formations served in the Eighth Army and under British higher formations... there was uniformity in the substantial matters which was brought about in part by the fact that the Intelligence at Eighth Army and within 21st Army Group was inspired by the direction of Brigadier ET Williams...Field Marshal Montgomery's chief Intelligence Officer in Africa, Sicily, Italy and NW Europe. From him, directly or indirectly, all of us learned the important basic things about our jobs. – Col. Peter Wright, First Canadian Army Final Intelligence Report, July 1945²²⁰

The Development of 1st Canadian Infantry Division Intelligence Prior to the Liri Valley Campaign

In June 1943, after a period of debate in senior Canadian political and military circles over whether to break up the First Canadian Army, 1st Canadian Infantry Division (1 CID) and 1st Canadian Armoured Brigade (1 CAB) departed England for Operation HUSKY, the Allied invasion of Sicily. Unlike some of the formations in the British Eighth and First Armies, which had operated in North Africa with little mentorship, IOs within 1 CID were fortunate as they benefitted directly from Eighth Army's "lessons-learned" process which had occurred in North Africa. During HUSKY, 1 CID had the good fortune to be placed under a highly experienced British Corps, XXX Corps, which, during the preceding years, had participated in such operations as CRUSADER, Alam el Halfa, and the First and Second Battles of El Alamein, and the Battles for the Mareth Line. Later, 1 CID was placed under XIII British Corps during Operation BAYTOWN, the invasion of southern Italy, and V British Corps during the Eighth Army's offensives in the Adriatic sector. As such, the intelligence section within 1 CID developed into a highly effective organization in Sicily and Italy before the remaining elements of I Canadian Corps arrived in the Mediterranean.

Still, it was not just the mentorship of Eighth Army which made 1 CID's intelligence organization effective. Many of the Canadian intelligence personnel selected to accompany 1 CID were among the best available, and the division maintained consistent intelligence leadership throughout the Sicilian and Italian campaigns which helped to solidify the

²²⁰ LAC, First Canadian Army Final Intelligence Report.

intelligence doctrine adopted in the organization. It is worthwhile to track the activities of two IOs who would play a very important role in the early development of 1 CID's intelligence organization. In early 1942, Lt (later Capt) A. Chambers, the future GSO 3 Int of 1 CID, and 2 Lt (later Capt) G.M.C. Sprung, a future I(a) officer for 1 CID, were both selected to attend the German Interrogation Course at Cambridge and subsequently the War Intelligence Course (WIC) at Matlock. Both had a good level of German linguistic capability.²²¹ In fact, Sprung had so impressed the British instructors at the Cambridge Interrogation Course that he was requested to come back to the school to instruct in mid-1942 once he had completed his WIC.²²² Meanwhile, Chambers returned to 1 CID in late 1942 as one of the IOs, and delivered a number of lectures to brigade intelligence schools, other staff, and soldiers in the division, on such diverse topics as PW handling, enemy identifications and markings, types of intelligence sources, situation maps, logging information, and German tactics which were employed in France in 1940. It is interesting to note that even by 1942, the intelligence sections within 1 CID and its brigades were attempting to implement a coherent intelligence policy by forming intelligence schools to run regular courses, exercises on patrolling and scouting, and occasional conferences; this tendency continued throughout the Italian campaign.²²³

By early 1943, Chambers began setting himself apart from his other IO colleagues by offering a series of German Army demonstration lectures. These lectures included some basic German language instruction as well as discussions and demonstrations of German drill and platoon tactics, which were described by one 1 CID staff officer as "...one of the finest and most instructive demonstrations ever put on for military instruction purposes."²²⁴ Chambers not only taught this lecture to 1 CID units and staff, he gave it to numerous other Canadian formations and units in First Canadian Army. On 27 April 1943, Chambers's efforts to professionalize both himself and his peers led to his promotion to GSO 3 Int of 1 CID.

²²¹ LAC, RG 24, Vol. 10024 - File 9/I.O./I - "Subject" Language Tests", 2 February 1942; LAC, RG 24, Vol. 9810 - Intelligence Courses - Officers - Letter from Capt D.D. Stewart, GSO 3 Military Training, CMHQ to Capt Robertson, Military Training Section, 24 January 1942.

²²² LAC, RG 24, Vol. 10012 - Selection of IO (Int Officer) – File 2/INT DUT/I/5 - Major Page, Officer Administering Intelligence Details Overseas, 9 June 1942.

²²³ LAC, RG 24, Vol. 13725 - 1st Cdn Inf Div WD, September - November 1942.

²²⁴ LAC, RG 24, Vol. 13725 - 1st Cdn Inf Div WD, April 1943.

Meanwhile, in late 1942, Sprung was selected, along with nine other IOs in the First Canadian Army, to be attached to the First British Army in North Africa. This included P.N. Cottam, a British Intelligence Corps officer who was seconded to I Canadian Corps when it arrived in Italy in late 1943, and who would later be attached to 1 CID during most of the Italian campaign.²²⁵ The secondment of Canadian IOs to the First British Army was of great utility to the development of Canadian intelligence. For example, Canadian intelligence observers noted a breakthrough against a strong German defence could only be obtained if well-trained air photo interpreters were used to accurately plot enemy positions. This information would assist in operational planning, the creation of artillery fire plans to neutralize enemy positions and conduct counter-battery work, and in briefing friendly patrols.²²⁶ Canadian IOs were already beginning to shape the intelligence system necessary to support the firepower-based doctrine being adopted by all Anglo-Canadian formations. It was IOs such as Sprung, one of the first Canadian IOs to see continuous action during the fighting in Tunisia in 1943,²²⁷ who brought back practical British intelligence doctrine to the Canadian Army, in particular 1 CID. Upon his return to England, Sprung wrote an after action report and conducted a series of lectures for the IOs of First Canadian Army on his experiences in North Africa, including practical advice on PW interrogation and German weapons and organization.²²⁸ Sprung later won the Military Cross during the Sicilian campaign, and became GSO 3 Int of 1 CID once Chambers was promoted out of the position on 31 July 1943.²²⁹

²²⁵ Elliot, *Scarlet to Green*, 129; Weir, "Intelligence Experiences of Grant", 6; LAC, RG 24, Vol. 9809 - Intelligence Courses - Officers - File 2/INT/I 50-2 - Memorandum by Major Page, Officer Administering Intelligence Details Overseas, 3 July 1942. Cottam was originally attached from the British Intelligence Corps to 5th Canadian Armoured Division in July 1942.; CWM, Oral History Program, Number 31D 7 Molnar - "Interview with George Molnar", 29 November 2006. Hereafter CWM, "Interview with George Molnar". Previous to the war, Cottam was an Oxford don and language specialist.

²²⁶ LAC, RG 24, Vol. 10718 - File 215C1.99(D25) - "Notes on the Tunisian Campaign - First Army - Tactical Intelligence from Air Sources", Derived from Canadian Observers of the First British Army, Published mid-1943.

²²⁷ LAC, CMHQ Intelligence Final Report.

²²⁸ LAC, RG 24, Vol. 9810 - Intelligence Courses - Officers - File 2/INT DUT/I/5 - "Lecture on PW Interrogation Procedure within First Army (North Africa)", 19 April 1943; Letter from Major J.D.W. Halbert, CMHQ to Lt. Col. W.B.P. Aspinall, Cambridge, 15 April 1943; LAC, RG 24, Vol. 13727 - 1st Cdn Inf Div WD - September 1943 to February 1944.

²²⁹ LAC, RG 24, Vol. 9811 - War Intelligence Courses - Policy Training of Intelligence Personnel - File 2/INT PERS/I; LAC, CMHQ Intelligence Final Report. Chambers returned to England to assist in the training Canadian and British IOs after the Sicilian campaign. Sprung served during the Moro River campaign in late 1943, and then as the GSO 2 Int for First Canadian Army as Col. Peter Wright's senior deputy during the Northwest Europe campaign. He finished the war as the Senior IO of the Canadian Far Eastern Force.

Rigorous training for 1 CID commenced in Scotland in mid-1943, and by May both Chambers and Sprung were intensely involved with planning for Operation HUSKY, participating in staff conferences, exercises, visiting higher formations for updated intelligence and providing the latest intelligence on the enemy and their defences in Sicily.²³⁰ This included issuing a number of planning INTSUMs which consisted of detailed maps of the entry beaches, enemy ORBATs and coastal defences.²³¹ As Nicholson cited in the Canadian Official History, intelligence staffs wisely erred on the side of caution and overestimated rather than minimized enemy strengths.²³² Last-minute intelligence training was also conducted by 1 CID's intelligence sections. It is very likely that both Chambers and Sprung were involved with organizing an intelligence course run for all intelligence personnel in 1 CID from 19 April to 1 May 1943,²³³ which inculcated all IOs in a common intelligence policy in the division. Additional intelligence training was also provided at British schools to 1 CID intelligence personnel, including for air photo interpretation IOs.²³⁴ By the end of May 1943, most of the planning for HUSKY was completed and on 19 June, the first of a number of convoys with 1 CID troops bound for Sicily departed. Despite the convoys being at sea, planning still continued, with the latest intelligence maps and photos being delivered to ships carrying the planning staffs. Lectures were also delivered by the IOs to various audiences on the organization and identification of German and Italian formations.²³⁵

Eighth Army's landing in south-eastern Sicily, including 1 CID's landing, on 10 July 1943 was largely unopposed but as the Canadians advanced inland, German resistance mounted. Though Desert Air Force (DAF) aerial reconnaissance was widely available, 1 CID intelligence found that the best information was derived from troops in contact with the enemy, especially when forward-deployed interpreters were utilized to gather information and

²³⁰ LAC, RG 24, Vol. 13725 - 1st Cdn Inf Div WD - May to June 1943.; Elliot, *Scarlet to Green*, 179, 181-182. Other IO staff included Lt. J Robinson, RCE, IO (Photo). At the Brigades: Capt. HK MacIntosh (1st CIB); FN Pope (2nd CIB); and Lt PD Prince (3rd CIB) and OM Roberto (First Canadian Army Tank Brigade).

²³¹ LAC, RG 24, Vol. 13725 - 1st Cdn Inf Div WD - May to June 1943. For example, see: 1 Cdn Div (Planning) INTSUM #12, 6 May 1943; Planning INTSUM #19, 17 May 1943.

²³² Nicholson, *The Canadians in Italy*, 53.

²³³ LAC, RG 24, Vol. 9810 - Intelligence Courses - Officers - File 2/INT DUT/l/5 - "1 Cdn Div Int Course", April 1943.

²³⁴ Elliot, *Scarlet to Green*, 108.

²³⁵ LAC, RG 24, Vol. 13726 - 1st Cdn Inf Div WD - June to August 1943.

conduct PW interrogations.²³⁶ As such, 1 CID's experience in gathering tactical intelligence had begun and these skills would continue to develop throughout the campaign, with excellent results. As more information became available, 1 CID's intelligence staff began to issue regular INTSUMs.²³⁷ Space constraints limit a comprehensive discussion of 1 CID's experience in Sicily. Perhaps one of the most important battles that should be discussed from an intelligence perspective was the division's role in the assault on Agira (24 - 28 July 1943), a costly five-day battle against the 1st Panzer Grenadier Regiment (PG Regt) of the Hermann Goering Division, and the 15th PG Regt of 29th PG Div, two highly-competent German formations.

This battle demonstrated that 1 CID's GOC, Maj. Gen. Guy Simonds, and his staff were still learning how to effectively utilize intelligence properly. In the face of intelligence-derived evidence to the contrary, in particular PW intelligence solicited by German and Italian linguists in 1 CID, Simonds underestimated the strength and determination of the German troops and their defences. In particular, 1 CID intelligence noted as the division approached Agira that the recent resolute German resistance was something new, for German rearguards previously usually had resisted for a temporary period, broke clean, and then withdrew eight to ten miles to another defensive line. 1 CID's intelligence cadre appreciated that if the Germans were fighting for every yard of ground, then 1 CID was nearing a more deliberate defence zone.²³⁸ Regardless, Simonds and his staff employed standard Anglo-Canadian doctrine, relying too heavily on the weight of a poorly-planned artillery bombardment without obtaining up-to-date intelligence on enemy dispositions, likely hoping that weight of fire would smother all opposition. The battle on 24 July 1943 demonstrated that even heavy bombardment from seven artillery regiments had a limited effect, especially against well-dug-in positions. Only on 26 July 1943 did 2nd Canadian Infantry Brigade (2 CIB), with only the support of four artillery regiments, conduct a successful attack. However, the main difference was that time was taken to collect combat intelligence and plot the German positions more

²³⁶ Elliot, *Scarlet to Green*, 182-183.

²³⁷ LAC, RG 24, Vol. 10888. For example, see 1 Cdn Div INTSUMs #5, 23 July 1943 and #7, 28 July 1943.

²³⁸ LAC, RG 24, Vol. 10888 - 1 Cdn Div INTSUM #5, 23 July 1943.

thoroughly, which led to artillery fire being used more efficiently.²³⁹ Overall, this battle demonstrated that 1 CID's staff and intelligence cadre needed to work more closely to conduct more successful operations.

Overall, 1 CID performed well in the Sicilian and the initial phases of the Italian campaign. These operations were essential formulative stages for this division's leadership and staff to learn to properly employ their formation.²⁴⁰ Personnel within the division demonstrated an ability to innovate quickly, possessed aggressive and competent leadership and, for the most part, had developed a good grasp of how to use available firepower. Though no doubt strongly mentored by XXX Corps, this performance can be at least partially attributed to the demanding and realistic training that individual units received before landing on Sicily. However, as Michael Cessford outlines, senior formation leadership and staff work still needed improvement.²⁴¹ Regardless, until the battle for Ortona in December 1943, the division was also able to avoid prolonged battles of attrition so its personnel could gradually learn lessons without sustaining too many casualties,²⁴² which would have caused a massive personnel turnover and a loss of corporate knowledge. Indeed, Montgomery, impressed by the 1 CID's operations in Sicily, later stated that he considered it to be one of his veteran divisions.²⁴³

On 7 August 1943, 1 CID was placed into reserve for rest and to prepare for Operation BAYTOWN, the invasion of southern Italy under XIII Corps. As Canadian operations came to a close in Sicily, the divisional staff already undertook a lessons-learned process. By 30 July 1943, permanent scout-sniper platoons were formed within units, their mission to advance ahead of the main infantry units to collect combat intelligence for their commanders and help define enemy defences ahead of the battalion.²⁴⁴ By early August, all arms, including intelligence, were ordered to submit proposals to 1 CID's HQ about the type of courses and

²³⁹ Cessford, "Hard in the Attack", 181-182.

²⁴⁰ Cessford, "Hard in the Attack", pg.198-199.

²⁴¹ Cessford, "Hard in the Attack", pg.iii-iv.

²⁴² Hart, *Clash of Arms*, 182-183.

²⁴³ Carlo D'Este, *Bitter Victory: the Battle for Sicily, July – August 1943*, (New York: Harper Collins Publishers, 1988), Appendix L, 614-621.

²⁴⁴ LAC, RG 24, Vol. 13726 - 1st Cdn Inf Div WD - June to August 1943 - 2nd Canadian Infantry Brigade "Brigade Commander's Conference", 30 July 1943.

schools needed to train personnel in the lessons learned from recent operations.²⁴⁵ As such, 1 CID, including its intelligence section, established itself as an effective learning institution, a pattern that continued whenever operational pauses allowed its personnel to conduct training.

Before discussing further Canadian operations in Italy, it is crucial to outline the development of German tactical defence doctrine. From Second El Alamein onwards, German defensive doctrine relied heavily on defence in depth, based on a series of defensive belts, or "switchlines", usually situated on natural features, such as rivers, dominating terrain, or a series of fortified towns. Doctrinally, each switchline usually consisted of an advanced line usually 5000 to 7000 yards forward of the main line of resistance; battle outposts 2000 to 3000 yards ahead of the main line of resistance; and the main line of resistance itself. However, German defences did not always conform to this doctrine. The forward defence lines were usually lightly manned but lavishly armed with machine guns, mortars, and anti-tank weapons in mutually supportive strongpoints, designed to slow Allied advances and gather tactical intelligence, especially locating the Allied main effort. Reverse-slope positions were used as much as possible to mitigate Allied observation of German positions and Allied firepower. The Italian countryside, with its narrow coastal strips, numerous river valleys, and rugged terrain, was ideal for such a defensive concept.²⁴⁶

German defensive doctrine was not purely static. Just behind the defensive line was a series of small, mobile reserves. Ideally, a battalion of infantry (depending on available resources), supported by tanks or self-propelled guns (SPGs; a.k.a. assault guns), were ready to immediately counterattack to eliminate any significant penetration in the defensive line or to conduct a blocking action so that the remainder of the defenders could fall back on the next switchline. If possible, these counterattacks were intended to be conducted within an hour,

²⁴⁵ LAC, RG 24, Vol. 13726 - 1st Cdn Inf Div WD - June to August 1943 - 1 Cdn Div Memorandum "Training", 7 August 1943. It was proposed that a 12-day intelligence course for all IOs be created.

²⁴⁶ French, *Churchill's Army*, 240-241; Jones, "Intelligence and Command", 86-88; Hart, *Clash of Arms*, 375-378; O'Keefe, "Bitter Harvest", 57-58; John Ferris and Michael Handel, "Clausewitz, Intelligence, Uncertainty and the Art of Command in Military Operations", *Intelligence and National Security*, Vol.10, 37, January 1995; Copp, *Fields of Fire*, 26-28; Kevin Jones, "A Curb on Ambition: Intelligence and the Planning of Eighth Army's Liri Valley Offensive, May 1944", *Intelligence and National Security*, Vol.22, 5, 746.

but more deliberate counterattacks could be planned, taking up to 24 hours before they manifested. If there were available resources, another larger mobile reserve could be created as an operational counterattack force to support the local reserves. The immediate counterattack was the cornerstone of German defensive doctrine. As such, to counteract its effects which could be devastating if Allied units were caught off guard, Allied offensive doctrine began to incorporate the immediate consolidation of ground which had recently been captured. This consolidation involved the moving up of anti-tank guns, infantry digging in and tanks setting up a defensive perimeter as soon as an attack was completed. In fact, by 1943, Allied tactical planners began to exploit German doctrine, by utilizing their fire superiority to smash German units as they conducted their counterattacks and further erode their combat strength.²⁴⁷ It will be demonstrated that Canadian intelligence had an important role to play in monitoring for and detecting German counterattack elements in order to support this Allied practice.

The landings during Operation BAYTOWN on 3 September 1943 again were largely unopposed²⁴⁸ and minimal opposition was met as 1 CID advanced up the Italian peninsula. 1 CID intelligence personnel continued to practice their craft, interrogating Italian and German PWs (mostly the former) and updating enemy ORBATs. As the advance continued, the Germans conducted a controlled withdrawal, using an extensive demolition plan to achieve maximum delay.²⁴⁹ 1 CID intelligence, by this time under Capt Sprung, continued to issue regular INTSUMs. Opposition remained light as the advance continued, and whenever Canadian elements were confronted by the enemy, it was usually in short but intense actions. 1 CID intelligence continued to offer predictions about where the enemy would likely conduct their delay activities, with mixed success. Intelligence procedures continued to be refined, in particular an emphasis by brigade and divisional staffs to improve the collection of detailed

²⁴⁷ French, *Churchill's Army*, 240-241; Jones, "Intelligence and Command", 86-88; Hart, *Clash of Arms*, 375-378; O'Keefe, "Bitter Harvest", 57-58; Ferris and Handel, "Clausewitz, Intelligence, Uncertainty and the Art of Command in Military Operations", 37; Copp, *Fields of Fire*, 26-28; Jones, "A Curb on Ambition", 746.

²⁴⁸ LAC, RG 24, Vol. 10888 - 1st Cdn Inf Div INTSUM #13, 4 September 1943 noted that PW interrogation of Italian soldiers indicated that elements of 29 PG Division had abandoned their positions on 1 September and by the end of 4 September almost all Italian units in the Canadian sector had been "put into the bag" (i.e., captured).

²⁴⁹ LAC, RG 24, Vol. 10888 - 1st Cdn Inf Div INTSUM #14, 7 September 1943.

information from patrols and OPs.²⁵⁰ In an example of these improving procedures, Capt W.S. Murdoch, the IO for the Seaforth Highlanders of Canada, outlined that during an action in November 1943, he regularly had operated between the battalion HQ and forward companies, gathering information, including a marked map which noted the location of a German Battalion HQ. PWs were regularly searched for documents and identifications and sent back to brigade as soon as possible, while information was regularly sent by ciphered wireless, utilizing the battalion's signalmen.²⁵¹ These improvements in tactical intelligence collection would pay dividends in the months to follow.

On 21 October 1943, 1 CID's INTSUM issued a general directive on the supply and potential planning uses of air photos; ultimately, the purpose of the document was to educate commanders on how divisional air photo interpreters could best be utilized.²⁵² There was also a growing realization that air photos were often superior to maps for planning purposes, in particular artillery fire plans, due to the poor quality maps of Italy used by the Allies.²⁵³ By November 1943, 1 CID was placed into Eighth Army's reserve which again allowed for the intelligence staff to focus on training its brigade and battalion IOs,²⁵⁴ further demonstrating the division's continued attempts to be a learning organization.

²⁵⁰ LAC, RG 24, Vol. 12327 - Intelligence Reports from Central Mediterranean Force - File 4/CMF REPS/1 - "Statement of Brig. H.D. Graham, Commander 1 Cdn Inf Bde, given to Capt Hughes (1 CID Historical Officer), 22 Oct 43 in Campobasso Area". In particular, more detailed information about enemy strengths and locations needed to be produced, as well as the state of terrain; LAC, RG 24, Vol. 12327 - 1 CID "Patrol Instructions", 18 October 1943. This document ordered that once 1 CID established itself in its assigned sector, all units would commence dominating the ground by stealth and collecting intelligence on the enemy; LAC, RG 24, Vol. 12327 - Capt Sprung, GSO 3 Int 1 CID "Intelligence in Positional Warfare", 16 October 1943.

²⁵¹ LAC, RG 24, Vol. 12327 - Intelligence Reports from Central Mediterranean Force - File 4/CMF REPS/1 - "Extracts from account by Capt. WS Murdoch, IO, Seaforth of Canada, given to Capt Hughes (1 CID Historian) at Barabello, 26 Nov 43".

²⁵² LAC, RG 24, Vol. 10888 - 1st Cdn Inf Div INTSUM #21, 21 October 1943.

²⁵³ Elliot, *Scarlet to Green*, 193; Jones, "Intelligence and Command", 91-92.

²⁵⁴ Elliot, *Scarlet to Green*, 190.

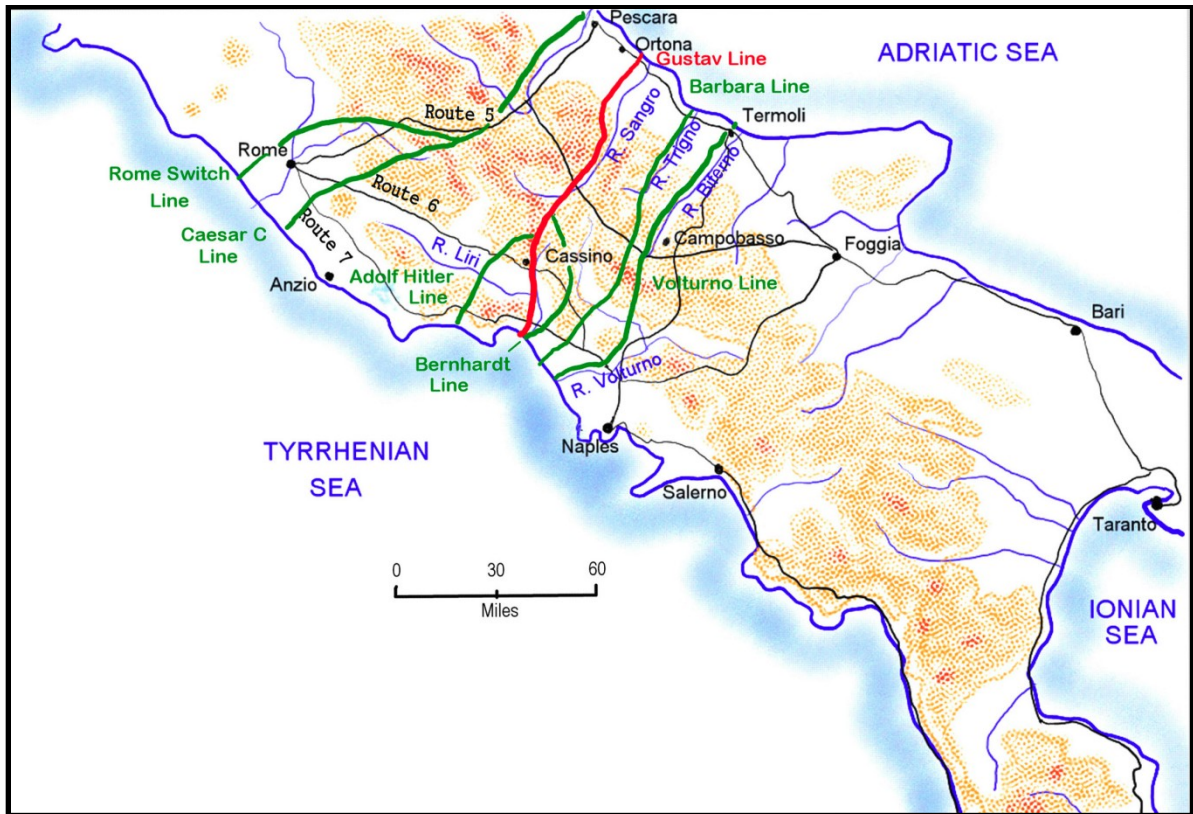


Figure One: German Switchlines, Late 1943 (Source: http://en.wikipedia.org/wiki/Winter_Line)²⁵⁵

As mid-November 1943 approached, the Allies came upon a major line of German resistance – the Bernhard Line, or Winter Line, a switchline designed to delay any further Allied advances. As Hinsley commented, Eighth Army intelligence gleaned most of the enemy's ORBAT, supply state and dispositions along the Bernhard Line from Y and Ultra intelligence, including the German intent to hold the line, with air photos providing much of the detail on enemy defensive positions.²⁵⁶ Drawing upon higher British formations, 1 CID intelligence began compiling information on the lines' defences. In particular, detailed intelligence profiles of the formations and units, such as the 1st Parachute Division (1st Para Div), were created so that 1 CID staffs were well aware of the formations that they were likely to encounter in the Adriatic sector.²⁵⁷ Once V British Corps began its assault on the line on 28 November 1943, 1 CID was soon ordered to relieve the battered 78th British Infantry Division

²⁵⁵ Source: http://en.wikipedia.org/wiki/Winter_Line, Last Accessed, 7 April 2012.

²⁵⁶ Hinsley, *British Intelligence, Vol. 3 Part 1*, 181-183. Hinsley estimates that German VHF traffic at the unit level provided up to 60 percent of the intelligence obtained from Army Y throughout the Italian campaign.

²⁵⁷ LAC, RG 24, Vol. 10888 - 1st Cdn Inf Div INTSUM #23, 10 November 1943; 1st Cdn Inf Div INTSUM #24, 16 November 1943; 1st Cdn Inf Div INTSUM #25, 8 November 1943 .

and assume the advance for V Corps on its right flank. Thus, the next major test for 1 CID had begun, the Battle of the Moro River, which culminated in with the fight for Ortona.

1 CID had completely relieved 78th Division by 8 December 1943. However, extensive planning and patrolling by Canadian elements had begun beforehand. 1 CID's GOC, Maj. Gen. Chris Vokes, later stated that this patrolling activity helped to determine which axis of advance to utilize and where the bridgehead over the Moro for 1 CID would be established.²⁵⁸ As such, 1 CID's emphasis on training in collecting detailed tactical intelligence from patrol activity had paid off. V Corps' INTSUM on 4 December 1943 appreciated that there were no large-scale preparations detected south of Pescara. However, it soon became apparent with reports from patrols that there was extensive German preparation of reverse slope positions across the Moro.²⁵⁹ Further, intelligence indicated that the German 65th Infantry Division (Inf Div), smashed during recent fighting with the British, had been replaced by the stronger 90th Panzer Grenadier Division (PG Div), on 1 CID's main axis of advance along the coastal sector.²⁶⁰ 90th PG Div, a very well-trained and competent formation, has a recurring place in 1 CID's military history as the formation that stiffly resisted during both the Moro River campaign, and later in the Liri Valley campaign.

By 6 December, a bridgehead was established across the Moro River by 1 CID, a lodgement that swiftly was counterattacked by the 90th PG Div. These counterattacks were quickly defeated with the consolidation-firepower doctrine discussed above, eventually forcing the Germans to withdraw northwards to another well-prepared position along the Orsogna - Ortona road.²⁶¹ A concerted advance towards Ortona commenced on the night of 9-10 December. 90th PG Div, systematically eroded by 1 CID's offensive, was gradually replaced by 1st Parachute Division (1 Para Div). On 19 December, "Cider", a key crossroads which had been defended fiercely by the Germans was finally captured with the largest artillery

²⁵⁸ LAC, RG 24, Vol. 10881 - Maj. Gen. Chris Vokes "Crossing of the Moro and Capture of Ortona", 16 March 1944. (Hereafter Vokes, "Crossing of the Moro and Capture of Ortona".)

²⁵⁹ Nicholson, *The Canadians in Italy*, 290-291.

²⁶⁰ Nicholson, *The Canadians in Italy*, 290; LAC, RG 24, Vol. 12327 - Intelligence Reports from Central Mediterranean Force – File 4/CMF REPS/1 - "Account by Capt GMC Sprung G-3 'I' 1 Cdn Div, Given to Capt Hughes in the San Vito Area, 3 Jan 44". Sprung noted that just as 1 CID came into the line and prepared for an attack, 90th PG Div had arrived around the same time.

²⁶¹ Cessford, "Hard in the Attack", 226.

bombardment yet coordinated by the divisional staff and a very successful combined-arms attack²⁶² which allowed for an assault on Ortona to begin. A comparison of translated German war diaries produced by the Canadian Historical Section in the late 1940s, and 1 CID's INTSUMs demonstrated that 1 CID's intelligence section, no doubt in conjunction with V Corps and Eighth Army intelligence, had accurately and meticulously monitored German ORBATs and dispositions prior to and throughout the Moro River offensive. This speaks to the accuracy of 1 CID's intelligence appreciations. 1 CID gave consistent and detailed accounts of the enemy's new dispositions and estimated strengths, including the replacement of 65th Inf Div with 90th PG Div and 90th PG Div's eventual turnover to 1 Para Div.²⁶³

Commencing on the night of 20-21 December, 2nd Canadian Infantry Brigade (2 CIB) advanced into the town of Ortona, with 1st Canadian Infantry Brigade (1 CIB) advancing on its left flank. The battle for Ortona was a bloody affair where, as 1 CID's GOC Chris Vokes stated, "no quarter was asked or given".²⁶⁴ The definition of the Ortona defences became an exacting process for the combat troops and a highly-detailed affair for the divisional intelligence staff. Information on enemy dispositions in an urban setting had to be at the lowest level, street by street, house by house, including the knowledge of the locations of sub-units (i.e., companies), and sub-sub units (i.e., platoons). Detailed information had to be collected mostly by troops in contact. However, the divisional intelligence staff realized that much of the information that battalion troops possessed was only being passed orally at the front but not to the rear;²⁶⁵ this omission was rectified as soon as it was practicable. Before the battle in Ortona, 1 CID's operations staff ordered air photos of the town itself and, using these air photos, began dividing the town into sectors to be cleared by certain companies in 2 CIB.²⁶⁶ As air photos were found to be of great utility, even down to the section level, it was

²⁶² Nicholson, *The Canadians in Italy*, 321-323.

²⁶³ LAC, RG 24, Vol. 6922 - Historical Section (G.S.) Army Headquarters, Ottawa "Report #18 - The Campaign in Southern Italy (September - December 1943), Information from German Military Documents", 1948, Passim; LAC, RG 24, Vol. 10888 - 1st Cdn Inf Div INTSUM #28, 7 December 1943; 1st Cdn Inf Div INTSUM #29, 16 December 1943; 1st Cdn Inf Div INTSUM #30, 22 December 1943; 1st Cdn Inf Div INTSUM #31, 27 December 1943; 1st Cdn Inf Div INTSUM #32, 2 January 1944.

²⁶⁴ Vokes, "Crossing of the Moro and Capture of Ortona".

²⁶⁵ Elliot, *Scarlet to Green*, 193.

²⁶⁶ LAC, RG 24, Vol. 12327 - File CMF REPS/1 - Maj. Gen. Chris Vokes "Notes on the Capture of towns by street fighting, given by Maj Gen C Vokes, GOC 1 Cdn Inf Div, to Lt.Col. Stacey at HQ 1 Cdn Inf Div, 21 Mar 44".

recommended after the fighting that larger amounts of air photos be secured for the use of all in the division.²⁶⁷ By 27 December, LXXVI Panzer Corps, which was the German corps in charge of the Adriatic sector, ordered 1st Para Div to withdraw from Ortona before it faced complete destruction.²⁶⁸ Ortona was declared completely cleared at 1200 hrs, 28 December, although Vokes noted that every battalion within 1 CID had suffered over 50 percent casualties.²⁶⁹ Point (Pt) 59 north of Ortona would not be taken until 4 January 1944.

1 CID emerged from Ortona with a reputation as a capable fighting formation. Vokes outlined several issues that led to the division's success that fully exemplify the doctrine established during the El Alamein battles, including extensive use of artillery, together with timed creeping barrages that had to be followed closely by infantry; the necessity of combined arms by fostering a spirit of cooperation between tanks, infantry and artillery; maintaining high morale and a fighting spirit among troops; and that rapid consolidation of recently captured ground by a determined defence consisting of dug in infantry, tanks and well-sited anti-tank guns could nullify German counterattacks.²⁷⁰ The capabilities of 1 CID's planning staff, including its intelligence component, also had increased. In particular, during the advance from the Moro River to Pt 59, the divisional intelligence staff learned to support a number of different operations, including an assault river crossing, several deliberate assaults against a well-entrenched enemy, and, perhaps one of the most salient points of the operation, an urban assault. Further, they had to support these very different types of operations simultaneously, which meant that they had to be meticulous in detail, including being able to pass information, especially air photos, as far forward as possible in order to assist in the fight. Information passage problems from battalion to higher HQs had to be addressed. 1 CID's static period on the Adriatic sector would allow it to rectify this deficiency.

²⁶⁷ LAC, RG 24, Vol. 13727 - 1st Cdn Inf Div WD - September 1943 to February 1944 - GS 1 Cdn Div "Ortona", 16 February 1944.

²⁶⁸ LAC, RG 24, Vol. 6922 - Historical Section (G.S.) Army Headquarters, Ottawa "Report #18 - The Campaign in Southern Italy (September - December 1943), Information from German Military Documents", 1948, 67.

²⁶⁹ Vokes, "Crossing of the Moro and Capture of Ortona".

²⁷⁰ Vokes, "Crossing of the Moro and Capture of Ortona". Vokes also noted that to keep the fighting edge, training schools should always be kept open in the divisional rear areas. This once again emphasizes that 1 CID continued to grow as a learning institution.

By the end of December 1943, extensive rains turned fields into a muddy morass, terminating large-scale operations. As the Germans regrouped and formed new operational reserves,²⁷¹ extensive patrolling along the Arielli River sector was ordered by Eighth Army. Though Nicholson describes this period as "static",²⁷² 1 CID's time in the Adriatic Line was very fruitful with regards to developing the sophistication of 1 CID's intelligence staff. This was due to two factors. First, the widespread patrolling conducted by 1 CID further developed the intelligence collection capability of its battalions and brigades. Second, the periods when brigades were out of the line allowed for training, including intelligence courses, to occur, further expanding intelligence capabilities at the tactical level. A number of minor operations would also be conducted by 1 CID on the Adriatic front, such as 1 CIB's attack along the Villa Grande-Tollo road during the last two days of January 1944. These operations had utility in that they pinned down German formations, in particular elements of the 1st Para Div, in the Adriatic sector so that they could not be used elsewhere, such as attempting to counter Allied assaults in the Cassino sector or during the critical stages of the Anzio seaborne landings conducted on 22 January 1944.²⁷³

A close look at 1 CID's and its brigade WDs for the period January to April 1944 demonstrates the continuing intelligence development of these formations. Few soldiers forced to conduct patrolling day after day, night after night during some very cold and rainy periods would recall this period with fondness. The only relief were short periods of rest as units and brigades were rotated to the rear. Patrols of varying sizes, from three or four individuals to platoon to company-sized fighting patrols and even battalion-sized raids, occurred with varying degrees of frequency.²⁷⁴ WD entries often discussed days and nights of limited activity, interspersed with brief combat actions when patrols came into contact with other enemy patrols or when the front lines came under heavy mortar and artillery fire.

²⁷¹ LAC, RG 24, Vol. 6922 - Historical Section (G.S.) Army Headquarters, Ottawa "Report #20 - The Italian Campaign (4 January 1944 - 4 June 1944), Information from German Military Documents", 1948, 68-70. (Hereafter LAC, "German Military Documents, 4 January - 4 June 1944".)

²⁷² Nicholson, *The Canadians in Italy*, 380.

²⁷³ LAC, "German Military Documents, 4 January - 4 June 1944", 7-14.

²⁷⁴ LAC, RG 24, Vol. 13727 - 1st Cdn Inf Div WD - September 1943 to February 1944; LAC, RG 24, Vol. 14084 - 3rd CIB WD - The Brigade War Diarist noted on 9 February 1944, the Royal 22e Regiment conducted a raid on Crechchio where they "shot up the Jerries good."

Indeed, a battalion or brigade IO from the First World War likely would have adjusted quickly to the conditions of the Adriatic front. While SIGINT and air photos could only reveal so much about the enemy, the most important prize was the capture of the ever-elusive PW who often evaded capture for days, even weeks, on end.²⁷⁵ What was needed to flesh out actual enemy dispositions were PWs who would reveal what unit was located in what position and to get a strong sense of the enemy's unit strength.²⁷⁶ At times, Vokes and brigade commanders even offered rewards, such as money or leave periods, to soldiers if they captured PWs.²⁷⁷

During this period, 1 CID's patrols learned to collect extensive information on the enemy. After months of practice in Sicily, the Moro River campaign, and Ortona, the amount of detail that patrols were expected to produce was impressive. This information ranged from the state of bridges, locations of barbed wire and enemy MGs, suspected enemy mortar locations, to where German voices were heard speaking, or even if dogs were heard barking. Many patrol reports were accompanied with information on enemy PWs captured or bodies found, with a strong emphasis on unit identifications. Appreciations of the enemy, estimates of enemy strengths at certain positions and where suspected enemy boundaries were located, were also forwarded.²⁷⁸ Some Brigade IOs even wrote their own INTSUMs. Most notably 3 CIB's IO Capt R.D. Prince, who would later become 1 CID's GSO 3 Int, wrote a number of his own INTSUMs instead of relying completely on 1 CID's intelligence staff, which

²⁷⁵ LAC, RG 24, Vol. 13727 - 1st Cdn Inf Div WD - September 1943 to February 1944. Sometimes PWs, especially from 1 Para Div, just did not want to be captured. On 6 January 1944, elements from the West Nova Scotia Regiment (WNSR) conducted a patrol and managed to capture 15 paratrooper PWs. Soon two PWs tried to run away, and were subsequently shot. While attempting to return to friendly lines, the patrol ran into an enemy patrol and attempted to evade it. However, an officer PW they had captured stood up and shouted at the enemy patrol which led to the enemy shooting him. Soon the WNSR patrol was under intense fire, and the Royal 22e R FOO ordered a smoke mission to assist in the WNSR patrol's extraction. However, the remainder of the PWs managed to take advantage of the smoke mission and ran away, leading to a total of zero PWs captured that day.

²⁷⁶ LAC, RG 24, Vol. 13727 - 1st Cdn Inf Div WD - September 1943 to February 1944 - 1st Cdn Inf Div INTSUM #33, 7 January 1944. Sprung stated in this INTSUM that the enemy's locations were well known by patrol reporting and air photos, but that exactly how the enemy companies and battalions were situated was not known. Sprung further elaborated "...a few more PW will clear this matter up."

²⁷⁷ LAC, RG 24, Vol. 14076 - 1st CIB WD - 1 March 1944.

²⁷⁸ See various patrol reports in: LAC, RG 24, Vol. 13727 - 1st Cdn Inf Div WD - September 1943 to February 1944; LAC, RG 24, Vol. 14076 - 1st CIB WD; LAC, RG 24, Vol. 14077, 14078 - 2nd CIB WD; LAC, RG 24, Vol. 14084 - 3rd CIB WD. For example, 1 CIB on 6 March 1944 noted that the Hastings and Prince Edward Regiment wounded a potential PW while on patrol. While they tried to bring him back, he continued to scream so they decided to leave him behind and took his jacket. The information from the jacket revealed he was from 4 Company, 1 Bn, 578th Regt, 305th Inf Div. As such, it was suspected that 578th Gren Regt held the area between 334 Engineer Battalion (of 334 Gren Regt) and 577 Gren Regt (305 Inf Div).

summarized the enemy activity and identifications on the brigade's front.²⁷⁹ At times, even the divisional IOs accompanied unit IOs out on patrols,²⁸⁰ although this was a rare occurrence.

Of note, the IOs in charge of keeping 2 CIB's WD were exceptional record keepers. Its WD often surpassed its companion brigades in the sheer mass of information which was preserved, including V Corps INTSUMs, CBO INTSUMs, and other related intelligence documents. Further, 2 CIB produced a number of IOs that would go on to be senior IOs within I Canadian Corps, including Capt W.D. Dewar, who became GSO 3 Int, the senior intelligence deputy, in I Canadian Corps, and Capt A.W. Gray, who was promoted to the GSO 3 Int in 5 CAD after the Liri Valley battles.²⁸¹ Whether this means that the commanders that 2 CIB produced, such as Maj. Gen. Chris Vokes (1 CID) and Maj. Gen. Bert Hoffmeister (5 CAD), were more "intelligence savvy" is difficult to say. However, it does speak to the professionalism which existed within the brigade's intelligence cadre.

As the situation became more static on the Adriatic sector, brigade schools were formed by early January 1944 to train troops, especially replacements to the brigades who possessed a lower standard of training, thus continuing 1 CID's tradition of being a learning institution. Intelligence schools were also organized. An example of this was 3 CIB's three-day intelligence courses, run by the brigade IO and battalion intelligence sergeants, where instructors instructed on such topics as observation post (OP) procedure, artillery cooperation, enemy equipment and organization, patrol reports, use of air photos, and the use of codex and codes.²⁸² Upon their return to their units, IOs who participated in the course were to implement a 40-hour training schedule for their intelligence sections based on what they had learned. 2 CIB also implemented a "Scout and Sniper School" under the direction of the Brigade IO, Capt A.W. Gray, essentially with similar curriculum.²⁸³

²⁷⁹ LAC, RG 24, Vol. 14084 - 3rd CIB WD.

²⁸⁰ LAC, RG 24, Vol. 14077 - 2nd CIB WD. On 24 February 1944, Capt Tucker-Burr, one of 1 CID's IOs accompanied the Seaforth's IO and three ORs out on a patrol of the front equipped with enemy weapons. The purpose of them being armed with enemy weapons remains unclear.

²⁸¹ LAC, RG 24, Vol. 14077 - 2nd CIB WD.

²⁸² LAC, RG 24, Vol. 14084 - 3rd CIB WD - WD Entry, 5 January 1944 - "Report on 3 Cdn Inf Bde Trg, 5 Jan - 8 Feb 44".

²⁸³ LAC, RG 24, Vol. 14078 - 2nd CIB WD - February 1944.

By 19 January 1944, 1 CID intelligence began issuing to its battalions air photos and traces of suspected enemy positions on a more regular basis in order for troops to further understand where intelligence perceived the enemy to be located and for them to confirm or deny this information.²⁸⁴ This further assisted the patrols to collect the masses of detail needed to build a comprehensive view of the enemy on 1 CID's front and, once it was integrated with the other sources it had available, 1 CID issued a consolidated INTSUM every few days summarizing the patrol activity and the identifications that had been made on its front. Also, a number of brigades in 1 CID began to adopt First World War SIGINT methods. Due to the static nature of the front, IOs sent out signallers to attempt to emplace devices to intercept German line communications,²⁸⁵ although it is unclear how successful these attempts at low-level SIGINT collection were. An important change in staff also occurred when Capt Sprung was replaced by Capt R.D. Prince as GSO 3 Int of 1 CID. Prince had been 3 CIB's IO in Sicily and would serve as the senior IO within the division during the Liri Valley battles.²⁸⁶

Canadian intelligence's main effort throughout its time on the Adriatic front was to try to clarify the often confusing enemy ORBAT situation within the Canadian sector. On 1 February 1944, I Canadian Corps relieved V British Corps on the Adriatic sector, including taking command of 1 CID. Throughout this month, the key question for I Canadian Corps and 1 CID intelligence to answer was whether or not the elite 1st Para Div, some elements of which were still on the Adriatic front, was being rushed to western Italy to stem Allied attacks at Anzio and Monte Cassino.²⁸⁷ Orders from senior formation commanders stressed that patrols must capture PWs in order to flesh out German ORBAT information about the LXXVI Panzer Corps and confirm enemy formation and unit locations.²⁸⁸ According to Eighth Army intelligence, there were already elements of 1st Para Div in the Anzio sector. This was largely due to Eighth Army possessing both high-grade SIGINT and Army Y VHF intercepts indicating

²⁸⁴ LAC, RG 24, Vol. 13727 - 1st Cdn Inf Div WD - September 1943 to February 1944 - WD Entry, 19 January 1944; 1 CID Staff "Patrol Reports and Sitreps", 18 January 1944; LAC, RG 24, Vol. 14084 - 3rd CIB WD. The War Diarist of 3 CIB noted on 14 February 1944 that the air photo mosaics being provided from division was of great utility for planning purposes.

²⁸⁵ LAC, RG 24, Vol. 14076 - 1st CIB WD - WD Entry, 1 March 1944. The Royal Canadian Regiment manned a telephone intercept set in an attempt to listen to German line communications.

²⁸⁶ LAC, RG 24, Vol. 13728 - 1st Cdn Inf Div WD - "Staff 'GS' Branch - 1 Cdn Inf Div", May 1944.

²⁸⁷ LAC, RG 24, Vol. 14077 - 2nd CIB WD, February 1944.

²⁸⁸ Elliot, *Scarlet to Green*, 196; Hinsley, *British Intelligence, Vol.3, Part 1*, 185.

that 90th PG Div was being relieved by the 1st Para Div in western Italy on 25 January 1944.²⁸⁹ However, PW interrogation along the Canadian front led to a debate within Canadian intelligence circles if the Parachute division had completely departed from the Adriatic front. A PW taken on the night of 4-5 February from the II Bn, 3rd Para Regt indicated that 1st Para Div was still in the Adriatic sector.²⁹⁰ Although 1 CID intelligence noted on 12 February that another Para Battalion had been identified in the Anzio sector, it still assessed that elements of 1st Para Div were still in their sector. This judgement was based not on PW intelligence but due to patrols reporting aggressive behaviour by German troops, a style characteristic of 1st Para Div,²⁹¹ which speaks to 1 CID's patrolling experience in its sector. 1 CID IOs on 17 February were still confident that elements of 1st Para Div were on their front, but there were suspicions that III Bn, 4th Para Regt had departed recently, especially as patrolling and air photos demonstrated that a number of enemy positions had been abandoned.²⁹²

The remaining elements of 1st Para Div did move from the Adriatic sector on 20 February 1944.²⁹³ As intercepted messages, likely from the Y Service, on 19 February indicated the division would be moving, artillery harassment fire was ordered to disrupt its movement out of the line.²⁹⁴ With the departure of the paratroopers, the capture of PWs became much easier as the German soldiers who replaced the paratroopers were less well-trained and motivated, demonstrated poor fieldcraft and security procedures, and some even deserted. Certainly by 21 February 1944, a PW was taken from 146th Gren Regt, 65th Inf Div, suggesting which formation was taking over from 1st Para Div.²⁹⁵ Several days after the departure of 1st Para Div, it was confirmed that a reinforced 305th Inf Div, augmented by 146th Gren Regt

²⁸⁹ Hinsley, *British Intelligence, Vol.3, Part 1*, 198. By 6 March 1944, SIGINT confirmed that the division had completely moved from the Adriatic area.

²⁹⁰ LAC, RG 24, Vol. 13727 - 1st Cdn Inf Div WD - September 1943 to February 1944 - 1st Cdn Inf Div INTSUM #38, 5 February 1944.

²⁹¹ LAC, RG 24, Vol. 13727 - 1st Cdn Inf Div WD - September 1943 to February 1944 - 1st Cdn Inf Div INTSUM #40, 12 February 1944.

²⁹² LAC, RG 24, Vol. 13727 - 1st Cdn Inf Div WD - September 1943 to February 1944 - 1st Cdn Inf Div INTSUM #42, 17 February 1944.

²⁹³ LAC, "German Military Documents, 4 January - 4 June 1944", 16.

²⁹⁴ Nicholson, *The Canadians in Italy*, 382; LAC, RG 24, Vol. 13727 - 1st Cdn Inf Div WD - September 1943 to February 1944 - 1st Cdn Inf Div INTSUM #43, 20 February 1944.

²⁹⁵ LAC, RG 24, Vol. 13727 - 1st Cdn Inf Div WD - September 1943 to February 1944 - 1st Cdn Inf Div INTSUM #44, 21 February 1944.

(65th Inf Div), had taken over opposite I Canadian Corps.²⁹⁶ Throughout March 1944 and into April, 1 CID continued its duties in the Adriatic sector, persisting in its intensive patrolling activity which continued to pull in a regular number of PWs who were rapidly identified by battalion and brigade IOs. 305 Inf Div would continue to be 1 CID's main antagonist for the coming months on the Adriatic sector.

By mid April and lasting into May, 1 CID was placed into I Canadian Corps reserve and was ordered into a strict training regime, with a strong emphasis on combined-arms training for all brigades and units in the division²⁹⁷ and a stress on "hardening" to get troops into shape for active operations again.²⁹⁸ One of the most important events for 1 CID's intelligence development before the Liri Valley campaign occurred on 24 April when the 1 CID Intelligence School was set up to train all intelligence personnel within the division at Ferrazzano. Two courses were held, one for all IOs from 27 April to 1 May (24 in total attending) and one for NCOs from 2 to 4 May (23 in total attending). The main instructors included the current 1 CID GSO 3 Int, Capt R.D. Prince, and his IO Capts I.T-Tucker-Burr and K.A. Cottam. Prince thought the Intelligence School was a great success for several reasons. First, a number of new battalion IOs with no previous intelligence experience received needed training. Second, everyone was updated with the latest developments and succinct policies were set down for intelligence in the division. Lastly, it was a good networking opportunity, as all IOs from the division, including reconnaissance and artillery IOs, were involved. One of the main topics of debate and discussion was, unsurprisingly, the subject of patrols, patrol policy, and scout platoons. There were divergent opinions on these subjects in different units. In particular, some IOs believed that some COs still disregarded the value of scout platoons. Further

²⁹⁶ Elliot, *Scarlet to Green*, 197; LAC, RG 24 Vol. 13727 - 1st Cdn Inf Div WD - September 1943 to February 1944 - 1st Cdn Inf Div INTSUM #44, 21 February 1944; LAC, RG 24, Vol. 13685 - I Canadian Corps WD, February 1944 - I Cdn Corps INTSUM #29, 29 February 1944. A deserter from I Bn, 578th Gren Regt, 305th Inf Div crossing the lines on 28 February 1944, helped further confirm the formation opposite I Cdn Corps.

²⁹⁷ LAC, RG 24, Vol. 13728 - 1st Cdn Inf Div WD. For example, see: 1 CID Staff "Tank-Infantry Training", 24 April 1944; "Co-operative Training with 1 Cdn Inf Div", 28 April 1944; Other numerous WD entries.

²⁹⁸ LAC, RG 24, Vol. 13728 - 1st Cdn Inf Div WD - WD Entry, 28 April 1944. This "hardening" included night manoeuvres and hill marches. The War Diarist compared it to the training 1 CID conducted in Scotland a year previously; LAC, RG 24, Vol. 14077 - 2nd CIB WD - "2 Cdn Inf Bde Trg Directive #2" Late April 1944. The main standard of the training was to march seven miles at four miles per hour with fighting equipment, conduct an attack, consolidate and return to the original starting point at the same march rate. Further training included mountain fighting, map and compass reading, weapons training, patrolling, conducting attacks, consolidating and repulsing counter attacks, and infantry-tank cooperation.

subjects discussed in the course included intelligence organization at the battalion and higher formation HQs, lectures on intelligence for artillery and engineer organizations, use of air photos, German organization, German paybooks, enemy tactics on the defence and offence, enemy equipment, artillery and weapons, reporting formats, handing of PWs, and scouts and snipers.²⁹⁹

The experience built within 1 CID's intelligence cadre during the Sicilian campaign, southern Italy, and on the Adriatic sector forged a highly-effective intelligence organization. Further, the intelligence courses run during static periods in the Adriatic sector or the larger divisional school at Ferrazzano inculcated important intelligence doctrine and policies throughout 1 CID's intelligence cadre. It will be demonstrated that this period of static warfare, patrolling, and training were critical for the further refinement of 1 CID's intelligence system, and would be of great utility during the upcoming Liri Valley operations. In fact, 1 CID's intelligence cadre would be relied upon very heavily during these operations and after during I Canadian Corps' lessons-learned process.

The Development of I Canadian Corps Intelligence Prior to the Liri Valley Campaign

Just as 1 CID intelligence went through several crucial periods of development in the Mediterranean theatre, I Canadian Corps, including 5th Canadian Armoured Division (5 CAD), did so as well. The intelligence cadre in I Canadian Corps had an experience similar to 1 CID. It was closely mentored by the Eighth Army, its personnel selection was very good, and there was consistent intelligence leadership for an extended period. This allowed Corps intelligence to assimilate British intelligence doctrine and set procedures before the Liri Valley campaign. Further, though several key personalities within Eighth Army accompanied Montgomery as he took over 21st Army Group at the beginning of 1944 for Operation OVERLORD, including his senior IO, Edgar Williams, intelligence personnel within the Eighth Army remained fairly consistent³⁰⁰ which allowed its intelligence cadre to build on the effective doctrine formed in North Africa and solidified in Italy. An example of this consistency was the new senior IO of

²⁹⁹ LAC, RG 24, Vol. 13728 - 1st Cdn Inf Div WD - 1 CID WD Entry, 24 April 1944; 1 CID Intelligence Staff "Report on 1 Cdn Div Intelligence School", 6 May 1944.

³⁰⁰ Jones, "Intelligence and Command", 63-64.

the Eighth Army, LCol. Donald Prater, an Oxford student fluent in German who had served as the senior IO for XXX Corps in North Africa and Sicily. Conversely, 5 CAD suffered from a series of deficiencies, in particular within the realm of staff work, that it was unable to overcome in time for the Liri Valley battles. These deficiencies were also apparent within the intelligence cadre of 5 CAD, especially because there was no consistent intelligence leadership to solidify doctrine, procedures, and analytical knowledge in the division. The reasons why 5 CAD experienced such difficulty in building an effective intelligence organization will be explored further below.

I Canadian Corps, including 5 CAD, and its auxiliary troops arrived in the Mediterranean theatre in November 1943. I Canadian Corps intelligence was led by the GSO 2 Int, Major Charles Darcy Kingsmill. Kingsmill, an artillery officer by trade and a lawyer in training before the war,³⁰¹ was posted to I Canadian Corps as the GSO 2 Int on 30 April 1943. By the time he left his GSO 2 Int position in 1945, he was well respected by senior IOs in First Canadian Army and eventually received the Order of the British Empire for his work after the war in fostering an intelligence relationship with the US War Department.³⁰² Other Corps intelligence staff included Capt A.B. Laver, GSO 3 Int, Capt D.G. Molnar, Capt R.L. Hancock, Lt D.M. Healy, Lt W.E. Edmonds, Lt S.H. Foyer and Lt J.A. Phillip.³⁰³ Kingsmill wasted little time upon the Corps' arrival in the Mediterranean to begin training. As he was responsible for personnel and administrative issues with regards to the CIC in the Mediterranean, he dealt with a number of staffing issues with the intelligence reinforcement system and 1 CID.³⁰⁴ Further, Kingsmill began to seek mentorship from the Eighth Army and XIII Corps.³⁰⁵ In late November 1943,

³⁰¹ Source: <http://kilby.sac.on.ca/activitiesclubs/cadets/history/militaryoldboys/wwii/kingsmillcharles.html>, Last accessed 14 April 2012.

³⁰² LAC, RG 24, Vol. 10012 - Selection of IO (Int Officer) - File 9/I.O./I/2 - Letter to Brig. MHS Penhale, DCGS (C) NDHQ from Lt. Col. Felix Walter, Senior IO, CMHQ "Nominations for Staff Appointments", 26 March 1945. Walter noted in 1945 that Kingsmill was "among the most experienced officers in intelligence work in the field" and was going to be mentioned in dispatches for his excellent work; Source: <http://kilby.sac.on.ca/activitiesclubs/cadets/history/militaryoldboys/wwii/kingsmillcharles.html>, Last accessed 14 April 2012.

³⁰³ Elliot, *Scarlet to Green*, 193-194.

³⁰⁴ LAC, RG 24, Vol. 12327 - Intelligence Reports from Central Mediterranean Force – File 4/CMF REPS/I - Letter from Maj Darcy Kingsmill to LCol Felix Walter, Senior IO, CMHQ, 10 February 1944. Kingsmill outlined to Walter that ever since he had arrived in the Mediterranean, Canadian intelligence personnel currently in the reinforcement system were not being utilized properly. Kingsmill also mentioned that many in 1 CID did not want to exchange personnel within the Canadian Corps and they were not looking at the broad picture and only their betterment, not the betterment of the Canadian Army.

³⁰⁵ XXX Corps had been sent back to England to participate in Operation OVERLORD.

many of the Canadian Corps intelligence staff, including Kingsmill, departed for up to several weeks of temporary duty with these formations.³⁰⁶ Several IOs were sent to the Combined Services Detailed Interrogation Centre (CSDIC) at 307 (Army) PW Cage and the Forward Interrogation Centre (FIC) at Eighth Army to see how these organizations operated and to refine their interrogation skills. Those attached to these interrogation centres, including Lt Philip and Lt Molnar, believed these experiences helped to build their understanding of the German organization in the Italian theatre and British intelligence doctrine in general.³⁰⁷

To get Corps staff up to speed and provide IOs some practice in presentation, standard intelligence lectures were regularly offered by the intelligence staff at I Canadian Corps on issues such as German organization and tactics. This also increased the general knowledge of the Corps staff. The Corps intelligence section also issued its first INTSUM on 13 December 1943. Further INTSUMs were issued on an almost weekly basis, the format mimicking Eighth Army's INTSUM. These INTSUMs also drew heavily on information from British formations, outlining the general situation in Italy, types of German divisions in Italy (including detailed reviews of such important formations as the 90th PG Div, 26th Pz Div, and 1st Para Div), German battle tactics, quoting extracts from captured documents, outlining types of German equipment, and giving personality summaries on German commanders. These INTSUMs also closely followed what was occurring on the Adriatic front, and the current fight that 1 CID was involved in.³⁰⁸ Not only did these INTSUMs help Corps intelligence staff develop their writing skills, it built a database of information on the future enemy that they would confront in six months time.

After his attachment to Eighth Army in January 1944, a Canadian Corps IO, Lt D.M. Healy, who would be one of the first Canadian Corps ORBAT analysts, wrote two extensive after-

³⁰⁶ LAC, RG 24, Vol. 13685 - I Canadian Corps WD, November 1943. Kingsmill would spend time with both Eighth Army and XIII Corps.

³⁰⁷ LAC, RG 24, Vol. 12328 – File 4/CORRES INT CORP/I 86/31 - Letter to Major Felix Walter, CMHQ from Lt. J.A. Phillip, Written sometime likely in Late December 1943 / Early January 1944; LAC, RG 24, Vol. 12328 - File 4/CORRES INT CORP/I 86/31 - Letter to Major Felix Walter, CMHQ from Lt. AGE Molnar, 19 January 1944; LAC, RG 24, Vol. 12328 - File 4/CORRES INT CORP/I 86/31 - Letter to Major Felix Walter, CMHQ from Lt. AGE Molnar, 4 June 1944; CWM, "Interview with George Molnar".

³⁰⁸ LAC, RG 24, Vol. 13685 - I Canadian Corps WD, December 1943; Elliot, *Scarlet to Green*, 194.

action reviews addressed to Kingsmill outlining British intelligence procedures.³⁰⁹ Much of the doctrine sketched in these reviews has been discussed in Chapter Two. However, Healy emphasised a number of points which no doubt strongly reflected the doctrine adopted by the I Canadian Corps intelligence cadre. Healy observed that Eighth Army's HQ operated in a "quadrangle" of vehicles, which fused operations, intelligence, J Service, and air staffs together so that information and map boards could easily be shared and the intelligence staff could quickly brief the commander. Healy also delineated the army-corps intelligence relationship, in particular that Eighth Army intelligence was responsible for providing "positive leads" to corps intelligence, including updates on the enemy, topography, and defence overprints, to name a few. Healy further described the ORBAT database system, how INTSUMs were written, and how Eighth Army organized its intelligence sections into ORBAT, topography, technical intelligence, and air photo interpretation. Finally, Healy illustrated how information was passed, with a strong emphasis on the telephone as the primary means of communication, and that interrogators were pushed as far forward as possible to glean intelligence of immediate tactical value. Most of these salient points were quickly assimilated by I Canadian Corps intelligence and would be utilized during the Liri Valley campaign.

As the month of January 1944 commenced, I Canadian Corps intelligence staff continued with its infrequent dissemination of INTSUMs covering the Italian campaign. On 12 January 1944, Eighth Army's commander, General Sir Oliver William Leese, ordered the Canadian Corps to relieve V British Corps on the Adriatic sector where 1 CID was currently operating. I Canadian Corps completed the relief of V Corps on 1 February 1944 and remained in place until 7 March 1944, when it was ordered back into Eighth Army's reserve. I Canadian Corps AGRA also arrived in the sector by 4 February 1944, although a number of Canadian AGRA officers, including IOs, had already been attached to V Corps for a number of weeks prior to

³⁰⁹ LAC, RG 24, Vol. 12327 - Intelligence Reports from Central Mediterranean Force – File 4/CMF REPS/1 - Memorandum from Lt. DM Healy to GSO 2 Int, I Cdn Corps, "Intelligence in Eighth Army", 10 January 1944; Memorandum from Lt. DM Healy to GSO 2 Int, I Cdn Corps, "The German IO at Eighth Army HQ", 23 January 1944.

this to gain practical artillery intelligence experience.³¹⁰ 5 CAD also relieved the 8th Indian Division by 9 February 1944 and then was withdrawn too in March 1944.

During its time on the Adriatic sector, I Canadian Corps intelligence gained important experience in gathering information from its subordinate formations and compiling it into a wider understanding of the enemy on its front. It is evident that V Corps intelligence conducted a fairly good handover to I Canadian Corps intelligence as there is almost an imperceptible difference in both format and content between V Corps INTSUMs written in late January 1944 and I Canadian Corps INTSUMs which began in early February 1944.³¹¹ By 2 February 1944, the Canadian Corps HQ began daily conferences on the situation at the front, including intelligence briefings by the GSO 2 Int or his representative. Further, as they were then in charge of a portion of the Adriatic front, they began planning patrolling activity. The Corps HQ also began a series of study periods and issuing training instructions as staff personnel and commanders continued to develop themselves, their HQs, and their troops to improve and refine their procedures.³¹² As discussed earlier, February 1944 was an important period to determine if 1st Para Div was still on the Canadian Corps front. Working in close conjunction with 1 CID, 5 CAD and neighbouring formations, I Canadian Corps intelligence gained vital experience in ORBAT analysis and fusing its higher-level sources, including information provided by Eighth Army, with reporting coming in from subordinate formations.³¹³ Another fortuitous turn of events was that I Canadian Corps intelligence had the opportunity to work with experienced wireless intelligence (WI) professionals. #105 SWS, a Type "B" veteran British Y service unit with wide experience in North Africa was attached to

³¹⁰ LAC, RG 24, Vol. 14315 - WD #1 AGRA September 1941 - April 1944 - "Report by BM 1 Cdn AGRA on Attachment to HQ 5 AGRA and HQ 1 AGRA (V Corps, Eighth Army), Period 24 November to 4 December 1943". Canadian AGRA officers were attached to V Corps from 28 November to 4 December 1943. During this period, they learned that the Germans were utilizing camouflage very well, making air photo interpretation very difficult. They also grasped the most up-to-date techniques for counter-battery work, including the use of Air OPs, air photos, and the standard flash spotting / sound ranging methodologies.

³¹¹ LAC, RG 24, Vol. 14077 - 2nd CIB WD - See V Corps and I Canadian Corps INTSUMs that were preserved in 2 CIB's WD.

³¹² LAC, RG 24, Vol. 13685 - I Canadian Corps WD, February 1944. The study periods and training instructions would examine such things as how to conduct creeping barrages, proper planning for start lines for offensive action, fireplanning, planning for ground-air operations, counter-battery and counter-mortar procedures, training for opposed river crossings, and signal security procedures, to name the most important.

³¹³ LAC, RG 24, Vol. 13685 - I Canadian Corps WD, February 1944 - INTSUM #11, 3 February 1944; INTSUM #12, 4 February 1944.; INTSUM #19, 13 February 44; INTSUM #15, 7 February 1944; INTSUM #24, 20 February 1944.

I Canadian Corps throughout its service on the Adriatic front.³¹⁴ By 10 March 1944, #105 SWS also began training #1 Cdn SWS, Type "B", when both units moved to the Liri Valley to conduct WI activities on the Cassino front.³¹⁵

Other Canadian Corps HQ intelligence elements gaining valuable experience was the I Canadian Corps Counter-Battery Office (CBO) and the Corps Survey Regiment. On 4 February 1944, the Canadian CBO took over the daily CBO INTSUM from V Corps, adopting the same format and content as its V Corps peers.³¹⁶ These documents outlined the enemy's artillery activity across the Corps front, noting the number of shell reports (SHELREPs) supplied by units that day, the enemy's artillery activity including suspected types of shells, bombardments that had been carried out by Canadian Corps artillery, the suspected locations of enemy batteries, how these were located (i.e., air photos, aerial reconnaissance, Air OP, flash spotting, sound ranging), estimated enemy artillery, and building a more comprehensive listing and location of Hostile Batteries (HB) along the front. An important point to note was that Corps intelligence was also gaining experience with working with Air OPs on a daily basis. In fact, the Canadian Corps worked with the Air OP squadron that would operate with them throughout the Liri Valley battles, Number 657 Air Observation Post Squadron, RAF. As such, Corps intelligence personnel not only received practice with regards to compiling daily patrol activity, WI and PW reporting into one summary, they received experience integrating air reconnaissance information.³¹⁷ By late February 1944, I Canadian Corps CBO was attaining strong cooperation from units who were providing SHELREPs and shell fragments on a regular basis, allowing the CBO to build up their understanding of the German artillery activity on the Corps front.³¹⁸ Of course, the intelligence provided by the CBO was not always perfect nor was the enemy artillery situation always clear. For example, the Canadian Corps INTSUM on 11 February 1944 remarked that "...enemy shelling (has) not been heavy during the last few days. In order to confuse our counter battery office staff and

³¹⁴ LAC, RG 24, Vol. 13685 - I Canadian Corps WD, February 44 - I Cdn Corps ORBAT, 24 February 1944.

³¹⁵ Gates, *I Was a Spy of the Airwaves*, 49-50.

³¹⁶ LAC, RG 24, Vol. 14077 - 2nd CIB WD. See V Corps and I Canadian Corps CBO INTSUMs that were preserved in 2 CIB's WD.

³¹⁷ LAC, RG 24, Vol. 14077 - 2nd CIB WD. See Counter Battery Office - I Cdn Corps, Daily CB Intelligence Reports, 4 - 29 February 1944.

³¹⁸ LAC, RG 24, Vol. 14084 - 3rd CIB WD - Counter Battery Office - I Cdn Corps Daily CB INTSUM #21, 24 February 1944.

our sound rangers, he (has) been firing nearly everything he owns at once."³¹⁹ By 7 March 1944, I Canadian Corps, its auxiliary troops, and 5 CAD were pulled out of the Adriatic sector and into Eighth Army's reserve. Once out of the line, I Canadian Corps HQ, including its intelligence cadre, began planning for the upcoming Liri Valley battles. Overall, I Canadian Corps personnel quickly and skillfully adopted the intelligence doctrine from Eighth Army and their experiences on the Adriatic sector had great utility in helping the Corps intelligence cadre to practice their craft.

The Development of 5th Canadian Armoured Division Intelligence Prior to the Liri Valley Campaign

Unfortunately, 5 CAD's intelligence cadre had a completely different experience than that of 1 CID or I Canadian Corps. Upon its arrival in Italy, 5 CAD seemed to have the odds stacked against it. Both Eighth Army commanders, Montgomery and then Leese, were unenthusiastic about 5 CAD's arrival in theatre, as they thought that the last thing they needed was another armoured division, a formation viewed as impractical on Italian terrain.³²⁰ What was more, many I Canadian Corps troops, especially 5 CAD, were slated to take over British equipment which had been left in theatre, but much of this equipment, especially tanks, was found to be unsuitable. This shortcoming had significant consequences as it would take until April 1944 before 5 CAD was fully and properly equipped and ready to conduct full training activities as a complete armoured division.³²¹

The story of 5 CAD's intelligence organization is one of neglect, inexperience, and just plain bad luck. There had been warning signs that 5 CAD's intelligence organization was having serious difficulties before the Liri Valley battles. 5 CAD was composed of the 11th Canadian Infantry Brigade (11 CIB), 5 CAD's only infantry brigade, and 5th Canadian Armoured Brigade (5 CAB). As 5 CAB's armoured units continued to equip, 5 CAD's infantry units needed experience, which led to 11 CIB being sent to the Adriatic sector by early January 1944. A cursory glance at 11 CIB's WDs in November and December 1943 seems to indicate that its

³¹⁹ LAC, RG 24, Vol. 13685 - I Canadian Corps WD, February 1944 - INTSUM #18, 11 February 44.

³²⁰ Cessford, "Hard in the Attack", 272-274.

³²¹ Cessford, "Hard in the Attack", 274-276.

intelligence sections were on the right track. Intelligence personnel were sent as staff learners with 2 CIB, scout platoons were formed and exercises held to increase patrolling efficacy.³²² But a closer comparison of 11 CIB's WDs in January to April 1944 with 1 CID's more experienced brigades reveals the gap of intelligence capability between these formations. 1 CID's brigade WDs were full of active and detailed discussion of the German formations and units opposite their fronts and attempts to gather more information on the enemy. Conversely, these discussions are notably absent 11 CIB's and 5 CAD's WDs.³²³

Once it arrived in the Adriatic sector, 11 CIB kept up an active patrolling policy. Indeed, in early March 1944, there was a triumphalist statement that the brigade's units were "dominating the front." However, barely any mention was made in the WD about identifying the German units on the brigade's front, discussions on German ORBATs were practically non-existent, and the WDs rarely mentioned attempts to capture PWs.³²⁴ Certainly active patrolling helped to seize the initiative from the enemy, but trying to dominate No-Mans Land was insufficient and missed the whole reason why units patrol in the first place – to gather vital information on the enemy, fuse the patrol reports together, and analyze it to build a strong picture of the enemy. There was limited evidence that 11 CIB's patrolling policies prioritized intelligence collection. In fact, 11 CIB did not even capture their first PW until 2 March 1944. The PW was described simply as a "Yugoslavian", and no attempt seems to have been made to identify the PW's unit at all!³²⁵ 5 CAB's WDs were no different. 5 CAB, which arrived in the Adriatic sector with 5 CAD in early February and departing in early March, conducted some patrolling but its main concern was to determine the "tank going" for sectors it might have to advance over, not to develop a detailed understanding of German ORBATs.³²⁶

³²² LAC, RG 24, Vol. 14158 - 11 CIB WD - WD Entries November - December 1943.

³²³ See War Diaries: LAC, RG 24, Vol. 14076 - 1st CIB WD; LAC, RG 24, Vol. 14077 - 2nd CIB WD; LAC, RG 24, Vol. 14084 - 3rd CIB WD. For example, 2 CIB's WD notes on 4 February 1944, a Seaforth Highlanders patrol captured a German PW, the first in quite sometime. The PW was quickly interrogated at the Seaforth HQ and he revealed that he was from 7 Company, II Bn, 3 Para Regt, and that his company's strength was now at 70 men, the company commander had been killed at Ortona and the company had been led by a staff sergeant since then. He even disclosed where the companies of his battalion were. The PW died several hours later of his wounds. Within 11 CIB's WDs from January to May 1944, there is barely any discussion on what German units or formations were on 11 CIB's front or PW identification.

³²⁴ LAC, RG 24, Vol. 14158 - WD 11 CIB; LAC, RG 24, Vol. 14159 - WD 11 CIB; LAC, RG 24, Vol. 14065 - WD 5 CAB.

³²⁵ LAC, RG 24, Vol. 13796 - 5 CAD WD - WD Entry, March 1944.

³²⁶ LAC, RG 24, Vol. 14065 - 5 CAB WD - "Patrol Policy", 20 February 1944.

5 CAD's WDs also demonstrate a conspicuous absence of German ORBAT discussions.³²⁷ As such, 5 CAD's intelligence cadre demonstrated a systemic inability to conduct proper ORBAT analysis even before the Liri Valley battles would expose glaring deficiencies in the division's intelligence organization.

A red flag should have been raised during 11 CIB's first major operation near the Arelli River Valley on 17 January 1944. General Leese ordered V Corps to conduct a limited offensive to pin German reserves down and better define German ORBATs on the eastern coast. 11 CIB was tasked to accomplish this. Several days before conducting the operation, 11 CIB relieved 3 CIB and the inexperienced brigade began three days of extensive patrolling that were largely unsuccessful in defining enemy strongpoints, a failure that impeded the future artillery program from hitting targets effectively. Poor, inaccurate maps, the blight of all Allied operations in Italy, were utilized but, surprisingly, even the gridded air photos were "inaccurate", which suggests that units were inexperienced in utilizing this form of navigation aid. What was more, 11 CIB was thrown into an offensive against a highly trained and motivated formation, 1st Para Div. Coupled with this and a series of piecemeal attacks, it spelled disaster for 11 CIB,³²⁸ as its inexperienced forces were cut to pieces by the well-planned German defensive system. Another attack by 11 CIB was ordered, this time on 30-31 January 1944, with similar disastrous results.³²⁹ These raids gained little ground, captured no PWs and gleaned little information, other than that 1st Para Div remained in the area.

It is unclear why 5 CAD arrived in the Mediterranean theatre with such a mediocre intelligence organization. A cursory look at the WDs of 5 CAD from January to December 1943 shows that some intelligence training did occur, but, unlike 1 CID, there seems to be an absence of courses run by the division and brigade intelligence staffs.³³⁰ It could very well be that due to the need to get the formation equipped and bring it up to a basic standard of training³³¹ caused specialist training such as intelligence to fall to the wayside. Moreover,

³²⁷ LAC, RG 24, Vol. 13796 - 5 CAD WD.

³²⁸ Elliot, *Scarlet to Green*, 195; Cessford, "Hard in the Attack", 282-285.

³²⁹ Cessford, "Hard in the Attack", 285-286.

³³⁰ LAC, RG 24, Vol. 13796 - 5 CAD WD, January – December 1943.

³³¹ Douglas Delaney, *The Soldier's General: Bert Hoffmeister at War* (Vancouver, BC: UBC Press, 2005), 121-122.

commanders and staffs were generally unfamiliar about how to integrate intelligence into their decision-making processes. What was more telling was an odd incident on 19 February 1944. 5 CAD's WD outlines that the then GOC of 5 CAD, Maj. Gen. Eedson Louis Millard (E.L.M.) Burns, the future I Canadian Corps commander, discussed with the divisional IO, Lt A.C. Laban, and the divisional air photo interpreter the uses which might be made of air photos in briefing patrols. Burns even arranged the air photo interpreter to give instructions on this subject to the battalion IOs.³³² That a divisional commander would need to explain such a minor issue to an IO who should have understood such a simple intelligence principle is disturbing. Unsurprisingly, Laban was removed from duty by 12 May 1944 and given an "adverse report" which effectively ended his intelligence career; he was replaced by Lt R. Pootmans, in whom the GSO 2 Int for the Corps, Maj Kingsmill, had much more faith.³³³

By the end of March and into April, some minor improvements were made to 5 CAD's intelligence organization. 11 CIB ran a several-day-long Scout and Sniper School commencing on 27 March 1944.³³⁴ A wider intelligence course was slated to be run by 5 CAD on 27 May, but it was cut short due to the Liri Valley offensive. Further, while 11 CIB was on the Cassino front for several weeks from 9 April to 5 May 1944, two INTSUMs were issued that demonstrated that the brigade's intelligence staff were beginning to improve their ability to conduct ORBAT analysis, in particular how to conduct identification of PWs captured by their troops.³³⁵ 5 CAB also conducted a series of afternoon intelligence study periods in mid to late March 1944. Although these study afternoons covered a broad spectrum of intelligence material, including air photos, German organization and equipment, reporting pro formas, patrols and patrol reports, and PW handling and document exploitation, they did not compare to the intelligence schools run by the brigades in 1 CID on the Adriatic sector or the intelligence courses run by the 1 CID's intelligence cadre in April. Further, these afternoons

³³² LAC, RG 24, Vol. 13796 - 5 CAD WD - WD Entry, February 1944.

³³³ LAC, RG 24, Vol. 10781 - File 224C1.013(D23) - Major CD Kingsmill GSO 2 (Int), I Cdn Corps "Intelligence Report on Adolph Hitler Line Offensive, 12 May to 5 June 1944", 8 June 1944; LAC RG 24 Vol.12328 - File Memo written by Major CD Kingsmill, 12 May 1944; LAC RG 24 - Vol.12328 - Letter to LCol Felix Walter, CMHQ from Major CD Kingsmill, 24 June 1944. Walter would write back to Kingsmill on 8 July 1944 that he was unsurprised that Laban had not stood up to the "wear and tear" and Walter had tried to get him a posting at the War Office for more experience before he left for Italy.

³³⁴ LAC RG 24 Vol 14158 - 11 CIB WD - WD Entry, 27 March 1944.

³³⁵ LAC, RG 24, Vol. 14158 - WD 11 CIB - 11 CIB INTSUM #1, 15 April 1944; 11 CIB INTSUM #2, 23 April 1944.

were run over the course of two weeks, allowing for skill fade, and the instructors were IOs and Int NCOs from 5 CAB or 5 CAD, thus exacerbating the inexperience in the division and 5 CAB.³³⁶

5 CAD's intelligence organization largely managed itself until the Liri Valley operations, with little guidance by the Corps, which was detrimental to intelligence development in the division. Why this institutional neglect existed remains unclear, though the division's intelligence development should be viewed in the context of the poor staff procedures within the formation before the Liri Valley. What is clear from the division's WDs was that any slight improvements in 5 CAD's intelligence system were severely hampered by a series of personnel changes that led to a lack of consistent senior intelligence leadership within the formation. In fact, 5 CAD's intelligence personnel selection system was completely defective before the Liri Valley. Available evidence suggests that standard operations staff officers were often temporarily chosen to fill many intelligence positions in 5 CAD, as opposed to I Canadian Corps or 1 CID where once a person was selected for intelligence, he remained as an IO for an extended period. Of course, there was nothing wrong in choosing staff officers to become IOs as long as the people chosen for intelligence duties were properly selected and, perhaps most importantly, given sufficient time to professionalize in the trade, i.e. over several years, not months. Unfortunately, this does not appear to have been the case and 5 CAD suffered the same problem that had plagued British formations and units prior to the war, where senior officers were unwilling to fill intelligence positions or staffed them in an ad hoc basis.

This is demonstrated in a number of examples. In January 1944, 5 CAD's GSO 3 Int at the time, Capt C.G. Kinsey, was attached to XIII Corps and 1 CID for two weeks. However, Kinsey was replaced by Capt R.M. Rawlinson in early March 1944,³³⁷ thus eroding any corporate knowledge that had been built in the division's senior intelligence cadre. That one of 5 CAD's divisional IOs, Lt A.C. Laban (mentioned above), was incompetent did not help matters. 5 CAD's GSO 3 Int was changed once again on 18 April 1944, with Maj H.W.F. Appleton, the GSO 3 Ops in 5 CAB who had up until recently concerned himself with organizing infantry-tank

³³⁶ LAC, RG 24, Vol. 14065 - 5 CAB WD - See "Intelligence Study Afternoons 1 - 6", 14 - 29 March 1944.

³³⁷ LAC, RG 24, Vol. 13796 - 5 CAD WD - WD Entry, January 1944.

exercises, replacing Capt Rawlinson, who had been the GSO 3 Int for only two months. Rawlinson left to become 5 CAB's GSO 3 Ops.³³⁸ Though Appleton had conducted some intelligence related activities, such as helping to build terrain cloth models, his overall intelligence experience was negligible.³³⁹

Further inconsistent leadership occurred at the brigade level as well. On 4 March 1944, Capt R.T. Currelly, 11 CIB's IO, left for a three-month air photo interpretation course, and Lt W.A. MacDonald, the IO for the Cape Breton Highlanders, assumed the brigade IO duties. However, on 10 May, now Capt MacDonald was promoted into a non-intelligence position, GSO 3 Ops in 11 CIB, leaving another inexperienced IO from the Irish Regiment, Lt C.H.A. Spencer, as brigade IO on the cusp of the Liri Valley offensive.³⁴⁰ The lack of intelligence expertise in 11 CIB was likely exacerbated due to the brigade not coming under Canadian Corps command again until 9 May 1944, two days before the beginning of the Liri Valley operations. Unlike 11 CIB, 5 CAB seems to have had consistent intelligence leadership under Lt, later Capt, Cowley since at least December 1943.³⁴¹ However, intelligence performance within 5 CAB during the Liri Valley battles would be still uninspiring. In the end, despite his best efforts to train his IOs, Cowley could not repair the institutional failings within his brigade or division. Overall, it is very possible that the general inconsistent intelligence leadership within 5 CAD may have reflected the "revolving door" of leadership which the formation had experienced for the past six months, in particular the rotation of the GOC position between Simonds, Burns, and later Maj. Gen. Bert Hoffmeister.³⁴²

To his credit, the GSO 2 Int at Corps, Maj Kingsmill, noted the serious problems emerging within 5 CAD's intelligence organization. Unfortunately, Kingsmill was not consulted about Appleton's appointment, for as he later stated, if the issue had been discussed with him, he could have selected an excellent and experienced IO from 1 CID for the GSO 3 Int position in 5

³³⁸ LAC, RG 24, Vol. 14065 - 5 CAB WD - WD Entry, March 1944; LAC, RG 24, Vol.13796 - 5 CAD WD - WD Entry, April 1944.

³³⁹ LAC, RG 24, Vol. 10781 - File 224C1.013(D23) - Major CD Kingsmill GSO 2 (Int), I Cdn Corps "Intelligence Report on Adolph Hitler Line Offensive, 12 May to 5 June 1944", 8 June 1944. Hereafter Kingsmill, "Intelligence Report on Adolph Hitler Line". Kingsmill noted after the Liri Valley battles that Appleton was a conscientious worker and would eventually make a decent GSO 3 Int. This statement was proven incorrect as Appleton was replaced by 2 CIB's IO, Capt Gray, on 20 June 1944.

³⁴⁰ LAC, RG 24, Vol. 14158 - WD 11 CIB – WD Entry, May 1944.

³⁴¹ LAC, RG 24, Vol. 14065 - 5 CAB WD.

³⁴² Delaney, *The Soldier's General*, 121-122.

CAD. Kingsmill even approached Lt. Gen. Burns, then the Corps commander at that time, about 5 CAD's intelligence problems and Appleton's recent appointment. However Burns, who often lacked the will to confront individuals who were incompetent or out of line,³⁴³ informed Kingsmill that the decision was the division commander's, Maj. Gen. Hoffmeister, to make, and there was no reason to complain until things went wrong.³⁴⁴ Hoffmeister, who was recently appointed as GOC of 5 CAD in March 1944 and who had no previous armoured command experience, was likely unwilling to make major changes in the division until he knew more about the individuals and procedures currently in place in the formation.³⁴⁵

With Burns unwilling to interfere with staff issues in 5 CAD, Kingsmill and the corps intelligence staff did what they could to get Appleton acclimatized to intelligence. Appleton was attached to I Canadian Corps to learn in the GSO 3 Int position there for several days, while Kingsmill's deputy, Capt Dewar the GSO 3 Int for the Corps, filled Appleton's position in 5 CAD. Appleton was introduced to all the intelligence resources of the corps and Eighth Army, and then sent for a day to the Fifth US Army PW Cage for interrogation familiarization.³⁴⁶ However, by late April 1944, I Canadian Corps HQ, in particular its intelligence cadre, was in the midst of planning for its first major operation, the breaking of the Hitler Line and a subsequent armoured exploitation down the Liri Valley. It was too late to do proper personnel selection and training for 5 CAD's intelligence cadre with less than a month before this operation. The truth of the matter was that 5 CAD's mediocre intelligence organization should have been addressed as soon as 5 CAD arrived in the Mediterranean theatre, in particular after 11 CIB's poor showing at Arielli and 5 CAD's overall inability to conduct proper ORBAT analysis on the Adriatic sector became apparent. Kingsmill could take partial blame for this, though he was likely consumed in building a basic level of competency in I Canadian Corps' intelligence cadre and providing intelligence for the Corps' upcoming operations. Further, without Burns's approval to intervene in 5 CAD's affairs, there was little Kingsmill could do. It should be noted that this lack of intelligence experience likely reflected the wider lack of staff experience within 5 CAD in general. Despite attempts to mitigate this

³⁴³ Delaney, *Corps Commanders*, 59.

³⁴⁴ Kingsmill, "Intelligence Report on Adolph Hitler Line".

³⁴⁵ Delaney, *The Soldier's General*, 121-122.

³⁴⁶ LAC, RG 24, Vol. 13685 - I Canadian Corps WD, April - May 1944.

lack of experience with divisional-level exercises in April, these exercises demonstrated that the divisional staff still had much to learn.³⁴⁷ With hindsight, a number of individuals, including Burns, Hoffmeister, 5 CAD's GSO 1 LCol H.H. Angle (who was the senior staff officer in 5 CAD) and 5 CAD's brigade commanders, Brig T.E. Snow (11 CIB) and Brig J.D.B. Smith (5 CAB), and their Brigade Majors (who were in the senior staff officers in the brigade) were all to blame for not properly preparing 5 CAD's intelligence cadre, and their HQ staffs, for the upcoming Liri Valley battles. 5 CAD's inexperience would prove to be a detriment during the upcoming Liri Valley offensive.

³⁴⁷ Delaney, *The Soldier's General*, 129.

Chapter Four: Intelligence Planning for the Liri Valley Campaign

The principle enemy defences are those comprised in the Hitler Line. These may be stoutly defended; or, on the other hand, the enemy may not be able to find troops to garrison them effectively, or his troops may be demoralized. An estimate of what the enemy could find by way of garrison, or other reserves, after three days of fighting by XIII Corps and flanking formations, is required from 'I'. In any case, we must prepare definite plans for breaching it. – Lt. Gen. E.L.M. Burns, GOC, I Canadian Corps, 11 April 1944³⁴⁸

From January to March 1944, there were three major Allied attempts by the Fifth US and Eighth British Armies to push towards Rome in the western Tyrrhenian Sea sector, later referred to as the First to Third Battles of Cassino. This also included the unsuccessful attempt to conduct a seaborne flanking at Anzio on 22 January 1944, leading to the VI US Corps being bottled up in a precarious bridgehead. The objectives of these offensives were not just the capture Rome, but also to prevent as many German formations from leaving the Mediterranean theatre so as to prevent them from interfering with Operation OVERLORD, the opening phase of the Northwest European campaign, planned for June. The lack of Allied success in the Cassino sector led to a drawing down of offensive activity by 25 March 1944 and a regrouping of Allied formations. On 2 April, during a conference with his senior commanders, GOC of the Allied Armies in Italy (AAI), British General Harold Alexander, stated that only an Army Group offensive would crack the Cassino sector and capture Rome. Operation DIADEM, assisted by heavy air support, envisioned Eighth British Army pushing through the Liri Valley, the shortest route to Rome, Fifth US Army advancing over Highway 7 along the western coast, and VI US Corps, still bottled up at Anzio, breaking out to link up with the Eighth and Fifth Armies. The object was to destroy the right wing of the German Tenth Army, push the Fourteenth German Army north of Rome allowing for a rapid capture of that city, and subsequently then to push to the Pisa-Rimini Line.³⁴⁹

The fact that the Liri Valley was the shortest route to Rome was as obvious to the Allies as it was to the Germans. Field Marshall (Generalfeldmarschall) Albert Kesselring, German

³⁴⁸ LAC, MG 31 G6, Vol.1 - Burns Fonds (Hereafter "Burns Fonds") - "Planning Notes - Operation 'HONKER' - Skelton Appreciation by GOC I Cdn Corps", 11 April 1944.

³⁴⁹ Jones, "Intelligence and Command", 141-142; Delaney, *The Soldier's General*, 132; Nicholson, *The Canadians in Italy*, 389-390; Cessford, "Hard in the Attack", 307-308.

Commander-in-Chief South, had ordered the preparation of a series of defences up the Italian peninsula in order to defend Rome. The Gustav Line, utilizing the Rapido - Gari Rivers as natural barriers, was the latest in a series of defensive switchlines which had been prepared on key terrain to delay the Allied advance. Approximately eight miles west of the Gustav Line was the Hitler Line, renamed the Senger Line in January 1944 on Hitler's insistence,³⁵⁰ the defences of which will be discussed below. Eighth Army's plan for DIADEM, Operation HONKER, called for XIII Corps to open the offensive into the Liri Valley with II Polish Corps and X British Corps, respectively, advancing on XIII Corps right flank in the Apennine Mountains. I Canadian Corps was placed into Eighth Army's operational reserve, ready to exploit any success in the Liri Valley, in conjunction with or without XIII Corps. I Canadian Corps also was to take part in a wide-scale deception operation by setting up a dummy headquarters near Salerno, complete with false signals traffic, and act as if the Corps was preparing to make a seaborne landing at Civitavecchia, northwest of Rome. Due to Kesselring's concern about the possibility of the Allies conducting another seaborne operation, and his lack of intelligence capability, this deception operation was successful.³⁵¹ Leese hoped that XIII Corps could break the Gustav Line and rush the Hitler Line before it could be properly manned, with I Canadian Corps exploiting to link up with VI US Corps; however, the more realistic scenario in most commanders' minds was that the Canadian Corps would have to assault the Hitler Line, possibly with the assistance of XIII Corps.³⁵² The attack, the fourth Allied effort to break through the Cassino sector, would commence on 11 May 1944.

Historian Kevin Leslie Jones believes that Leese's entire conception of his Liri Valley offensive was flawed from the beginning. Rather than it being intelligence-led, planning was chiefly governed by what Leese perceived as the operational strengths of his Army, i.e., the execution of set-piece battles which utilized Eighth Army's material strength in tanks (an estimated 2000 tanks in all), artillery, and air power.³⁵³ Further Leese overlooked topographical obstacles that stood in the way of subsequent armoured exploitation over

³⁵⁰ LAC, "German Military Documents, 4 January - 4 June 1944", 9-10.

³⁵¹ Nicholson, *The Canadians in Italy*, 390-391; LAC, "German Military Documents, 4 January - 4 June 1944", 25-42.

³⁵² Cessford, "Hard in the Attack", 307-308.

³⁵³ Jones, "Intelligence and Command", 148-149, 169.

countryside that was ill-suited for cross-country vehicular traffic. Highway 6 and most roads along Eighth Army's axis of advance were in poor shape, and the Liri Valley was choked with numerous streams, deep wadis, irrigation ditches, fallen trees, and tree stumps. Buttressed to the north by Monte Cassino and to the south by the Aurunc Mountains, the valley at times was just three to four miles wide, which severely impeded the ability for one corps, let alone two, to manoeuvre effectively. The result would be nightmarish traffic jams, impeding any rapid exploitation. Jones also believes that Leese disregarded a push through the Apennine Mountains in order to flank the Hitler Line even though he had the infantry forces to do so.³⁵⁴

These higher-level operational decisions were beyond the Canadian Corps commander, Lt. Gen. E.L.M. Burns, and the Canadian Corps HQ planning and intelligence staffs. Their job was to follow orders and implement the overall intent of the Eighth Army, and these orders were to utilize the Liri Valley as their main axis of advance. Burns, who had been appointed GOC of I Canadian Corps on 20 March 1944, remains a fairly controversial figure in Canadian military history. Although undoubtedly he possessed an intensely intellectual and analytical mind, having written several academic articles on the military profession in the interwar years, his lack of experience in commanding a formation in battle, his inability to impose his will on or to inspire his subordinates, his hesitance to confront individuals who were incompetent or out of line, and his cold and distant personality often put him at odds with his British superiors and his Canadian subordinates and eventually led to his dismissal in November 1944.³⁵⁵ Yet, Burns appears to have had a fairly good understanding of intelligence and how it could be integrated into his decision-making processes. This is evidenced by his interwar experiences as the Officer Commanding (OC) the Geographical Section at the Department of National Defence in Ottawa from 1931 to 1936 where he helped develop procedures to more effectively utilize air photos and his emphasis early in the war on building intelligence capability at CMHQ.³⁵⁶ Burns, a highly rational thinker who took into consideration as much

³⁵⁴ Jones, "Intelligence and Command", 143-145.

³⁵⁵ Jack Granatstein, *The Generals: The Canadian Army's Senior Commanders in the Second World War* (Calgary, Alberta: University of Calgary Press, 2005), 120, 127-134, 141-143; E.L.M. Burns, *General Mud: Memoirs of Two World Wars* (Toronto: Clarke, Irwin and Company, Ltd., 1970), 132-133. ; Delaney, *The Soldier's General*, 116-117, 178.; Delaney, *Corps Commanders*, 58.

³⁵⁶ Elliot, *Scarlet to Green*, 91, 119-120; Burns, *General Mud*, 91; Skaarup, *Out of Darkness*, 59-60.

information as possible before making any decision, was willing to listen to evidence and appraisals provided by his intelligence staff. Fortunately, Burns inherited a reasonably competent corps intelligence staff who served him well.

On 7 March, I Canadian Corps was relieved from the Adriatic sector by V British Corps and placed into the Eighth Army's reserve. Once the Corps relief was complete, I Canadian Corps HQ staff, especially the intelligence cadre, would begin to plan for the Liri Valley offensive.³⁵⁷ Only two days after I Canadian Corps was off the Adriatic line, three key staff officers of the Canadian Corps, Maj W.G.M. Robinson, GSO 2 Ops, Maj Kingsmill, GSO 2 Int, and Maj W.B.G. Reynolds, GSO 2 Air, departed on a "special mission" for the Corps Commander.³⁵⁸ It is almost certain that these officers visited Eighth Army in what would be a series of liaison trips to the higher formation for the latest intelligence on the Gustav and Hitler Lines.³⁵⁹ Kingsmill would also regularly interact with XIII Corps and the Fifth US Army to gain the latest information from those formations.³⁶⁰ These visits led to a succession of intelligence appreciations by Kingsmill from 13 March to 27 April 1944, which brought together the latest information on the Gustav and Hitler Lines, with a special focus on the latter.³⁶¹ This information, much of which was disseminated to 1 CID and 5 CAD, included a large number of maps of the Liri Valley; defence overprints based on air photo sorties over the Hitler Line which gave as detailed as possible outlines of enemy positions and weapons emplacements along the line, sometimes down to individual MG and artillery emplacements; terrain analyses (i.e., "going maps") for tanks in the Valley; information on key bridges and crossroads, detailed maps on

³⁵⁷ LAC, RG 24, Vol. 13686 - I Canadian Corps WD, March 1944 (Hereafter LAC, I Canadian Corps WD) - "Staff and Command List - I Cdn Corps", 23 March 1944. The intelligence staff for I Canadian Corps in March 1944 and throughout the Liri Valley offensive included Maj Kingsmill, GSO 2 Int, Capt W.S. Dewar, GSO 3 Int, Capt R.L. Hancock, IO, Capt D.M. Healy, Lt J.A. Vaughan, Capt J.A. Phillip (IO Interrogator), and Lt D.G.E. Molnar (IO Interrogator). The intelligence staff for 1 CID included Capt R.D. Prince, GSO 3 Int, Capt I.T. Burr, Lt K.A. Cottam, and Lt W.F. Goa, IO (Photo).

³⁵⁸ LAC, I Canadian Corps WD, March 1944.

³⁵⁹ Burns Fonds - ELM Burns WD, 17 March 1944. On this day, as Burns prepared to take over Corps command, he visited Eighth Army and its GSO 1 Int, LCol. Donald Prater. Further arrangements were made to send the Canadian Corps intelligence staff for more visits.; LAC, I Canadian Corps WD, 13 March 1944. Maj Robinson, Maj Kingsmill, and Capt W.S. Dewar, GSO 3 Int, left to visit the GSO 1 Int at Eighth Army to gather information about the Cassino front for the Corps Commander.; LAC, I Canadian Corps WD, April 1944. Capt R. Ward in the Corps APIS MIAU (West) returned from Eighth Army on 7 April, in order to collect the latest imagery on the Gustav and Hitler Lines. Capt J Guest, an IO from the Eighth Army, also visited the Canadian Corps intelligence staff later that day.

³⁶⁰ Kingsmill, "Intelligence Report on Adolph Hitler Line".

³⁶¹ LAC, RG 24, Vol. 10753 - I Canadian Corps Intelligence Appreciations, March - April 1944. (Hereafter LAC, I Canadian Corps Intelligence Appreciations).

key river crossing points, and potential fording and bridging sites on rivers that the Corps likely would have to cross such as the Gari - Rapido, Melfa, Liri and Sacco Rivers; estimates on the state of roads within the Liri Valley, in particular Highway 6, and whether engineer work was likely needed for these roads; and traces of potential hostile batteries for counter-battery work.

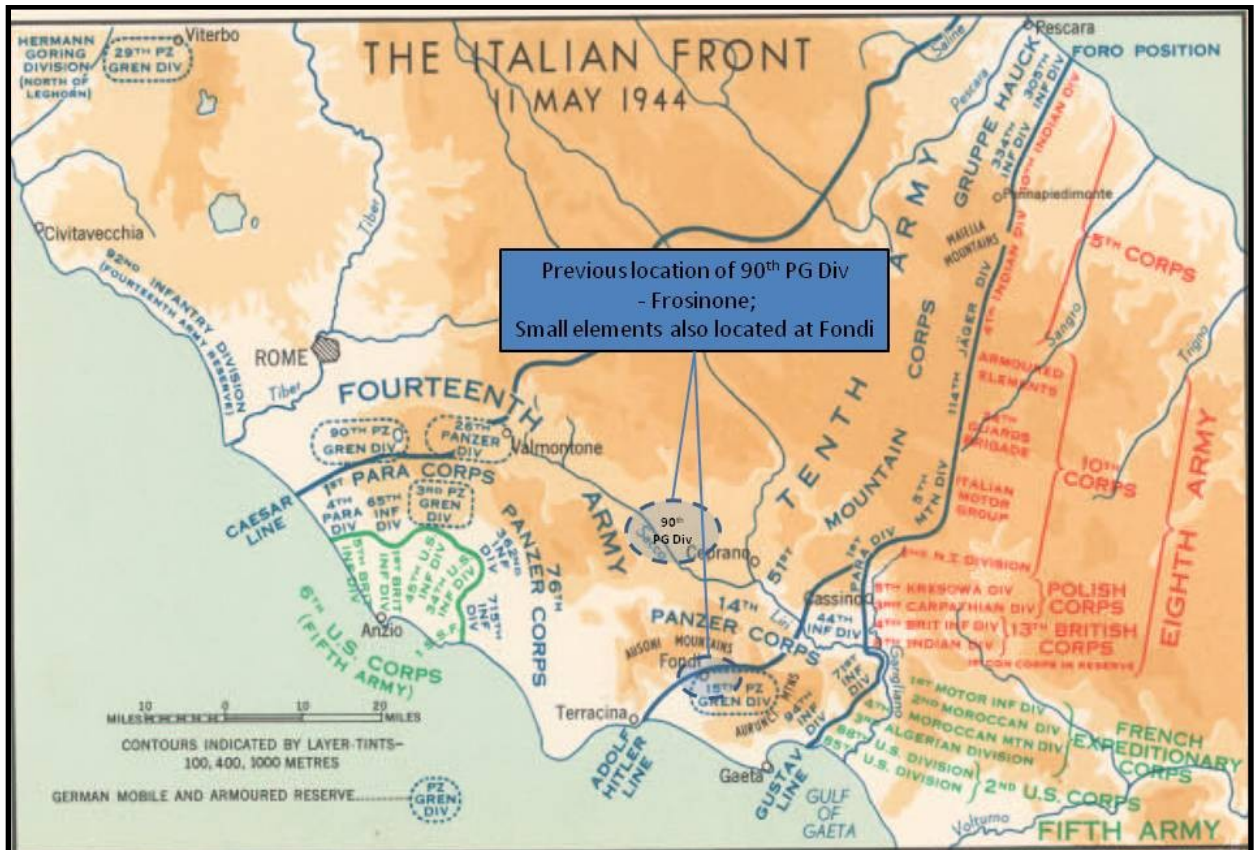


Figure Two: The Italian Front, 11 May 1944 (Source: Nicholson, *The Canadians in Italy*)³⁶²

However, one of the most important aspects of these appreciations was the updated information on enemy ORBATs and potential enemy reaction to an Allied offensive in the Cassino sector. Kingsmill, utilizing the available evidence provided by Eighth Army and XIII Corps, was able to provide an accurate picture of the potential enemy formations that the Canadian Corps would have to face in the coming months. On 13 March, only four days after

³⁶² Nicholson, *The Canadians in Italy*, Map 12, 398. Note that the location of 90th PG Div as of 11 May 1944 was spread out between Ostia and Castel Gandolfo, north of the Anzio bridgehead while small elements were also at Fondi under the Fourteenth Army. The division was previously located at Frosinone just west of Ceprano along the Sacco River after being ordered there to reconstitute in February 1944. See: LAC, "German Military Documents, 4 January - 4 June 1944", 16, 45.

his first initial visit to Eighth Army, Kingsmill issued his first intelligence appreciation which gave the basic overview of the German ORBAT.³⁶³ The main senior German formation was Army Group C, consisting of the Tenth Army which currently held the main southern front facing the Allied Eighth British and Fifth US Armies, and the German Fourteenth Army closely monitoring the VI US Corps at the Anzio bridgehead (see Figure One). Tenth Army had two corps under its command, including XIV Panzer (Pz) Corps as the furthest west corps with a boundary from the Tyrrhenian Sea to the Liri River (which would change several times over the coming months) with LI Mountain (Mtn) Corps on its northeastern flank. Eight Infantry Divisions (Inf Div) and one Panzer Grenadier (PG) Div, 15th PG, were distributed among these Corps along the Gustav Line. Of note, 1st Parachute Division (1st Para Div) was north centred at the town of Cassino.³⁶⁴ 90th PG Div, a well-known adversary which had been severely mauled by 1 CID during the Moro River campaign, was assessed to be in the German Army Group C reserve south of Rome (correct), in a position to counter-attack any thrust up the Liri Valley or to man the Hitler Line (also correct).³⁶⁵ Other German Divisions in reserve which had the potential to counter an Allied assault on the Cassino sector were 26th Panzer (Pz) and 29th PG Divs, currently under 14th Army (correct), and the Hermann Goring Panzer Division. It is almost certain that "sanitized" high-grade SIGINT provided by Eighth Army informed Kingsmill's assessment, since Hinsley notes that a series of Ultra decrypts closely monitored the location, overall strengths and dispositions of all German formations operating in Italy prior to and throughout DIADEM.³⁶⁶

Drawing heavily from Eighth Army and XIII Corps, Canadian Corps INTSUMs continued to give ongoing coverage of the Cassino front and up-to-date information on German dispositions and ORBATs. Unsurprisingly, much ink was spent discussing the 1st Para Div's activities, the fierce defence of Cassino itself, and its assessed reinforcement situation. On 14 March, the Corps INTSUM offered a detailed description of the Gustav Line, based on XIII

³⁶³ LAC, I Canadian Corps Intelligence Appreciations.

³⁶⁴ Kingsmill had his staff create a trace of the assessed formations along the Gustav Line in his 13 March 1944 appreciation. In the south, along the Tyrrhenian Sea, 94th Inf Div was assessed to be along the western coast, with 71st Inf Div further north bordering 15 PG Div. Further north of 15 PG Div was 1st Para Div, followed by 44th Inf Div and then 5th Mountain (Mtn) Div.

³⁶⁵ LAC, "German Military Documents, 4 January - 4 June 1944", 45.

³⁶⁶ Hinsley, *British Intelligence, Vol.3, Part 1*, 199-201; Jones, "Intelligence and Command", 73.

Corps intelligence, and the Hitler Line, based on Eighth Army intelligence. This intelligence outlined that although parts of the Gustav Line had been destroyed by recent Allied offensives in the Cassino area, the Germans were using the terrain to their advantage along this switchline to impede any Allied advance and to strengthen the Hitler Line. Construction of the Hitler Line had commenced in December 1943 and it had been built across a natural route running from the Apennines Mountains in central Italy, through Aquino to Pontecorvo, running to Sant Oliva, through the Aurunci Mountains and finally to the sea. The main defensive area was between Pontecorvo and Aquino, running parallel to the Liri Valley floor. Air photo interpretation had detected a number of anti-tank ditches (by 1 May these were still of concern, but were assessed as not continuous), numerous wire obstacles that ran almost the whole length of the line, and, more concerning, large numbers of unidentified camouflaged objects had been detected. Air photo interpreters were unable to distinguish if these objects were 75mm anti-tank guns in covered tank turrets or MG positions. This was especially true as many of these objects had been earthed over, which made them very difficult to detect from the air. Another concern was that air photo interpretation was unable to detect any minefields.³⁶⁷ Further information on the Hitler Line continued to be provided, including drawings and descriptions of the mobile steel pillboxes Canadian troops would have to face in the near future.³⁶⁸

³⁶⁷ LAC, I Canadian Corps WD, March 1944 - I Cdn Corps INTSUM #33, 14 March 1944; INTSUM #34, 18 March 1944.

³⁶⁸ LAC, I Canadian Corps WD, March 1944 - I Cdn Corps INTSUM #35, 22 March 1944; INTSUM #36, 26 March 1944; INTSUM #37, 27 March 1944; INTSUM #38, 28 March 1944.

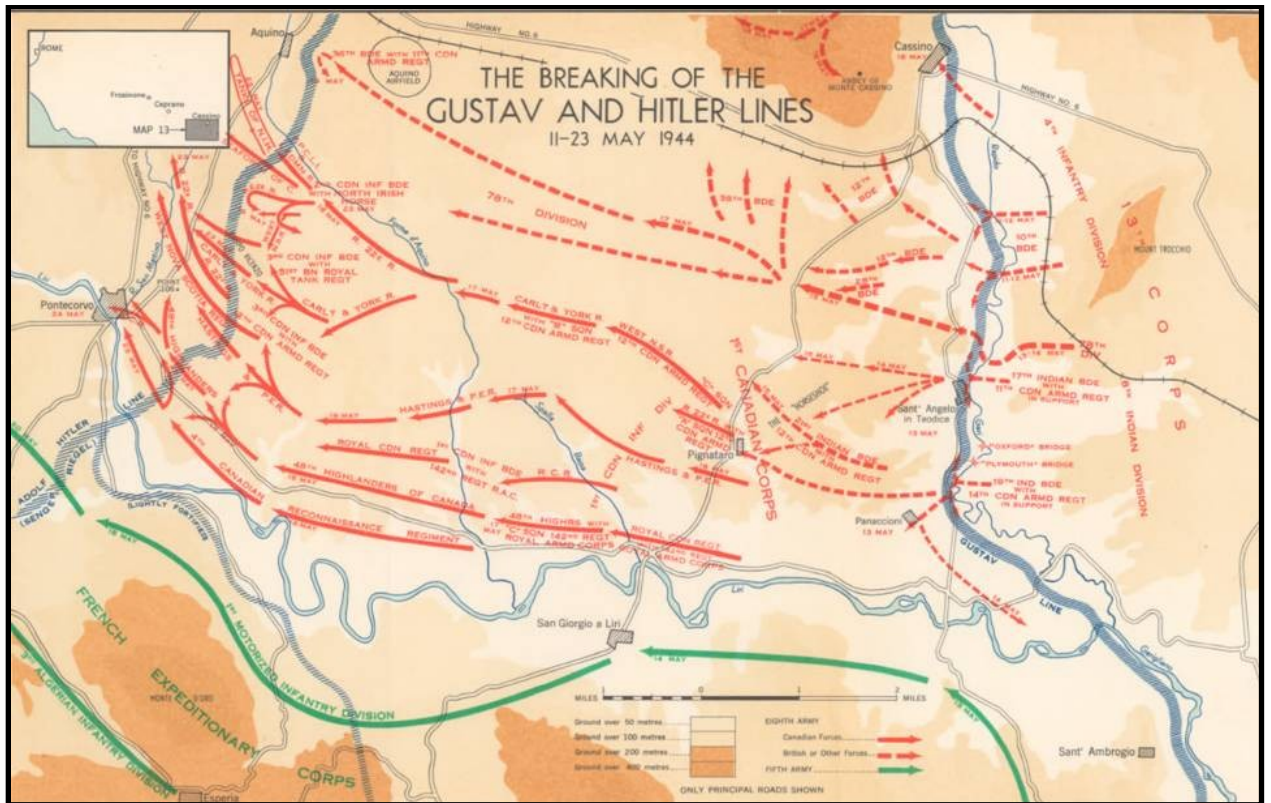


Figure Three: The Gustav and Hitler Lines (Source: Nicholson, *The Canadians in Italy*)³⁶⁹

Canadian Corps intelligence on 31 March outlined that XIII Corps CBO had detected additional artillery and *Nebelwerfers* moving into the Liri Valley. Further, numerous anti-tank ditches had been located in the vicinity of Pontecorvo and Aquino, two towns which would play pivotal roles in the upcoming struggle for the Hitler Line. Corps intelligence also noted there were now well over 100 camouflaged sites spread across the Hitler Line, most of them between Pontecorvo and Aquino. By 1 May, as more photo reconnaissance missions were flown, the number of identified camouflaged sites would grow to almost 200, 114 between Highway 6 and where the Liri River bisected Pontecorvo, with the average depth of the defensive line being approximately 800 yards.³⁷⁰ Air photo analysis had discovered that most permanent defensive structures were likely to be well-camouflaged at or below ground level, being covered by timber or rubble, or being built into the numerous demolished buildings which had been discovered across the line. Air photo missions had defined over 70 "minor

³⁶⁹ Nicholson, *The Canadians in Italy*, Map 13, 424.

³⁷⁰ LAC, I Canadian Corps WD, March 1944 - I Cdn Corps INTSUM #39, 31 March 1944, INTSUM #47, 1 May 1944; Jones, "Intelligence and Command", 160.

defence" locations, including unreinforced MG and anti-tank gun positions. The line was assessed to be a formidable defensive position and as Burns later wrote, the air photo intelligence had been very accurate.³⁷¹

Kingsmill issued another intelligence appreciation circa 15 April 1944.³⁷² In it, he noted that the Anzio bridgehead had a direct bearing on the forces opposing Eighth Army. The enemy at the bridgehead had four infantry and one PG Div, the main Eighth Army front faced five infantry and one PG Divs, while two PG Divs and one Pz Div continued to be in reserve near Rome. Further, and importantly for Canadian Corps planners, no formation was judged to be manning the Hitler Line. Kingsmill then went on to assess the military qualities of the terrain, noting that the Rapido, Forme d'Aquino, Melfa and Liri Valleys all formed natural defence lines for the enemy and that mountains dominated on the sides of the valleys. Further, the water courses running into the Liri River ran at right angles to the Canadian line of advance. This not only rendered the country difficult for tanks, it also would aid enemy delaying actions, a problem further exacerbated by the anti-tank ditches on the Hitler Line. However, it was still believed that the terrain was suitable for armoured movement, an assessment with which Eighth Army and XIII Corps agreed.³⁷³ It would later turn out that these positive appreciations for "tank going" were largely incorrect. In addition, the width of the valley between the Melfa and Liri Rivers – just past the Hitler Line and where armoured exploitation was to occur – was only 8000 yards, though no mention was made of the potential difficulties that this might cause to exploitation operations after the Hitler Line had been breached. However, it was assessed correctly that all bridges were wired for detonation to slow down

³⁷¹ Burns Fonds - Lt Gen ELM Burns "Notes on the Fortifications of the 'Adolph Hitler' Line - Remarks on the Method by Which Such a Line Might be Attacked in the Future", 17 June 1944. Burns wrote that numerous air photo sorties had disclosed the location of practically all the works. It was, however, impossible to determine their character, though it had been guessed that the "camouflaged structures" might be fixed anti-tank gun emplacements, such as the formidable Panther or Mk IV 75 mm tank turrets, or steel cupolas. As discussed in the Canadian Corps INTSUMs, these guns, sited to hit Allied tanks approaching towards Pontecorvo and Aquino, were positioned just above crests and, as predicted, were difficult to see on the ground until within 100 to 200 yards. The steel portable pillboxes for MGs had been described precisely in the INTSUMs, and many were difficult to identify, though a number were disclosed by air photos. Dugouts were easily identified and suppressed by the creeping barrages – the key was for the infantry to closely follow the barrage. The minefields and wire obstacles were found to be rudimentary; the mines were laid in a couple of rows behind the wire, and the wire lines were often narrow belts. The weaknesses of the line were lack of depth, ineffective obstacles, many fire positions lacking overhead protection and the dust kicked up by the heavy barrages impaired the visibility for the weapon operators.

³⁷² LAC, I Canadian Corps Intelligence Appreciations.

³⁷³ Jones, "Intelligence and Command".

any advance. Kingsmill also explained that several portions of the Line were well camouflaged by natural terrain such as orchards. Further, Canadian intelligence continued to struggle to identify the "camouflaged structures" on the line, making it difficult to know which enemy positions were most threatening. Kingsmill also noted that PW interrogation had revealed a delaying position being set up between the Gustav and Hitler Lines. This line, consisting of dug-in weapon pits and a number of 75 mm anti-tank guns, was likely being created to cause delay in order for the Hitler Line to be properly manned. It is possible that Kingsmill's intelligence staff had indentified the switchline which would hold up 1 CID's advance between 16 - 18 May located near Pignataro (see Figure Three) discussed in the next Chapter, but no specific villages were named in the appreciation so it is difficult to confirm this.

This appreciation gave further detailed information on enemy dispositions and ORBATs, which, as more information became available, outlined the complexity of the command relationships of the German formations and units along the Gustav Line. It was now assessed that 44th Inf Div had split its units, with elements being detected along the Liri River sector between 71st Inf Div and 15 PG Div and further north of the Cassino sector between portions of 15 PG Div (which itself had dispersed elements on the Liri Valley / Cassino sector) and 5th Mtn Div. Most German infantry battalions were judged to be in line, with only local reserves available.³⁷⁴ 10th Army was believed to have a total of 60 tanks, 30 (75 mm) assault guns, 60 captured Italian assault guns and 30 self-propelled 88 mm anti-tank guns (SPGs). Only 15 PG Div was assessed to have an available tank battalion (115 Tk Bn), and these 45 tanks were appreciated to be part of 10th Army's reserve. It was also believed that the Germans had 180 to 200 artillery pieces of varying calibres, and approximately 60 *Nebelwerfers*, split between 1st Para Div and 71st Werfer Regt.³⁷⁵ Further, the estimates of enemy strengths, including 1st Para Div (fighting strength 4800 men), 15 PG Div (fighting strength 7550 men), and 44th Inf Div (fighting strength 4230 men) were reasonably accurate. German WD entries noted a month earlier on 2 March that 1st Para Div had a fighting strength of 4442 men, 15 PG Div

³⁷⁴ LAC, "German Military Documents, 4 January - 4 June 1944", 47, 57.

³⁷⁵ LAC, I Canadian Corps Intelligence Appreciations.

7878 men, and the 44th Inf Div 8302 men.³⁷⁶ These estimates would be further augmented when Ultra revealed the complete up-to-date German tank strengths of 10th Army on 28 April,³⁷⁷ which very likely was provided to the Canadian Corps. As such, though the figures on 44th Inf Div were inaccurate, both Eighth Army and I Canadian Corps planning staffs had a reasonable understanding of overall enemy strengths before Operation HONKER began.

In his final formal intelligence appreciation on 27 April, Kingsmill asserted an Allied offensive in the Liri Valley was likely to be met with stiff opposition, as the Germans were unlikely to give up territory unless they thought that their defence had become untenable. It was also unlikely that the Germans would retire to the Hitler Line once the offensive against the Gustav Line had begun; the enemy would only retire if compelled to do so.³⁷⁸ Kingsmill also believed that the defence would likely resemble that of previously successful Cassino defensives. The Germans would assess the size of the attack, determine the main axis, and then stabilize the line with local mobile reserves. If that failed, the Germans would call in the Army Group reserve. Kingsmill recalled the most recent Cassino battle in March where 1st Para Div had been able to hold the line with its local reserves, only needing outside assistance on one occasion when 115th PG Regt (15th PG Div) restored the situation. However, during that period when the German line was threatened, 90th PG Div had moved forward from Frosinone ready to take position on the Hitler Line, a contingency that was likely to occur again during the upcoming offensive. Kingsmill concluded that the Germans were currently in the process of "unshuffling" their formations, for during the previous Allied offensive the enemy had made ad hoc groupings, much like shuffling a deck of cards, plugging gaps with whatever units they had at the time. At the time of Kingsmill's appreciation, the Germans were trying to place units under their parent formations. Kingsmill, in line with XIII Corps assessment, also stated that sources indicated that 15th PG Div, with its mechanized forces, was likely to pull out of the line to become a mobile reserve,³⁷⁹ which was proved correct by

³⁷⁶ LAC, "German Military Documents, 4 January - 4 June 1944", 19.

³⁷⁷ Hinsley, *British Intelligence, Vol.3, Part 1*, 201.

³⁷⁸ LAC, "German Military Documents, 4 January - 4 June 1944", 43-44. Kingsmill's appreciation, along with his XIII Corps and Eighth Army colleagues, was essentially correct. German documents outline that senior German commanders knew that Hitler would never allow a withdrawal from Cassino (i.e., the Gustav Line) without a fight to the bitter end.

³⁷⁹ LAC, I Canadian Corps WD, April 1944 - I Cdn Corps INTSUM #46, 28 April 1944.; Jones, "A Curb on Ambition", 753.

late April – early May.³⁸⁰ Thus Kingsmill argued that the whole Gustav Line would likely be held by Para, Mtn or Inf troops. 90th PG Div was still in the mobile reserve, as 26th Pz Div and 29th PG Div closely watched for another Allied seaborne landing south of Rome while concurrently acted as a reserve for the Anzio bridgehead.³⁸¹

Canadian Corps intelligence continued to closely monitor the information coming out of both Eighth Army and XIII Corps, and the understanding of the locations and boundaries of German formations along the Gustav Line and in reserve continued to be very accurate.³⁸² However, trying to pin down actual German regimental, battalion, and company locations proved difficult. Jones points out the weaknesses of Ultra during this period. Though Ultra offered a strong understanding of general locations of formations, the actual specific dispositions of these formations was a considerable intelligence gap and Y service intercepts were limited due to the Germans using landlines extensively. Much like the Canadians had learned in the Adriatic sector, only PWs could really give the dependable ORBAT information needed at the lowest tactical levels. Unfortunately, XIII Corps was having an exceptionally difficult time capturing PWs, which severely restricted the British ability to gain timely, detailed locations of German units on the front line, notably potential counterattack elements from 15th PG Div.³⁸³

As discussed earlier, one of the main cornerstones of Anglo-Canadian offensive doctrine was to prepare for and destroy German counterattacks. As intelligence is a supportive function to assist in decision making, it is unsurprising that one of the main purposes of Anglo-Canadian intelligence doctrine during planning and then actual operations was to

³⁸⁰ Hinsley, *British Intelligence, Vol.3, Part 1*, 201. High-grade SIGINT closely tracked the movements of all major German formations, including 15th PG Div's movements.; LAC, "German Military Documents, 4 January - 4 June 1944", 32, 36, 44.

³⁸¹ LAC, I Canadian Corps Intelligence Appreciations; LAC, I Canadian Corps WD, May 1944 - I Cdn Corps INTSUM #48, 3 May 1944.

³⁸² LAC, I Canadian Corps WD, April 1944 - I Cdn Corps INTSUM #39, 2 April 1944.; LAC, "German Military Documents, 4 January - 4 June 1944", 44-48. A comparison of Canadian Corps INTSUMs and German WD information indicates that Canadian (Commonwealth) assessments of German formation locations were remarkably accurate. See Figure Two.

³⁸³ LAC, RG 24, Vol. 14316 - I Cdn Corps AGRA May to December 1944 - WD Entries, May 1944.; LAC, I Canadian Corps WD, May 1944 - I Cdn Corps INTSUM #40, 7 April 1944, INTSUM #42, 13 April 1944, INTSUM #49, 9 May 1944. Citing XIII Corps, I Canadian Corps intelligence stated that the latest information on the Gustav Line between Mont Castellone and the Liri River was obscure. However, elements of 15th PG Div, including 115th PG Regt with possibly a battalion's worth of tanks and assault guns, were still assessed to be a mobile reserve behind the Gustav Line; but precisely who was forward and who in the rear was impossible to say.; Jones, "A Curb on Ambition", 756.

monitor for potential German counterattacks, so that they could be counteracted with massive firepower. This was exemplified by XIII Corps GOC Maj. Gen. Sidney Kirkman and his intelligence staff. Jones notes that they were so concerned about the German capability to counterattack and destroy any bridgehead across the Gari - Rapido Rivers during the assault on the Gustav Line that this acted as a "curb on their ambition" to any possibility to rapidly exploit up the Liri Valley. In fact, this even might have caused senior officers to largely believe that a set-piece attack would have to take place against the Hitler Line instead of it being crashed (i.e., overwhelmed quickly).³⁸⁴ Cessford forwards a similar non-intelligence based argument that Burns was a product of the doctrine he was trained in, with Burns envisioning the upcoming attack unfolding in successive controlled bounds, which Cessford believes restricted any chance for decisive exploitation.³⁸⁵ Kingsmill's 27 April intelligence appreciation largely conformed to Anglo-Canadian doctrine as well, when he stated that if the Gustav Line was successfully breached by XIII Corps, it was likely that the enemy would conduct a fighting withdrawal towards the Hitler Line, while a mobile reserve awaited behind the Hitler Line along the Melfa River. If the Hitler Line was held, a reserve German division could try to launch a large-scale counter attack with the view of destroying Canadian elements in the valley.³⁸⁶ As will be demonstrated, throughout the approach to and during the assault on the Hitler Line the concept that a German counterattack could form and destroy any gains was one of the top concerns of Canadian commanders. Although it is easy to criticize this mentality of obsessive consolidation and even paranoia regarding counterattacks, the Germans had demonstrated in the last three Cassino offensives that immediate counterattacks could severely blunt, or even completely obliterate offensive gains. As such, prudence was likely the wisest course for Anglo-Canadian commanders and intelligence staffs.

Kingsmill and his staff were not the only Canadian Corps intelligence organization preparing for this offensive. In conjunction with the firepower-based doctrine that the Corps followed,

³⁸⁴ Jones, "A Curb on Ambition", 757, 763; Jones, "Intelligence and Command", 155-156.

³⁸⁵ Cessford, "Hard in the Attack", 311-312. However, Burns also encouraged his commanders to conduct infiltration of the Hitler Line and to crash it if the situation allowed.

³⁸⁶ LAC, I Canadian Corps Intelligence Appreciations; LAC, I Canadian Corps WD, May 1944 - I Cdn Corps INTSUM #48, 3 May 1944.

Canadian Corps artillery personnel, including their attached IOs, were also deep in preparation. Each divisional artillery HQ and the AGRA was to have a specific Air OP flight assigned to them, more specifically from the 657th Air OP Squadron which had worked with the Canadian Corps before on the Adriatic sector. Also each divisional artillery grouping had a Survey section attached to assist in counter-battery work. XIII Corps had ordered and prepared an extensive number of "going" and overprint maps, and air photos, and Canadian Corps artillery staffs were ordered to utilize these as much as possible. However, warnings were issued that topographical maps remained inaccurate. Extensive use of gridded air photos, which XIII Corps had requested to cover the areas from the present gun lines to the rear of the Hitler Line, would be used, especially for fire planning. The same air photos were also provided to the companies and platoons in units conducting the assault for easy target reference. Counter-mortar sections at the divisional level were also augmented with additional personnel.³⁸⁷

As Corps intelligence continued to compile and appreciate as much information as possible and pass it in a digestible format to Burns and the Corps staff, I Canadian Corps planners began to build plans based on this intelligence. As early as 22 March, Burns ordered a number of Corps staff studies to be conducted with the object of discussing how a Corps could achieve a "breakthrough" after conducting a "break-in" of a heavily defended enemy locality, and then how to mitigate what could impede this breakthrough; unsurprisingly, the "hypothetical" scenario being studied was the Hitler Line.³⁸⁸ Burns wrote in his memoirs that the I Canadian Corps staff had sufficient intelligence to know that the fight for the Hitler Line would be a difficult one. His main concern was whether or not enough personnel in the corps and divisional staffs understood how to conduct "break-in" and "break out" operations; he later admitted that he wished that all personnel had been better trained in exploitation operations.³⁸⁹ Delaney correctly observes that Burns's staff became almost completely preoccupied with the break-in battle, which led to less focus on issues such as road

³⁸⁷ LAC, RG 24, Vol. 14311 - I Cdn Corps HQ RCA - I Cdn Corps Arty Planning Notes #1, 26 April 1944; Notes on CRA Conference held at RCA I Cdn Corps - 1100 hrs, 30 April 1944; Notes on CRA Conference held at RCA 5 CAD - 1100 hrs, 6 May 1944.

³⁸⁸ Burns Fonds - ELM Burns "Staff Study I Cdn Corps", 22 March 1944.

³⁸⁹ Burns, *General Mud*, 140-142.

movement, traffic control, and the pursuit battle.³⁹⁰ Burns issued the first of a number of Planning Notes on 11 April, with these notes continuing to be issued sporadically into early May. These notes dealt extensively with how Burns envisioned the upcoming fight would unfold, and how to mitigate any problems that might arise. Burns ordered 1 CID to conduct the break-in against the Hitler Line and 5 CAD to conduct the armoured break-out. Burns also appreciated in his Planning Notes #6 on 2 May that, although it was possible XIII Corps could breach both the Gustav and Hitler Lines allowing the Canadian Corps to exploit to Rome, the Canadian Corps and XIII Corps likely would have to work in concert to breach the Hitler Line, and he planned for this.³⁹¹ Further study periods for Corps staff began in early May, focusing on the Hitler Line problem. The latest intelligence, including air photos, defence overprints, and other intelligence reports, was presented at these staff studies by either Kingsmill or his deputy, Capt Dewar.³⁹² As the XIII Corps offensive began on 11 May, corps study periods and planning continued.

Within 1 CID, the division chosen to break the Hitler Line, by 4 May "study groups" were also organized at the divisional and brigade HQs to conduct group learning on amphibious operations for the fictitious seaborne hook and an attack against a heavily-defended locality. Unsurprisingly, the latter study dealt with the Hitler Line. However, senior officers quickly stressed that this had "no connection" with the upcoming operation that the division was to take part in, and it was ordered, for operational security reasons, that no one at the squadron / company level or below would have the study group topics disclosed to them.³⁹³ A number of brigade and battalion IOs, who were cleared to know about the upcoming operation, visited the front before HONKER began to study the topography so that they would be able to convey the type of terrain to their commanders and sub-unit commanders.³⁹⁴ By 11 May, as

³⁹⁰ Delaney, *Corps Commanders*, 83.

³⁹¹ Cessford, "Hard in the Attack", 309-311; Burns, *General Mud*, 142.; LAC, I Canadian Corps WD, May 1944 - "Planning Notes #6 - Operation HONKER", 2 May 1944.

³⁹² LAC, I Canadian Corps WD, May 1944 - "I Cdn Corps Study Period", 5 May 1944. These studies also included a comparison of recent air photos with older ones, discussions on how to most effectively use artillery for destructive shoots, the probable tactical purpose of enemy works on the Hitler Line, and how to approach enemy defences. All battalions were to be issued the latest defence overprints, 1:25000 maps, 1:25000 "going" maps, all available air photos, and soil maps.

³⁹³ LAC, RG 24, Vol. 13728 - 1st Cdn Inf Div WD (Hereafter LAC, 1 CID WD) - WD Entry, 4 May 1944.

³⁹⁴ LAC, RG 24, Vol. 14078 - 2nd CIB WD - WD Entry 9 May 1944. Capt A.W. Gray and a Battalion IO from the Loyal Edmonton Regiment departed for the front to overlook the terrain of the Liri Valley from an artillery OP on Mount Cedro.

the XIII Corps operations commenced, divisional and brigade commanders were allowed to disclose the outline plan to all individuals in their formations and an intensive three-day study period was initiated within the division down to company level, with the latest air photos, maps and a detailed defence overprints of the Hitler Line available for planning purposes.³⁹⁵ Further, it seems that 1 CID's Divisional GSO 3 Int, Capt Prince, was present at most of the brigade-level study groups at one point or another where, in conjunction with the brigade IOs, some of whom had prepared sand or glass models, he presented very detailed information on the Hitler Line.³⁹⁶

Conversely, the problems with the intelligence organization within 5 CAD continued. Maj Appleton, recently appointed the GSO 3 Int, arrived back from his exchange with I Canadian Corps on 4 May. By 7 May, an "I" meeting was held at the divisional HQ with the formation's IOs and the divisional staff to keep everyone in touch with the latest developments and for everyone to reach a common "I" conclusion.³⁹⁷ That such a meeting needed to be conducted on the brink of 5 CAD's first major operation was again indicative of a lack of organizational cohesion and boded poorly for the future operation. On 8 May, Appleton worked on constructing a large-scale model of the Hitler Line.³⁹⁸ Why he was constructing such a model when 5 CAD was expected to exploit a break-through of the Hitler Line, not assault it, is puzzling especially when units and formations in 1 CID were doing similar work in their HQs. Appleton's task wasted effort and time that would have been better spent focusing on potential enemy reactions and dispositions past the Hitler Line, in particular potential defences along the Melfa and Liri Rivers during the division's exploitation phase. Further, though there were a series of orders groups in 5 CAD which likely kept everyone in the

³⁹⁵ LAC, RG 24, Vol. 10779 - HQ 1 CID "1 Cdn Inf Div in the Liri Valley, 15 - 28 May 1944", 11 June 1944; LAC, RG 24, Vol. 14076 - 1st CIB WD; LAC, RG 24, Vol. 14078 - 2nd CIB WD - WD Entry, 13 May 1944.

³⁹⁶ LAC, RG 24, Vol. 14078 - 2nd CIB WD - WD Entry, 11 - 13 May 1944. Capt Gray, 2 CIB's IO, was in charge of a number of duties during the 10 - 11 May 1944 study group, including providing a general overview of the topography, a detailed description of the enemy defences on the Hitler Line, and mosaics. Other topics of discussion included overcoming wire obstacles, minefields, strongpoints, defended towns, the state of roads and general "tank going", fireplans, how to conduct reconnaissance of the Hitler Line, tank-infantry support, and consolidation once the line was breached.; LAC, RG 24, Vol. 14084 - 3rd CIB WD - WD Entry, 10 - 13 May 1944.

³⁹⁷ LAC, RG 24, Vol. 13796 - 5 CAD WD - WD Entries, 4 and 7 May 1944.

³⁹⁸ LAC, RG 24, Vol. 13796 - 5 CAD WD (Hereafter LAC, 5 CAD WD) - WD Entry, 8 May 1944.

picture, and many from 5 CAD attended 1 CID's study group on 10 May,³⁹⁹ few study groups were formed by 5 CAD's staff. Even in these infrequent study groups, there was little formal discussion on how to conduct exploitation operations after the Hitler Line was breached.⁴⁰⁰ It should be emphasized that Appleton and his intelligence staff are not the only ones to blame for the faults in doctrine, staff work, or the lack of foresight within the division's leadership; in particular 5 CAD's GOC, Hoffmeister, and his GSO 1, LCol Angle, should have been providing better direction to their intelligence staffs.

Several important points must be emphasized before moving on to the discussion of the assaults on the Gustav and Hitler Lines. As corps planners worked on the upcoming operations, training instructions, a number of which were mentioned while discussing 1 CID's training efforts in Chapter Three, were disseminated for the whole corps in March 1944, emphasizing combined-arms exercises and drills for tank-infantry cooperation.⁴⁰¹ There was a wide consensus with 1 CID's brigade commanders and its GOC, Maj. Gen. Vokes, after the Liri Valley operations that this training period, which began in earnest in late April and continuing into early May, with its focus on small unit tactics, hardening marches, and tank-infantry-artillery training, had been essential for the success for the operations against the Hitler Line.⁴⁰² Without an effective action arm, Kingsmill and his intelligence staffs' efforts would have been for nought. A well-trained combat force was what was needed to action the very good intelligence that had been provided so far. Further, sometime during this training period, Burns ensured that all battalions had formed a scout - sniper platoon and inquired if they were properly trained and equipped.⁴⁰³ This emphasis on developing integral intelligence collection capability, in conjunction with the Intelligence School which occurred in the April timeframe, would greatly assist in developing the current intelligence picture for 1 CID during the upcoming battles. Lastly, Canadian Corps Standing Operation Instruction #12, "Reports on

³⁹⁹ LAC, 5 CAD WD - WD Entry, 10 May 1944.

⁴⁰⁰ LAC, 5 CAD WD - "5 Cdn Armd Div Study Period", 4 May 1944. This study period, again only allowed to company commanders and higher under strict operational security, focused mainly on attacking a well-defended enemy position, but lacked any real discussion on exploitation operations.

⁴⁰¹ LAC, I Canadian Corps WD, March 1944 - I Cdn Corps Training Schedule, Issued 21 March 1944; "Drill for Tank-Infantry Cooperation - Sqn and Coy Basis", 28 March 1944.

⁴⁰² LAC, RG 24, Vol. 10779 - HQ 1 CID "1 Cdn Inf Div in the Liri Valley, 15 - 28 May 1944", 11 June 1944.

⁴⁰³ LAC, 1 CID WD - WD Entry, 10 May 1944.

Operations", was issued on 22 March. It reminded all units, as the tactical situation permitted, to compile after-action reports once major operations were complete so that commanders could study them, for historical purposes, and to study and to help modify tactical doctrine.⁴⁰⁴ As such, I Canadian Corps began preparations to learn from its operations well before the beginning of their first major operation, setting the conditions for it to becoming a learning institution, much like 1 CID and Eighth Army before it. I Canadian Corps' intelligence cadre would also be very involved in this lessons-learned process at the end of the Liri Valley battles, leading to the inculcation of all intelligence personnel in a common doctrine and creating a stronger intelligence organization for future operations.

⁴⁰⁴ LAC, I Canadian Corps WD, March 1944 - Standing Operation Instruction #12 "Reports on Operations", 22 March 1944.

Chapter Five: Intelligence During the Advance to and Breaking of the Hitler Line

Before discussing the Liri Valley offensive and the contributions of I Canadian Corps intelligence, it is worthwhile to examine the operations of two corps-level intelligence organizations as their operations played a crucial, albeit often unseen, role in the Corps intelligence organization. The first is #1 Cdn SWS, Type "B". In actuality, this Canadian Y intelligence unit participated in Operation HONKER well before the commencement of I Canadian Corps operations. Arriving in Italy in mid-February 1944 with only motor transportation, by early March 1944 the unit was ordered to the Cassino front and began working with the British #105 SWS, Type "B" (which had worked with the Canadian Corps in the Adriatic sector). After a week of training, the Canadians took over their British counterpart's intercept operations.⁴⁰⁵ By 5 May 1944, they were ordered to take over #106 SWS, Type "B"'s wireless intercept vans and they continued to use this equipment, which had seen service since North Africa, until they departed for Holland with the rest of the I Canadian Corps in early 1945. As discussed earlier, it is extremely difficult to measure the impact of the Canadian Y service's contributions to the Liri Valley battle, largely due to the lack of records and I Canadian Corps masking their reporting, instead often attributing intercept information to PW interrogation.⁴⁰⁶

Hinsley maintains that throughout DIADEM from 12 May to 4 June 1944, SIGINT was available in large quantities with limited delay. High-grade SIGINT (i.e., Ultra) on divisional and higher-level German formations were sent to Eighth Army in emergency signals, while Army Y provided a running commentary on the fighting, and was probably the most valuable intelligence source due to it being available to commanders faster than Ultra intelligence.⁴⁰⁷ Ronald Gates, a Special Operator in #1 Cdn SWS, recalled that as of 2200 hrs, 11 May, when the XIII Corps offensive began, German wireless sets were used extensively, the messages often being transmitted in the clear and in plain language. These transmissions were piped into the intelligence van for instant translation and analysis. Further, Gates claimed that #1

⁴⁰⁵ Gates, *I Was a Spy of the Airwaves*, 49-50.

⁴⁰⁶ LAC, RG 24, Vol. 10677 - Brigadier Edgar Williams, "Notes on Signals Intelligence", 6 May 1944.

⁴⁰⁷ Hinsley, *British Intelligence, Vol.3, Part 1*, 202, 206-207, 307.

Cdn SWS, Type "B" intercepted an average of 400 - 500 messages daily, most dealing with movements, casualties, reinforcements, and supply states. The Canadian Y unit was also able to easily track 1st Para Div due to the whole formation using VHF transmissions extensively.⁴⁰⁸ Further, Gates a rare "intelligence scoop" was made around 23-24 May when an intercept originating from the Hermann Goring Division indicated that that formation was moving south from its current reserve position north of Rome.⁴⁰⁹ In an action that later compelled General Leese personally to thank the Canadians, Y Service direction finding was able to help locate the origin of these transmissions and the potential assembly points for the planned counterattack.⁴¹⁰ This information was quickly passed to Eighth Army, leading to extensive Allied airstrikes against the formation impeding its movement south. High-grade SIGINT later placed the Hermann Goering Division near Valmontone on 27 May and it was reported to have sustained considerable casualties from air attack.⁴¹¹ #1 Cdn SWS, Type "B" moved twice to support Canadian Corps actions and by 5 June the Y Service unit was ordered into the Eighth Army's reserve with its parent Corps.

The second corps-level intelligence organization, which formed in early May just before the Liri Valley operations, was the First Canadian Interrogation Team.⁴¹² During the Liri Valley battles, Capt M.B.E. Tucker-Burr and Lt D.G.E. Molnar were the main interrogators for this unit, though Burr operated forward with 1 CID for most of the operation. They, in conjunction with the Provost Corps and a number of OR intelligence personnel, were officially in charge of the Corps PW cage and conducted more in depth interrogations in an attempt to discover further information on German ORBATs, such as unit histories, personalities, organization, equipment, personnel strengths, unit tactical symbols, ammunition states, morale, and any rumours the PWs may have heard. They were also responsible for keeping a running tally on the number of PWs captured and their parent units. Much of the information they gleaned

⁴⁰⁸ Gates, *I Was a Spy of the Airwaves*, 27, 51.

⁴⁰⁹ Hinsley, *British Intelligence, Vol.3, Part 1*, 204-205. Hinsley notes that the Y Service closely tracked the movements of the Hermann Goering Division. However, it is probable that a number of Y units, including #1 Cdn SWS, Type "B", worked in a coordinated fashion to locate the division.

⁴¹⁰ Gates, *I Was a Spy of the Airwaves*, 53.

⁴¹¹ Hinsley, *British Intelligence, Vol.3, Part 1*, 204-205.

⁴¹² LAC, RG 24, Vol. 16407 - 1st Canadian Interrogation Team WD, May 1944, June 1944; LAC, RG 24, Vol. 12252 - Microfilm Reel 17854 - Policy Reorganization of Intelligence Units. The formation of this team was in line with British intelligence doctrine to have an interrogation team at every corps HQs.

was reflected in the Canadian Corps daily INTSUM during the Liri Valley operations and their interrogation reports were distributed to 1 CID, 5 CAD, Eighth Army and other higher HQs. The members noted with pride that during the Liri Valley battles, they detained 37 officers and 1302 ORs in their cage, an estimated 70 percent of them having been interrogated during their stay.⁴¹³

After interrogating hundreds of PWs over the 11-day offensive, both Molnar and Tucker-Burr published separate reports that had much to say about the German formations and units that I Canadian Corps confronted.⁴¹⁴ Molnar and Tucker-Burr noted that the initial morale of many of the German soldiers they questioned was high, especially those from 15th PG, 90th PG, and 1st Para Divs. These soldiers were generally well-equipped, confident, and typically security minded as many did not even carry their paybooks. Paratroopers possessed a very defiant attitude throughout the campaign. However, between 16 and 23 May, as the Canadian Corps advanced into the Liri Valley, German morale plummeted especially as soldiers from "lower-quality" units were captured. Many PWs observed that they were overwhelmed by Allied material superiority, had not eaten for days, ammunition was running low in some units, and orders such as "hold to the last" were issued regularly, causing many junior officers to resent their senior commanders. However, relations between junior officers and their men were still assessed as good, and it was rare to hear PWs say that their immediate officers had abandoned them. Most soldiers and officers would not carry out "fight to the death" orders, but would hold until they believed that they were about to be cut off or overrun. Identifications also became easier as many PW officers from lower-quality units were more talkative, although some still tried to deceive interrogators by giving false information, such as the strengths of their units. Burr also believed that one out of every 50 men he interrogated was a Nazi party member. Most party members were usually young officers, arrogant, and occasionally difficult to interrogate. Further they were full of "astounding political and racial theories", and completely confident in a German victory as

⁴¹³ LAC, RG 24, Vol. 16407 - 1st Canadian Interrogation Team WD, May 1944, June 1944.

⁴¹⁴ LAC, RG 24, Vol. 16407 - 1st Canadian Interrogation Team WD, June 1944 - Lt. D.G.E. Molnar, "Morale Report on German PWs during period 12 May 1944 - 3 June 1944", 4 June 1944; LAC, RG 24, Vol. 14078 - 2nd CIB WD - WD Entry, 2 June 1944 - Capt Tucker-Burr " Notes on Interrogation", 2 June 1944.

German High Command had "something up their sleeves". Officers remained the most valuable source of information. Both interrogators also observed that most PWs expressed no political convictions, were generally fed up, and just wanted to go home. This was especially true for the "*Volksdeutsche*", those of German ethnicity not originally from Germany, such as Czech, Hungarian, Romanian, Russian, Armenian, Yugoslav, Alsatian, and Polish Germans. *Volksdeutsche* also seemed to form the vast majority of deserters and rarely were in more elite formations, such as 1st Para Div or 90th PG Div. As for demographics, Burr noted that "Not one German soldier was found to be younger than 18 or older than 45 years old, and all were physically fit".⁴¹⁵ This likely indicated that either German strategic personnel resources continued to hold out despite the strains on the German war machine or the Germans were prioritizing the Italian front for resources. In general, interrogators such as Molnar and Burr are reflective of the quality of interrogation which existed within both I Canadian Corps and 1 CID, and these interrogators provided excellent information to the divisional and corps ORBAT analysts.

On the evening of 11 May 1944, the Eighth Army offensive began, with the support of more than 1000 guns, including those of I Canadian Corps AGRA and elements of 1 CID and 5 CAD artillery regiments. Throughout this period, Maj Kingsmill, GSO 2 Int of I Canadian Corps, kept in close contact with XIII Corps to glean the latest intelligence,⁴¹⁶ contact which no doubt shaped his assessments. The offensive achieved surprise against the Germans. By happenstance, Eighth Army's main effort was directed on the boundary between XIV Pz and LI Mtn Corps (the Liri River), and at a sector along the Gari which had a less cohesive unit defending it, the 44th Inf Div, which was in charge of ad hoc groupings from 15th PG and 305 Inf Divs.⁴¹⁷ However, it remains unclear if this was coincidence or the result of Eighth Army leveraging available intelligence to strike at a weaker portion of the German line. By 13 May, XIII Corps had established a strong bridgehead across the Gari - Rapido Rivers and had repulsed a number of counterattacks. Leese subsequently ordered I Canadian Corps, with 1

⁴¹⁵ LAC, RG 24, Vol. 14078 - 2nd CIB WD - WD Entry, 2 June 1944 - Capt Tucker-Burr "Notes on Interrogation", 2 June 1944.

⁴¹⁶ Kingsmill, "Intelligence Report on Adolph Hitler Line Offensive".

⁴¹⁷ LAC, "German Military Documents, 4 January - 4 June 1944", 43, 47.

CID leading the advance, to move forward on the evening of 15 May. The intent was for 1 CID to occupy 8th Indian Division's sector and continue the offensive on 16 May.

Meanwhile, XIII Corps's advance had triggered a number of decisions in the German senior leadership. First, LI Mtn Corps ordered a number of positions on the Hitler Line to be manned. Further, as predicted by Kingsmill, Army Group C's immediate operational reserve, 90th PG Div, elements of which were located just south of Rome and at Fondi near the Tyrrhenian coast, was ordered to move to the Liri Valley sector on 13 May. 200th PG Regt (90th PG Div) was to reinforce south of Pontecorvo to Sant Oliva to defend against the French Expeditionary Force (FEC) advance occurring on Eighth Army's left flank, with 361st PG Regt (90th PG Div), reinforced by Jäger companies from 5th Mtn Div, reinforced north of Pontecorvo.⁴¹⁸ Of specific interest to the upcoming 1 CID advance, by 14-15 May, 361st PG Regt had moved forward to a switchline along the San Giorgio a Liri – Pignataro – Cassino Road (see Figure Three), approximately four to five miles east of the Hitler Line. Kesselring ordered 26th Pz Div, located near the Anzio bridgehead and equipped with Panther (Mark V) tanks, south to reinforce the Tenth Army. By 18 May, he also sent the remainder of 305th Inf Div and the 335th Inf Div, located in the Adriatic sector, to the Liri Valley sector.⁴¹⁹

As the XIII Corps offensive continued, I Canadian Corps and 1 CID intelligence attempted to further define the enemy's ORBAT, seeking to identify the units that they would confront (especially at the Hitler Line), the strengths of these units, and locating operational reserves. The numerous PWs captured by XIII Corps gave a reasonable understanding of the units likely to be confronted in the interim. Though the situation remained confused, 115th PG Regt (15th PG Div), and 576th Gren Regt (305th Gren Div), were quickly identified operating under 44th Inf Div on XIII Corps' front. North of the Liri Valley, 1st Para Div, in particular 3 Para Regt (1st Para Div) and 100 Mtn Regt (5th Mtn Div), offered stiff resistance in the vicinity of Cassino while several rapid counterattacks indicated the enemy had anticipated offensive action in

⁴¹⁸ LAC, "German Military Documents, 4 January - 4 June 1944", 56-58. Other elements of 90th PG Div which moved forward included that 190th anti-tank Bn, 109th Pz Bn (equipped with 30 assault guns), 190th Engineer Bn, and I Bn 190th Artillery Regt.

⁴¹⁹ Hinsley, *British Intelligence, Vol.3, Part 1*, 202; LAC, "German Military Documents, 4 January - 4 June 1944", 58-61.

that sector.⁴²⁰ However, on 13 May it was obvious that the Gustav Line was lost to the Germans. Thus Kingsmill believed the enemy had two options – counterattacking to destroy the bridgehead or conducting a fighting withdrawal to the Hitler Line.⁴²¹ Kingsmill's appreciation was validated on 16 May when defences at Cassino became untenable and all units were ordered to withdraw to the Hitler Line.⁴²²

Canadian Corps intelligence assessed correctly, based on information collected on 13 and 14 May, that 90th PG Div's 200th and 361st Regts were on their way to reinforce the Liri Valley sector.⁴²³ This assessment may very well have been based on SIGINT, in particular Y intelligence. Hinsley outlines that Army Y closely monitored the movements of German formations, including 90th PG Div's move to reinforce the Liri Valley sector, the final order to evacuate 1st Para Div from Cassino, and the commitment of 26th Pz Div. Further, Ultra intelligence had revealed on 15 and 17 May that 90th PG Div was ordered to protect LI Mtn Corps' southern flank against an Allied breakthrough along and south of the Liri River,⁴²⁴ which likely further informed I Canadian Corps intelligence. Burns's WD entry on 15 May outlined that while visiting General Leese at Eighth Army's forward HQ, the Eighth Army commander informed him that 90th PG Div had come into the Liri Valley, 200 PG Regt was south of San Giorgio and a reinforced 361st PG Regt sat west of Pignataro.⁴²⁵ It is unlikely that Leese would be willing to emphasize this point to Burns unless it was based on reliable information such as Y or Ultra intelligence. As 1 CID was due to commit its full offensive power into the Valley by 16 May, Kingsmill issued an early INTSUM at 1800 hrs on 15 May, stressing that Canadian elements were almost certain to confront 90th PG Div, including 200 PG and 361st PG Regts south and north of the Liri River, respectively, in the next 24 hours. He

⁴²⁰ Procedural note: All cited INTSUMs are based on the previous days reporting, unless otherwise noted; i.e., if a Canadian Corps INTSUM is written on 13 May 1944, it is based on the reporting from 12 May 1944.; LAC, RG 24, Vol. 13728 - 1st Cdn Inf Div WD - 1 CID INTREP, 1900hrs 12 May 1944; LAC, I Canadian Corps WD, May 1944 - I Cdn Corps INTSUM #51, 13 May 1944.

⁴²¹ LAC, I Canadian Corps WD, May 1944 - I Cdn Corps INTSUM #52, 14 May 1944.

⁴²² LAC, "German Military Documents, 4 January - 4 June 1944", 62.

⁴²³ LAC, I Canadian Corps WD, May 1944 - I Cdn Corps INTSUM #52, 14 May 1944. Corps intelligence noted that even though 115th PG Regt continued to resist on the Pignataro - Cassino road, as it had lost over 200 PWs, it must have been reinforced. It was logical that the extensive motor transport noted by air reconnaissance south of Pontecorvo could be the first elements of 90th PG Div, 200 PG Regt and 361st PG Regt.; LAC, I Canadian Corps WD, May 1944 - I Cdn Corps INTSUM #53, 15 May 1944.

⁴²⁴ Hinsley, *British Intelligence, Vol.3, Part 1*, 203.

⁴²⁵ Burns Fonds - Burns's WD, May 1944.

further detailed that the tank battalions of the 15th PG and 90th PG Divs had so far not been committed, though Panzer Mark IVs had participated in local company-level counterattacks.⁴²⁶

In his continued search for potential large-scale counterattack forces, Kingsmill outlined in the 15th May INTSUM that while 26th Pz Div was thought to be on its way to the front, it could not be located. This armoured division's presence could allow a counterattack large enough to drive back Eighth Army's gains. In addition, all PWs except one believed that the Hitler Line was not manned. Kingsmill also issued the latest up-to-date identifications and locations within the Liri Valley. Though 35 enemy battalions had been identified, Kingsmill emphasized that many were non-existent or at 10 percent strength; he estimated that only the equivalent of 17 full-strength battalions were currently in the Valley at that time. The Canadian Corps INTSUM issued in the early hours of 16 May outlined that a captured enemy map indicated that German commanders had ordered a Forward Defence Line (FDL) to be constructed on the Cassino - Pignataro road. PW interrogation also had revealed that III Alpine Battalion and an Engineer Company from 44th Inf Div had been identified north of Pignataro, the paybook of a soldier from 361st PG Regt had been discovered near Pignataro, and 200 PG Regt's mission was to advance south of the Liri River to halt the French advance there.⁴²⁷ However, it still remained unclear which units were located on the Hitler Line, although a special air photo sortie had been flown between Pontecorvo and Aquino on 11 May that provided more specific information on the locations of anti-tank defences, wire obstacles, and "camouflaged objects". However, these flights still could not identify any minefields. As air photo mission sorties continued, with photos and updated defence overprints rushed to the brigades as often as possible.⁴²⁸

Armed with the latest, though imperfect, intelligence on German ORBATs and dispositions, including the view that resistance by forward reinforced elements of 90th PG Div was likely at the San Giorgio – Pignataro – Cassino Line, 1 CID, supported by the British 25th Army Tank

⁴²⁶ LAC, 1 CID WD, May 1944 - 1 CID INTSUM #59 (ICOT: 1800 hrs, 15 May 1944), 15 May 1944

⁴²⁷ LAC, I Canadian Corps WD, May 1944 - I Cdn Corps INTSUM #54, 16 May 1944.

⁴²⁸ LAC, 1 CID WD, WD Entry, May 1944; Kingsmill "Intelligence Report on Adolph Hitler Line Offensive". Kingsmill emphasized that the latest 1:25000 defence overprint was issued just before the Hitler Line was reached on 23 May 1944.

Brigade, prepared to relieve 8th Indian Division and continue its advance on the Hitler Line.⁴²⁹ The advance, starting with 1st Canadian Infantry Brigade (1 CIB) on the left, begun in the early hours of 16 May, the 3rd Canadian Infantry Brigade (3 CIB) moving up on 1 CIB's right on early 17 May, and the 2nd Canadian Infantry Brigade (2 CIB) as the divisional reserve. As the Canadian brigades began advancing, as expected, they engaged a series of strongpoints near Pignataro which could not be overcome by platoon attacks. Company and battalion-sized attacks, with support from the attached British tanks, had to be mounted, which caused some delay.⁴³⁰ Although 1 CID's officers and soldiers probably did not know the exact location of enemy positions as they began their advance, they were ready to deal with this uncertainty. The training that these soldiers and officers had gone through in April and early May, their previous experience in Sicily and the Moro River campaign, and the combined-arms doctrine with which they had been inculcated in served them well.⁴³¹ Brigadier Spry (Commander of 1 CIB) noted that the enemy resistance consisted mostly of direct fire weapons, with a few batteries of artillery in support; however, *Nebelwerfer* and mortar fire took the heaviest toll on Canadian infantry in the advance.⁴³²

Sixty PWs were taken from the assaults against the Pignataro switchline. From that point, Canadian elements took a lead role in both collecting and assessing intelligence for the I Canadian Corps and Eighth Army.⁴³³ Subsequent PW interrogation by 1 CID intelligence revealed that a German withdrawal to the Hitler Line was inevitable. Other identifications had been made in the Pignataro area, including elements from 185 Mtn and 100 Mtn Regts (5th Mtn Div units), and PWs had confirmed the 361st PG Regt was operating in the area.⁴³⁴ 1 CID

⁴²⁹ LAC, I Canadian Corps WD, May 1944 - "Cdn Corps Operational Instruction #8", 15 May 1944.

⁴³⁰ LAC, RG 24, Vol. 14084 - 3rd CIB WD - 3 CIB "The Advance to and Breaching of the Adolf Hitler Line", 1 June 1944. 3 CIB elements noted as they began their advance that every building they encountered was a strongpoint. However the enemy was "no match" against the excellent Canadian tank-infantry cooperation, and PWs were pushed to the rear as soon as possible.

⁴³¹ LAC, RG 24, Vol. 10779 - HQ 1 CID "1 Cdn Inf Div in the Liri Valley, 15 - 28 May 1944", 11 June 1944. (Hereafter HQ 1 CID, "1 Cdn Inf Div in the Liri Valley"). 1 CID's commander, Maj. Gen. Vokes, who later stated that the success of 1 CID was due to infantry being physically hard and mentally fit, very good artillery support, "perfect" tank-infantry cooperation, and the success of the French Corps on the Canadian left flank. Vokes attributed the training period in April as also instrumental to their success.

⁴³² HQ 1 CID, "1 Cdn Inf Div in the Liri Valley".

⁴³³ Kingsmill "Intelligence Report on Adolph Hitler Line Offensive". Kingsmill stated that once 1 CID took over the front, information began to flow back, allowing for a clear picture of enemy to develop.

⁴³⁴ LAC, 1 CID WD, May 1944 - 1 CID INTSUM #59 (ICOT: 1800 hrs, 16 May 44), 16 May 1944.

intelligence also began to estimate the number of troops that the division was likely to encounter in the future. Approximately 4000 German troops were originally on the Gustav Line from Cassino (excluding 4th Para Regt, 1st Para Div) to the Liri River; these elements were estimated to have incurred at least 50 percent casualties, including a total of 1000 PWs captured by Eighth Army. But with the recent reinforcements from 90th PG Div, it could be reasonably argued that the enemy on 1 CID's front now had fewer than 4000 troops in total. Regardless, enemy resistance was clearly weakening. By the evening of 16 May, Pignataro was taken by 1 CID in what German sources described as an outflanking manoeuvre against III Bn 361st PG Regt. III Bn's HQ was overrun sometime on 17 May, giving 1 CID intelligence "much valuable information".⁴³⁵ As multiple penetrations were occurring along the Pignataro – Cassino switchline, the German Tenth Army ordered a withdrawal to the Hitler Line. Despite the fact that 1 CID was encountering resistance from a reinforced and fresh PG Regt, General Leese, disappointed with 1 CID's overall progress, pressed Burns to push his Corps. In response, Burns wrote to Vokes, offering more tactical advice and suggestions than actual pressure.⁴³⁶

Early on 17 May, Kingsmill noted that air reconnaissance had observed staff cars, tanks, and armoured cars moving into the Aquino – Pontecorvo area in the vicinity of the Hitler Line, which he appreciated as further elements of 90th PG Div, as the PG Div began to take over the sector from 44th Inf Div. Kingsmill believed that 90th PG Div would utilize its mobile assets, including its assault guns and attached 88mm self-propelled guns (SPGs), to conduct a delay to allow 1st Para Div to extract itself from Cassino and for German elements to man the Hitler Line.⁴³⁷ Canadian Corps intelligence also noted that many of the units being confronted were "hotch-potch", elements patched together from a variety of divisions and regiments likely under the command of either 115th PG or 576th Gren Regts, with overall command

⁴³⁵ LAC, RG 24, Vol. 10785 - G.S.I. HQ 1 Cdn Inf Div "The Enemy on the Adolph Hitler Line, May 1944", likely published in early June 1944. (Hereafter HQ 1 CID "The Enemy on the Adolph Hitler Line"); LAC, "German Military Documents, 4 January - 4 June 1944", 64.

⁴³⁶ Cessford, "Hard in the Attack", 316-319; Burns Fonds - Letter to Maj-Gen Chris Vokes from Maj-Gen ELM Burns, 16 May 1944. Burns was still probably dealing with the stigma of being an inexperienced corps commander with much more experienced individuals as his subordinates. As such, this is probably the reason why he made "suggestions" rather than give clearer orders to Vokes.

⁴³⁷ LAC, I Canadian Corps WD, May 1944 - I Cdn Corps INTSUM #55, 17 May 1944.

provided by 90th PG Div. In fact, as the battle progressed and German formations were eroded, German ORBATs became extremely difficult to define as German senior commanders were ordered to form battlegroups (*kampfgruppe*, i.e., ad hoc combined-arms teams based on multiple units which usually took the name of the individual commanding it)⁴³⁸ to delay the Allied advance.

As Kingsmill appreciated, as 1 and 3 CIB continued their advance on 17 May, they encountered numerous battlegroups (BG) conducting delay battles in temporary battle positions manned by infantry, tanks, and SPGs. By the early to late evening, patrolling indicated that most of these temporary positions had been abandoned.⁴³⁹ Over 200 PWs were taken from a variety of regiments,⁴⁴⁰ and a number of Mark IV tanks were knocked out, quickly identified as being from 115th Tank Bn (15th PG Div).⁴⁴¹ It is obvious from 1 CID's WD that the intelligence training and experience from January to April 1944 paid dividends as battalion and brigade IOs could rapidly identify German units as they took PWs. Only one German counterattack occurred on this day when, a number of SPGs from 190th Tank Bn (90th PG Div) supported by infantry attacked 1 CIB at 2200 hrs.⁴⁴² This attack was repulsed by the anti-tank guns and attached tanks of 1 CIB, inflicting over 100 German casualties.

German WDs tell a tale of being almost overwhelmed by 1 CID's advance on 17 May. On 1 CID's left flank, BG Strafner, consisting of Mtn and Jäger troops plus 190th Pz Reconnaissance Battalion (90th PG Div), was nearly cut off and destroyed by 1 CIB before it extracted itself the night of 17-18 May. In the centre, the withdrawal of 576th Gren Regt (305th Gren Div) under command of 90th PG Div, went according to plan. Further north, BG Fabian, consisting mostly of elements of 361st PG Regt (90th PG Div), was severely mauled by 3 CIB when it was enveloped on both sides by tanks. This fighting had severely depleted 361st PG Regt; strength returns to Tenth Army noted that the regiment's II Bn was estimated at 120 men, III Bn at about 60 men. The situation was becoming dire for 90th PG Div. In order to create an

⁴³⁸ Jones, "Intelligence and Command", 74; French, *Churchill's Army*, 241.

⁴³⁹ HQ 1 CID, "1 Cdn Inf Div in the Liri Valley".

⁴⁴⁰ These units included 576th GR (305th Gren Div), 741 Jager Regt (114th Jager Div), 100 Mtn Regt (5th Mtn Div), and 361st PG Regt (90th PG Div).

⁴⁴¹ LAC, RG 24, Vol. 13728 - 1st Cdn Inf Div WD - WD Entry, 17 May 1944.

⁴⁴² HQ 1 CID "The Enemy on the Adolph Hitler Line".

operational reserve for 90th PG Div, Tenth Army ordered 9th PG Regt (26th Pz Div) to proceed to Pico, approximately 10 miles west of Pontecorvo.⁴⁴³ It is important to note that the movements of 26th Pz Div, in particular if it would materialize on the Canadian front, played on the anxieties of Canadian intelligence staffs and commanders as the battle for the Hitler Line culminated.

Corps intelligence recapped the 17 May fighting in its 18 May INTSUM. One of the more interesting statements was that PWs from 361st PG Regt claimed they had been placed on the Pignataro line and ordered to hold at all costs,⁴⁴⁴ further reinforcing previous assessments that their efforts were intended to grant 1st Para Div time to withdraw from Cassino. More members of 361st PG Regt and several other units were captured and rapidly identified by 3 CIB the next day, once again demonstrating the efficacy of 1 CID's brigade intelligence organizations.⁴⁴⁵ Most importantly, Canadian Corps and 1 CID intelligence could find no conclusive indications the Hitler Line was being manned by a full-strength formation. Moreover there was only limited indication that significant reserves were approaching to reinforce the Liri Valley sector except for air reconnaissance which had observed approximately 20 personnel carriers moving southeast of Rome. Kingsmill believed these vehicles belonged to 90th PG Div as 26th Pz Div was thought to be still containing the Anzio bridgehead. However, it was more likely that this convoy was from 9th PG Regt (26th Pz Div) moving towards Pico (mentioned above). Corps intelligence also noted that the French Expeditionary Corps (FEC) had encountered the 200th PG Regt (90th PG Div) and the remnants of 71st Inf Div was pushing them back to the San Oliva line, just south of Pontecorvo. Further, the FEC had captured PWs from unusual German reserves, including the Ersatz (Replacement) Bn of 15th PG Div and 616th Osttruppen (Eastern Troop) Bn which was made up of Russian conscripts, indicating these elements had been scraped together to stem the Allied advance. 17 May also saw I Canadian Corps order 5 CAD to prepare to move

⁴⁴³ LAC, "German Military Documents, 4 January - 4 June 1944", 65.

⁴⁴⁴ LAC, I Canadian Corps WD, May 1944 - I Cdn Corps INTSUM #56, 18 May 1944.

⁴⁴⁵ LAC, RG 24, Vol. 14084 - 3rd CIB WD - WD Entry, 18 May 1944.

forward to exploit any breach made by 1 CID in the Hitler Line and to prepare to move towards Frosinone.⁴⁴⁶

On 18 May 1944, enemy resistance weakened as 1 and 3 CIB encountered small rearguards which were easily swept aside, allowing them to make initial contact with the Hitler Line that afternoon. This was a very important day for decision points throughout the Eighth Army, and an increased sense of urgency was felt by many senior officers in the Canadian Corps, in particular due to the intelligence provided to them. In 1 CID's after action report, the Commander of 2 CIB, Brigadier T.G. Gibson, noted that as 1 CID approached the Hitler Line, Canadian intelligence took a "very optimistic view", which led them to "underestimate" the enemy's strength on the Hitler Line.⁴⁴⁷ LCol Jean Allard, commander of the Royal 22e Regiment, claims he was given reports that, due to the FEC's success on the Canadian left flank, the Hitler Line possibly had been abandoned which led to pressures to push forward swiftly.⁴⁴⁸ These ideas of the perceived weakness of the Hitler Line must be more closely examined. Jones states that Eighth Army intelligence, under LCol Donald Prater, was very positive on 18 May about the situation on the Hitler Line. Although Prater noted it was impossible to estimate exact numbers of enemy troops in the Hitler Line, he believed the enemy's remaining strength in the Liri Valley between Monte Cairo and the Liri River itself stood at 8300 troops split into three BGs, and those within the line were a "depleted and motley crew".⁴⁴⁹ Corps intelligence outlined that air reconnaissance had been carefully monitoring for any German elements moving into the Hitler Line during the day, and they observed no major formations doing so. Kingsmill also seemed fairly positive when he observed that 1st Para Div's regiments to the north had taken a severe beating and had barely escaped from Cassino intact. Kingsmill believed that all German elements were "nipping back" to the Hitler Line,⁴⁵⁰ suggesting the enemy was in a most vulnerable state. Of interest, PWs, of

⁴⁴⁶ LAC, I Canadian Corps WD, May 1944 - "Cdn Corps Operational Instruction #9", 17 May 1944.

⁴⁴⁷ HQ 1 CID, "1 Cdn Inf Div in the Liri Valley".

⁴⁴⁸ Allard, *Memoirs*, 74.

⁴⁴⁹ Jones, "Intelligence and Command", 163-164; LAC, RG 24, Vol. 10998 - Eighth Army INTSUM #725, 18 May 1944.

⁴⁵⁰ LAC, I Canadian Corps WD, May 1944 - I Cdn Corps INTSUM #57, 19 May 1944. I Canadian Corps would also use Eighth Army's estimates of enemy strength in this INTSUM.

which 1 CID then had 296, were extremely young, "dejected", and possessed low morale, with most stating that a full-scale withdrawal to the Hitler Line was now in effect.⁴⁵¹

General Leese believed, based on intelligence provided by Prater, that the Hitler Line could be "crashed" due to appreciations that it was lightly manned.⁴⁵² Burns opined in his memoirs that, at that time, he shared similar views that the Hitler Line could be "crashed".⁴⁵³ Although he was likely influenced by his intelligence staff, it is also possible that Burns, under close scrutiny and pressure from Leese, was willing to acquiesce to his superior commander's appreciation that an immediate attack could be successful. As such, Leese ordered two major attempts to breach the line, one by XIII Corps in the vicinity of Aquino, the other by I Canadian Corps further south near Pontecorvo. At 2200 hrs on 18 May, 3 CIB's Brigade Major (BM) received a personal order from 1 CID's GOC, Maj. Gen. Vokes, to the effect that, based on recent intelligence, it was felt that the enemy had not had time to properly man the Hitler Line. The brigade was to push vigorously in the morning to seize the high ground overlooking Pontecorvo and the road running along the Hitler Line and then conduct an assault on the Line itself. This order led to a period of intense planning within the brigade into the early morning, with particular reference to the artillery fire plan. There was great disappointment when 1 CID's and 3 CIB's planning staffs were informed that only 1 Field Regt RCHA would be able to support their attack as 78th British Division in XIII Corps, conducting the assault near Aquino, was given priority of artillery fire from Eighth Army's guns.⁴⁵⁴ Given the lack of artillery support, 3 CIB's Commander, Brigadier Paul Bernantchez, decided that only one battalion could be supported, and the Royal 22e Régiment (R22eR) was selected for the assault.⁴⁵⁵

On 19 May, R22eR pushed forward and at first made reasonably good progress. But soon, enemy snipers hit the tank crews from the 51st Battalion, Royal Tank Regiment who were not buttoned up in their tanks, anti-tank fire knocked out several tanks, and the infantry were

⁴⁵¹ LAC, 1 CID WD - WD Entry, 18 May 1944.

⁴⁵² Jones, "Intelligence and Command", 164-165.

⁴⁵³ Burns, *General Mud*, 145.

⁴⁵⁴ Cessford, "Hard in the Attack", 322-328.

⁴⁵⁵ HQ 1 CID, "1 Cdn Inf Div in the Liri Valley"; CJC Molony, *The Mediterranean and Middle East: Vol VI, Part I: 1st April to 4th June 1944*, (London: Her Majesty's Stationery Office, 1984), 179-180.

pinned down by heavy machine gun (MG) and mortar fire.⁴⁵⁶ The battalion was forced back and was placed into the brigade reserve. 78th Division's attack at Aquino, smashed by anti-tank gun fire, fared no better. The commander of the R22eR, LCol. Jean Allard, later deeply criticized the "recklessness" of the operations and intelligence staffs of his higher HQs for sending his unit into an operation with limited information and without artillery support.⁴⁵⁷ It is often stated in intelligence circles that one mistake by intelligence can destroy all credibility in one swift blow; indeed, Allard described those who analyzed the intelligence reports as being "ill-advised bureaucrats".⁴⁵⁸ Although Commonwealth intelligence could be blamed for stating the enemy was weak, which the First Canadian Army Final Intelligence report would later warn never to do likely as a result of situations such as this,⁴⁵⁹ the attack on 19 May was not completely the result of an intelligence failure. Certainly, the lack of concentration of force, both at the Eighth Army level for ordering two weak brigade-sized attacks, and at the Corps level, by allowing 3 CIB to commit only one battalion with limited artillery support, against positions which had strong anti-tank defences were unwise decisions in retrospect. Jones believes that Eighth Army missed an important opportunity to crash the Hitler Line by not ordering the proper concentration of force required to breach the line as the period of three days of relative inactivity allowed the Germans to strengthen their positions, causing further casualties when the final assault occurred.⁴⁶⁰ Despite the attack's failure, 1 CID, I Canadian Corps, and XIII Corps intelligence continued to believe that the defences on the Hitler Line were weak, especially in infantry (which was essentially correct), and the enemy should not be allowed to reorganize and reinforce the line.⁴⁶¹ Vokes, likely influenced by this intelligence, also perceived that the Line was weak; in fact, it had taken 3 CIB's commander, Brigadier Bernantchez, much effort to convince Vokes to authorize the R22eR to withdraw

⁴⁵⁶ HQ 1 CID, "1 Cdn Inf Div in the Liri Valley".

⁴⁵⁷ Allard, *Memoirs*, 74-77.

⁴⁵⁸ Allard, *Memoirs*, 77.

⁴⁵⁹ LAC, First Canadian Army Final Intelligence Report.. Intelligence "Practical Principle" Number XIII stated that "Intelligence and Commanders should never tell troops that the enemy is weak and will not fight, unless they are announcing a definite capitulation. The greatest damage was done to Intelligence throughout the campaign by announcements of this character. It was found again and again that the weak enemy...still had the ability to dispose himself for defence...".

⁴⁶⁰ Jones, "Intelligence and Command", 167.

⁴⁶¹ LAC, 1 CID WD - WD Entry, 19 May 44.; LAC, I Canadian Corps WD, May 1944 - I Cdn Corps INTSUM #58, 20 May 1944; Jones, "Intelligence and Command", 166.

from the attack.⁴⁶² Vokes assessed that it would take 48 hours to prepare for the next attack against the Hitler Line, including a mass barrage in order to open up a 2000-yard-wide corridor for 5 CAD to pass through. Vokes also ordered his divisional artillery to commence a continuous and increasingly intense artillery bombardment against all known enemy positions.⁴⁶³

Leese had made a number of operational-level errors during the planning of the assault and exploitation phase of the Hitler Line. On 20 May, he held a conference with his corps commanders where he ordered I Canadian Corps to assault the Hitler Line between Pontecorvo and Aquino, and then exploit towards Ceprano; meanwhile, XIII Corps would conduct a diversionary attack with 78th Division near Aquino. Cessford believes that by this time the FEC had essentially penetrated the Hitler Line defences further to the south in the Aurunci Mountains. This offered an opportunity to cut off large portions of Tenth German Army if Leese had insisted to Fifth US Army commander, General Mark Clark, to switch the French axis of advance northwards; however, Clark ordered the French to continue to push west.⁴⁶⁴ One of Leese's greatest errors was ordering two corps to operate side by side down a very narrow valley that could barely hold a divisional frontage. This problem could have been avoided if Leese had placed the 78th Division under Canadian Corps command and allowed the Canadians exclusive rights to manoeuvre in the valley as they saw fit, including the ability to prioritize the use of high-speed routes.⁴⁶⁵ This serious mistake not only caused command and boundary issues between I Canadian and XIII Corps, but also severe traffic jams. Further, due to XIII and I Canadian Corps' boundaries intersecting at Aquino, 1st Para Div caused considerable casualties to 2 CIB from its fortified positions in the town during the assault on the Hitler Line when the 78th British Div failed to neutralize the paratroop threat to 1 CID's right flank.⁴⁶⁶ Regardless, the main attack against the Hitler Line was ordered to commence in

⁴⁶² Allard, *Memoirs*, 76.

⁴⁶³ LAC, 1 CID WD - WD Entry, 19 May 1944.; LAC, RG 24, Vol. 10779 - HQ 1 CID "1 Cdn Inf Div in the Liri Valley, 15 - 28 May 1944", 1 Cdn Div CRA "Artillery 1 Cdn Div in the Liri Valley Battle", 11 June 1944. The number of guns in support would increase from 230 initially to 700 guns in total by 20 May.

⁴⁶⁴ Cessford, "Hard in the Attack", 332-334.

⁴⁶⁵ Delaney, *Corps Commanders*, 85

⁴⁶⁶ Cessford, "Hard in the Attack", 350-355.

several days, in conjunction with the VI US Corps attempt to break out of the Anzio bridgehead.

By 20 May, planning staffs and commanders throughout the Canadian Corps were fully engaged with planning for the assault against the Hitler Line. Burns issued Corps Operational Instruction #10 later that day, ordering 1 CID to breach the Hitler Line on the night of 21-22 May or 22 May and 5 CAD to be ready to exploit the breach and subsequently capture Ceprano.⁴⁶⁷ Vokes attended a conference at Corps HQ and presented his initial plan for the breaching of the Hitler Line to Burns. He originally envisioned a two-battalion attack using 2 CIB supported by the British 25th Army Tank Brigade. Both Burns and Vokes agreed to an H Hour on 23 May at 0600 hrs. However, after Burns briefed Leese on Vokes's plan, Leese requested that Vokes use more infantry on a wider frontage. Vokes thus reformed his plan to use a battalion from 3 CIB to the left of 2 CIB's two battalions, with the overall divisional reserve the R22eR and 12th Canadian Armoured Regiment (Three Rivers Regiment).⁴⁶⁸ The plan was codenamed Operation CHESTERFIELD.

Meanwhile, Vokes needed more information about the Hitler Line's defences. Vokes, likely still influenced by 1 CID's intelligence cadre stating that the Hitler Line was weakly defended, ordered the 4th Princess Louise Dragoon Guards (PLDG), the divisional Reconnaissance Regiment, to probe German defences near Pontecorvo.⁴⁶⁹ Vokes also ordered extensive patrolling along the Hitler Line to discover or confirm knowledge of enemy defences, including the locations of wire, concrete bunkers, MG positions, anti-tank guns, strong points, and any other relevant data.⁴⁷⁰ The intelligence lessons learned, discussed, and practiced from Sicily, the Moro River campaign, the Adriatic sector, and the intelligence course run in April 1944 came into good effect. At least twice in 1 CID's WDs, the War Diarist compared the patrolling activity against the Hitler Line to the division's time on the Adriatic sector, which reflects the familiarity of 1 CID's infantry and intelligence cadre conducting patrolling to

⁴⁶⁷ LAC, I Canadian Corps WD, May 1944 - I Cdn Corps Operational Instruction #10, 20 May 1944.

⁴⁶⁸ LAC, 1 CID WD - WD Entry, 21 May 1944; Burns Fonds - Letter to Maj-Gen Chris Vokes from Maj-Gen ELM Burns, 20 May 1944.

⁴⁶⁹ HQ 1 CID, "1 Cdn Inf Div in the Liri Valley".

⁴⁷⁰ LAC, 1 CID WD - WD Entry, 19 May 1944.

gather information.⁴⁷¹ From 20 May to the early hours of 23 May, numerous patrols were sent out and the reports coming back were as detailed as the ones from the Adriatic sector.⁴⁷² Patrols probed the Hitler Line throughout this timeframe, noting where they took fire, how often they were shelled, locations of anti-tank guns and turrets, locations of and descriptions of wire, and locations of minefields.⁴⁷³ Of course, there was the inevitable focus on capturing PWs as much as possible.⁴⁷⁴ All this information was systematically passed back via intelligence channels from the battalion IOs, to the brigade IOs, to divisional intelligence and finally to Corps.⁴⁷⁵ Kingsmill believed that 1 CID's intelligence organization during this period worked very well and that it provided satisfactory information. Further, when he interviewed a number of battalion and brigade IOs from 1 CID after the battle, they believed that they had been kept in the picture by their respective higher HQs, indicating that information was passed efficiently up and down the chain. As Kingsmill later stated "The whole drill was familiar to all concerned and it functioned smoothly."⁴⁷⁶

Before the final assault on the Hitler Line, Canadian Corps intelligence provide a reasonably clear appreciation of the enemy's defences and intentions, in particular potential enemy reserves which might be encountered in the interim. Kingsmill noted on 20 May that specific efforts were made to to determine the enemy strengths and units around around Pontecorvo. Further, Corps intelligence closely monitored the movements of 26th Pz Div as it had the potential to relieve certain elements of 90th PG Div on the French front, allowing

⁴⁷¹ LAC, 1 CID WD - WD Entry, 20 May 1944; WD Entry, 21 May 44.

⁴⁷² LAC, RG 24, Vol. 14084 - 3rd CIB WD - WD Entry, 21 May 44. For example, see 3 CIB INTREP, 0930 hrs, 21 May 1944 – On the West Nova Scotia Regiment's (WNSR) sector enemy artillery was active until 2330 hrs when it died down. A WNSR patrol reached an area and came under fire, the location of which was noted. On the Carleton and York (C&Y) sector shelling and mortaring was heavy, but died out late at night. A C&Y fighting patrol went out and encountered a party of five Germans who were lost; one PW was taken, another German killed, and the remainder escaped. PW interrogation occurred, identifying the PW from 576th Gren Regt, the third regiment in 305th Gren Div; the other two regiments (577 and 578) in this Div were recalled to have been in contact with 3 CIB in the Adriatic sector several months before. The PW noted that 576th Regt was from Bode BG and was pushed from Adriatic sector at the beginning of Eighth Army's offensive. The PW stated that his company's strength was 20 men, his battalion's 60 men, there was only one MG in the Bn (grid noted) and his battalion's frontage was 300 yards plus. PW also stated that only a small percentage of the positions on the line were manned. Supplies were low as not much motor transport was available and most supplies had to come in by mule or by foot. PW believed that anti-tank defences were not extensive in his area. PW did not know where the Regt's HQ was.

⁴⁷³ LAC, 1 CID WD. See patrol reports 20 - 23 May 1944.

⁴⁷⁴ LAC, 1 CID WD - WD Entry, 21 May 1944.

⁴⁷⁵ LAC, I Canadian Corps WD, May 1944 - WD Entry, 21 May 1944. At 1016 hrs, the Corps War Diarist noted that a good picture of the enemy defences were being built up by 1 and 3 CIB patrolling the previous night. Enemy MG positions and wire was pinpointed and this information is being passed up by the GSO 3 Int of 1 CID.

⁴⁷⁶ Kingsmill "Intelligence Report on Adolph Hitler Line Offensive".

these elements to confront any Canadian offensive. Of real concern was that if the enemy was given time, it would build a significant counterattack force. There was an omnipresent anxiety that the attack on the Hitler Line could draw off the remainder of 26th Pz Div, in particular the division's Panzer regiment, 26th Pz Regt, Kesselrings's final reserve at the Anzio bridgehead, to be a counterattack force against the Canadian Corps in the Liri Valley.⁴⁷⁷

Information obtained in the next two days exacerbated Canadian Corps fears of enemy consolidation which could lead to an operational reserve behind the Hitler Line that could conduct a counterattack or, if necessary, an organized delay battle to hamper any exploitation operation. For example, Canadian Corps ISUM #3 on 21 May 44 noted that PWs had been taken from 26th Reconnaissance Unit of 26th Pz Div on Fifth US Army's front who stated the whole Pz Div was slated to be sent to Tenth Army's front (i.e., possibly against the Canadian Corps).⁴⁷⁸ Further, 1 CID intelligence on 21 May stated that 9th PG Regt (26th Pz Div) and 200 PG Regt (90th PG Div) essentially had been organized into BGs to fight a delay action, which caused further concern that the enemy was gaining time to reorganize.⁴⁷⁹ Canadian Corps intelligence on 21 May continued to warn Corps staffs and commanders against allowing the enemy to consolidate. It also stated that based on PW information, 305 Inf Div was increasing its presence on the FEC's sector which might allow elements of 26th Pz Div to move into the Canadian sector soon to launch a counterattack or allow the division to conduct a delay battle up the Liri Valley to the Valmontone Line.⁴⁸⁰ Corps intelligence noted on 22 May that the French had identified two companies of 67th PG Regt (26th Pz Div) near Pico eight miles west of Pontecorvo, and that 305th Gren Div was increasingly replacing 9th PG Regt (26th Pz Div) elements so that 26th Pz Div could act as a mobile reserve. Meanwhile, Corps intelligence believed that 90th PG Div was attempting to extricate its forces from the Hitler Line to reform and act as a mobile rearguard.⁴⁸¹

⁴⁷⁷ LAC, I Canadian Corps WD, May 1944 - I Cdn Corps INTSUM #59, 21 May 1944.

⁴⁷⁸ LAC, I Canadian Corps WD, May 1944 - I Cdn Corps ISUM #3, 21 May 1944; Kingsmill "Intelligence Report on Adolph Hitler Line".

⁴⁷⁹ LAC, 1 CID WD - 1 CID INTSUM #61, ICOT: 1200 hrs, 21 May 1944.

⁴⁸⁰ LAC, I Canadian Corps WD, May 1944 - I Cdn Corps INTSUM #60, 22 May 1944.

⁴⁸¹ LAC, 5 CAD WD - 5 CAD INTSUM #4, 22 May 44.

German WDs help confirm that I Canadian Corps intelligence continued to be reasonably accurate in its predictions, though, in hindsight, Corps intelligence likely overestimated the available strength of 26th Pz Div. These German documents indicate that, General Kesselring finally released 29th PG Div on 20 May to fight at Fondi in order to blunt the Fifth US Army's advance.⁴⁸² This move effectively left him only elements of 26th Pz Div in his reserve (the Hermann Goering Div was to be moved only at the orders of *Oberkommando der Wehrmacht* or OKW – the most senior German command organization). As such, there was justified concern that 26th Pz Div might still show up on the Canadians' doorstep if the latter were successful at breaching the Hitler Line. German WD information also helps confirm the fears of Canadian Corps intelligence about the enemy reinforcing and creating a more powerful counterattack force. On 20 May, two *Nebelwerfer* Regiments were sent from Fourteenth Army's front to 90th PG Div's sector near Pontecorvo, while 21 May saw the arrival of further reinforcements in 90th PG Div's area, including a company from 114th Engineer Bn (114th Jäger Div) and, of great importance, a company of Panther tanks from 26th Pz Div. Further confirming Corps assessments, 200th PG Regt (90th PG Div) was ordered to assemble in Ceperano, approximately 12 miles west of Pontecorvo, likely for reorganization so it could be returned to its parent formation as a mobile reserve.⁴⁸³

Continued pressure was mounted on the Hitler Line by 1 CID on 21 May, including a reconnaissance in force by the PLDG in the vicinity of Pontecorvo during the morning, leading to the capture of 22 PWs. Vokes remarked in his after-action report that most of these PWs were from a reinforcement battalion (44th Ersatz or Reinforcement Bn from 44th Inf Div) who had "little stomach" for fighting. Likely spurred on by their intelligence cadres who warned not to allow the Germans any time to consolidate, both Vokes and, to a lesser extent Burns, were convinced that this recent PW intelligence meant that German defences around Pontecorvo was weak, leading Vokes ordering another assault against the Pontecorvo area.⁴⁸⁴ Vokes first explored an assault against Pontecorvo from the south through the FEC's sector,

⁴⁸² LAC, "German Military Documents, 4 January - 4 June 1944", 68-69.

⁴⁸³ LAC, "German Military Documents, 4 January - 4 June 1944", 71.

⁴⁸⁴ HQ 1 CID, "1 Cdn Inf Div in the Liri Valley".; Burns, *General Mud*, 147-149.

but when this proved unfeasible,⁴⁸⁵ he ordered a more direct assault. Later on 21 May, 1 CID intelligence issued a peculiar INTSUM which likely reinforced Vokes's perceptions of enemy weakness. The INTSUM stated that a German withdrawal from the Hitler Line was imminent and that the line was manned by elements that were literally expendable. This assessment was largely based on the success of other Allied fronts (i.e., the Fifth US Army and the FEC) and interrogation of approximately 280 PWs which had passed through the division, all of whom had similar stories about units having severe shortages of manpower, low morale, while many had not eaten for two to three days. A number of PWs from 44th Ersatz Bn even claimed that they had been ordered to hold on as long as possible as a rearguard so the main body could retreat from the Hitler Line.⁴⁸⁶ Obviously, the PW information, a substantial amount originating from weak units such as 44th Ersatz Bn which suggested that the Hitler Line was being abandoned was incorrect. However, the fact that so many PWs from these types of units were suggesting a critical vulnerability existed could have adversely affected 1 CID's intelligence appreciations, leading to the assessment that the Hitler Line was being abandoned. Indeed, coupled with recent French successes on the Corps' left flank, Burns it there was potential to turn the German flank and the Hitler Line rolled up northwards to open a breach wide enough for 5 CAD to pass through.⁴⁸⁷

Though it would be easy to accuse 1 CID intelligence, Vokes, and even Burns of "over optimism" again, they were responding as best they could to available evidence. This evidence, based on at times debatable PW information, suggested there was an opportunity to regain the initiative and to breach the Hitler Line before 23 May. Further, Canadian Corps intelligence still believed that the Germans were attempting to reorganize a large counterattack force or were forming a mobile defence which could blunt any exploitation operation. In many ways, a dichotomous balance between saving lives and building certainly was at issue. The longer one planned, the more certainty was created that a breach of the Hitler Line could be achieved. However, the longer one took to plan allowed the Germans more

⁴⁸⁵ HQ 1 CID, "1 Cdn Inf Div in the Liri Valley".; Burns Fonds - Burns's WD, May 1944.

⁴⁸⁶ LAC, 1 CID WD - 1 CID INTSUM #61, ICOT: 1200 hrs, 21 May 1944; LAC, I Canadian Corps WD, May 1944 - WD Entry, 22 May 1944.

⁴⁸⁷ LAC, I Canadian Corps WD, June 1944 - Lt Gen ELM Burns "The Set Piece Attack - Lessons from the Breakthrough of the Hitler Line", 6 July 1944. (Hereafter Burns "Lessons from the Hitler Line")

time to consolidate, increasing the chance of more lives being expended during the final assault and decreasing the chances of a successful armoured exploitation. Such were the factors that weighed upon commanders' minds and intelligence staffs' appreciations.

On 22 May, a second limited assault by 1 CID was conducted by 1 CIB against the Hitler Line near Pontecorvo.⁴⁸⁸ Much like the attack on 19 May, this assault was essentially a reinforced one-battalion assault by 1 CIB with a demonstration further north by 3 CIB. This attack also effectively delayed 2 CIB the brigade slated to conduct the main assault on the Hitler Line on 23 May, from relieving 1 CIB on the front.⁴⁸⁹ This delay had unforeseen consequences later. The attack was preceded by a reconnaissance in force by PLDG and subsequently led up with the assault elements of 1 CIB. The assaults went well initially, but by late afternoon the units were suffering considerable tank and infantry losses and the assault bogged down. Vokes later claimed that the breach created by 1 CIB was insufficient for any exploitation operation to occur. Units in 3 CIB conducting the diversionary attack further north came under similar resistance and withdrew. However, the commander of 3 CIB believed that good information was acquired from the attack and officers conducting the probe assessed that the Hitler Line continued to be manned by weak forces which could be overwhelmed by a larger and more concerted attack.⁴⁹⁰ Despite Burns's hesitance about the operation, both he and Leese agreed that it had been a useful one,⁴⁹¹ although after the war Burns admitted, likely with some regret, that the attack launched on 22 May distracted from the main effort to breach the Hitler Line.⁴⁹² 65 PWs were taken during this assault, most again from 44th Ersatz Bn, though interrogations led to the identification of both 576th Gren Regt (305 Gren Div) and 190th Engr Bn (90th PG Div) operating near Pontecorvo.⁴⁹³

Unfortunately, what was not fully realized at the time was that 44th Ersatz Bn was actually part of BG Bode, an ad hoc unit made up of two battalions from 576th Gren Regt (305th Inf

⁴⁸⁸ Cessford, "Hard in the Attack", 344-346. Cessford notes that the CO of the 48th Highlanders was deeply disturbed by his orders to push towards Pontecorvo and threatened to resign. In the end, his protests got him several more hours to plan.

⁴⁸⁹ HQ 1 CID "1 Cdn Inf Div in the Liri Valley". The commander of 1 CIB, Brigadier Dan Spry, was somewhat hesitant to conduct the assault and requested the attack to be put in at 1200 hrs. Vokes, who originally wanted the attack to go in at 0800 hrs, "compromised", and set it at 1000 hrs.

⁴⁹⁰ LAC, 1 CID WD - WD Entry, 22 May 1944; HQ 1 CID "1 Cdn Inf Div in the Liri Valley, 15 - 28 May 1944".

⁴⁹¹ Burns Fonds - Burns's WD, May 1944.

⁴⁹² Burns, *General Mud*, 147-149.

⁴⁹³ LAC, I Canadian Corps WD, May 1944 - I Cdn Corps INTSUM #61, 23 May 1944.

Div), 334 Engineer Bn (334 Inf Div), elements of 44th Ersatz Bn (44th Inf Div), a Company of 190th Engineer Bn and a Company from 190th Anti-Tank Bn (both from 90th PG Div).⁴⁹⁴ Despite 576th Gren Regt taking severe losses for the last several days, it seems that this ad hoc BG retained enough strength to repulse the limited Canadian attacks that went in at Pontecorvo. In fact, German WDs suggest that 334 Engr Bn acted very competently during the local defence of Pontecorvo throughout the 22 May assault, calling down effective mortar and *Nebelwerfer* fire on the Canadians. Further, one German officer from the 334 Engr Bn assessed 44th Ersatz Bn as a very weak unit. In fact, a number of individuals in Bode Group later blamed the Ersatz Bn for allowing the penetration of the Hitler Line to occur on 23 May,⁴⁹⁵ though 1 CID intelligence assessed after the battle the main attack on 23 May fell against 361st PG Regt's sector further north.⁴⁹⁶ The large numbers of PWs captured from 44th Ersatz Bn in the previous two days likely skewed 1 CID's intelligence assessments of the weakness that supposedly existed in the Pontecorvo sector. In fact, the main lesson from the last few days was that poorly-trained troops with meagre morale could hold out reasonably well in well-prepared defensive positions against attacks lacking proper concentration of force. After the operation on 22 May, Vokes proceeded with the original CHESTERFIELD plan. He ordered a regrouping of forces, with units of 2 CIB moving up to relieve the previous units in the line while the divisional tactical HQ was amalgamated with the tactical HQs of 2 and 3 CIB and 25th Army Tank Brigade for easier C3 and information passage.

Meanwhile, during the final days before the attack against the Hitler Line, 1 CID remained well-served by the air photo intelligence provided by the Corps to its subordinate formations and units. As 1 and 3 CIB set into position along the Hitler Line and initial patrols went out, Vokes claimed the defences depicted on the defence overprints compiled from air photo interpretation were highly accurate,⁴⁹⁷ although later it was found that the defences were not as strong as the air photos suggested.⁴⁹⁸ A further weakness of the air photo interpretation was that while the defence overprints accurately located enemy positions, they erred in

⁴⁹⁴ LAC, "German Military Documents, 4 January - 4 June 1944", 65-66, 72-73. Col. Bode (305th Gren Div) would later receive a commendation for his actions in repulsing the Canadians on 22 May 1944.

⁴⁹⁵ LAC, "German Military Documents, 4 January - 4 June 1944", 76-78.

⁴⁹⁶ HQ 1 CID "The Enemy on the Adolph Hitler Line".

⁴⁹⁷ HQ 1 CID, "1 Cdn Inf Div in the Liri Valley".

⁴⁹⁸ HQ 1 CID "The Enemy on the Adolph Hitler Line".

places about the types of weapons involved. This was due to the fact that the defences were built under camouflage nets and were original in design and thus new to the MAIU (West) photo interpreters, who had difficulty in interpreting what they were.⁴⁹⁹ Up to the final day before the assault on the Hitler Line, air photo interpreters had considerable difficulty in spotting many minefields, a failing which considerably delayed both Canadian assaults on 22 and 23 May.⁵⁰⁰ Regardless, adding to the effectiveness of the imagery intelligence being provided, on 22 May, 1:25,000 gridded photos with target reference points were issued down to company and squadron level, and the same photos were provided to artillery units. This allowed everyone within the Canadian and XIII Corps to employ the same map and photo references, allowing artillery and air support to be called down more efficiently.⁵⁰¹

From 18 to 22 May, 1 CID, I Canadian Corps and Eighth Army intelligence weighed in on the enemy ORBAT, dispositions, and strengths on the Hitler Line. There were discrepancies. On 18 May, Eighth Army intelligence assessed that there were three BGs that made up the Hitler Line, including a BG based on 1st Para Div with approximately 3950 troops in XIII Corps sector in the north, a BG further south based on 361st PG Regt (90th PG Div) with approximately 1235 troops, and a BG based on 576th Gren Regt (305th Gren Div) with approximately 1985 troops near Pontecorvo. Thus, the sector that the Canadian Corps was expected to assault, according to Eighth Army, had an estimated strength of up to 3500 troops.⁵⁰² On 19 May 1 CID estimated, based on PW intelligence, that approximately 2900 German troops were in the Canadian sector, based within a number of ad hoc BGs.⁵⁰³ These Commonwealth appreciations of enemy unit dispositions were reasonably accurate, though slightly skewed in the vicinity of Pontecorvo. But it would have been impossible to be completely accurate due

⁴⁹⁹ Kingsmill "Intelligence Report on Adolph Hitler Line Offensive".

⁵⁰⁰ Nicholson, *The Canadians in Italy*, 414, 418-420.

⁵⁰¹ LAC, I Canadian Corps WD, May 1944 - "Cdn Corps Operation Order #1", 23 May 1944.

⁵⁰² Jones, "Intelligence and Command", 163-164; LAC, RG 24, Vol. 10998 - Eighth Army INTSUM #725, 18 May 1944.

⁵⁰³ LAC, RG 24, Vol. 13728 - 1st Cdn Inf Div WD - WD Entry, 19 May 44. Along 1 CID's attack sector, divisional intelligence estimated that the 361st PG Regt BG consisted of 361st PG Regt with 700 troops, 190th Reconnaissance Bn with 200 troops, 190th Engineer Battalion with 250 troops and I Bn 115th PG Regt with 85 troops; 576th Gren Regt BG was assessed to have 576th Gren Regt with 600 troops, III Bn 115th PG Regt, 85th Reconnaissance Bn with 150 troops, 95th Engineer Bn with 250 troops, 80th Engineer Bn with 200 troops and III Alpine Bn with 680 troops; LAC, I Canadian Corps WD, May 1944 - I Cdn Corps INTSUM #57, 19 May 1944. On 19 May, Corps intelligence assessed the following unit dispositions were along the Hitler Line, from north to south: 3rd Para Regt, 1st Para Regt, 361st PG Regt, 576th Gren Regt, 115th Gren Regt including a number of Mtn units and 190th Reconnaissance Bn (which had lost all its officers); south of the Liri River, 71st Inf Div had under its command 131 Gren Regt (44th Inf Div) and 305th Reconnaissance Bn. Of particular note, 200th PG Regt (90th PG Div) and 9th PG Regt (26th Pz Div) had both been under command of 71st Inf Div at one point or another.

to the complexity of German ORBATs, in particular the mixed nature of German BGs, at the time.

Based on German WDs, German dispositions on the night of 18-19 May were, from north to south:⁵⁰⁴

- Under 1st Para Div:
 - BG Schultz (Piedmonte Sector) – Remnants of 1st Para Regt, 1st Para Div; II Bn, 721st Jäger Regt and the II Bn, 741st Jäger Reg (114th Jäger Div); elements of 242nd Assault Gun Brigade.
 - BG Heilmann (Aquino Sector) – 4th Para Regt, 1st Para Div; I and II Bns, 3rd Para Regt, 1st Para Div; I Bn, 361st PG Regt (90th PG Div).
- Under 90th PG Div:
 - BG Fabian – (just north of Pontecorvo) which was based on II and III Bns 361 GR (90th PG Div) and included elements of 44th Ersatz Bn, a Panther company from 26th Pz Div, and assorted anti-tank units and engineer elements.
 - BG Strafner (under command of BG Bode near Pontecorvo) – With three companies from 5 Mtn Div and several half companies from miscellaneous Jäger Battalion, various assault guns, and elements of an engineer battalion.
 - BG Bode (in the vicinity of Pontecorvo) – which was based on I and II Bns 576th Gren Regt, 334 Engineer Battalion (Engr Bn - Less one company), Elements of 44th Ersatz Bn, a company from 190th Engr, and a company from 190th anti-tank battalion.

Further, three companies of anti-tank guns, sited in clusters of two to three weapons each, were spread throughout the defences of the Hitler Line,⁵⁰⁵ and at least 150 artillery pieces, two batteries of 150mm *Nebelwerfers* and one battery of 210mm *Nebelwerfers* provided indirect fire support.⁵⁰⁶ It should be noted that an estimate of the numbers of mortars available to the Germans was impossible, though the numbers were probably significant.

⁵⁰⁴ LAC, "German Military Documents, 4 January - 4 June 1944", 65-66.

⁵⁰⁵ Cessford, "Hard in the Attack", 336-337.

⁵⁰⁶ Molony, *The Mediterranean and Middle East: Vol. VI, Part I*, 185.

German WDs give no estimates of the numbers of troops available because most German commanders probably did not even know how many troops were available in each unit at that time. However, all units were severely depleted of men. A 1 CID post-battle assessment of the Hitler Line estimated that on the day of the assault, only 775 German infantry were available on the line between Pontecorvo and Aquino, not including other troops such as sappers, those manning the anti-tank guns and tank turrets, and artillery personnel. 1 CID also assessed that there had been at least ten Mark IV tanks, ten "Hornets" (SPGs with 88 mm guns), and an unknown number of Mark III tanks under LI Corps ready to counterattack against any salient made by Canadian or British forces. After the battle, Burns calculated the enemy on the Hitler Line had no more than 1300 troops between Pontecorvo and Aquino.⁵⁰⁷ Further, post-battle assessments of the Hitler Line noted that, though formidable, the Line was incomplete and many of its defence works were neglected. The Hitler Line relied extensively on anti-tank defence. Though the main anti-tank emplacements, such as the reinforced Panther turrets, were complete and able to resist artillery fire, many infantry and towed anti-tank gun positions were hastily dug-in and there were limited numbers of reinforced trenches or concrete dugouts. Firing positions had limited visibility as crops in front of them had not been cut. Further, as German troops had retreated so quickly into the Line, they were unable to set up an outpost line to restrict Canadian patrolling, which allowed for 1 CID to build a good picture of the enemy defences through reconnaissance.⁵⁰⁸

Post-battle assessments aside, it is most important to note what commanders in I Canadian Corps believed they were going to face during the day of the assault. Eighth Army had estimated no more than 3500 troops in the Canadian sector. Brigadier Spry, Commander of 1 CIB, concluded that 1 CID intelligence believed that they were going to face no more than 2000 troops (which was lower than the 19 May 1 CID assessment) in the Corps sector, including two tank regiments of 15 to 20 tanks each for mobile counterattacks and that

⁵⁰⁷ HQ 1 CID "The Enemy on the Adolph Hitler Line".; Cessford, "Hard in the Attack", 337-338.; Burns "Lessons from the Hitler Line".

⁵⁰⁸ LAC, I Canadian Corps WD, May 1944 - I Cdn Corps INTSUM #63, 25 May 1944 - "First Impressions of a Section of the Adolf Hitler Line", 25 May 1944; LAC, RG 24, Vol. 10881 and Vol. 10888 - "1 Cdn Inf Div - Report on the Hitler Line Defences", June 1944.

assault guns were interspersed in support of German infantry.⁵⁰⁹, Eighth Army, I Canadian Corps and 1 CID's intelligence cadres all overestimated enemy troop numbers, though it seems that the estimates of tank numbers were reasonably accurate. It is fair to say that I Canadian Corps commanders were well-served by their intelligence cadres. They knew where the vast majority of enemy strongpoints and fixed anti-tank guns were located based on accurate air photo intelligence (i.e., disseminated on defence overprints) and the extensive patrolling conducted by 1 CID. As such, it is reasonable to state that Canadian commanders believed they faced between 2000 to 3500 well-dug-in troops with strong anti-tank gun support, some in reinforced bunkers resistant to artillery fire, and that at least 30 to 40 enemy tanks were available to conduct immediate counterattacks. All Canadian commanders knew that it was going to be a tough, costly fight especially because they were conducting a frontal attack on a reinforced defensive position.⁵¹⁰

While front-line elements prepared to assault the Hitler Line, Corps artillery convened a series of conferences to plan fire support, and, more specific to intelligence, determine targets on the Line. Targeting intelligence was derived from Air OPs, FOOs, infantry patrolling, and air photos. Air OPs and FOOs, as they became more acquainted with their fronts, played a vital and continuing role in controlling artillery fire and providing excellent observation of the front.⁵¹¹ Throughout the battle for the Hitler Line and beyond, there was widespread praise for artillery Air OPs for their ability to not only rapidly acquire targets and call in artillery fire, but to serve as an active observer and tactical reconnaissance asset for divisional and brigade HQs, especially for scouting, reporting on friendly troops, and identifying counterattack forces.⁵¹² The artillery staff and IOs also had high praise for the defence overprints based on

⁵⁰⁹ HQ 1 CID, "1 Cdn Inf Div in the Liri Valley".

⁵¹⁰ Burns "Lessons from the Hitler Line".

⁵¹¹ LAC, 1 CID WD - WD Entry, 19 May 1944.; LAC, RG 24, Vol. 10779 - HQ 1 CID "1 Cdn Inf Div in the Liri Valley, 15 - 28 May 1944", 1 Cdn Div CRA "Artillery 1 Cdn Div in the Liri Valley Battle", 11 June 1944.; LAC, I Canadian Corps WD, May 1944 - WD Entry, 21 May 1944.

⁵¹² LAC, 5 CAD WD - WD Entry, 24 May 1944.; LAC, RG 24, Vol. 10881 / Vol. 14311, "Report by CCRA I Cdn Corps on Operations of Canadian Artillery in Italy, May - June 1944", Published sometime in Early June 1944.; LAC, RG 24, Vol. 10929 - Maj Gen Burt Hoffmeister, Commander 5 CAD "5 Cdn Armd Div - Report on Operations 23 to 31 May 1944", 22 June 1944.; LAC, RG 24, Vol. 10929 - "RCA 5 Cdn Armd Div - Report on Operations 23 to 31 May 1944", and "HQ RCA 3 Cdn Armd Div - Lessons from Ops from Adolf Hitler Line to Frosinone", 22 June 1944.

air photos taken 72 to 96 hours before the main offensive began. All targeting information was passed to the IORA and two other staff officers to do detailed map plotting of targets.

As the assault began on 23 May, a large-scale fire plan, including a creeping barrage, was commenced 3200 yards wide and 3000 yards deep in the Canadian Corps sector. With Allied artillery outnumbering German artillery nearly four to one, a total of 810 guns were used, including 75 medium and heavy guns allotted for counter-battery (CB) throughout, and 52 guns and all available mortars were used in counter-mortar (CM) operations. As per Anglo-Canadian doctrine, all forward elements monitored for counterattacks, and reported any indications of these German counter strokes higher so that 1st Canadian AGRA and 6th British AGRA could break them up with heavy artillery concentrations. During 3 CIB's final advance and consolidation of the breach it had made at 1800 hrs on 23 May, over a two-hour period, multiple concentrations were ordered by FOOs, artillery representatives and Air OPs, including against suspected enemy withdrawal routes. In post-battle accounts, the Corps artillery staff admitted that targeting intelligence was not perfect, as fire had been brought down on numerous unoccupied positions while other positions not identified by intelligence sources were not engaged at all. To rectify this, the Canadian Corps staffs recommended that in future operations, defence overprints must reflect air photography not more than 24 hours old.⁵¹³ Regardless, 1 CID intelligence and German WDs noted that the massed artillery had been instrumental in causing psychological damage to the enemy, disrupting enemy signal communications and logistics, destroying non-reinforced anti-tank positions, and conducting general suppression while friendly troops approached enemy positions which were subsequently destroyed in close combat. Most turreted 75 mm anti-tank guns were reported taken out by tank fire and enemy infantry eliminated by small arms or tank fire.⁵¹⁴ This is

⁵¹³ LAC, 1 CID WD - WD Entry, 19 May 1944.; HQ 1 CID, "1 Cdn Inf Div in the Liri Valley". Brigadier Gibson would state that excellent work had been done by air photo interpreters, but more up to date defence overprints would have been more useful to help neutralize suspected mortar, artillery and anti-tank positions.

⁵¹⁴ LAC, 1 CID WD - 1 CID INTSUM #61, ICOT: 1200 hrs, 21 May 1944, 1 CID INTSUM #62, ICOT: Likely late 23 May 44.; LAC, RG 24, Vol. 10881 and Vol. 10888 - "1 Cdn Inf Div - Report on the Hitler Line Defences", June 1944; LAC, "German Military Documents, 4 January - 4 June 1944", 73-80.; Burns "Lessons from the Hitler Line".

largely in line with what other historical studies have observed about artillery effectiveness against well-prepared enemy positions.⁵¹⁵

The other major aspect of the Canadian Corps artillery, the Counter Battery Office (CBO), was also very busy utilizing the available intelligence to build its plan. On 20 May, the CBO of I Canadian Corps was ordered to take over the direction of CB on the Canadian Corps front and prepare a CB plan for the Hitler Line. That day, I Canadian Corps CBO issued a CB Appreciation.⁵¹⁶ It stated that before the opening of XIII Corps' operation on 11 May, it was estimated that the Germans had approximately 250 guns of all types west of the Rapido - Gari River, which, based on the historical documents on German strengths noted above, was probably 50 to 100 guns too many. On 20 May, the enemy artillery picture, as compared to the beginning of the Cassino offensive, had changed completely as the enemy's artillery relocated west. Canadian and British flash spotter (FS) bases and a British sound ranging (SR) base were deployed. But misty weather, dust, poor weather, and smoke over the battlefield hampered the FS while battle noise hampered the SR. Air photo cover had been obtained for 18 May while the interpreter was unable to detect any new positions and many positions were noted to be then vacant. But, due to the poor weather, air photos were unable to be taken on 19 and 20 May. Thanks to the rapidly changing situation, time was needed to build up the picture of the enemy HB locations, which would take up to three days to accomplish. Available imagery also demonstrated that practically all locations occupied before 20 May were now vacated, and the interpreters could not pick out new ones, which meant the German artillery was moving daily. By the evening of 20 May, only 11 definite HB locations were confirmed by air photos. Every effort was devoted to identifying enemy HB locations as soon as possible. From 20 to 22 May, FS and SR equipment, along with air photos, corroborated 44 HB locations, but few *Nebelwerfers* were identified.⁵¹⁷ In both the light of the numbers of artillery guns that the CBO thought existed and that actually existed, this number is disappointing.

⁵¹⁵ French, *Churchill's Army*, 490-491.; Engen, *Canadians Under Fire*, 85-86.; Hart, *Colossal Cracks*, 95.

⁵¹⁶ LAC, RG 24, Vol. 13687 - I Canadian Corps CBO WD, May 1944.

⁵¹⁷ LAC, RG 24, Vol. 13687 - I Canadian Corps CBO WD, May 1944 - Counter Battery Office - I Cdn Corps "Counter Battery in the Battle of the Adolph Hitler Line - 23, 24 and 25 May 44", 30 May 1944.

On the morning of 23 May, engagement of all suspected HB positions was undertaken and the initial suppression of enemy artillery was effective until about 0930 hrs when the first reports of hostile shelling and mortaring came in from forward troops. In his after-action report, Burns expressed disappointment with the CB efforts, stating that the initial effects of this program initially were effective but short lived and German artillery activity seemed to increase as the day went on. Burns thus recommended the necessity to blind or destroy enemy OPs on surrounding ground.⁵¹⁸ Shelling dropped off by the day's end, though this result likely was due to the enemy withdrawing. Extensive shelling was reported to be coming from Aquino, and these positions were shelled systematically at least three times. Great difficulty was experienced in identifying *Nebelwerfers* until 1300 hrs, at which time the mist and dust cleared, Air OPs were able to identify a number of them and they were engaged.⁵¹⁹ The CBO assessed at the end of the battle that the vast majority of HBs had been identified by air photo interpretation. On 27 May, the CBO issued an after-action report outlining a number of observations from the assault on the Hitler Line. The Air OP organization was noted to work very satisfactorily, for, besides weather restricting its activities, these OPs identified and engaged a notable number of HB targets. As for air photo interpretation, currently the air interpreter resided permanently at the Field Photographic section and interpreted photos at that location and then sent his findings to the CBO. The CBO recommended having an actual interpreter at the office itself to keep the interpreter up-to-date with the current CB situation so that he could meet the intelligence demands of the CBO more quickly even though this change would require a permanent Royal Engineer plotting staff and a means of getting the latest photo prints to the interpreter.⁵²⁰

Counter-mortar (CM) efforts during the Hitler Line battle were even more disappointing than the CB efforts. Infantry accounts emphasized the continual mortar fire they had to bear throughout the assault, and Burns emphasized the need to improve these efforts.⁵²¹ As 1 CID

⁵¹⁸ LAC, RG 24, Vol. 10881 and Vol.10888 - "1 Cdn Inf Div - Report on the Hitler Line Defences", June 1944.

⁵¹⁹ LAC, RG 24, Vol. 13687 - I Canadian Corps CBO WD, May 1944 - Counter Battery Office - I Cdn Corps "Counter Battery in the Battle of the Adolph Hitler Line - 23, 24 and 25 May 44", 30 May 1944.

⁵²⁰ LAC, RG 24, Vol. 13687 - I Canadian Corps CBO WD, May 1944 - "Notes for Report on the Battle of the Hitler Line from Counter Battery Point of View", 27 May 1944.

⁵²¹ Burns "Lessons from the Hitler Line".

estimated that most of their casualties incurred during the assault against the Hitler Line were caused by mortar fire and more resources were needed to increase CM effectiveness.⁵²² The CM program utilized mostly 4.2 inch mortars and was deemed effective by 1 CID only when the mortars were actively firing at enemy mortar positions.⁵²³ However, the resources devoted to CM efforts were completely inadequate and the effects of enemy mortars continued to be demoralizing throughout the Liri Valley campaign. Unfortunately, by the end of the Liri Valley battles, it was determined that units were just as much to blame for the ineffective CM efforts as the CB and CM organizations themselves, largely due to the dearth of mortar and shell reports (MOREPS / SHELREPs) provided by front-line units.

The assault against the Hitler Line went in at 0600 hours, 23 May. The initial attack by the 3 CIB's first echelon battalion, the Carleton and York Regiment (CYR), went well despite serious losses to their attached tanks and soon it was consolidating with its supporting arms (i.e., anti-tank guns) and tanks. 3 CIB's second echelon, the West Nova Scotia Regiment (WNSR), moved forward past the CYR and soon was on its objectives. However, the attacks by the two 2 CIB battalions on 3 CIB's right flank achieved limited success. The battalions were bogged down by undisclosed minefields sited behind wire plus incessant mortar and anti-tank gun fire, much of it originating from Aquino due to 78th British Division's failure to capture the town from 1st Para Div.⁵²⁴ As Burns and the commander of 2 CIB, Brigadier Gibson, later assessed, the previous assault attempts on 22 May had been detrimental to 2 CIB. Delaney is even more harsh, accusing Vokes of "diddling around Pontecorvo" for the last few days rather than focusing on the main assault on the 23rd.⁵²⁵ During the assault on 23 May, 2 CIB, having only just relieved elements of 3 CIB at 1700 hrs on 22 May, had no time to do proper reconnaissance of its sector and 3 CIB may have done a poor job of handing over information about its sector to 2 CIB. As Brigadier Gibson later commented, while the defence overprints provided by divisional intelligence were a good guide to the Hitler Line, there was no substitute for good reconnaissance by infantry. If 2 CIB had time to conduct more thorough

⁵²² LAC, 1 CID WD - 1 CID INTSUM #62, ICOT: Likely late 23 May 1944; HQ 1 CID, "1 Cdn Inf Div in the Liri Valley".

⁵²³ LAC, RG 24, Vol. 10881 and Vol. 10888 - "1 Cdn Inf Div - Report on the Hitler Line Defences", June 1944.

⁵²⁴ HQ 1 CID, "1 Cdn Inf Div in the Liri Valley"; Cessford, "Hard in the Attack", 348-358; Nicholson, *The Canadians in Italy*, 423-424.

⁵²⁵ Delaney, *Corps Commanders*, 94.

patrolling, a more efficient advance could have been mounted, which probably would have saved a number of tanks from German anti-tank fire.⁵²⁶ Conversely, the CYR of 3 CIB, on 2 CIB's left, explained much of its success to it becoming very familiar with its sector due to extensive patrolling over its previous three days in the line. However, it should also be emphasized that 2 CIB faced serious resistance originating from Aquino on its right flank, including a number of counterattacks, after the 78th British Div failed to neutralize 1 Para Div in that town. Regardless, intelligence personnel played a vital communications role during the fighting that day. For example, 2 CIB's War Diarist noted that when 2 CIB's HQ lost contact with the forward units, the brigade commander and his IO, Capt A.W. Gray, struggled to keep in contact with the forward units. Capt Gray maintained his position at the main brigade HQ providing a key communications link between the brigade commander and the division.⁵²⁷

By mid to late afternoon, enemy counterattacks began forming, most originating from Aquino from elements of the 1st Para Div. These were subsequently beaten back, especially by heavy concentrations of artillery fire and supporting tanks although not before some elements of 2 CIB were overrun, resulting in 75 personnel being taken prisoner.⁵²⁸ By 1300 hrs, it was obvious that 3 CIB's breach in the Hitler Line would be the best opportunity to exploit. As such Vokes, with Burns's permission,⁵²⁹ ordered the divisional reserve, the R22eR with the attached tanks of the 12th Canadian Armoured Regiment, to move into the breach. Enemy reserves forming up for another counterattack were caught in the open and devastated by Commonwealth artillery. By 1800 hrs, the breach in the line was essentially consolidated.⁵³⁰ Over 700 PWs were taken throughout the day and numerous enemy tanks, SPGs, MG positions, strong points, and enemy troops were destroyed.⁵³¹ But the cost for 1 CID was also great. The division suffered 879 casualties, and two armoured regiments were effectively shattered during the assault.⁵³²

⁵²⁶ Burns "Lessons from the Hitler Line".; HQ 1 CID, "1 Cdn Inf Div in the Liri Valley".

⁵²⁷ LAC, RG 24, Vol. 14078 - 2nd CIB WD - WD Entry, 23 May 1944.

⁵²⁸ Nicholson, *The Canadians in Italy*, 421-423.

⁵²⁹ Burns Fonds - Burns's WD, May 1944.

⁵³⁰ LAC, I Canadian Corps WD, May 1944 - WD Entry, 23 May 1944. At 1710 hrs, the GSO 1 from 1 CID reported he believed that the enemy had "had it" based on 1) PW interrogation reports, 2) that there had been a long pause since the last enemy counterattack and, 3) the latest French reports of enemy withdrawal.

⁵³¹ LAC, 1 CID WD - WD Entry, 23 May 1944.

⁵³² Cessford, "Hard in the Attack, 348-358; Nicholson, *The Canadians in Italy*, 423-424.

I Canadian Corps intelligence closely observed the battle occurring throughout 23 May by monitoring radio nets, in particular Air OP nets, the J Service, and pushing interrogators forward to brigades to conduct rapid interrogation of PWs. Further, the #1 Cdn SWS, Type "B" likely played an important intelligence role during the battles, but there are unfortunately no historical records to document their contribution. Corps and divisional intelligence compiled and re-examined ORBAT information, in particular enemy unit locations, strengths, if reinforcements were on the way, and if there were indications that the enemy was withdrawing.⁵³³ A major concern to monitor for was if any potential counterattacks were forming that could destroy any gains made. For example at 1010 hrs, Corps intelligence reported that a PW from the 11th Company, 3rd Para Regt, 1st Para Div related that he had seen six Tiger tanks recently (Corps intelligence assessed he had seen Hornets – 88mm SPGs). More importantly, he believed that 20 to 30 Mark IV tanks were located near Aquino.⁵³⁴ This information provided by the PW was essentially correct, as a number of counterattacks by 1st Para Div with tank support originated from Aquino,⁵³⁵ but it remains unclear if this PW intelligence offered early warning of these attacks.

However, at approximately 1310 hrs, one of the most alarming reports that 1 CID intelligence had received during the day originated from a PW from 115th Pz Bn (a Mark IV tank battalion in 15th PG Div). The PW reported that a substantial number of tanks, including 36 Mark IVs and 96 Panthers (Mark Vs) from 26th Tank Regt (26th Pz Div) had moved into the Liri Valley front on 21 May. These battalions were allegedly ready to counterattack any breakthrough of the Hitler Line.⁵³⁶ This information seemed farfetched, but with recent Corps concerns about 26th Pz Div moving into the Liri Valley sector, this report could not be dismissed outright. Vokes quickly sent a message to Corps stating that he was anxious to have armoured reconnaissance push out forward as soon as possible between the Hitler Line and the Melfa River to verify this PW's story. Corps responded that it would coordinate artillery Air OPs and aerial reconnaissance to locate any enemy tanks forward of the Hitler Line.⁵³⁷

⁵³³ LAC, 1 CID WD - WD Entry, 23 May 1944.

⁵³⁴ LAC, I Canadian Corps WD, May 1944 - WD Entry, 23 May 1944.

⁵³⁵ Cessford, "Hard in the Attack", 350-355.

⁵³⁶ LAC, 1 CID WD - WD Entry, 23 May 1944.

⁵³⁷ LAC, 1 CID WD - WD Entry, 1340 hrs, 23 May 1944.; Burns, *General Mud*, 152.

Corps and 1 CID intelligence quickly scrambled to corroborate this PW information. 1 CID conducted further interrogations of PWs, in particular those from tank units, and discovered that 115th Pz Bn (15th PG Div) likely only had 15 to 20 Mark IV tanks. Additionally, although 115th Pz Bn had been placed under the command of 26th Pz Regt (26th Pz Div), it was assessed that 26th Pz Regt only likely had 24 Panthers and 36 Mark IVs in total,⁵³⁸ making the total armour strength available to LI Mtn Corps 80 tanks as opposed to the 132 tanks suggested by the PW from 115th Pz Bn. Further, these tanks were responsible for the entire LI Mtn Corps front, including the sectors commanded by 90th PG Div (on the Canadian front) and 1st Para Div (on XIII Corps front); thus they could not be committed wholesale. Only a maximum of 25 tanks were appreciated to be encountered at any one time, which, although significant, was a manageable threat. It remains difficult to assess the accuracy of Canadian intelligence on this issue, although German WDs outlined that 90th PG Div had been provided at least two Panther tank companies for operational reserves.⁵³⁹ At least one of these companies had been provided by 26th Pz Div, so there was some element of truth in the PW revelations. However, 1 CID estimated in post-battle reports that just 10 tanks had been potentially available to 90th PG Div, but that the aggressive use of assault guns and SPGs had confused many PWs and frontline troops about the number of actual tanks available. Most counterattacks were put in by infantry supported by up to five tanks or SPGs, or a mix of the two, and most counterattacks were reportedly directed at Canadian infantry, not armour, before they had consolidated.⁵⁴⁰ Canadian intelligence wisely had erred on the side of caution by overestimating the number of German tanks, but did it had not exaggerated the threat while still providing reasonably accurate assessments for planners to make sound and timely decisions.

As the battle for the Hitler Line culminated, Corps intelligence already had begun looking ahead for the fight to the Melfa River and beyond (see Figure Four, Chapter Six). 1 CID intelligence estimated that the Hitler Line had never been more than just a delaying position, and it had allowed the Germans to pull elite formations from the line, including 29th PG Div

⁵³⁸ LAC, 1 CID WD - 1 CID INTSUM #62, ICOT: Likely late 23 May 1944.

⁵³⁹ LAC, "German Military Documents, 4 January - 4 June 1944", 66, 71.

⁵⁴⁰ LAC, RG 24, Vol. 10881 and Vol. 10888 - "1 Cdn Inf Div - Report on the Hitler Line Defences", June 1944.

on the Fifth US Army front and 90th PG Div on the Eighth Army front. These more elite formations would be used to conduct a competent delay action back to a line where they could consolidate with forces trying to contain the Anzio bridgehead.⁵⁴¹ It was assessed that 200 PG Regt (90th PG Div) would be the main unit that would conduct the delay and defence up the southern portion of the Liri Valley, with elements of 1st Para Div conducting the delay up the northern half; according to German WDs, this was essentially correct.⁵⁴² Corps intelligence, unsurprisingly, largely agreed with their divisional colleagues.⁵⁴³ 1 CID appreciated that 361st PG Regt (90th PG Div) and 576th Gren Regt (305th Gren Div) should be considered wiped out. Corps intelligence seemed too elated to forward a predictive assessment for the next few days; its INTSUM in the early hours of 24 May related mostly factual information. In total 229 PWs had been reported captured so far; and, following 1 CID's example, the following units were considered to be non-existent: I and II Bns 576th Gren Regt, II and III Bns 361st PG Regt, 190th Engr Bn and 44th Ersatz Bn.⁵⁴⁴ However, while Corps intelligence warned that elements of 26th Pz Div were still located along the Pico - San Giovanni road, there were high hopes that elements of Tenth Army could be cut off before they escaped north to Rome.

As the Allies broke through the Hitler Line, LI Mtn Corps reported the Allied assault on 90th PG Div's sector, with its "ceaseless" air attacks and an "unending" artillery barrage, caused a widespread interruption of telephonic communications. A deep penetration was reported north of Pontecorvo (i.e., 3 CIB's recent assault), threatening 1st Para Div's right flank. Counterattacks by a battalion from 1st Para Div, augmented with two companies from 5th Mtn Div, were wiped out. Further, many German units reported that if they attempted to form up for offensive action, they were placed under extensive artillery fire,⁵⁴⁵ which speaks to the efficacy of the Commonwealth intelligence doctrine to locate and destroy any potential counterattack elements. As appreciated by Canadian intelligence, German WDs also stated

⁵⁴¹ LAC, 1 CID WD - 1 CID INTSUM #62, ICOT: Likely late 23 May 1944.

⁵⁴² LAC, "German Military Documents, 4 January - 4 June 1944", 80-86.

⁵⁴³ LAC, 1 CID WD - 1st Cdn Corps ISUM #5, 23 May 1944. This ISUM further elaborated that the French had taken Pico, and a PW from 67th PG Regt (26th Pz Div) stated that his unit was withdrawing to San Giovanni, approximately 5 miles north of Pico. Further, the enemy was likely to set up a mobile defence and conduct a delay up the Liri Valley.

⁵⁴⁴ LAC, I Canadian Corps WD, May 1944 - I Cdn Corps INTSUM #62, 24 May 1944.

⁵⁴⁵ LAC, I Canadian Corps WD, May 1944 - I Cdn Corps INTSUM #62, 24 May 1944.

that elements of 576th Gren Regt, 361st PG Regt, and BG Strafner had to be considered destroyed. LI Mtn Corps outlined that most of its battalions had a fighting strength of 30 men. 200 PG Regt had only 200 troops, and 361st PG Regt had just 100 troops still standing. Further, it was assessed that the Allied breakthrough had occurred along the weakest point of the Hitler Line. LI Mtn Corps asked Tenth Army to withdraw from the Hitler Line, a request that was approved on 24 May. During the night of 23-24 May, 90th PG Div attempted to set up a temporary defensive line on the San Giovanni - Ponte Regno road forward of the Melfa River. But at 1000 hrs 24 May this line was swept aside by a large force of Allied tanks, likely the PLDG-composite BG sent forward by Vokes (see next chapter), supported by aircraft and artillery attacking down the boundary of 90th PG Div and 1st Para Div.⁵⁴⁶ LI Mtn Corps would attempt to build a defensive line along the Melfa River, with 200 PG Regt holding the southern portion and the remnants of 1st Para Div to the north.⁵⁴⁷ The stage was set for the next phase of I Canadian Corps campaign – the armoured pursuit by 5 CAD down the Liri and Sacco Valleys.

Assessing the contributions of Commonwealth, including Canadian, intelligence during the advance to and breaking of the Hitler Line remains difficult. However, this chapter has outlined several examples where intelligence had a discernible positive effect. Hinsley has shown that SIGINT at the higher operational level (i.e., Ultra and Y Service intelligence), which monitored the movements of German formations and provided essential ORBAT information, was excellent. However, it is almost impossible to determine the effects of Commonwealth and Canadian SIGINT efforts at the tactical level due to the lack of historical records available in Canada. Regardless, 1 CID's intelligence cadre once again demonstrated throughout the breaking of the Hitler Line that they were true professionals, quickly processing the information provided by higher formations, and then breaking it down into planning information for the divisional and brigade commanders and staffs so that this intelligence could inform the combat elements. This was demonstrated best by the efforts previous to the offensive, especially when 1 CID's intelligence cadre participated directly in the division's

⁵⁴⁶ LAC, I Canadian Corps WD, May 1944 - I Cdn Corps INTSUM #62, 24 May 1944.; HQ 1 CID "The Enemy on the Adolph Hitler Line".

⁵⁴⁷ LAC, "German Military Documents, 4 January - 4 June 1944", 80-86.

study groups prior 1 CID's advance. Once 1 CID's operation commenced, the divisions' units became effective intelligence collection platforms notably thanks to the strong skills in patrolling and PW interrogation developed since Sicily. The formation's IOs also compiled all available information not only to report it, but also to properly contextualize the information, in particular the German units being encountered, their assessed dispositions and strengths, and appreciations of their future intentions.

Canadian Corps intelligence also did well, an impressive achievement given that this had been its first major operation. Previous to the offensive, Corps intelligence, working alongside Eighth Army and XIII Corps intelligence, provided excellent information for 1 CID's intelligence cadre and made solid appreciations of the enemy, albeit at times relying on 1 CID's assessments. Although the Canadian Corps intelligence cadre occasionally overestimated the tank threat – for a few moments even exacerbating fears of a potential German counterattack by 26th Pz Div on 23 May – it did not exaggerate it either, seeking out further information on this potential threat and providing reasonable assessments based on this evidence. Commonwealth aerial reconnaissance, including air photo interpretation and Air OPs, was outstanding, in particular the Air OPs providing up-to-date situational awareness and targeting information. Although air photo interpretation led to highly accurate defence overprints, they inevitably lacked information about enemy minefields and other key enemy positions. This failure proved detrimental to 2 CIB in the final assault on the Hitler Line on 23 May, as its troops were unable to conduct sufficient reconnaissance to address these intelligence gaps due to the assault attempt by 1 CIB and 3 CIB ordered by Vokes on 22 May, which delayed 2 CIB taking up position on the line until late that same day.

Although the Hitler Line was successfully breached, in no small part due to the intelligence effort occurring in the background, Canadian intelligence must share in a number of the failures which befell the Canadian Corps. 1 CID and the Canadian Corps intelligence organizations could be blamed for pushing for action against the Hitler Line, leading to premature assaults on 19 and 22 May. However, their assessments that the Hitler Line was "weak", which led to these assaults, had elements of truth to it. While the German infantry

strength manning the Line itself was relatively light the Line's strength was not entirely reliant on the numbers of infantry manning it, but rather to the numbers of crew-served weapons available for its defence, including the reinforced Panther turrets and large numbers of mortars. As such, operations staffs, Vokes, Burns, and Leese were also to blame for not utilizing the full resources available to their formations to conduct these assaults, including not employing enough artillery to suppress these German crew-served weapons in order to allow the infantry and armour to close with and destroy the enemy. Further, although Canadian targeting intelligence (i.e., defence overprints and Air OPs), in particular for artillery, was very good, the counter-battery (CB) and counter-mortar (CM) intelligence efforts left much to be desired, leading to high numbers of Canadian infantry casualties. Unfortunately, rectifying these CB and CM problems would take time, time that Corps personnel did not have as the Canadians transitioned into the next phase of operations, an armoured pursuit down the Liri–Sacco Valleys. Unfortunately, 5 CAD, including its intelligence cadre, would prove unprepared for this next phase which will be explored in the next chapter.

Chapter Six: Intelligence in the Pursuit Up the Liri–Sacco Valleys

With the Hitler Line breached, came one of the more controversial aspects of I Canadian Corps' Liri Valley experience – that of the exploitation up the Liri–Sacco valleys. Burns ordered that 1 CID press vigorously to the Melfa River and cross it if possible. Further, 5 CAD was to create a strong bridgehead over the Melfa, move towards Ceprano, and block all enemy from withdrawing across the Melfa.⁵⁴⁸ Vokes ordered a composite battle group (BG) led by the Princess Louise Dragoon Guards (PLDG), including three squadrons of tanks and the Carleton and York Regiment (C&YR), to pursue German forces up to the Melfa River and to create a bridgehead across the river. 1 CID brushed aside the minimal resistance put up by the Germans, and the division's engineers established at least one bridging site across the Melfa by 1710 hrs on 24 May.⁵⁴⁹ Meanwhile, by 1700 hrs on 23 May, Burns had given 5 CAD permission to exploit the breach 1 CID had made in the Hitler Line. However, severe traffic jams in the rear areas of I Canadian Corps and Eighth Army and the nature of the terrain slowed the ability of 5 CAD's exploitation brigade, the 5th Canadian Armoured Brigade (5 CAB), to do so. Leading elements of 5 CAB managed to cross the Melfa at 1530 hrs, 24 May.⁵⁵⁰ Of note, 5 CAB had its first major tank battle with a group of Panther tanks near Mancini east of the Melfa River, apparently the long-feared "counter attack force" from 26th Pz Div but more likely remnants of 90th PG Div's operational reserve.⁵⁵¹ Ten German Panthers or 88 mm SPGs were knocked out during this engagement.⁵⁵² Meanwhile, the remainder of 1 CID at the Hitler Line began mopping up operations, in particular south of Aquino, where 1st Para Div continued to severely delay XIII Corps,⁵⁵³ as numerous 1 CID staff officers formed study groups to discuss lessons learned and investigate the nature of the Hitler Line defences.⁵⁵⁴

⁵⁴⁸ LAC, 1 CID WD - 1st Cdn Corps Op Instruction #11.

⁵⁴⁹ LAC, 1 CID WD - WD Entry, 24 May 1944; HQ 1 CID, "1 Cdn Inf Div in the Liri Valley".

⁵⁵⁰ LAC, 5 CAD WD - WD Entry, 24 May 1944.

⁵⁵¹ LAC, "German Military Documents, 4 January - 4 June 1944", 88.

⁵⁵² LAC, RG 24, Vol. 10991 - Brigadier JDB Smith (Comd, 5 CAB) "The Crossing of the Melfa and the Securing of a Bridgehead by 5 Cdn Armd Bde Gp", 4 June 1944. (Hereafter Smith, "Crossing of the Melfa".)

⁵⁵³ Burns Fonds - Burns's WD, May 1944.

⁵⁵⁴ LAC, 1 CID WD - "Defences - Adolph Hitler Line", 24 May 1944; LAC, RG 24, Vol. 14076 - 1st CIB WD - WD Entry, 26 May 1944. The diary entry states: "Brigade study group on the breaching of Hitler Line occurred at 1600. Div GSO I and GSO III (Int) attended. General day of rest."

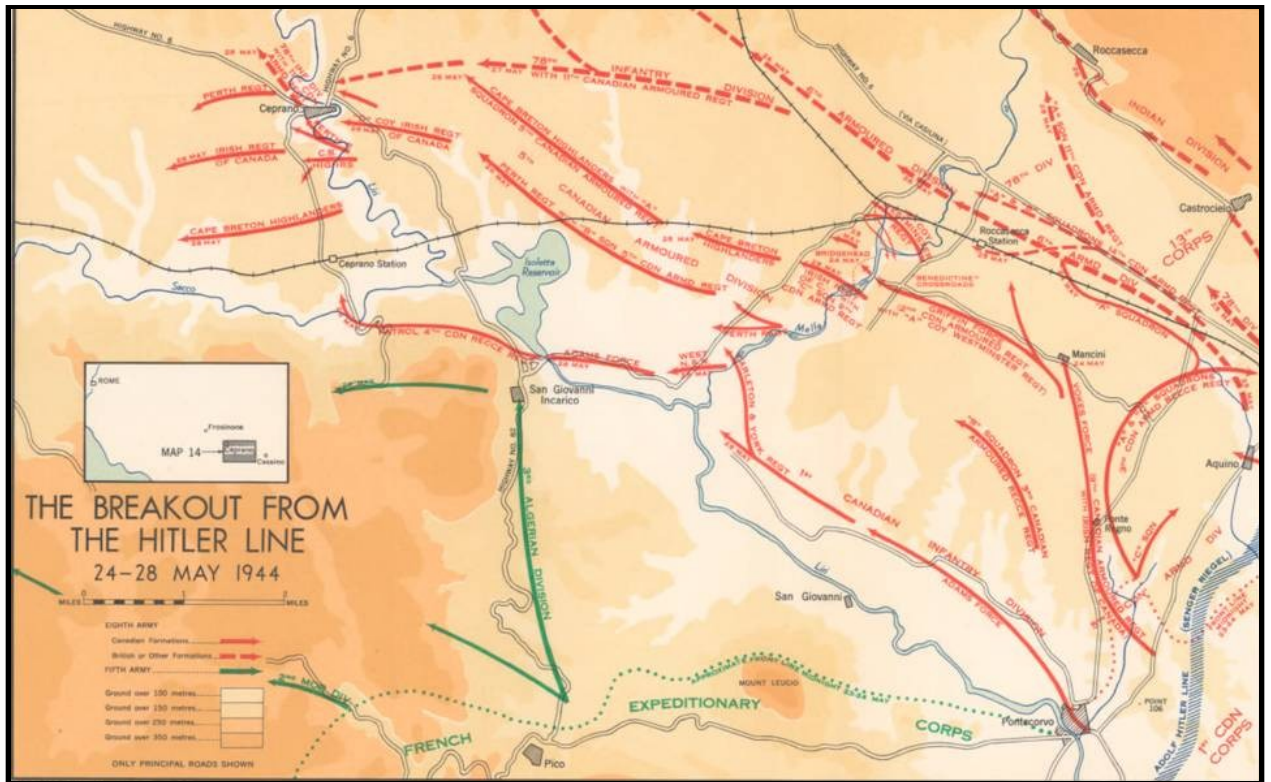


Figure Four: The Breakout from the Hitler Line (Source: Nicholson, *The Canadians in Italy*)⁵⁵⁵

As noted above, 5 CAD's intelligence organization was dysfunctional moving into the Liri Valley battle. Throughout its short period on the advance, the 5 CAD's intelligence staff, when compared to 1 CID intelligence, demonstrated a lack of capacity, in particular an inability to pass on information, lacked basic intelligence skill sets, and proved unable to provide solid tactical assessments of the enemy. Most of 5 CAD's intelligence staff, many of whom had recently just been placed in their positions, just did not know how to do their jobs properly. A number of senior officers are likely responsible for this. Lt. Gen. Burns had refused to allow his GSO 2 Int, Maj Kingsmill, to rectify 5 CAD's intelligence personnel problems before the offensive began. Although 5 CAD's GOC, Maj. Gen. Hoffmeister, had only been in command of the division for several months, he had commanded 2 CIB, a highly-competent formation with arguably the strongest intelligence cadre in I Canadian Corps. Thus, it stands to reason that Hoffmeister should have known what to expect from his intelligence staff although it will be shown that he was a fairly inexperienced divisional commander. However, 5 CAD's previous

⁵⁵⁵ Nicholson, *The Canadians in Italy*, Map 14, 442.

GOCs, Maj. Gen. Simonds from November 1943 to January 1944 and then Burns from January to March 1944, can also be blamed for not training 5 CAD's staff to the high standards needed. 5 CAD's GSO 1, LCol H.H. Angle, the senior staff officer in 5 CAD and in theory the man responsible for overseeing the staff procedures and personnel selection in the division's HQ,⁵⁵⁶ obviously did not do enough to adequately prepare his HQ staff for the upcoming operations. 5 CAD's brigade commanders, Brig T.E. Snow (11 CIB) and Brig J.D.B. Smith (5 CAB), and their Brigade Majors, who were in the senior staff officers in the relevant brigades, also must share the blame. These individuals should have ensured that 5 CAD's intelligence cadre was set up for success. However, they failed to confirm that proper personnel selection, consistency, and training of 5 CAD's intelligence cadre had occurred, or that general staff processes within the division were sound so intelligence could function properly.

5 CAD's intelligence cadre had little influence during the division's pursuit operations. 5 CAD's poor performance also negatively impacted I Canadian Corps intelligence as the corps relied extensively on its subordinate formations for intelligence collection and analysis. However, Maj Kingsmill and his crew tried to mitigate 5 CAD's poor intelligence and provide relevant appreciations on the information collected. Kingsmill assessed that 5 CAD's "immediate value" intelligence was very poor, but that its "long term" intelligence (likely due to Corps tutelage and influence) was good.⁵⁵⁷ Kingsmill also noted that once 5 CAD began its mobile operations, intelligence information virtually stopped and the enemy situation became very confused. Although this could be attributed to the collapse of 5 CAD's C3 system (see below), Kingsmill also admitted that even if the intelligence organization had functioned perfectly, matters would have been confused as the enemy, fighting in small ad hoc pockets, was "shuffled like a deck of cards." However, this excuse only goes so far as 1 CID's intelligence performance during the latter portion of the Liri Valley campaign after taking over the pursuit from 5 CAD dealt with a similar ambiguous situation in a far more competent manner.

⁵⁵⁶ Delaney, *The Soldier's General*, 157.

⁵⁵⁷ Kingsmill, "Intelligence Report on Adolph Hitler Line".; LAC, RG 24, Vol. 14065 - WD 5 CAB - WD Entry, 27 May 1944. This included 5 CAD's foresight to pass a number of key captured documents discovered by the Westminster Regiment. Higher intelligence circles were very appreciative of captured documents. The document itself, a marked map showing all gun positions in the Atina area, was described as a "prize find".

During 1 CID's advance to and then its assault on the Hitler Line, 5 CAD's intelligence staff was poorly utilized by its operations staff, a failure which both reflects 5 CAD's poor staff processes and suggests that most 5 CAD HQ staff did not know how to use intelligence properly. Until 20 May, 5 CAD's intelligence staff was inundated with numbering target reference points for the division's artillery staff which, though important, probably could have been delegated to other members of the divisional staff. Further, the GSO 3 Int, Maj. Appleton, was also chosen to be an LO for the division as a secondary task,⁵⁵⁸ a complete misuse of intelligence resources. However, it remains unclear who designated him to perform this duty. Kingsmill was aghast that the intelligence personnel at 5 CAD were wasted on such tasks which eroded their ability to maintain their situational awareness about the current battle and perform their primary job – appreciating the enemy.⁵⁵⁹ 20 May also saw 5 CAD issue one of its first INTSUMs, effectively just an overview of the Hitler Line on a trace with the addition of very generalized information on the current situation.⁵⁶⁰ Maj Appleton demonstrated some foresight in his 22 May INTSUM which attempted to identify the German formations that the division was likely to encounter in the upcoming pursuit operations. However, it used outdated information from 1 May to calculate enemy strengths, an oversight which showed the intelligence cadre's amateurish nature especially as updated appreciations were available.⁵⁶¹ By 23 May, Appleton had correctly determined that 90th PG Div, in particular 200 PG Regt, was the division's most likely opponent in the upcoming pursuit operations.⁵⁶² However, Appleton may have become fixated on this assessment as he failed later to appreciate in a timely manner that 26th Pz Div had taken over the delay operations against 5 CAD.

There were a number of systematic problems with 5 CAD's intelligence procedures, most of which were caused by not following, or ignorance of, established Commonwealth intelligence doctrine. As 5 CAB began its pursuit of the Germans through the Hitler Line, there were serious misunderstandings within the brigade, and 5 CAD in general, about how to conduct

⁵⁵⁸ LAC, 5 CAD WD - 5 CAD INTSUM #2, 20 May 1944.

⁵⁵⁹ Kingsmill, "Intelligence Report on Adolph Hitler Line".

⁵⁶⁰ LAC, 5 CAD WD - 5 CAD INTSUM #2, 20 May 1944; Elliot, *Scarlet to Green*, 204.

⁵⁶¹ LAC, 5 CAD WD - 5 CAD INTSUM #4, 22 May 1944.

⁵⁶² LAC, 5 CAD WD - 5 CAD INTSUM #7, 23 May 1944.

intelligence in a mobile operation. Brigade staffs were under the impression that information related to intelligence could not be transmitted over wireless, which was blatantly incorrect (it had to be transmitted via enciphered transmission). Even when this was rectified, brigade intelligence was only transmitted to the operations staffs at the division and not conveyed to the divisional intelligence staff so it could not be compiled into an intelligence report. At one point during the operation, Kingsmill even visited 5 CAD and stated to Appleton that this could be easily rectified if the operations and intelligence vans were side by side, standard Commonwealth intelligence doctrine since El Alamein. However, when Appleton attempted to implement this change, it met "stubborn resistance" from the GSO 2 Ops of the division, which further emphasized that 5 CAD's staff had a poor conception of intelligence and what it could do. Thus operations and intelligence, and even air operations, vans remained separated, contrary to every other HQ Kingsmill had ever seen or visited. This problem was seen as one of the major flaws of 5 CAD's intelligence system.⁵⁶³

Another major problem was that 5 CAD did not push interrogators down to brigades as 1 CID had been doing for almost a year. Attached interrogators to 5 CAD from Corps continued to remain at the divisional HQ throughout 5 CAD's operations. 1 CID noted this problem early when PWs whom 5 CAB had captured were unable to be processed properly and 3 CIB had to conduct the initial interrogations.⁵⁶⁴ 5 CAB's commander, Brigadier Desmond Smith, later remarked that thanks to brigade HQ needing to be constantly on the move, it had not been possible for IOs to collate or compile information of real value from PWs. Brigadier Smith also recommended in his after-action report that Corps interrogators be attached to armoured brigades.⁵⁶⁵ Smith probably thought he was proposing something new but having interrogators and the brigade IO in an armoured brigade interrogate and compile information from PWs had been part of British intelligence doctrine since the latter portions of the North

⁵⁶³ Kingsmill, "Intelligence Report on Adolph Hitler Line".

⁵⁶⁴ Smith, "Crossing of the Melfa"; LAC, 1 CID WD - WD Entry, 25 May 1944.

⁵⁶⁵ Smith, "Crossing of the Melfa"; LAC, 5 CAD WD - WD Entry, 29 May 1944; LAC, RG 24, Vol. 10929 - Maj Gen Burt Hoffmeister, Comd 5 CAD "5 Cdn Armd Div - Report on Operations 23 to 31 May 1944", 22 June 1944.

Africa campaign.⁵⁶⁶ Why such doctrine had not been adopted by 5 CAB is unclear and inexcusable.

However, 5 CAD's intelligence organization cannot be completely blamed for its poor performance as numerous factors also impeded its effectiveness. During its pursuit operations, 5 CAD's inexperience and weaknesses in staff work soon became apparent and it suffered from an almost complete breakdown in command, control, and communications (C3). Intermittent line communications, in particular due to tanks and artillery cutting ground-based communications wire, and a shortage of cipher personnel produced an inability to pass information quickly back and forth between all relevant HQs.⁵⁶⁷ The GSO 2 Ops in the Canadian Corps HQ, Maj. GJW Proctor, noted that the flow and mass of information rapidly increased once the battle became more mobile. However, whereas 1 CID had been very good with information passage, 5 CAD "left much to be desired". The situation became so bad that the GOC of 5 CAD, Maj. Gen. Hoffmeister, had to be sought out personally on a number of occasions for the latest information as the divisional staff lacked the information Corps needed to make decisions. It was also very apparent that information was not being passed, as the J Service had picked up on issues that should have been sent higher on much earlier. In fact, on 26 May, the Canadian LO to Eighth Army visited the Canadian Corps HQ and indicated that the Army felt that the staff work in 5 CAD was not entirely satisfactory due to poor passage of information. Burns took steps to rectify this, but several days passed before information passage improved, and not until the Chief of Staff of I Canadian Corps had intervened to tell 5 CAD's HQ to get its act together.⁵⁶⁸ Information passage within the division was not just a divisional HQ problem as artillery HQs indicated that 5 CAD FOOs were not passing information rearward either.⁵⁶⁹ Burns was forced to visit 5 CAD's HQ a number of

⁵⁶⁶ LAC, RG 24, Vol. 9811 - Capt Kulbach "Memorandum on Bde I.O.'s Duties of 26 Armd Bde", Likely written in early August 1943 and Capt EVAW Ofenheim "Comment on Memorandum on Bde I.O.'s Duties of 26 Armd Bde", 21 August 1943. Kulbach, a Canadian IO who was attached to a British armoured brigade in Tunisia, outlined a very effective armoured brigade intelligence organization and even stated that the brigade IO often conducted interrogations, exploited captured documents and kept careful notes on German identifications, even on active operations.

⁵⁶⁷ Burns Fonds - Burns's WD, June 1944.

⁵⁶⁸ LAC, RG 24, Vol. 10781 - Major GJW Proctor, GSO 2 (Ops), I Cdn Corps "Report on the G(Ops) Branch - HQ I Cdn Corps - Period 16 May - 5 June 1944", 7 June 1944; LAC, MG 31 G6 Vol.1 - Burns Fonds - Burns's WD, May 1944.

⁵⁶⁹ LAC, RG 24, Vol. 10929 - "RCA 5 Cdn Armd Div - Report on Operations 23 to 31 May 1944", and "HQ RCA 3 Cdn Armd Div - Lessons from Ops from Adolf Hitler Line to Frosinone", 22 June 1944.

times to get the information he needed to understand the current battle. Hoffmeister, who utilized a forward tactical HQ for the majority of 5 CAD's time on the line, often had to send information back by despatch rider to inform Burns about his current situation and future intentions.⁵⁷⁰

5 CAD's C3 problems also reflected another problem – Hoffmeister's inexperience in commanding a higher formation. 5 CAD's GOC split his HQ, creating a poorly manned and ill-equipped tactical HQ which, forward most of the time with Hoffmeister, could not effectively monitor 5 CAD's advance and allow Hoffmeister to exert proper C3. The wireless sets at the main HQ were much more powerful and had landlines back to Corps. Hoffmeister, under the orders of Burns, eventually had to rejoin his tactical and main HQs to exert tighter C3.⁵⁷¹ Further, as Douglas Delaney states, one of Hoffmeister's main problems was that he likely had risen through the ranks too quickly, leading him to neglect thinking ahead and tapping into information sources he required to do proper planning. Hoffmeister was able to convey his intent, but the information he was basing his decisions on was often inadequate.⁵⁷² In many ways, this is a case of ambition being mistaken for competence, where driven yet inexperienced individuals take on more responsibility than they can handle, which leads them to fail. That his intelligence staff was generally incompetent did not help things either.

The division itself was placed in a very demanding situation, that of a mobile pursuit operation, coordinated by a divisional and brigade staff with very little experience. In fact, intelligence during a mobile operation is probably more difficult to manage than preparing for a defensive battle or conducting an assault against a well-entrenched enemy. Further, it is often factors other than intelligence, such as well-trained and experienced troops ready to deal with uncertainty, good contingency planning, and competent leadership, that will determine a mobile operation's success.⁵⁷³ There certainly are grounds for criticism of both Burns's and Hoffmeister's command of the pursuit battle, in particular not "driving" 5 CAD's

⁵⁷⁰ Delaney, *The Soldier's General*, 141-142; Burns Fonds - Burns's WD, May 1944.

⁵⁷¹ Delaney, *The Soldier's General*, 145; Cessford, "Hard in the Attack", 385-386; Burns Fonds - Burns's WD, May 1944.

⁵⁷² Delaney, *The Soldier's General*, 150.

⁵⁷³ Handel, *Intelligence and Military Operations*, 48-49; Michael Handel in the Preface for: David Glantz, *Soviet Military Intelligence in War*, (London: Frank Cass Publishing, 1990), pg.xiii.

troops forward. But Michael Cessford's belief that Anglo-Canadian doctrine of successive bounds for brigades should have been ignored and that 5 CAB should have continued to push onwards until it could go no further ignores one point⁵⁷⁴ – independent armoured thrusts had previously been attempted in North Africa and often had been quickly destroyed piecemeal. 5 CAD was coming up against an enemy highly experienced in conducting delay operations. German BGs were very skilled in utilizing small, mobile rearguards equipped with numerous mortars, a handful of tanks, SPGs and anti-tank guns, and extensively mined and booby-trapped routes of advance, replete with snipers often picking off engineers trying to clear these routes. These BGs often caused delay and casualties until either Allied engineers demolished the German obstacles or the rearguard withdrew because it risked being outflanked.⁵⁷⁵ There was also the matter of terrain as the Italian peninsula was hardly the North African desert. The topography in Italy was not conducive to large-scale armoured thrusts which had been planned for 5 CAD. As previously mentioned, another major problem was that of the boundaries between XIII Corps and I Canadian Corps, both of which were attempting to squeeze down the narrow confines of the Liri Valley. Leese also continued to favour XIII Corps over the Canadian Corps for the use of high-speed routes and bridges, leading to XIII Corps often utilizing terrain that the Canadian Corps was traversing, further exacerbating existing traffic jams in the rear areas.⁵⁷⁶

During these operations, Corps and 5 CAD artillery staffs continued to have difficulty in efficient control of fire as communication lines were stretched to the limit.⁵⁷⁷ Artillery staffs also had difficulty identifying the locations of friendly troops, leading to hesitancy in conducting fire missions. Even more importantly, during 5 CAD's advance towards Ceprano and the crossing of the Liri River, the division's troops suffered from extensive shelling and mortaring. Everything possible was done to mitigate this, including moving AGRA guns to the east of the Melfa River, pushing sound ranging (SR) and flash spotting (FS) equipment forward, and using Air OPs to try to identify enemy artillery and mortars, but counter-battery

⁵⁷⁴ Cessford, "Hard in the Attack", 404-414.

⁵⁷⁵ French, *Churchill's Army*, 241.

⁵⁷⁶ Cessford, "Hard in the Attack", 368-379; Delaney, *The Soldier's General*, 142-145.

⁵⁷⁷ LAC, 1 CID WD - WD Entry, 19 May 1944; LAC, RG 24, Vol. 10779 - HQ 1 CID "1 Cdn Inf Div in the Liri Valley, 15 - 28 May 1944", 1 Cdn Div CRA "Artillery 1 Cdn Div in the Liri Valley Battle", 11 June 1944.

(CB) and counter-mortar (CM) performance continued to be poor. An almost complete lack of shell reports (SHELREPs) and mortar reports (MOREPs) throughout the operation from forward troops led to inadequate targeting information, making it impossible to conduct proper CB and CM work. After the operation, responsibility for these failures was placed upon unit representatives, including artillery and mortar OP personnel, FOOs, platoon / troop commanders, and the intelligence sections of infantry battalions. This was despite the fact that, previous to the operation, CB and CM personnel had garnered an initial spirit of cooperation from 5 CAD's units to produce MOREPs and SHELREPs, but none were actually sent during operations.⁵⁷⁸ As 5 CAD and I Canadian Corps artillery personnel found that the actual number of discovered hostile battery (HB) locations was generally unsatisfactory, they believed that the first major test of the CM sections in Canadian formations was a complete failure.⁵⁷⁹ The GOC of 1 CID, Maj Gen Vokes, remained so concerned about the mortar threat, that he issued a memorandum, likely sometime just before 1 CID went back into action on 29-30 May, insisting that all personnel in his division send in more MOREPs to brigade CM officers so that enemy mortars could be effectively suppressed.⁵⁸⁰

Despite the poor information passage within 5 CAD, Corps intelligence attempted to keep on top of the current situation and appreciate the latest information. In the early hours of 25 May, both 1 CID and Kingsmill assessed that the enemy would attempt to hold the Melfa with a number of ad hoc elements. This assessment was especially assisted when 1 CID discovered a German map which indicated that 1 Para Div intended to defend along the Melfa River.⁵⁸¹ German documents confirmed that Hitler wanted the Melfa line held for several days, but German commanders realized this was unrealistic as the Allies had already crossed parts of the river and established bridgeheads. Thus LI Mtn Corps ordered a withdrawal from the Melfa River by 2350 hrs, 25 May 1944.⁵⁸² By the 26th, the intelligence picture had become

⁵⁷⁸ LAC, RG 24, Vol. 10929 - "RCA 5 Cdn Armd Div - Report on Operations 23 to 31 May 1944", and "HQ RCA 3 Cdn Armd Div - Lessons from Ops from Adolf Hitler Line to Frosinone", 22 June 1944.

⁵⁷⁹ LAC, RG 24, Vol. 10881/ Vol. 14311 - "Report by CCRA I Cdn Corps on Operations of Canadian Artillery in Italy, May - June 1944", Published sometime in Early June 1944.

⁵⁸⁰ LAC, 1 CID WD - Maj Gen Chris Vokes "Counter Mortar Activity", issued sometime late May 1944.

⁵⁸¹ LAC, I Canadian Corps WD, May 1944 - I Cdn Corps INTSUM #63, 25 May 1944, I Cdn Corps INTSUM #64, 26 May 1944; LAC, 1 CID WD - 1 CID INTREP, 0300 hrs 25 May 1944.

⁵⁸² LAC, "German Military Documents, 4 January - 4 June 1944", 87.

extremely confused. 5 CAD's INTSUM in the early hours of 26 May noted no recent enemy identifications,⁵⁸³ but this could be partially attributed to the above-noted divisional inability to process PWs quickly. Regardless, the division's intelligence cadre gave an update on the organization of 26th Pz Div's units, which would soon become its main adversary; however, 5 CAD offered little information on the unit strengths and dispositions of the German formation. The most important thing needed at that point, Kingsmill noted in his post-battle assessment, was information about strengths of men and tanks and closely watch unit reorganization.⁵⁸⁴ 5 CAD's intelligence cadre proved largely incapable of providing this, which was a considerable disservice to the commanders and staff of the division. Regardless of 5 CAD's lack of intelligence capability, Corps intelligence forwarded an assessment, based on the captured map from 24-25 May, that 1st Para Div and 90th PG Div continued to be in charge of the delaying operations, 1st Para in the north of the valley, 90th in the south, and that an orderly fighting withdrawal would be conducted to the Valmontone Line.⁵⁸⁵

Despite establishing a small bridgehead across the Melfa on 24 May, 5 CAB had difficulty expanding it. Heavy shelling, mortar, and anti-tank fire plus a number of enemy counterattacks slowed the brigade's ability to gain a strong foothold on the west bank of the Melfa. As Brigadier Smith stated later, "...it was obvious the enemy was trying as much as he could to stop a consolidated bridgehead from forming."⁵⁸⁶ As 5 CAD's engineers established two bridges across the Melfa River on the night of 24-25 May, Hoffmeister, fearing that the Germans might create a more solid delay position along the river, ordered 11 CIB to move forward to exploit the bridgehead and capture Ceprano on the Liri River by the night of 25 May.⁵⁸⁷ This order was largely in accordance with Anglo-Canadian doctrine to have units move in sequential bounds. Unfortunately, the advance by 11 CIB towards the Liri River and Ceprano quickly bogged down.

⁵⁸³ LAC, 5 CAD WD - 5 CAD INTSUM No Number, signed at 0125 hrs, 26 May 1944.

⁵⁸⁴ Kingsmill "Intelligence Report on Adolph Hitler Line".

⁵⁸⁵ LAC, I Canadian Corps WD, May 1944 - I Cdn Corps INTSUM #64, 26 May 1944.

⁵⁸⁶ Smith "The Crossing of the Melfa".

⁵⁸⁷ LAC, RG 24, Vol. 10929 - Maj Gen Burt Hoffmeister, Comd 5 CAD "5 Cdn Armd Div - Report on Operations 23 to 31 May 1944", 22 June 1944. (Hereafter Hoffmeister, "5 CAD Report on Operations").

11 CIB was commanded by Brigadier Eric Snow who, in many ways, exemplified the inexperience and poor staff work which existed within 5 CAD. Snow moved cautiously as he refused to let his armour become separated from the infantry, which was inevitable due to the nature of the terrain and the obstacles, such as minefields, blown bridges, and abatis skilfully left behind by the Germans. He also took too long to prepare orders, leading to his subordinate units not having enough time to do their own planning which led to poorly coordinated attacks.⁵⁸⁸ 11 CIB elements were also incessantly shelled, sniped at, and mortared, further slowing its advance.⁵⁸⁹ At one point, Snow even believed that a counterattack would be launched against his forces on 26 May, although this seems less due to intelligence providing assessed information and more likely due to an element in 11 CIB spotting enemy tanks nearby at some point.⁵⁹⁰ This led Snow to order the brigade's main body to halt and dig in a half a mile away from Ceprano and the Liri River; only an intervention by Hoffmeister led him to recommence his advance.⁵⁹¹ Although it is impossible to say if Snow's decision to stop his advance would have been different if 5 CAD's and 11 CIB's intelligence cadre was more competent and functional, it is safe to say that the lack of timely intelligence on German intentions and capabilities likely exacerbated his uncertainty that a German counterattack would strike his formation.

By 2000 hrs 26 May, 11 CIB finally consolidated some key terrain across the Liri River. Patrols swimming across the Liri River into Ceprano that evening noted that the town was abandoned. At one point, two PWs from 9th PG Regt (26th Pz Div) were taken by the Perth Regiment, leading to a 5 CAD assessment that "...the Germans are committing everything they possess in a vain attempt to hold our advance."⁵⁹² However, it remains unclear if this PW intelligence gave sufficient indication of a counterattack, launched by 26th Pz Div at some point late on 27 May, which attempted to eliminate 11 CIB's bridgehead near Ceprano. Luckily, this attack was beaten back by 5 CAD's artillery, no doubt assisted by a number of 6-pounder anti-tank guns rafted across by 11 CIB the night before. By noon on 27 May, Ceprano

⁵⁸⁸ Delaney, *The Soldier's General*, 143-145.

⁵⁸⁹ LAC, 1 CID WD - WD Entry, 26 May 1944 - 5 CAD SITREPs at 0600 hrs and 1908 hrs, 26 May 1944.

⁵⁹⁰ LAC, 5 CAD WD - WD Entry, 26 May 1944.

⁵⁹¹ Cessford, "Hard in the Attack", 379-385.

⁵⁹² LAC, 5 CAD WD, WD Entry, 26 May 1944.

was finally confirmed to be in Canadian hands, but the Germans had managed to break contact and continue their withdrawal. However, the Canadians remained exposed to almost continual artillery and mortar fire which greatly slowed bridging efforts by the engineers.⁵⁹³

On 27 May, 5 CAD issued an INTSUM that demonstrated that its intelligence organization was still having major difficulties. This INTSUM reminded all IOs that PWs were of a much greater value if they were tagged with a six-figure map reference indicating where they had been captured as well as the date of their capture. Further, it emphasized that a PW's paybook was NOT to be removed from the PW. The INTSUM further emphasized that it was essential to get PWs back to PW cages more quickly, including all captured documents and suspected new equipment, and all brigade IOs were to phone or send the PW numbers and preliminary identifications to the GSO 3 Int. These were basic PW handling points that all intelligence personnel should have known, which reveals how unprepared 5 CAD's intelligence cadre was for the Liri Valley battles. Regardless, PWs from both 200th PG and 361st PG Regts (90th PG Div) stated that their units were conducting a withdrawal westward. However, one PW suggested that 90th PG Div was in charge of the Acre sector in the northern Liri Valley, which was previously (and still) under the control of 1st Para Div. Based on this information, Appleton incorrectly concluded that it was possible that 1st Para Div had withdrawn from the valley once more demonstrating his inexperience, as he was basing this appreciation solely on a single source (I Canadian Corps intelligence averred on 28 May that 1 Para Div continued to give strong resistance in the north against XIII Corps).⁵⁹⁴ Of note, Corps intelligence assessed that 90th PG Div would not long be on their front, as 26th Pz Div had been driven north of the Sacco River (which ran parallel to the Canadian axis of advance) by the French and was a much more suitable formation for manoeuvre defence back to the Valmontone Line.⁵⁹⁵ There were already indications that 26th Pz Div was taking over the delay

⁵⁹³ LAC, 5 CAD WD - WD Entry, 26 May 1944; Cessford, "Hard in the Attack", 385; Hoffmeister, "5 CAD Report on Operations"; LAC, "German Military Documents, 4 January - 4 June 1944", 88-89. German WDs stated that two 26th Pz Div units, 26th Pz Bn and 1027 PG Regt, conducted a counterattack against 11 CIB at 1600 hrs on 27 May. By 2000 hrs attempts to eliminate Canadian penetrations apparently had failed and by 2130 hrs, the formation's main body withdrew, leaving a rearguard. The formation was ordered to withdraw to a switchline at Cessano, approximately 7 miles west of Ceprano.

⁵⁹⁴ LAC, 5 CAD WD - 5 CAD INTSUM #9, ICOT: 2200 hrs, 27 May 1944.

⁵⁹⁵ LAC, I Canadian Corps WD, May 1944 - I Cdn Corps INTSUM #64, 26 May 1944.

against 5 CAD from 90th PG Div when PWs were captured near Ceprano from 9th PG Regt, 26th Pz Div on 26 May, but Appleton failed to pick up on this. He also failed to appreciate that 26th Pz Div had been in charge of the defence of Ceprano. Once again, 5 CAD intelligence had demonstrated it did not have a solid grasp of the enemy's organization or an ability to conduct basic ORBAT intelligence, failures that seriously impeded the ability of 5 CAD's staff and commanders to understand the enemy they were confronting.

On 28 May, Eighth Army's commander, General Leese, officially ran out of patience with what he perceived as 5 CAD's, and likely I Canadian Corps', slow progress up the Liri Valley. Burns recalls that, during the previous several days, there was a definite and perceptible slowdown in the advance of 5 CAD.⁵⁹⁶ In fact, the COS of the Eighth Army, Maj Gen Walsh, called Burns in the morning to discuss further operations, asking if 1 CID could take over the advance from 5 CAD. Further, 6th South African Armoured Division (6 SAAD), slated to come under command of I Canadian Corps, was ordered to relieve 1 CID to carry on the advance in the near future. Further, despite I Canadian Corps being in the best position to exploit Highway 6, Walsh wanted XIII Corps (78th British Div) to utilize the bridges currently being constructed by 5 CAD over the Liri River near Ceprano thanks to the continued resistance by 1st Para Div further north at Arce.⁵⁹⁷ Burns informed Hoffmeister of the change in plans, and, though Hoffmeister later stated it seriously interfered with his scheme of manoeuvre, he made the necessary arrangements.⁵⁹⁸ 5 CAD reported extensive mines along key roads and obvious routes, seriously impeding 5 CAB from moving forward to take over the advance from 11 CIB. Vokes was informed that 1 CID would carry on the advance from 5 CAD on the night of 30-31 May, with 2 CIB taking over 11 CIB's sector by 29-30 May, which 1 CID's War Diarist noted was a complete change in their expected role.⁵⁹⁹ By this time, the enemy had broken contact with 5 CAD's forward elements, the Germans withdrawing up Highway 6.⁶⁰⁰ To top

⁵⁹⁶ Burns, *General Mud*, 158-159.

⁵⁹⁷ Burns Fonds - Burns's WD, WD Entry, 26 May 1944; Cessford, "Hard in the Attack", 386-391.

⁵⁹⁸ Hoffmeister, "5 CAD Report on Operations". Hoffmeister would later make arrangements with 78th Div so that both their formations could use the bridges built by 5 CAD.

⁵⁹⁹ LAC, 1 CID WD - WD Entry, 28 May 1944.

⁶⁰⁰ LAC, 5 CAD WD - WD Entry, 28 May 1944.

this off, a bridge constructed by 5 CAD's engineers on the Liri collapsed on 28 May,⁶⁰¹ causing significant embarrassment to both Hoffmeister and Burns.

Meanwhile, patrols were sent forward by 11 CID, leading to the capture of three PWs on the afternoon of 27 May from the 1027th Reinforced Gren Regt (26th Pz Div), as noted in 5 CAD's INTSUM on 28 May 44.⁶⁰² Unfortunately all three PWs, two riflemen and a medical orderly, were generally ignorant about their unit. This proved quite unfortunate because a real opportunity was once again missed for 5 CAD intelligence to identify 26th Pz Div as taking over the delay from 90th PG Div as 1027th Gren Regt was commanded by 26th Pz Div. Canadian Corps intelligence was quick to pick up on the relevance of the identification of 1027th Gren Regt as a new unit on their front in its INTSUM in the early hours of 29 May, though not its connection to 26th Pz Div. However, Corps still assessed that 90th PG Div likely would be relieved by 26th Pz Div, though this view was very likely based on SIGINT that could not be disclosed in its INTSUM. Corps intelligence also followed the activities of 1st Para Div further to the north. Given the enemy's recent extensive demolition activity of key bridges and mining of key routes, the Germans were likely to try to break contact with XIII Corps very soon, and flee north once elements reached the crossroads at Frosinone.⁶⁰³ In the meantime, with 1 CID recommencing operations in the interim, 1 CID's intelligence cadre also issued a useful INTREP on 29 May at 1300 hrs for its staff and commanders stating that most of 90th PG Div was likely withdrawing, with 26th Pz Div commanding a number of ad hoc units in rearguard actions until all troops were clear from the Frosinone line; extensive demolitions and obstacles were expected.⁶⁰⁴

⁶⁰¹ Burns, *General Mud*, 158-159.

⁶⁰² LAC, 5 CAD WD - 5 CAD INTSUM #10, ICOT: 2200 hrs, 28 May 44.

⁶⁰³ LAC, I Canadian Corps WD, May 1944 - I Cdn Corps INTSUM #66, 29 May 1944.

⁶⁰⁴ LAC, 1 CID WD - WD Entry, 29 May 44.

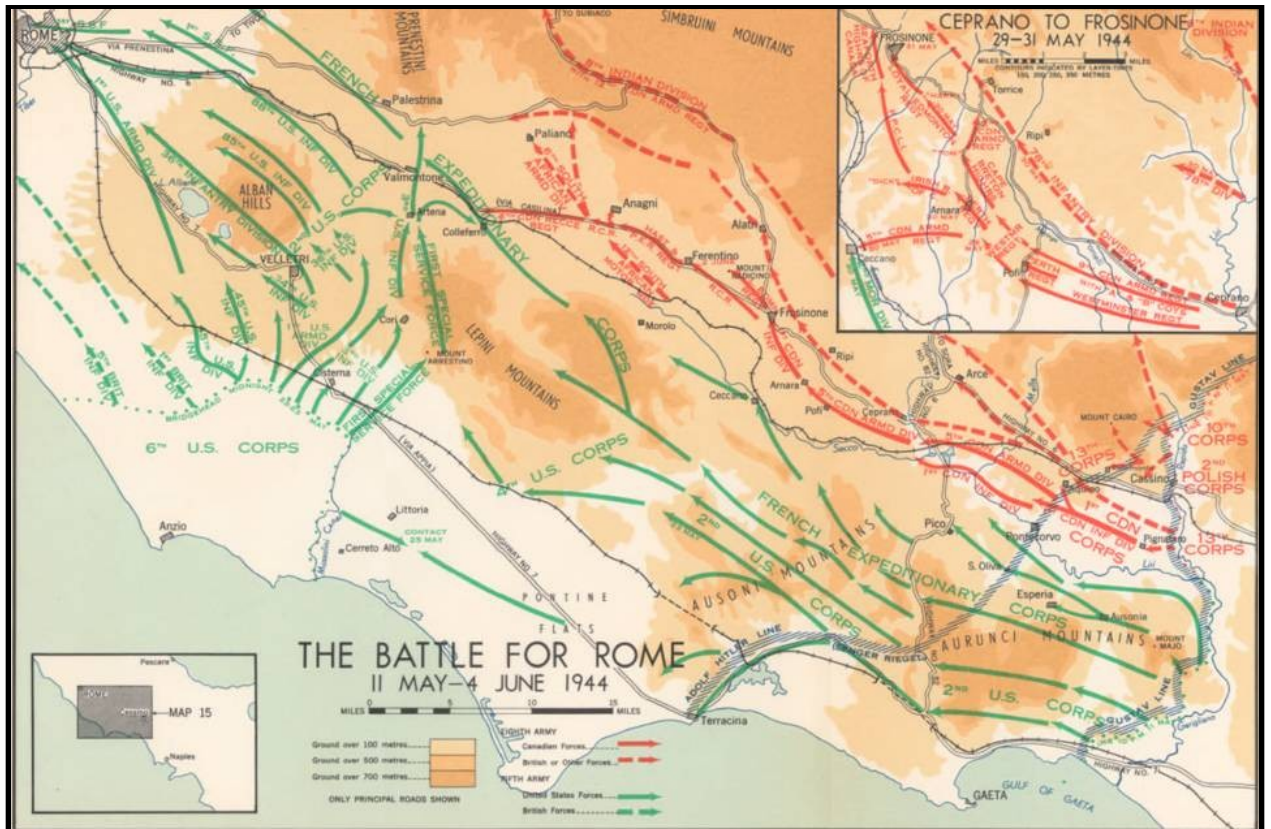


Figure Five: The Battle for Rome (Source: Nicholson, *The Canadians in Italy*)⁶⁰⁵

Despite orders that 5 CAD was to be relieved soon, Hoffmeister ordered elements of 11 CIB and 5 CAB to advance towards the town of Pofi commencing on 29 May. Due to the nature of the terrain, only one armoured regiment could advance. Further, the Germans used the natural terrain to maximum advantage, imposing delay by demolition work, extensive mines, and indirect fire from German artillery and mortars. As 5 CAB advanced towards Pofi, it took strong anti-tank fire from the north of Highway 6, although the town was still taken on the 29th. On 30 May, an OP at Pofi conveyed an urgent message to 5 CAD's HQ. A large column of enemy vehicles, confirmed not to be from 78th British Div, were seen moving up Highway 6. Hoffmeister ordered the Lord Strathcona's Horse (LdSH) to move with all possible speed to Tartarella with a view of cutting off the enemy column of tanks and vehicles withdrawing along this highway. At approximately 1520 hrs on 30 May, a tank engagement occurred, with the LdSH losing five tanks while the Germans lost three Panthers, one Mark IV, and one 47

⁶⁰⁵ Nicholson, *The Canadians in Italy*, Map 15, 450.

mm SPG.⁶⁰⁶ German WDs demonstrate that these German forces were from 26th Pz Div which, at this point, was commanding a series of ad hoc BGs.⁶⁰⁷

5 CAD's intelligence cadre floundered during these significant events, adding no real understanding as to what was occurring on the division's front, what formations 5 CAD was currently confronting, or offering relevant predictive analysis about the enemy would react to 5 CAD's operations. 5 CAD's INTSUM on 29 May once again urgently called for PWs and that no time should be wasted in labelling PWs properly with the time, date and location of capture, that PW paybooks be confiscated, and both the PW and his paybook be sent directly to the divisional PW cage. On 31 May, another memorandum sent out by Appleton spelled out more succinct procedures on PW handling,⁶⁰⁸ again fairly basic intelligence practices which should have been standard doctrine before 5 CAD began its advance. The 29 May INTSUM also disclosed that PWs from 9th PG Regt (which Appleton still failed to mention was part of 26th Pz Div) had recently been taken, and it appeared that at least 9th PG Regt would be encountered in the future, an obviously simplistic assessment.⁶⁰⁹ It is unclear if Appleton was fully "in the picture" with Corps and 1 CID intelligence appreciations on the same day that 26th Pz Div was likely taking over the main delay battle against the Canadians, which again was indicative of Appleton's lack of intelligence professionalism.

Corps intelligence in the early hours of 30 May utilized the information provided by 5 CAD (and probably its Y service) to provide more accurate assessments. It noted that 26th Pz Div had not made a strong stand at the Ripa–Pofi line, and may well have withdrawn to the Frosinone area. Further, a knocked out 75mm anti-tank gun and the paybook on a corpse, both identified from 9th PG Regt (26 Pz Div), plus recent PWs from 1027th Gren Regt (which was presumed still under 26th Pz Div) were the first real evidence that 26th Pz Div was fighting along Highway 6. Meanwhile, 1st Para Div continued its stiff resistance against the British further north near Acre, though it was likely to conduct a withdrawal fairly soon. In

⁶⁰⁶ Smith, "Crossing of the Melfa"; LAC, 5 CAD WD - WD Entry, 29 May 1944; Hoffmeister, "5 CAD Report on Operations".

⁶⁰⁷ LAC, "German Military Documents, 4 January - 4 June 1944", 96. These BGs were composed of (at least) 26th Pz Bn, its two PG Regts (9th and 67th PG), I Bn 104th PG Regt (15th PG Div), 334th Rifle Bn (334th Gren Div) and II Bn 578th Inf Regt (305th Gren Div), 95-96.

⁶⁰⁸ LAC, 5 CAD WD - 5 CAD INTSUM #12, ICOT: 2200 hrs, 31 May 1944; Maj Appleton, GSO 3 Int, 5 CAD "Prisoners of War", 31 May 1944.

⁶⁰⁹ LAC, 5 CAD WD - 5 CAD INTSUM #10, 29 May 1944.

addition, the Hermann Goring Division was now assessed to have reinforced the Valmontone Line further northwest and 19 German (albeit very weakened) divisions were preparing to fight along this line to defend Rome.⁶¹⁰ Unsurprisingly, Appleton quickly changed his tune in his 30 May INTSUM (issued at 2200 hrs that day), likely after reading the Corps INTSUM that morning. He stated that 26th Pz Div was likely to be the main opponent in the vicinity of Frosinone, including the following PG Regts: 9th PG, 26th PG, and 1027th PG (presumed under 26th Pz Div).⁶¹¹ This judgement demonstrated that Appleton still remained highly reliant on Corps intelligence providing him assessments – assessments which he probably should have already been coming to, especially after capturing a number of PWs from 26th Pz Div during the last two days and 5 CAD even engaging in a major tank battle with its elements on 30 May.

By the afternoon of 30 May, 2 CIB had moved up, came under the temporary command of 5 CAD, passed through 11 CIB in the Pofi area, and then pushed on towards 1 CID's overall objective, Frosinone. 11 CIB continued its approach to Ceccano and Arnara (captured by late morning 30 May).⁶¹² Both brigades encountered extensive obstacles, especially booby trapped mines covered by MG fire and snipers. By 31 May, 5 CAD was relieved by 1 CID and the infantry division continued the advance.⁶¹³ As 1 CID commenced its unexpected advance, 1 CID's intelligence cadre struggled to gain a grip on the current situation, which was hampered by 5 CAD's lack of understanding of the situation and its inability to provide a proper handover. 1 CID's intelligence cadre assessed that there would be no major enemy resistance in Frosinone, based on recent demolition activity detected on Highway 6 up to Frosinone and just past the town. Further, a column of vehicles three miles long had been seen moving north from the town, so rearguards had probably left or would be leaving Frosinone soon. As the enemy likely was consolidating near the Valmontone Line, it was

⁶¹⁰ LAC, I Canadian Corps WD, May 1944 - I Cdn Corps INTSUM #67, 30 May 1944.

⁶¹¹ LAC, 5 CAD WD - 5 CAD INTSUM #11, ICOT:2200 hrs, 30 May 1944.

⁶¹² LAC, 5 CAD WD - WD Entry, 30 May 1944; LAC, RG 24, Vol. 10929 - "Irish Regiment of Canada - Report on Operations 17 to 31 May 1944", 22 June 1944. During the Irish Regiment's advance west, the battalion's IO was wounded by a Teller mine, demonstrating the risk that many battalion IOs experienced on a daily basis with their units.

⁶¹³ Hoffmeister, "5 CAD Report on Operations".

unlikely that major opposition in the town, except for shelling, would be met.⁶¹⁴ This assessment proved to be half true. On 30 May, 2 CIB came under intense mortar and MG fire near Frosinone, likely from a German rearguard. As Burns, Vokes, and Hoffmeister decided that 2 CIB should not attempt to take Frosinone if it was held in force, 2 CIB patrolled in its vicinity, while other 1 CID elements were manoeuvred to the heights overlooking Frosinone in preparation to advance upon Ferentino, located further west, once Frosinone was taken.⁶¹⁵ On 31 May at 0700 hrs, with the German rearguard departed, 2 CIB captured Frosinone with little resistance.⁶¹⁶ Meanwhile, on 31 May, Eighth Army warned that an enemy armoured formation appeared to be lying across Highway 6 near Ferentino, approximately 8 miles west of Frosinone. 1 CID intelligence, still struggling to gain situational awareness on their front, remained doubtful of this report, though it remains unclear why.⁶¹⁷ 1 CIB and 4 PLDG were ordered to move west of Frosinone towards Ferentino, possibly to confirm Eighth Army's intelligence. Meanwhile, 3 CIB, with the remainder of 25th Army Tank Brigade, remained in reserve near Pofi. 6 SAAD continued its preparations to relieve 1 CID on the night of 2-3 June 1944.⁶¹⁸

From an intelligence perspective, after initial hiccups, the quality of reporting increased as 1 CID took command of the front from 5 CAD. 1 CID began sending out regular INTREPs, PW identification became rapid and accurate, and assessments became more forward thinking and less reliant on Corps intelligence. Several examples on 31 May demonstrate this. During 2 CIB's advance into Frosinone, two PWs were taken from the 104th PG Regt (15th PG Div), who, under interrogation by the divisional IO attached to the brigade, stated that 400 to 500 Germans in the town the previous day had heavily mined the area. By late afternoon, 4 PLDG reported that a few tanks had been observed withdrawing northwest out of Frosinone, and two PWs had been captured from 67th PG Regt (26th Pz Div). By the end of the day, 1 CID intelligence reported to Corps that 31 PWs had been taken in total. Most importantly, a new

⁶¹⁴ LAC, 1 CID WD - 1 CID INTREP #39, 0930 hrs 30 May 1944; LAC, I Canadian Corps WD - I Cdn Corps INTSUM #68, ICOT 2200 hrs, 30 May 1944.

⁶¹⁵ Burns Fonds - Burns's WD, May 1944.

⁶¹⁶ LAC, "German Military Documents, 4 January - 4 June 1944", 97. German WDs, conversely, state that there was a "sharp encounter" between the elements of 2 CIB and the rearguard elements of I Bn 134 Gren Regt (under 26th Pz Div) in Frosinone on 31 May 1944.

⁶¹⁷ LAC, 1 CID WD - WD Entry, 31 May 1944.

⁶¹⁸ LAC, 1 CID WD, WD Entries, May - June 1944.

unit identity had been discovered from these PWs during interrogation – 305th Pz Bn, which was assessed to be equipped with ten Italian SPGs (Semoventes) and ten Czech SPGs (likely 75mm guns on Czech 38 T chassis). It is likely that this is the armoured formation that Eighth Army was concerned about operating in the vicinity of Ferentino and 1 CID intelligence was instrumental in identifying it.

1 CID's INTSUM in the late hours of 31 May described the delay action in Fronsino as "a very simple affair" complete with the standard demolitions and mines, and two Panthers and three Mark IV tanks "hovering in the background" (reported originally by the PLDG) which, according to PWs, were there to test the strength of 2 CIB elements. Numerous PWs had also identified a defensive line forming further west across the Sacco valley centred on Ferentino, which was essentially correct.⁶¹⁹ Based on the PW information compiled on 31 May, 1 CID rapidly built an assessment of the enemy ORBAT and strengths at the delay line near Ferentino, commanded by 26th Pz Div. Most importantly, 1 CID outlined potential tank strengths located at the delay line. It was assessed that three Panthers and one Mark IV had been recently knocked out and that only two Panthers and two Mark IVs, under 67th PG Regt, were likely nearby. 305 Panzer Bn was also on the division's front somewhere near the delay line with its ten Semoventes and ten 75 mm SPGs.⁶²⁰ Within 24 hours, 1 CID's intelligence organization had accomplished what 5 CAD could not – rapid compilation of available evidence into as comprehensive an appreciation as possible, including predictive analysis of what 1 CID would likely encounter at the forming defensive line at Ferentino.

On 1 June, 2 CIB was tasked to advance and occupy Mount Radicino in order to secure the right flank of 1 CIB as it advanced on Ferentino. This would be the last major Canadian action during the Liri Valley campaign. The Loyal Edmonton Regiment was selected to conduct this task. Once again, the patrolling skills developed over the previous year paid off handsomely as the unit quickly captured four PWs in the late afternoon who revealed that the convent on

⁶¹⁹ LAC, "German Military Documents, 4 January - 4 June 1944", 97. German WDs confirm that 14 Pz Corps informed Tenth Army that they had dispatched anti-tank and tank elements on a defence line between Morolo and Ferentino, though no detailed ORBAT information is available to confirm 1 CID's assessment.

⁶²⁰ LAC, 1 CID WD - WD Entry, 31 May 1944; See also 1 CID INTREP #45, 2230 hrs, 31 May 1944, 1 CID INTSUM #46, 1 June 1944.

Mount Radicino was held by an unknown force. The Edmontons rapidly pushed the PWs to the brigade HQ to be interrogated by the Brigade Major and the attached divisional IO, Capt Tucker-Burr.⁶²¹ The PWs soon admitted that the convent was held by at least 200 troops from III Bn 721st Jäger Regt (114th Jäger Div) with four heavy mortars. These troops had been ordered to fight a delaying action until dark and then withdraw. Armed with this information, including potential locations of enemy crew-served weapons, a company-sized attack was organized with support from tanks, medium artillery, plus 4.2- and 3-inch mortars. The assault was conducted at 2200 hrs, but the feature was found almost completely deserted except for a small rearguard, 18 of whom were captured. At one point, one of these PWs even volunteered to call in fire on his own troops!⁶²² As the advance continued, 1 CID interrogators remarked with disbelief how willing many German PWs were to provide information so soon after being captured. The information they gained from these PWs about ammunition dumps, concentration areas, and motor vehicle parks was utilized regularly for artillery and air staff targeting intelligence.⁶²³ This not only speaks to the low quality of many of the German soldiers that were captured, but also to the interrogation skills of the intelligence sections within 1 CID and I Canadian Corps. With only days left before the relief by 6 SAAD, 1 CID intelligence continued to provide up-to-date assessments on the enemy's probable strength and dispositions, locations of enemy obstacles, and even possible bypasses of poor terrain or destroyed roads, in order to assist the planning staffs of both 1 CID and 6 SAAD.⁶²⁴ What overall effect this intelligence had on decision making is difficult to say as archival materials do not reveal commander intentions for this stage of the battle. This is unsurprising, as the

⁶²¹ LAC, RG 24, Vol. 14078 - 2nd CIB WD - WD Entry, 1 June 1944.

⁶²² HQ 1 CID, "1 Cdn Inf Div in the Liri Valley"; LAC, 1 CID WD - WD Entry, 1 June 1944.

⁶²³ LAC, 1 CID WD - WD Entry, 29 May 1944. Officers and soldiers of 1st Para Div were usually different, exuding stoic, and at times arrogant, attitudes towards their interrogators - even when threatened with summary execution! See LAC, 1 CID WD - WD Entry, 2 June 1944. A WD entry began in a very practical sense, but soon turned philosophical: "If one did not appreciate the peculiar quality of the German Army's discipline - in which everything is based on efficiency of the command - one would be shocked at the indifference of these PWs toward any harm which may result to their late comrades from the information they give away. Possibly some of the targets we take on as a result of the interrogation exist only in an inventive PW's imagination, but the chance is worth taking and we have plenty of aircraft. Both Frosinone and Ferentino have been terribly bombed. One sometimes questions the utility of this destruction. It gives us a great deal of trouble in restoring communications, providing for refugees, etc. when we take over, and it is probably only effective against Germans once in a hundred times."

⁶²⁴ LAC, 1 CID WD - WD Entry, 1 CID INTREP #46, 1 June 1944.

pursuit operation was likely unfolding so rapidly that decisions were being made so quickly to properly record how these decisions were made.

During the last few days of the offensive, 1 CID, including its intelligence organization, gave a good accounting of itself, though it at times also suffered from poor information passage due to the confusion of mobile operations.⁶²⁵ As it had during the approach and breaching of the Hitler Line, Corps intelligence benefitted from 1 CID's collection of information and stated in the early hours of 2 June that, despite the disparate ad hoc groups across 10th Army's Front, 26th Pz Div remained the "guardian of Route 6". II Bn 67th PG Regt, supported by some tanks and 1027th Gren Regt, covered the north of the highway. Further south along the Sacco River was 15th PG Div, with 104th PG Regt forward and 115th PG Regt back, and between 15th PG and 26th Pz Divs was 305th Gren Div, though this had not been confirmed with actual PW intelligence. However, 305th's Anti-Tank Bn (1 CID had described it as 305th Pz Bn) was operating in the area with a screen of SP anti-tank guns forward. Overall, the German withdrawal was to continue though it would need to be carefully coordinated if it was to succeed. The goal was to get to the Valmontone line and hold there, though it was unclear what the enemy dispositions would be at that location or even if they would hold there given recent American success on the Corps left.⁶²⁶ By the next day, as 6 SAAD prepared to take over the advance from 1 CID, the Fifth US Army had broken through the Valmontone defences just as Corps intelligence issued another detailed appreciation of the line.⁶²⁷

By 4 June 1944, the Liri Valley offensive was over for I Canadian Corps as it was ordered into Eighth Army's reserve for rest, to conduct a lessons learned process, and retrain. XIII Corps took over command of 6 SAAD as it pushed forward past Anagni.⁶²⁸ Coincidentally, 4 June was the same day that the Fifth US Army entered Rome, and some authors have suggested that General Clark, commander of the Fifth US Army, missed a golden opportunity to cut off and systematically destroy LI Mtn Corps and other portions of the German Tenth Army so that he

⁶²⁵ LAC, 1 CID WD - WD Entry, 3 June 1944. 1 CID HQ emphasized to all units and formations under its command that twice daily SITREPs must be submitted, on time, and they must not only discuss current locations and routes of advance, they must be a coherent statement of events over a period of time. SITREPs also had to be submitted if there was nothing to report.

⁶²⁶ LAC, I Canadian Corps WD - I Cdn Corps INTSUM #69, 2 June 1944.

⁶²⁷ LAC, I Canadian Corps WD, June 1944 - I Cdn Corps INTSUM #70 (Information cut off time: 2100 hrs), 2 June 1944; Burns Fonds - Burns's WD, June 1944 - WD Entry, 2 June 1944.

⁶²⁸ Burns Fonds - Burns's WD, May 1944 - WD Entry, 4 June 1944.

could instead receive the credit for capturing Rome.⁶²⁹ The acclaim for the Fifth Army would be short lived, however, when the Allies landed in Normandy on D-Day, 6 June. Still, all units and formations in I Canadian Corps could be proud of their accomplishments. High-grade SIGINT revealed on 8 and 9 June that Operation DIADEM had led to 28,024 German personnel to either being killed, wounded, captured, or missing, though this number would continue to rise. Further, formations such as 1st Para, 44th Inf, 15th PG, 71st Inf, 26th Pz, 114th Jäger, 94th Inf, 3rd PG, 362nd Inf, 90th PG and 29th PG Divs were all assessed as having less than 20 percent of their full infantry battle strength and Kesselring requested that further formations and reinforcements to be sent to the Italian theatre.⁶³⁰ Many of these divisions had been severely mauled by Canadian forces. Indeed, Alexander and his staff must have been very pleased with the achievements of the Allied Armies in Italy (AAI). DIADEM had barely mustered a 1.5:1 Allied to German ratio in divisional superiority, but still had gutted 20 German divisions, rendering them to a combined strength of only six.⁶³¹ This forced the Germans to rebuild these mauled divisions and to request for divisions from outlying regions including from Croatia, Denmark, Hungary, and the Ukraine to stabilize the situation. As such, less combat power was available to potentially counter the Allied landings at Normandy.

I Canadian Corps intelligence also had much of which to be proud. Corps intelligence, under the mentorship and guidance of Eighth Army and XIII Corps and the competent leadership of Maj Kingsmill, had successfully navigated its first major operation by providing sound intelligence for planning purposes, especially the breaking of the Hitler Line. Despite the faults of 5 CAD's intelligence organization, I Canadian Corps intelligence performance was probably equivalent to any British corps despite having just five months of in-theatre training. Canadian Corps interrogators had particular bragging rights in that they had processed 1410 PWs from 11 May to 4 June.⁶³² 1 CID's intelligence cadre had demonstrated professionalism throughout these operations, using the skills developed since Sicily to provide needed intelligence to commanders and staff of both the division and the corps. In comparison to 1 CID's intelligence

⁶²⁹ Cessford, "Hard in the Attack", 391.; Carlo D'Este, *Fatal Decision: Anzio and the Battle for Rome*, (New York: Harper Collins, 1991), See: Epilogue.

⁶³⁰ Hinsley, *British Intelligence, Vol. 3, Part 2*, 308-309.

⁶³¹ Windsor, "Anatomy of Victory", 59.

⁶³² LAC, I Canadian Corps WD - I Cdn Corps INTSUM #72, 7 June 1944.

organization, 5 CAD's intelligence cadre left much to be desired, as it demonstrated on numerous occasions that it was unable to conduct the most basic of intelligence tasks. During the Corps' time in Eighth Army's reserve, Maj. Kingsmill would oversee the intelligence lessons-learned process, and he would ensure that all intelligence personnel in the Corps would be trained in the proper lessons. 5 CAD's intelligence organization would be completely transformed – unsurprisingly in the image of 1 CID.

Conclusion: The Lessons Learned Process – "Kingsmill's Killers" improve I Canadian Corps Intelligence⁶³³

The (intelligence) system that was finally achieved, was NOT arrived at immediately, but was evolved through that time-honoured practice of trial and error. The first major battle in which the corps took part – that of the GUSTAV and HITLER LINEs and the subsequent pursuit actions – showed the strength and the weaknesses of the system and by the time that the Battle of the GOTHIC LINE had arrived, a process of weeding and pruning, bolstering and strengthening, finally produced the corpus that was to remain virtually unchanged from August 1944 until the end of hostilities. – Major JME Clarkson, GSO 2 Int, HQ I Canadian Corps⁶³⁴

So the glamour boys of the Maroon patch [i.e., 5th Canadian Armoured Division] have at last come down to earth to realize perhaps they didn't know all the answers, and are now seeking the help and advice of those that have had experience. The above applied to all phases, not only intelligence work! – Major CD Kingsmill, GSO 2 Int, HQ I Canadian Corps, 24 June 1944⁶³⁵

Though I Canadian Corps personnel had much to be proud of in what was for many of them their first major operation, one overarching problem weighed heavily. Eighth Army's Commander, General Leese, very displeased with many aspects of the performance of the Corps, also personally disliked Canadian Corps Commander Lt. Gen. Burns. Under the advice of Leese, Burns sacked a number of individuals, including his Chief Engineer and his Corps Brigadier General Staff (essentially the senior staff officer of the Corps), Brig. George Arnold MacCarter. MacCarter protested his dismissal, to which Burns retorted:

...Brig MacCarter alleges that the failure to produce adequate (information) lay with (5 CAD), rather than with the General Staff (GS) at Corps. It is true that (5 CAD's) procedure was very poor...Incidentally, I did speak to Maj Gen Hoffmeister regarding the work and org of his HQ; and on the final days the Div was in action, information came in much better. The statement I make about the "G" Staff failing to obtain and disseminate adequate information referred to the operations throughout; not only to the particular phase mentioned by Brig MacCarter. I also came to the conclusion that the GS lacked confidence in itself...In any case, being

⁶³³ LAC, I Canadian Corps WD, June 1944. Maj. Kingsmill formed a team named the "Kingsmill's Killers" for the series of volleyball tournaments held while the I Canadian Corps was in Eighth Army's reserve.

⁶³⁴ LAC, First Canadian Army Final Intelligence Report. It should be noted that Major Clarkson began his IO duties as the Brigade IO in 1 CIB in January 1944 and would continually be promoted to more senior positions in I Canadian Corps during the Italian Campaign.

⁶³⁵ LAC, RG 24, Vol. 12328, File 4/CORRES INT CORPS/I, 86/31 - Letter to LCol Felix Walter, CMHQ, from Major CD Kingsmill, 24 June 1944.

dissatisfied with the performance of the GS myself, when it was intimated to me from Eighth Army subsequently by the Army Commander himself (i.e., General Leese), that the I Cdn Corps GS was not functioning satisfactorily, I concluded that it should be reorganized, and that Brig MacCarter would not be able to effect the considerable improvement required."⁶³⁶

Burns believed that McCarter's subordinate staff did not understand their responsibilities about obtaining and disseminating information in a systematic way, and was not an effective COS for his corps.⁶³⁷ At the end of the Liri Valley battles, Burns likely hoped that removal of key staff would make incremental improvements to HQ procedures and information passage in the Canadian Corps to achieve the high standards expected from Eighth Army.

But for Leese, this was still not enough. He retained grave doubts about the ability of I Canadian Corps HQ to properly manage multiple divisions and wanted Burns dismissed as Leese believed Burns lacked personality, initiative, tactical sense, and power of command.⁶³⁸ Burns probably had not endeared himself to Leese either when he implied in an after-action document that Leese had made a mistake by trying to push two corps down the Liri Valley together.⁶³⁹ Meeting with Alexander on 28 June, Leese advocated for Burns's removal and the dissolving of I Canadian Corps which both men saw as "unbalanced" with but two divisions and a brigade, and "extravagant in overheads" (this overlooked the fact that two other British corps at the time were also "unbalanced" – V British Corps had only two divisions, while X Corps had one division and four brigades). Leese and Alexander also had a solution if Canada rejected the dissolving of I Canadian Corps – a British GOC should take command. General H.D.G. Crerar, now the commander of the First Canadian Army which was about to become operational in Normandy, rejected these ideas. After a Canadian Military Headquarters (CMHQ) investigation of Burns, I Canadian Corps and its GOC were to be given a second chance.⁶⁴⁰ Given this context, it is understandable that Burns and his senior staff had extra incentive to reform the flaws within the Corps.

⁶³⁶ Nicholson, *The Canadians in Italy*, 450-451; Burns Fonds - Burns's WD, July 1944 - Letter to COS, CMHQ from Lt. Gen. ELM Burns regarding a protest made by Brig G.A. MacCarter soon after his dismissal.

⁶³⁷ Delaney, *Corps Commanders*, 102.

⁶³⁸ Delaney, *The Soldier's General*, 155.

⁶³⁹ Windsor, "Anatomy of Victory", 183.

⁶⁴⁰ Cessford, "Hard in the Attack", 401-406.

As has been demonstrated with examining both Eighth Army and 1 CID, it is critical for military organizations to learn from experience and then to inculcate personnel with refined methodologies and doctrine. As I Canadian Corps withdrew into Eighth Army's reserve in the Upper Voltuno Valley, Burns wasted no time in implementing the lessons-learned process for the Corps. On 5 June, a day after the Corps was placed into reserve, Burns Leese to discuss with him how to improve Corps performance. Leese stated that the main problems within the Canadian Corps remained staff work, engineering organization and ability, and command and control (C2) techniques.⁶⁴¹ By 7 June, Burns held a meeting with both of his divisional GOCs, Vokes and Hoffmeister, to discuss how to implement these lessons.⁶⁴² In fact, both GOCs had already ordered their subordinate commanders to compile written reports of their recent operations and the lessons learned from these experiences.⁶⁴³ Of the two divisions of I Canadian Corps, 5 CAD experienced the greatest difficulties during the Liri Valley operations and its HQ staff and staff procedures needed serious reform. As such, a process of re-examination of its C2 and staff procedures led to a reshaping of this organization.⁶⁴⁴ The commander of 11 CIB, Brigadier Snow, was also sacked by Hoffmeister due to his lack of initiative and drive during previous operations.⁶⁴⁵ By 10 June, the Corps HQ ordered that all post-operations reports on the period between 16 May and 5 June be complete by 15 June.⁶⁴⁶ Burns also visited the Hitler Line and Pontecorvo on 13 June to conduct a more detailed analysis of the defences there.⁶⁴⁷

Once all after-action reports were received, a Corps-wide conference convened on 16 June for all GOCs, brigade commanders, senior artillery officers, Brigade Majors, and all branch and service chief heads to discuss the lessons-learned process. Subjects discussed included the use of an armoured division in pursuit operations, river crossings, clearance of obstacles, and

⁶⁴¹ Burns Fonds - Burns's WD, June 1944.

⁶⁴² Burns Fonds - Burns's WD, June 1944.

⁶⁴³ LAC, 5 CAD WD - WD Entry, 1 June 1944.; LAC, 1 CID WD - "Defences - Adolph Hitler Line", 24 May 1944.; LAC, RG 24, Vol. 14076 - 1st CIB WD - WD Entry, 26 May 1944.

⁶⁴⁴ Delaney, *The Soldier's General*, 154.

⁶⁴⁵ Nicholson, *The Canadians in Italy, 1943 - 1945*, 451-452.

⁶⁴⁶ LAC, I Canadian Corps WD, June 1944 - I Cdn Corps "Reports on Ops", 10 June 1944.

⁶⁴⁷ Burns Fonds - Burns's WD, June 1944.

the breaching of a strongly-held defensive position such as the Hitler Line.⁶⁴⁸ While Burns declared that the break-in at the Hitler Line had been successful, the second phase, the pursuit, had not. Burns blamed a lack of training in pursuit operations and a lack of appreciation of the enemy which would be encountered after the Hitler Line had been breached. This failing spoke to 5 CAD's poor intelligence organization, and implied that Corps intelligence was not as forward thinking as it should have been. A large number of initial lessons-learned came out of this conference, including the need to use reconnaissance units more efficiently; that support arms needed to augment but not hinder pursuit forces i.e., there was a need to balance firepower and mobility; that contact must always be maintained with the enemy; that engineers must be pushed far forward but more training for every soldier also was needed to breach minefields and obstacles; a specific definition of the difference between a "firm base" (preparing for a definite counterattack), and a "bound" (which was a position of temporary consolidation so other forces could quickly pass through) needed to be created; discussions on how to disrupt and speed up the elimination of German rearguards and obstacles; detailed discussions on how to conduct river crossings; and how to keep communication systems reliable throughout the advance (i.e., avoid landlines being cut and increased use of high-powered wireless sets). Burns closed the conference by stating that though there were small disagreements within the Corps about how to speed up the pursuit, it was still necessary to disseminate these lessons to the troops and then train them appropriately.⁶⁴⁹

Corps explanatory notes and instructions on the pursuit were disseminated on 18 June and 23 June outlining the training requirements and thinking needed to improve this phase of war,⁶⁵⁰ and orders were distributed to create a traffic control unit. A whole series of training exercises, including combined arms (infantry-tank-artillery), traffic control, signals and command post exercises to speed information passage, artillery training to speed up drills so

⁶⁴⁸ LAC, I Canadian Corps WD, June 1944 - I Cdn Corps "Training Conference", 10 June 1944; LAC, 1 CID WD - "Training Conference" to be held on 16 June 1944, agenda issued 14 June 1944.

⁶⁴⁹ LAC, I Canadian Corps WD, June 1944 - I Cdn Corps "Memorandum on Training Conference Held at HQ I Cdn Corps, 16 June 1944", 17 June 1944.

⁶⁵⁰ LAC, I Canadian Corps WD, June 1944 - I Cdn Corps "I Cdn Corps Training Instruction #4 - The Pursuit", 18 June 1944; "Explanatory Notes on I Cdn Corps Training Instruction #4", 23 June 1944.

fire could be called in faster, and counter-battery skills training were organized to infuse all members of the Corps with the refined Canadian Corps doctrine.⁶⁵¹ Kingsmill and his intelligence staff would assist in building an intelligence picture, including German ORBATs and INTSUMs, for a number of these exercises, such as Exercise VITAL (held 23-24 July) which was designed to test the strengthened staff procedures of the Corps and divisions and to see if speed of information passage had improved.⁶⁵²

Meanwhile, Burns analyzed with great scrutiny the after-action reports provided to him.⁶⁵³ Based on these reports, Burns wrote two reports, "The Set-Piece Attack: Lessons from the Breakthrough at the Hitler Line", published on 6 July 1944, and "Lessons of the Pursuit from the Melfa to the Aganni" published on 12 July 1944. Burns emphasized a number of principles, such as keeping the initiative, speed of exploitation, and a very strong emphasis on proper traffic control. One intelligence-oriented lesson was that it was essential that troops conducting the pursuit must have the most up-to-date intelligence on the enemy situation. This meant that organizational changes needed to be made to push this intelligence down to the lowest level possible.⁶⁵⁴ It was also essential that forward troops pass information back, something which also had not been done very well during the pursuit battles.⁶⁵⁵ These documents became baseline doctrine with which Corps personnel would be inculcated during post-action training.

Canadian Corps intelligence organizations were subject to the same lessons learned process as all arms and services during this period. Not surprisingly, 1 CID's excellent intelligence organization and personnel were relied on extensively to further this process. Kingsmill knew that there were serious deficiencies in some aspects of the Corps intelligence organization, especially within 5 CAD, and that some personnel management problems that needed to be

⁶⁵¹ LAC, 5 CAD WD - "Training Syllabus - June 1944".; LAC, I Canadian Corps WD, June 1944 - I Cdn Corps "Training Syllabus - June 1944", 12 June 1944; LAC, I Canadian Corps WD, June 1944 - WD Entry, 21 June 1944.; LAC, I Canadian Corps WD, July 1944 - WD Entry, 10 July 1944.; LAC, RG 24, Vol. 14339 - 1st Cdn Corps Counter Battery Staff WD, June 1944.; Burns Fonds - Burns's WD, June/July 1944; LAC, RG 24, Vol. 14065 - WD 5 CAB.

⁶⁵² LAC, I Canadian Corps WD, July 1944; See Ex VITAL INTSUMs #100, 101, 102; Ex VITAL Narrative #1; Ex VITAL Enemy Situation Traces.

⁶⁵³ Burns Fonds - Burns's WD, June 1944.

⁶⁵⁴ Burns, *General Mud*, 166-167.

⁶⁵⁵ Nicholson, *The Canadians in Italy*, 451-452; LAC, I Canadian Corps WD, Jul 44 - Lt. Gen. ELM Burns ""Lessons of the Pursuit", 12 July 1944.

sorted out. One of the most important steps towards building a common intelligence doctrine within the Corps was the re-establishment of 1 CID's intelligence school. However, this iteration of the school would not be restricted to just 1 CID's personnel, as had occurred in April 1944. Kingsmill, very disappointed with 5 CAD's intelligence performance during the last operation, ensured that all IOs within the Corps attended 1 CID's school.⁶⁵⁶ This school formed on the Lago del Matese, an idyllic lakeside location, on 10 June, and training commenced on 12 June. The school ran two courses and closed on 23 June.⁶⁵⁷ 1 CID's intelligence organization had performed very well in the last operation, no doubt in part to its mounting experience from Sicily onwards, and Kingsmill believed it was one that was worth emulating.⁶⁵⁸ Kingsmill also was particularly impressed that 1 CID's battalion intelligence staffs were always overstrength,⁶⁵⁹ which strongly indicated that many unit commanders respected intelligence in the division. As Sam Hughes, 1 CID's historical officer since Sicily, wrote:

...from the standpoint of an observer and an historian...this Division's Intelligence staff seems to me to be a model and had it not been for their penetrating appreciation of the Adolf Hitler Line situation we might have hesitated fatally long before hitting it. I think it would be a mistake to underestimate the decisive part played by this veteran Division and this Division alone in that memorable action.⁶⁶⁰

Though certainly Hughes was biased towards the division he had been studying for almost a year, his analysis was essentially correct, and Kingsmill sought to use 1 CID's strengths to buttress the intelligence cadre throughout the Corps.

The first intelligence course, from 12 to 19 June, was for all IOs from corps to battalion. Another course, for all intelligence NCOs at brigade and unit level, ran from 20 to 23 June. The IO course covered a range of issues. These included briefings on the most up-to-date enemy situation in Italy, German ORBATs, Canadian ORBATs (due to complaints that IOs had a poor

⁶⁵⁶ LAC, RG 24, Vol. 12328, File 4/CORRES INT CORPs/I, 86/31 - Letter to LCol Felix Walter, CMHQ from Major CD Kingsmill, 24 June 1944.

⁶⁵⁷ LAC, LAC, 1 CID WD - WD Entry, 10 - 23 June 1944.

⁶⁵⁸ Kingsmill "Intelligence Report on Adolph Hitler Line"; LAC, RG 24, Vol. 12328 - File Memo written by Major CD Kingsmill, 12 May 1944.

⁶⁵⁹ LAC, RG 24, Vol. 12328, File 4/CORRES INT CORPs/I, 86/31 - Letter to LCol Felix Walter, CMHQ from Major CD Kingsmill, 24 June 1944.

⁶⁶⁰ LAC, RG 24, Vol. 12328, File 4/CORRES INT CORPs/I, 86/31 - Letter to LCol. Felix Walter, CMHQ, from Historical Officer Sam Hughes, 30 May 1944.

knowledge of their own army organization), aerial reconnaissance (i.e., Air OPs) and RAF tactical air support, enemy defensive doctrine especially delaying tactics, operations staff procedures at division, intelligence file management, battalion intelligence organizations, air photo interpretation, intelligence reports, wireless security and ciphers, the Italian political situation, German and Allied artillery, field security, signal procedure, counter-battery work, Corps intelligence organization, a general question period on the German Army, scouts and snipers, exploitation of enemy documents, enemy and Allied engineer organization, mine warfare, and a 10 minute "Student Lectures" period, where students presented issues they thought were important (this had been a great success in 1 CID's last course). The NCO course was lighter in content and reflected many of the issues the IOs were taught. Most lectures were taught by 1 CID personnel, especially Capts Prince and Cottam, both of whom had taught previously at the 1 CID intelligence school in April, with the rest of the lectures taught by specialists or Corps intelligence staff, including Kingsmill himself.⁶⁶¹ A number of senior officers visited the school, including Burns on the afternoon of 14 June.⁶⁶²

Kingsmill, as the senior Canadian IO in the Mediterranean theatre, was also in charge of dealing with intelligence personnel issues in the Corps. With the operational lull, the first major issue he had to deal with was a number of "problem children". For a variety of reasons, whether educational background, possessing a high amount of knowledge on the enemy leading to being sought for counsel, or just plain egotism, IOs often have a high sense of self-worth. This had led to serious personnel problems, especially when certain IOs believed that they were not being employed in a fashion they perceived they deserved. As well, a number of IOs had to be either reassigned to other duties or completely removed due to incompetence. Several examples will suffice to demonstrate Kingsmill's resolve to mitigate or eliminate these "problem children". As discussed earlier, an ineffective IO in 5 CAD, Lt Laban, was removed from duty on 12 May 1944 and given an "adverse report" effectively ending his intelligence career. Kingsmill intended to appoint Capt Tucker-Burr, a competent divisional

⁶⁶¹ LAC, 1 CID WD - WD Entry, 10 - 23 June 1944; LAC, I Canadian Corps WD, June 1944 - 14, 17 and 23 June 1944; LAC, RG 24, Vol. 14339 - 1st Cdn Corps Counter Battery Staff WD, June 1944. Capt Hess was a lecturer for CB work at the 1 Cdn Div Intelligence School. 40 officers were present, and he conducted a 45 minute lecture, covering methodology and types of German artillery.

⁶⁶² Burns Fonds - Burns's WD, June 1944 - WD Entries, 13 and 14 June 1944.

interrogator from 1 CID, to the 1st Canadian Interrogation Team prior to the Liri Valley battles. However, Tucker-Burr "threw a temperamental fit", leading Kingsmill to state to CMHQ senior IO LCol Felix Walter that Tucker-Burr had a "terrific ego", but in the end he was not as "hot" as he thought he was (despite him performing as an effective interrogator for 1 CID throughout the Liri Valley battles). Another "problem child" was Lt Sorensen who, though he spoke a number of languages fluently, which is why he was likely chosen to be an IO, was also a heavy drinker, had marital problems, and had embarrassed himself so much in 1 CID's intelligence school that he was removed from training by the school's senior IO, Capt Prince. Lt Lehmann, an IO with the #1 Cdn SWS, Type "B", was found unsuitable for SIGINT work but, being a fluent German speaker, Kingsmill decided to make him an interrogator and arranged for training.⁶⁶³ Despite the effective intelligence recruitment system, it was inevitable that a number of weak or egotistical IOs would make it through the system who needed "sorting out". This intangible aspect of recruiting, that of finding sensible, selfless individuals is no doubt why senior First Canadian Army IO, LCol Peter Wright, stated at war's end:

... in my opinion (our job) was only done because of the ability, hard work, common sense and good humour of all ranks engaged in it...I can only say that the soundest basis of any Intelligence is sensible, able, unselfish men. Without them nothing is possible. With them, any job can be done.⁶⁶⁴

Another major problem that Kingsmill had to deal with concerned the intelligence reinforcement situation, a growing problem within I Canadian Corps. Notably finding skilled German speakers as interrogators was a systemic problem in the Canadian Army by mid-1944.⁶⁶⁵ This problem compelled Kingsmill to travel to Rome at the end of June to sort out the reinforcement issue with CMHQ representatives and to explain to them that there were at least five types of "intelligence officer", and three types of intelligence OR, all of which needed a small reinforcement pool.⁶⁶⁶ Unfortunately for Kingsmill, he also lost a number of

⁶⁶³ LAC, RG 24, Vol. 12328 - Letter to LCol Felix Walter, Senior IO First Canadian Army, from Major CD Kingsmill, 3 June 1944.

⁶⁶⁴ LAC, First Canadian Army Final Intelligence Report.

⁶⁶⁵ LAC, RG 24, Vol. 12328 - Letter to LCol Felix Walter, Senior IO First Canadian Army, from Major CD Kingsmill, 3 June 1944.; LAC, RG 24, Vol. 10012 - File: 9/IO/1 - Selection of IO Personnel, Postings, Attachments, Transfers of Intelligence Officers " Minutes of a Meeting held in the Joint Battle Room Main HQ First Cdn Army at 1100 hrs, 4 Aug 44"; Elliot, *Scarlet to Green*, 206.

⁶⁶⁶ LAC, I Canadian Corps WD, June 1944 - WD Entry, 29 June 1944.; LAC, RG 24, Vol. 12328 - Letter to LCol Felix Walter, CMHQ, from Major CD Kingsmill, 31 July 1944. Kingsmill noted to CMHQ representatives in Rome that there were five types

key IOs went to staff training in Haifa soon after 1 CID's intelligence school was completed. This included the head of 1 CID's intelligence, Capt Prince, who had been GSO 3 Int for the division during the Liri Valley battles and had been in the Mediterranean theatre with 1 CID since Sicily, where had had been a Brigade IO; Capt Dewar, Kingsmill's skilled deputy (GSO 3 Int), who was replaced by Capt Clarkson (he had been a brigade IO in 1 CIB);⁶⁶⁷ and Capt D.M. Healy, a skilled ORBAT IO at Corps.⁶⁶⁸ In order to maintain consistency in 1 CID's intelligence leadership, the highly experienced Capt Cottam replaced Prince as GSO 3 Int at 1 CID.

Another major issue was 5 CAD. This division had demonstrated the consequences of poor personnel management and the lack of proper intelligence training. Kingsmill, not ignoring this lesson, took steps after the Liri Valley to mitigate these problems. There was the question of Maj Appleton, the lacklustre GSO 3 Int at 5 CAD who had not shown much aptitude for intelligence. Though Kingsmill likely hoped that the personnel issues in 5 CAD, including Appleton, could be sorted out with minimal friction, the problems with Appleton continued. In early June, Capt Dewar, Kingsmill's deputy at Corps, visited 5 CAD to arrange for all of 5 CAD's intelligence personnel to attend 1 CID's intelligence course occurring later that month. However, Maj Appleton refused apparently wanting to run his own intelligence course at 5 CAD.⁶⁶⁹ Kingsmill was already unimpressed by 5 CAD's performance in recent operations; having this inexperienced intelligence cadre under Appleton run its own course would have done a serious disservice to 5 CAD. Fortunately, whether it was through Kingsmill's lobbying of the Corps Commander or due to a request by 5 CAD's senior staff – Kingsmill officially stated it was the latter – Kingsmill achieved a "100 percent" turnover of intelligence

of IOs, including: I(a) - Operational Intelligence, who may or may not be a German linguist; I(a) Interrogator - who needed to be a linguist; I(b) - Field Security and Counter Espionage - German linguist preferred; I(s) - Wireless Intelligence - a highly qualified German linguist; and IO(ph) - Photo Interpreter - employed with the MAIU, but IO I(a) and IO(ph) were often not interchangeable. OR specialties included: I(a) - Interrogator, who needed to be both a strong clerk, disciplinarian and fluent linguist; I(s) - Wireless Intelligence - highly qualified and not interchangeable with other intelligence ORs; I(b) - Field Security. Currently, the CMHQ scale of reinforcements only allowed for two months of reinforcements, including three officers and eight ORs, which he saw as unreasonable and wanted increased to at least 34 personnel overall.

⁶⁶⁷ LAC, I Canadian Corps WD, June 1944 - WD Entry, 14 June 1944.

⁶⁶⁸ LAC, LAC, 1 CID WD - WD Entry, 14 June 1944; LAC, RG 24, Vol. 12328 - Letter to LCol PER Wright, First Canadian Army from Major CD Kingsmill, 3 June 1944.

⁶⁶⁹ LAC, 5 CAD WD - WD Entry, 11 June 1944.

personnel in 5 CAD, in particular Appleton.⁶⁷⁰ By 22 June, Capt A.W. Gray, the Brigade IO of 2 CIB who had clearly demonstrated competency to perform intelligence duties during the Liri Valley battles, was appointed as GSO 3 Int in 5 CAD.⁶⁷¹ Appleton was posted to 3rd Canadian Armoured Reconnaissance Regiment (the Governor General's Horse Guards) as a Squadron Commander.⁶⁷² Kingsmill had achieved his intent. 5 CAD's intelligence establishment would emulate 1 CID's intelligence doctrine by inculcating all its personnel through a course run by 1 CID's intelligence establishment and appointing a strong IO from 1 CID as the senior IO in the armoured division.

Further intelligence training and refinement of organization continued throughout the Corps. Air photo lectures were conducted in 1 CID for operations staffs and fighting troops.⁶⁷³ Kingsmill personally toured brigades to see how useful air photos had been in recent operations and how air photo distribution could be improved. Kingsmill also visited 5 CAD to get a stronger sense of the division's general organization and where further improvements could be made.⁶⁷⁴ Further photo interpretation courses and training were held for artillery, counter-battery, and counter-mortar intelligence staffs, in order to rectify the problems observed during the Liri Valley battles.⁶⁷⁵ The Canadian Corps Sniper School, which had been formed in the May timeframe, also continued to run courses.⁶⁷⁶ Though the sniper curriculum was not entirely intelligence focused and not under Kingsmill's supervision, the two-week courses it ran had lectures on such things as judging distances, stalking, reading air photos, field sketching, camouflage and map reading, combined with the regular shooting routine. These courses no doubt increased the efficacy of battalion intelligence sections and scout / sniper platoons. By July, under close supervision of Kingsmill, 5 CAD's formations began running their own intelligence schools for their intelligence personnel, closely mimicking the

⁶⁷⁰ LAC, RG 24, Vol. 12328 - Letter to LCol Felix Walter, CMHQ, from Major CD Kingsmill, 24 June 1944.

⁶⁷¹ LAC, RG 24, Vol. 14077 - 2nd CIB WD - WD Entry, 22 June 1944. Capt E.B. Bradish, a member of the Loyal Edmonton Regiment, took Gray's place as brigade IO of 2 CIB.

⁶⁷² LAC, RG 24, Vol. 13796 - 5th Cdn Armd Div WD - WD Entry, 16 June 1944.

⁶⁷³ LAC, RG 24, Vol. 14077 - 2nd CIB WD - WD Entry, 28 June 1944.

⁶⁷⁴ LAC, 5 CAD WD - WD Entry, 7 June 1944; LAC, RG 24, Vol. 13687 - I Canadian Corps WD, June 1944 - WD Entry - 15 and 16 June 1944.

⁶⁷⁵ LAC, RG 24, Vol. 14339 - 1st Cdn Corps Counter Battery Staff WD, July 1944.; See also: "Syllabus for 3 Day Course in Photographic Interpretation for CMOs", 2 July 1944.

⁶⁷⁶ LAC, RG 24, Vol. 16867 - WD 1st Cdn Corps Sniper School, June – July 1944.

training syllabus that 1 CID's recent school emphasized and even the brigade intelligence schools that 1 CID's brigades ran in the Adriatic in early 1944.⁶⁷⁷ Capt Gray, the newly appointed GSO 3 Int for the division, taught many of the lectures in these courses and Capt Clarkson, the new Corps GSO 3 Int – Kingsmill's current deputy and future successor – also taught a number of lectures.⁶⁷⁸ A battalion IO and an intelligence Sgt from 11 CIB were also selected to go on an intelligence course held by the British in North Africa from 18 June to 5 July.⁶⁷⁹ As well, Kingsmill also met with a number of artillery and counter-battery (CB) officers in July in order to discuss improvements to artillery and CB intelligence, thus achieving further refinement in Corps intelligence procedures.⁶⁸⁰

Organizational changes to formations were also underway, and Canadian Corps intelligence had to adapt to this as well. General Leese had already reorganized British armoured divisions from a North African model to an Italian model to deal with the difficult Italian terrain by adding an infantry brigade to each armoured division, for a total establishment of one armoured brigade and two infantry brigades. Leese recommended to Burns to create another infantry brigade for 5 CAD. 12 CIB subsequently was created out of a number of reconnaissance and air defence units.⁶⁸¹ This was authorized by CMHQ on 12 July. As 12 CIB began to form, Kingsmill and Capt Gray rushed to inculcate the recently minted brigade's intelligence establishment in Canadian Corps intelligence doctrine. Kingsmill selected a recently promoted Captain, J.A. Vaughan, who up until then had been an IO at the Corps HQ, as its brigade IO.⁶⁸² This selection is interesting as brigade IOs usually were selected from a unit IO from the actual brigade, not by the Corps intelligence establishment. This likely reflects Kingsmill's continued attempts to institute a common doctrine throughout Corps intelligence by placing trusted personnel into key positions. Vaughn helped to issue training memorandums, such as on the organization and tactical handling of a battalion scout platoon

⁶⁷⁷ LAC, 5 CAD WD - See: 5 Canadian Armoured Brigade Intelligence Course, 13 - 16 July 1944. ; 11 Canadian Infantry Brigade Intelligence School Syllabus - 5 - 8 July 1944.; LAC, RG 24, Vol. 14159 - 11 CIB WD, July 1944. A Brigade Scout and Sniper School also was formed on 27 July 1944. It was run by Capt T Lowe of the Cape Breton Highlanders and the Scout Platoons of all battalions were ordered to attend.

⁶⁷⁸ LAC, RG 24, Vol. 14159 - WD 11 CIB - WD Entry, 5 July 1944.

⁶⁷⁹ LAC, RG 24, Vol. 14159 - WD 11 CIB - WD Entry, 1 June 1944.

⁶⁸⁰ LAC, RG 24, Vol. 14311 – I Canadian Corps HQ RCA WD, WD Entries, July 1944.

⁶⁸¹ Delaney, *The Soldier's General*, 164-165.

⁶⁸² LAC, I Canadian Corps WD, July 1944 - WD Entry, 18 July 1944.

and, under Gray's supervision, he formed a brigade intelligence school on 11 August, which had to be closed down prematurely on 15 August due to the upcoming operations against the Gothic Line.⁶⁸³

The two months that I Canadian Corps spent in Eighth Army's reserve were not wasted. The Corps instituted a comprehensive and thorough lessons-learned and training process, which led to increased combat efficacy throughout all units and formations in the Corps. As the senior IO of I Canadian Corps, it was Kingsmill's responsibility to ensure that the formation's intelligence cadre was prepared to support future operations, especially with the loss of several of his senior cadre to staff courses in Haifa. In this task, Kingsmill did not fail. He ensured that corporate knowledge and consistent leadership continued within the Corps' divisions and brigades by selecting well-qualified personnel to run the intelligence function in the Corps' formations, in particular personnel from 1 CID. Further, he ensured that all Corps intelligence personnel attended 1 CID's intelligence school in June, which was run by extremely experienced IOs from the seasoned division, thus making certain that common intelligence principles were understood and practiced by all in the Corps. This was followed up by forming a series of brigade-level intelligence schools, in particular in 5 CAD, which further inculcated individuals in the common intelligence doctrine. He also made certain that the Corps intelligence cadre continued to participate in the Corps training regime, which no doubt facilitated a greater intelligence-operations relationship. On the whole, as I Canadian Corps opened up its offensive in the Adriatic sector against the Gothic Line, all units and formation HQs, including its intelligence establishment, were prepared as best they could be.

⁶⁸³ LAC, RG 24, Vol. 14162 12 CIB WD - WD Entries, 2 August and 11 - 15 August 1944.

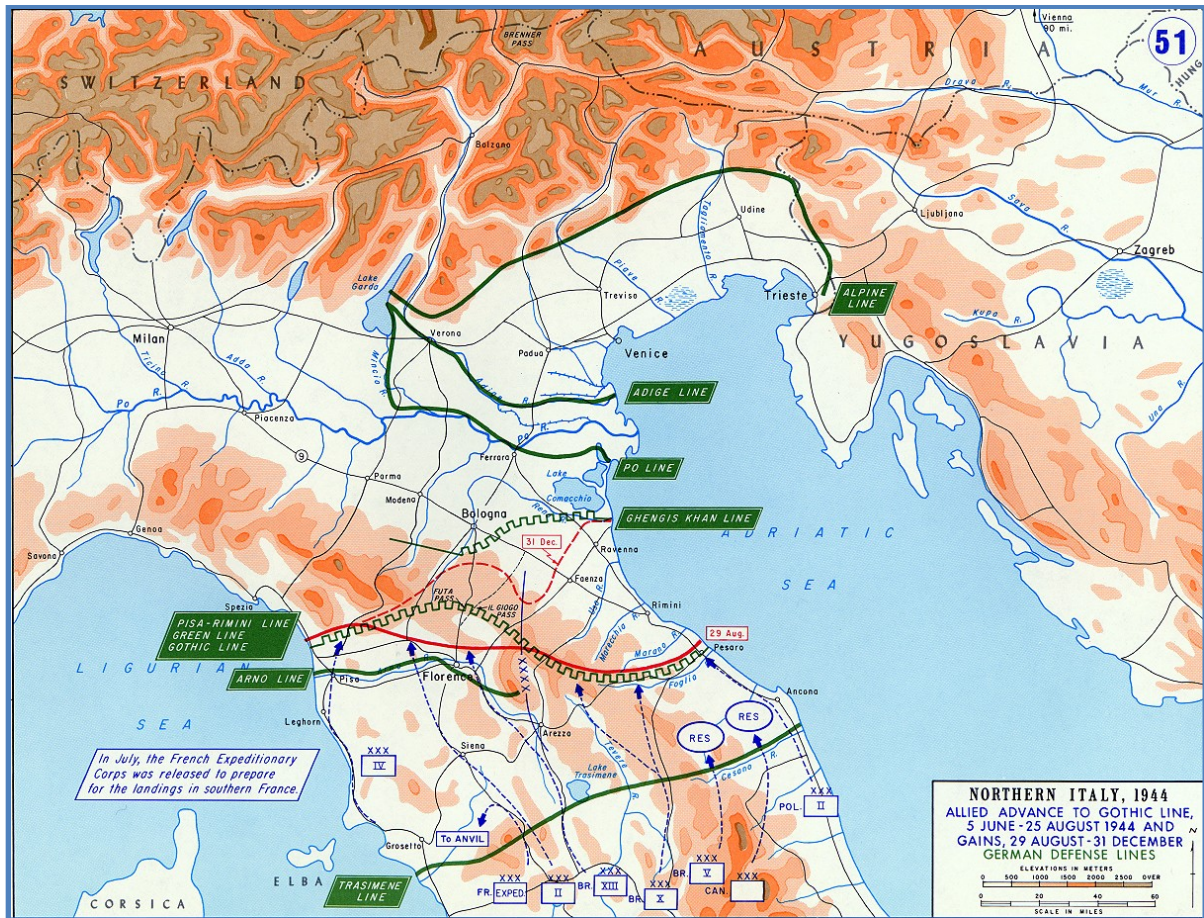


Figure Six: The Gothic / Green Line (Source: <http://www.mazzaforte.com/UmbertideHistory.html>)⁶⁸⁴

When the I Canadian Corps was pulled out of the line on 4 June 1944, the Corps intelligence staff kept up on the military situation in Italy by issuing INTSUMs every three to six days on the current battle line occurring almost 400 miles northwest of the Canadian Corps sector. On 20 July, General Leese, visiting Burns at the Canadian Corps HQ and giving an outline of recent operations in Italy, said that though the future task of the Canadian Corps was not yet determined, it was likely that future operations would be focused on breaking through the Gothic Line.⁶⁸⁵ As such, a new planning cycle had begun, and on 23 July Burns issued the first set of planning notes focused on the likelihood of the Corps attacking the Gothic Line.⁶⁸⁶ By the end of July, Kingsmill and the Corps intelligence staff began to compile information on the Gothic Line. Kingsmill visited Eighth Army for three days, and he or his deputy began briefing

⁶⁸⁴ Source: <http://www.mazzaforte.com/UmbertideHistory.html>; Last accessed 18 March 12.

⁶⁸⁵ Burns Fonds - Burns's WD, July 1944.

⁶⁸⁶ Burns Fonds - Burns's WD, July 1944 - "Notes on the Method of Planning for an Op to Break Through the 'Gothic' Line", 23 July 1944.

Burns daily on the enemy situation.⁶⁸⁷ By 11 August, Leese confirmed the Canadian Corps task by issuing orders for Operation OLIVE, the breaking of the Gothic Line and the advance to the Po Valley.⁶⁸⁸ On 25 August, Operation OLIVE commenced on the Adriatic sector with the Canadian Corps advancing alongside V British Corps and II Polish Corps. The following month would see some of the hardest fighting and the heaviest casualties ever witnessed in the Italian campaign. Due to the intense lessons-learned process in June and July, all elements of I Canadian Corps were launched against the Gothic Line better trained and better prepared than had been the case during the Liri Valley Campaign. This included its intelligence establishment, in particular 5 CAD, which had been trained to emulate 1 CID.

Despite the I Canadian Corps HQ staff arriving in the Mediterranean in November 1943 with minimal experience, and notwithstanding a number of criticisms from Eighth Army of a number of key commanders and staff within the Corps, the Corps staff had performed reasonably well in its first major operation. Canadian Corps intelligence, under Kingsmill's strong leadership, was effective in delivering the information needed for the planning that helped break the Adolph Hitler Line. Corps intelligence astutely followed German ORBATs, provided accurate defence overprints, and gave enough forward-thinking assessments on the potential German reactions to the breaking of the Hitler Line. Accusations of Corps and 1 CID intelligence "underestimating" the Hitler Line leading to the imprudent assaults on 19 and 22 May 1944 are probably misplaced and not intelligence failures. Although post-battle assessments indicated that the Hitler Line was lightly manned with infantry, it was still strong in crew-served weapons, in particular anti-tank defences. If these attacks had been given enough resources to suppress these weapons, they may well have succeeded in crashing the Hitler Line much as the Gothic Line would be crashed four months later. However, both 5 CAD and Corps intelligence could be placed at fault for not providing enough assessment of German defences post-Hitler Line, in particular during 5 CAD's exploitation. However, this was probably attributable to the weak intelligence system that existed within the Canadian armoured division itself more than to Corps intelligence.

⁶⁸⁷ LAC, I Canadian Corps WD, July 1944.

⁶⁸⁸ Burns Fonds - Burns's WD, July 1944.

Overall, I Canadian Corps' intelligence cadre was successful in its goal of providing effective intelligence support during the Liri Valley campaign, in particular it played an important role in breaking the Hitler Line. The effectiveness of the Corps intelligence system was attributable to a number of factors. The first is the shrewd selection of the right personnel to join the Canadian Intelligence Corps and the foresight of senior members of the Intelligence Corps to properly train and judiciously place these personnel in key positions within specific HQs. These individuals possessed certain attributes, such as intellectual honesty; a mental stamina to sift and analyze large quantities of various sources of information over sustained periods of time and properly contextualize this information to provide predictive analysis; and building their cultural understanding of the enemy, whether through their own linguistic abilities or someone else's, in order to empathize and ascertain potential actions of this enemy more effectively. Further, these individuals were also given time to professionalize as intelligence experts for an extended period. The selection and management of 1 CID's and I Canadian Corps intelligence cadres are prime examples of the success of this system; conversely, 5 CAD's intelligence cadre was poorly chosen and not allowed to professionalize properly, leading to detrimental performance.

Another major factor explaining Canadian Corps intelligence success was the close guidance and mentorship of Eighth Army's intelligence cadre, first under LCol (later Brig) Edgar Williams and then LCol Donald Prater, and the three British Corps that the Canadians worked with, 1 CID with XXX Corps, and all Canadian elements with V Corps on the Adriatic front and XIII Corps during the breaking of the Gustav and Hitler Lines. Eighth Army had been through numerous operations in North Africa, Sicily, and Italy and its well-developed intelligence doctrine and organization, including a clear vision as to the relationship between an army and corps, was quickly adopted by Kingsmill and his Corps IOs. Throughout the planning of the Canadian Corps operation to break the Hitler Line, Eighth Army provided "strong leads" on information needed and the procedures to follow to attain more. It should be stressed that Eighth Army did not do the work for Kingsmill and his IOs. Rather it empowered Canadian Corps intelligence to develop into an independent thinking organization, so it could become an effective intelligence collector for the army. I Canadian Corps was also fortunate to have a

very experienced division, 1 CID, integrate within its command. 1 CID's intelligence cadre was very strong from the unit level to the divisional headquarters. In particular, the patrolling efficacy developed during the division's operations in Sicily, the advance up the Italian peninsula, and the Adriatic sector in early 1944 was at a high standard. Further, the division's IO interrogators were very effective at eliciting information from PWs. As divisions did not have access to wireless intelligence, at least not officially, this patrol and PW information was the best intelligence available on German ORBATs and it was utilized to its maximum.

This thesis has sought to build a better understanding of a staff process that is often underrated and, at times, even taken for granted. There is a well-known maxim in military circles that there are only either operational successes or intelligence failures. Of course, any military operation which comes under closer scrutiny will prove this generalization incorrect. Operational successes, especially in modern warfare, usually need large quantities of high-quality intelligence to achieve the desired end-state; when intelligence is poor, staff procedures are faulty, or staffs and commanders are inexperienced in integrating intelligence into decision making, there is certainly a greater chance of mission failure, especially if fighting at a disadvantage against a competent foe. However, even the highest quality intelligence will never completely mitigate the "fog of war", which is why it is essential that the intelligence organization in question must inform an effective action arm which can deal with the uncertainty that all battlefields will impose on any military organization.

This thesis is unique in Canadian military historiography. This is both fortunate and unfortunate. It is only one of a handful of works which focus specifically on the organization, doctrine, and assessed effectiveness of military intelligence during a specific Canadian battle in the Second World War, making it exclusive. More studies such as this would help further the understanding of Canadian military intelligence during the Second World War, or Canadian intelligence issues in general. Many existing studies instead focus on more "sensational" aspects of intelligence such as Ultra, agent handling, "cloak and dagger" or, in modern parlance, covert action such as the activities of the Special Operations Executive, but ignoring the "grunt" work of tactical military intelligence. As the senior British IO, Sir David

Hunt, believed, a solid understanding in "bread and butter" intelligence was essential in order to properly contextualize any other forms of intelligence activity.⁶⁸⁹ As such, any study which furthers understanding of how intelligence organizations, including the Canadian Intelligence Corps during the Second World War, "master the basics" has merit. Doing so would not only enhance wider knowledge of the Canadian experience in war, but might in some way help guide future intelligence professionals and those who seek their counsel to more effectively integrate intelligence into their decision-making processes.

⁶⁸⁹ Hunt, *A Don at War*, xvi/xvii.

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