

**Canada's Unknown Success
Employment Of Land Based Aircraft – The Antisubmarine Role Gulf Of St
Lawrence.**

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Disclaimer

The conclusions and opinions expressed in this document are those of the author cultivated in the freedom of expression and of an academic environment.

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Introduction

Canadians are often inured, unaware or disinterested with their military history. To some the great battles and military operations that have occurred in Canada simply did not happen on our doorstep. Therefore Canada is often seen as untouched by the ravages of war and World War II in particular.

The truth is, the legacy of World War II is all around us. It is often unseen, lost, or hidden from sight. But much evidence remains if you look for it. So too many stories have been lost in time or have simply been forgotten. This may be due in part to the great reticence of many veterans to tell the tale of when, where, and how these events took place. As the years pass by and as memory fades, the story of Canada's war effort will sadly fade too, if not remembered.¹

The Summer of '42

The summer of 1942 is a case in point. Much transpired. Twenty three ships were torpedoed with 22 lost in the Gulf of St Lawrence.² Canadian littoral waters became a battleground. German U-boats entered the waters pointing at dagger at the Canadian heartland. U-boats operated from Newfoundland in the north, up the St Lawrence estuary, and over far south below Halifax. In fact if you look with a discerning eye, it was a significant area of operation.

Strategic Overview 1939 -1941

This account will deal with the allocation of air resources to the U-boat problem in the Gulf of St Lawrence in 1942 and 1943. There were many issues surrounding aircraft allocation, and in light of history, it would be easy to criticize many decisions of the day. But these decisions must be taken in context of the time. Decision makers did not have the benefit or full knowledge of the course of events that we now have in hindsight. What was important to them though was cause and effect. Decisions were based on the evidence of their own eyes stemming from dangerous events as they transpired. Regrettably their decisions were often made only on partial evidence. But in the end, it was the only evidence that they had, or that was available.³

At the same time, there was only limited experience in the employment of aircraft in an antisubmarine role from World War I. However air theorists of the day tended to view air power as a strategic asset best employed directly at an enemies centre of gravity. The anti-submarine role was viewed as a secondary if not of tertiary importance; consequently, the situation on the employment and assignment of air assets was rife with disagreement and interservice argument.⁴

Decisions...decisions

Official histories provide a fairly accurate precise record of events but their presentation offers what authorities would have us believe. It is often devoid of human aspects; the drama, pathos, and humour that bring life to the story.⁵ The events leading to the Battle of the Gulf of St Lawrence are a case in point. Allied naval resources were stretched to the limit protecting merchant and other shipping against U-Boat operations ranging from Canadian shores, the mid and north Atlantic, the Arctic, to the Mediterranean. The presence of a ubiquitous U-boat threat in so many theatres, threatened to swamp limited Allied naval resources. The situation demanded and alternative solutions to fill the gaps. But what was available? Consideration had to be given to the use of air assets to deal with that threat. The problem was that airpower theory and doctrine were still in development.

Events would dictate what air assets were eventually available for an anticipated “Battle of St Lawrence” and ultimately the “Battle of the Atlantic.” The preparation, at least from an air force perspective, was one based on scarcity and the allocation of long range air resources then available in 1941. Much of those strategic decisions would be made on the other side of the Atlantic, Canada deferring to the larger partners on strategic matters desiring a moderate war policy for domestic purposes.⁶ But deferral presented its own problems especially when “who would get what and when” was at issue. There were heated arguments over the employment of long range air assets that would eventually be decided by Winston Churchill himself. Canadian preparations would be based on what resources were available and when the government was faced with a looming crisis at hand.

Arguments would be made for vital long range assets by Coastal Command and the Royal Navy on the one hand, and the Royal Air Force Bomber Command, on the other that would affect and that mattered to Canada. For example, the Royal Navy and Coastal Command made a case for the employment of long range aircraft on maritime patrol while the Royal Air Force countered with the needs of strategic bombing.

Winston Churchill favoured Bomber Command because, on the face of it (Figure 1 see results 1939-1941), there was little physical evidence to support the RN and Coastal Command case. It was widely viewed then that “bombing the U-boat construction facilities and bases in France and Germany would be more effective in combating the U-boat menace than convoy escort or maritime air patrols.”⁷ Churchill’s decision would have many ramifications. But significantly the resulting decision left the vital convoy link without adequate air protection when it was most urgently required.

The Force of Personality

Winston Churchill was in full control in the management of the war and he had his own ideas on how it would be fought and won. He was not only Prime Minister but also was his own Minister of Defence.⁸ By many accounts he was an accomplished and skilled politician and a man of varied experience. More importantly, Churchill was well versed and experienced with how a government should manage a war, which shaped his many decisions and directions.

By 1942 Churchill faced threats and demands on many fronts that strained his limited resources.⁹ He knew that he simply could not cover all bases and consequently was forced to optimize his forces. In the end he was left with little choice but to curtail any expansion of Coastal Command and Naval air assets at a critical juncture in 1941. There were simply too many fires to put out with what was available to him.¹⁰

Still the U-boat issue was so pressing that it remained Churchill's most dreaded fear. He resolved to deal with the issue by declaring the Battle of the Atlantic.¹¹ Churchill was concerned with the tempo and devastation of the destruction. In his estimate, huge convoy losses were generated by no more than 12 -15 U-Boats on patrol at any one time up until 1942.¹² Churchill was not just concerned with the number of ships lost but the tonnage of cargo that failed to reach its final destination. Thus his thinking led to the concentration of his forces and the drawing of the attention of his staff to the vital task at hand through the declaration of the Battle of the Atlantic. It was a siren call to arms much like his declaration of the Battle of Britain.¹³

Facing A Conundrum Shaped on Experience

Despite the declaration of the Battle of the Atlantic, strategic bombing was viewed as “the priority”. Churchill and the Commonwealth devoted their time, resources, and best men toward achieving that priority. Churchill's selection of “Strategic Bombing” as the priority was not surprising in the least. Churchill was intimate with air force doctrine. During the post World War I, he was minister responsible for combining the ministries of War and Air into one. He was selected by then Prime Minister David Lloyd George because of his flexibility of mind and that he was open to the employment of air power.¹⁴

Churchill was also for a time Minister of Munitions during World War I (1917-1918). It was here that Churchill gained much experience on the economics of warfare. This portfolio was also likely his foundation and education for his views on the management of war and aircraft production and employment in particular.¹⁵ Churchill then was well aware of the value of air power and the need for air superiority.¹⁶

Hugh Trenchard, the “father of the RAF” was a contemporary of Churchill who was responsible for the theory of strategic airpower. Trenchard identified enemy morale as the key target in RAF doctrine. His theory was institutionalized in a series of doctrinal manuals which was subsequently the guideline and basis for action used by Arthur Harris, Churchill's Commander of Bomber Command.¹⁷

It is likely then that Churchill's familiarity with RAF strategic doctrine and his need for offensive action were the key factors that swayed many arguments and his decision in favour of Bomber Command in 1941.¹⁸ It was not just a gut decision; there was hard doctrinal evidence that supported the RAF's case. Unfortunately none existed, was deficient or unavailable for either the RN or Coastal Command's case at the time.

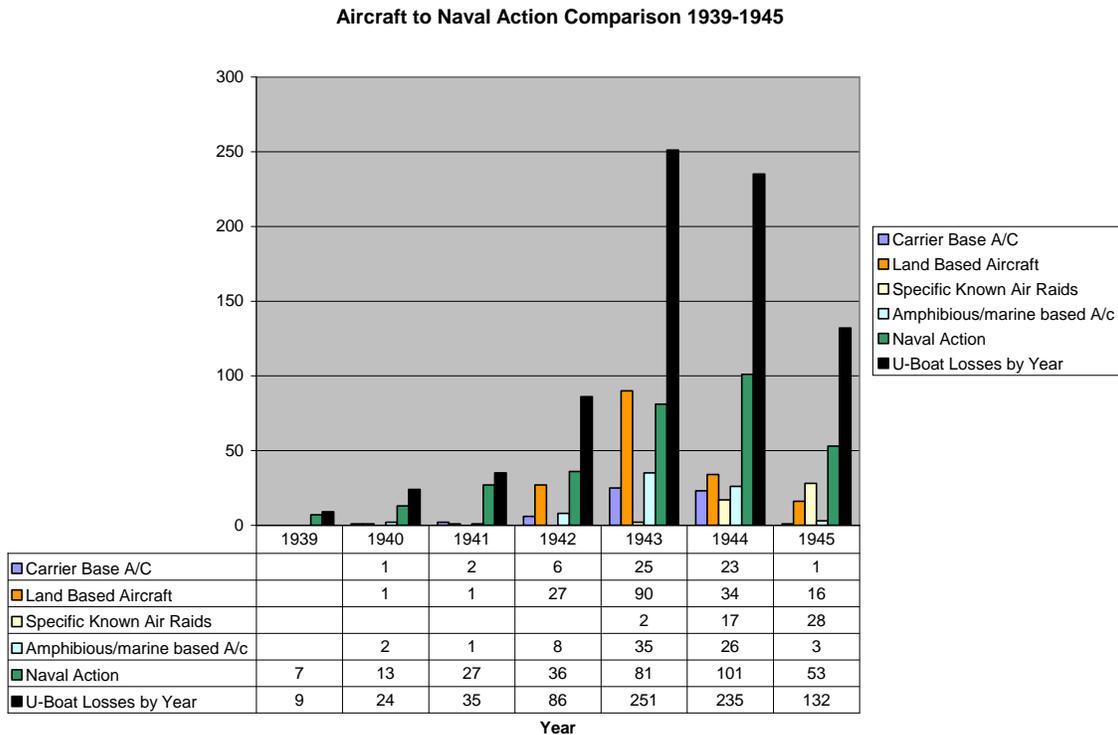
The Hard Facts

The decision to allocate long range assets to the RAF before Coastal Command and the needs of the Royal Navy seemed reasonable in light of the results to date. In the battle of U-boat operations the gathering of that evidence was often difficult and was in large part

an intangible which is one reason why the Royal Navy and Coastal Command lost their case.

The empirical evidence available between 1939 and 1941 suggests that it was naval action, not air action that achieved results against the U-boats. There was little evidence supporting the role of air power in the destruction of U-boats during that period. It would be easy for any observer to conclude then, that use of air power in the pursuit of U-boats was ineffectual and a misuse of vital and scarce resources. (Figure 1)¹⁹.

Figure 1



Air action U-Boat destruction results were desultory between 1939 and 1941. The leading champion of U-boat sinkings on the face of events was indeed, naval action. It was not until 1942 that airpower in total and, land based aircraft in particular, started to produce results in quantity that even matched the results from naval action (Figure 1).

The point that is often lost in the discussion though, was that these land based attacks played a vital role. The destruction of a U-Boat may have been the direct object, but the land based air crafts' importance was often lost in an indirect result, keeping the U-Boat submerged, which was its most important service and purpose. The suppression of U-boat activity and operability were likely the more important and vital object that contributed to the success of limiting their operations thus saving lives and materiel. But maintaining an air umbrella was probably viewed as the more costly option when compared to strategic bombing in terms of fuel, crew requirements, and aircraft. In the end it simply did not

play to air force doctrine of hitting at enemy morale at a time when the force of personality and public opinion demanded so.

The Allies did employ air raids against ports that resulted in some U-boat losses but this did not occur in great frequency until the last two years of the war 1944-1945 (figure 1) and contributed little easement to the naval threat or assuage the loss of the merchant shipping from U-boat action on the high seas. In the end though, it was the presence of aircraft over the high seas that dissuaded U-boat activity and limited its success. And a very important point though is often lost is the majority of U-boat sinkings resulting from air action between 1939 and 1945 were due largely to land based aircraft (Table 1).²⁰

Table 1 – A Comparison of U-Boat Sinking by Air Attack Classification

Comparison of Air Action Class only						
	Year	Land Based Aircraft	Amphibious/ marine based A/c	Carrier Base A/C	Specific Known Air Raids	Total
	1939	0	0	0	0	0
	1940	1	2	1	0	4
	1941	1	1	2	0	4
	1942	27	8	6	0	41
	1943	90	35	25	2	152
	1944	34	26	23	17	100
	1945	16	3	1	28	48
	Total Air Action	169	75	58	47	349
	% Total Destroyed Air Action	48%	21%	17%	13%	100%
	Total Destroyed	772				

Air attacks accounted for 349 of 772 or 45% losses of all U-Boat losses between 1939 and 1945. The contribution of land based aircraft is very evident (Table 1). Land based aircraft represented 48% of total losses by all air causes (Table 1). In comparison to naval actions, land based aircraft accounted for 28% of all U-boats losses compared to 41% of losses by Naval action (Table 2).

Table 2 – U-boat Losses by all Methods 1939-1945

<u>Actual</u>	<u>Year</u>	<u>Naval Action</u>	<u>Mines</u>	<u>Carrier Base A/C</u>	<u>Land Based Aircraft</u>	<u>Amphibious/ marine based A/c</u>	<u>Misadventure/U known Accident/Other</u>
	1939	7	2				
	1940	13	6	1	1	2	4
	1941	27	1	2	1	1	4
	1942	36	5	6	27	8	8
	1943	81	2	25	92	35	25
	1944	101	13	23	51	26	57
	1945	53	13	1	44	3	18
	Total	318	42	58	216	75	116
	% total destroyed	41%	5%	8%	28%	10%	15%

Table 2 tends to indicate that the lion's share of U-boat losses from 1939 to 1942 was indeed largely due to naval action. It was only after this point that U-boat losses to aircraft operation would increase significantly. In the arguments over scarce defence economic resources in 1941 though, it was evident that land based aircraft operations against U-Boat activities were being discounted in favour of strategic assets for the air war in Europe. These arguments likely delayed the closure of the air gap in the Battle of the Atlantic as much needed aircraft were deemed more important for the prosecution of the strategic air war in Europe. The decisions would have an impact later for Canadians in the Battle of the Gulf of St Lawrence.

Skepticism – The Employment of Land-based Aircraft in an Anti-submarine role?

Employing land based aircraft against submarines was nothing new. Land based air assets were employed in the maritime patrol role as early as World War I. The basic lessons learned there was, aircraft proved effective against German U-boats forcing them to remain submerged and exhausting their batteries either while en route to or in operational areas. U-boats were found to be very vulnerable to air attack by air escorted convoys.²¹

Yet in 1939, despite the lessons of World War I, most belligerents were ill-prepared to engage submarines by land based aircraft for a number of reasons.²² Inter-service rivalry and competition certainly played a role, but adherence to strategic doctrine that the bomber would always get through certainly swayed opinion.²³ There was little visible evidence of the efficacy of land based aircraft in the Maritime surveillance and anti-submarine role. This discrepancy served to muddy the waters. Given the weight of evidence between 1939 and 1941, the inter-service rivalry for the control of air power, lent toward strategic bombing rather than optimizing efficiency amongst all competing

resources. This struggle governed the organizational schemes along with the force of personalities at the time.²⁴

The Fall Out - The Clash Of Personalities

The fall out of Churchill's decision was that Air Chief Marshal Sir Frederick Bowhill; the top ranking officer responsible for Coastal Command, was removed from command and tasked with sorting out the problem with the backlog of delivery of vital strategic aircraft from Canada to the United Kingdom. Long range aircraft were urgently needed for the front on strategic bombing.²⁵ Bowhill arrived from Great Britain on a short two days notice. His new responsibilities were deemed more vital to Britain's defence interests than his then important function at Coastal Command.²⁶

Churchill also believed that employment of an air arm in an antisubmarine role was undeveloped in 1941 and therefore in his mind, its value was limited.²⁷ He therefore made his plans for the three services and set his priorities accordingly in that year. He did augment Coastal Command but the lion's share of incoming air assets went to Harris's Bomber Command.²⁸

Yet matters came to a head in 1942 for Canada in particular. A re-organization of land based maritime assets would be necessary to meet the looming U-boat threat in Gulf of St Lawrence. A battle was in the offing. The commencement of that battle would play an important part in the consideration of the employment of land base aircraft in an anti-submarine role. This consideration would later be of much concern to the German navy at the conclusion of its operations in 1942. Constant air surveillance and air attack led the Kriegsmarine to withdraw from this theatre as it was considered too dangerous.²⁹

Although the German navy lost no U-Boats to air attack in the Gulf, the persistence of its pursuers and intensity of their attacks forced the Germans out of the Gulf to more profitable hunting grounds in the mid-Atlantic. Like World War I it was air cover that forced the U-Boats further away from land in order to be outside the range of aerial Air escorts and other patrols.³⁰ This task was largely accomplished by the cooperation and coordination of the Royal Canadian Navy and Eastern Air Command in particular.

The Dreary Battle of the "Gulf of St Lawrence"

The Battle of the Gulf of St. Lawrence is a little known event in Canadian History.³¹ It may well be that wartime censorship played role to stifle the story but it is more likely that this battle was viewed as an unmitigated defeat on Canadian shores. The post war view may have been an expedient to ignore it and leave it best forgotten.³² But the reality was the "Battle of the Gulf of St Lawrence" was anything but an unmitigated defeat. It was in fact an unknown military victory. The Battle denied the enemy control over Canadian littoral waters. This victory was largely due to a combined arms effort of the Royal Canadian Navy, Royal Canadian Air Force, and Canadian Army.

The cast of an “unmitigated defeat” was largely due to the significant shipping losses and casualties in the Gulf of St Lawrence resulting from U-Boat activities in 1942 . German U-boat activities served to dislocate many Canadian military initiatives by delaying the construction of Gander/Goosebay airfield by 6 months, by diverting huge military resources to the U-Boat hunt, and by forcing the closure and restriction of merchant naval traffic in the St Lawrence itself. It was this “observed” effect rather the unobserved that swayed the perception of defeat. The Gulf of St Lawrence was considered a black eye for the Canadian military and of the government preparations of the day.

However it was the unobserved effects that showed the true measure of Canadian actions at the time. But success at the time was being measured in terms of concrete results. If results were not evident, it was often concluded that certain actions were ineffective. Thus it was the immediate and apparent results that often swayed the decisions of the day.³³ Results just had to be concrete, based on the hard facts of observable and based on conclusive evidence. Decisions, as a consequence, were often swayed in favour of events with the concrete, measurable, and direct evidence.

At the Start of the Gulf of St Lawrence operations

The Battle of the Gulf of St Lawrence is such an example. Its commencement was likewise expected but a surprise. U-553 laid the gauntlet down to the start of the campaign commencing on 12 May 1942 with an incursion where its torpedoes sunk the British freighter Nicoya a few kilometres off Anticosti Island. Less than two hours later U-553 once again destroyed a ship, the Dutch freighter, Leto.³⁴

Originally U -553 planned to be on a patrol line just off Boston. But U-553 encountered some engine trouble. U-553 changed course northwards towards what was assumed to be calmer waters in the St. Lawrence for urgent repairs. ³⁵ The Kriegsmarine had no plans for incursions into the St Lawrence. This first incursion was merely accidental. However the Kriegsmarine quickly realized it as an opportunity. U-553’s attack truly struck at Canada’s heartland and morale. Canadian military dispositions seemed to be lacking, were unprepared, and were largely disorganized.

The great prize then was the blow to Canadian morale. Questions were quickly raised by many “as to how German submarines could have carried out such vicious attacks with complete impunity within Canada's territorial waters?”³⁶

The Naval resources at Canadian disposal in the summer of 1942 to protect the Gulf of St. Lawrence amounted to one Bangor class minesweeper, two Fairmiles class motor launches, and one armed yacht. This naval task force was not sufficient for the requirements of patrolling much less protecting water course 575 km long and 110 km wide at some points. The operational area roughly bounded an area from Sept-Îles, Quebec to the Strait of Belle Isles on the North Shore of Quebec and Labrador, and on the South Shore from Rivière du Loup to the Gaspé Peninsula, thence to New Brunswick, Nova Scotia, and Prince Edward Island with Island of Newfoundland as the

cork in the bottle to the east.³⁷ Canada was unprepared and had to quickly reorganize its resources. But so too was the German navy. It too was almost as unprepared for war in 1939. It would be two years before U-boats began to seriously threaten the western Atlantic.³⁸

Thus up until 1941 the German Navy up confined its activities largely in the approaches to the British Isles. It was inevitable though that they would come to operate in the western Atlantic and ultimately in the Gulf of St Lawrence so their untimely arrival was indeed expected. It was only a question of “when?”. Until it actually happened, Canada only planned contingencies for the eventuality. These plans included the employment of Quebec -Sydney convoys and the establishment of a naval base at Gaspé for a Gulf escort force. There was also consideration given to the need of routing materiel overland for cargo which normally went by river to Canadian Atlantic port facilities.³⁹ The St. Lawrence traffic was considered valuable but was secondary in importance to the needs of ocean going convoys to Great Britain and to that of the oil tankers transiting along the American coast from the Caribbean.

Canada’s contingency plans were not an afterthought. The Canadian Government did consider both its East and West Coast defence needs well before World War II. Eastern Air Command was established on 15 September 1938 because of the threat posed by the Munich crisis in that year. Defence plans that included bases and squadron were developed.

East and West Coast Commands were placed under control of the Home War Establishment (HWE). At the end of 1939 HWE consisted of 14 active squadrons and No.110 (Army Cooperation) Squadron. But only two squadrons had aircraft for the mission at hand, far short of the 16 squadrons deemed necessary with 574 aircraft that were to be in place under the initial HWE defence plan.⁴⁰ Based on Canada’s preliminary planning, a U-boat threat was indeed anticipated. It was all a question of resource allocation. But disparity of resources and organization would not be felt until the first action in May 1942. Until then because there was virtually no action in the Gulf of St. Lawrence, the resources were being allocated to where they were most needed.

Although much thought and considerable effort had been put into Canada’s defence needs, other priorities contrived to limit access to modern aircraft, technology, and other resources. Dealing with a theoretical U-Boat threat had to be deferred until events necessitated a re-evaluation.⁴¹ In any case, any plan would have to be augmented from resources at hand.

Stretching Resources

The Battle of the St. Lawrence would stretch Eastern Air Command (EAC) resources. The air role would become doubly important as the Royal Canadian Navy was heavily committed in 1942. There was a shortage of naval escorts due to demands of the North

Atlantic convoy system. Eastern Air Command of the RCAF accepted the navy's request for a major share of the responsibility of the defence of shipping in the gulf.

Eastern Air Command diverted some of its assets from Atlantic duties in order to concentrate in the Gulf. EAC placed as many as 48 front-line anti-submarine bombers at the disposal of this battle for air protection in the gulf and its ocean approaches.⁴² Coincidentally there were 44 Hudson Bombers on establishment at O.T.U 31 from May 1941 on. Some of these assets were employed in this role and along with the assets of other training establishments contributed greatly in this battle.⁴³

Despite reorganization and new dispositions of existing assets, resources were still sadly lacking. In the end the training schools and advanced training establishments had to be mobilized as well. For example 31 General Reconnaissance School based at Charlottetown, PEI was mobilized to fly Anti-submarine and convoy protection patrols where 31 General Reconnaissance School employed the Avro Anson carrying two, 250-pound bombs.⁴⁴

Operational Unit 31 at Debert, Nova Scotia was also brought into the fray. Thus an operational burden would come to be placed on the training establishments in order to cope with the threat. EAC's available resources in 1942 included 307 aircraft that were augmented by 259 training aircraft (84%). This figure rose to 483 aircraft in 1943 that were also augmented by 386 (80%) training aircraft available for the battle of the Gulf of St Lawrence.⁴⁵

The operational tempo was high once the decision was made to mobilize the schools. O.T.U. 31 carried out regular anti-submarine and convoy patrols for Eastern Air Command and did so until 21 December 1943. Four especially fitted Hudson bombers for the antisubmarine-convoy patrol were kept ready and available for the task. It was agreed that O.T.U. 31 would diminish this role commencing 19 January 1944 because of the needs of its primary training role. Despite a diminished capacity, O.T.U. 31 maintained a commitment for the anti-submarine role of two days of anti-submarine patrols of 3-1/2 hr and 5-1/2 hours respectively, and one night patrol of 3 hours that was fitted into its training schedule starting 19 January 1944.⁴⁶

Some may question the utility of employing the operational training units in the anti-submarine role. But in the end, they were a value added asset and harkened back to the forgotten lessons of World War I which were being re-learned.⁴⁷ They were a force multiplier at a time when resources were already short on the ground.

The lessons of World War I showed that shore based air patrols were indeed important to the fighting the U-Boat threat. The mere presence of any aircraft was a cause for concern to any U-Boat captain.⁴⁸ Land based aircraft forced German U-boats to remain submerged stretching their batteries to exhaustion, and limiting speed, hence range and operability, while en route or in operational areas. U-boats were vulnerable to air attack by air escorted convoys.⁴⁹ Thus aircraft were direct contributors to limiting U-boat effectiveness and operations merely by their presence in the air!

Perceptions of the Enemy

Despite EAC's best efforts conditions were more favourable to the enemy. They made great strides in the Gulf. Air attack was very weather dependent and estuarine conditions shielded them from sonar-ascid contact by the navy whose Asdic was limited by the bathyscaphe effect.⁵⁰ They were vulnerable however when surfaced air power showed its true potential. When caught on the surface, the U-boats were attacked relentlessly. Air cover kept them submerged and dwelling in fear.

The German perspective provides some insight as to the effectiveness of the Canadian effort. They considered three pillars in the battle that was of grave concern. These pillars were radio intelligence direction based on radio direction finding, traffic analysis, and decryption. The enemy considered that it was the effect of radio intelligence that had the greater influence on Allied operational and tactical decisions.⁵¹ This pillar placed land based aircraft on or in the vicinity of known U-boat locations.

Admiral Dönitz was fastidious for daily position reports in his management of the Battle. It was this daily positioning reporting and use of the box square system that was of value to fixing U-boat positions and concentrating Allied air and naval resources to great effect. This was probably the key to Dönitz's conviction of the dangers inherent in the Gulf of St Lawrence.⁵²

The Effects of EAC Persistence

U-517 was been found and located by such means. U-517 was actively pursued and land based aircraft were brought into the fray in its pursuit. U517 was attacked by Pilot officer Maurice Jean Belanger. Belanger not only attacked U-517 just once, but on several occasions. This tenacity serves as an attestation to the efficacy of Canadian triangulation methodology. U-517 was almost brought to grief. U-517 crash dived leaving an impression with Belanger and his air crew that U -517 was sunk.

Belanger delivered three well placed depth charges. U-517 lingered in the area remaining submerged for several hours. When safe to do so, U-517 surfaced to survey the damages. Belanger's skilful bombing and gunnery left U-517 damaged with one well place bomb lodged in its hull forward of the 10.5cm ammunition locker! U-517's Captain, engineer and two crew members dislodged the bomb and ditched it over the side. They considered themselves extremely lucky for they came with a hair's breath of death and destruction!⁵³

U-517 departed for home base at Lorient on 5 October 1942 severely damaged and with a lasting impression of their experience in the Gulf of St Lawrence. U-517's Captain calculated that he was on the receiving end of at least 27 bombs and 118 depth charges dropped near enough to his discomfort.⁵⁴ Thus it is clear that triangulation of radio signals combined with fixed the box locations were of great assistance to land based aircraft on patrols as they were dispatched basically to known or suspected locations.⁵⁵ This too likely had a great influence in suggesting to them that Canadian eyes and aircraft were ubiquitous too!

Proof is in the Pudding U-Boat Inactivity 1943 - Canadian Inshore Waters

The intensity of anti-submarine action in the Gulf of St Lawrence in 1942 largely dissuaded the Germans from pursuing any large scale action operations in the Gulf in 1943. It was considered much too dangerous. The lack of German activity in this area should have been a clue to the success of EAC's efforts in the prior year. But it was likely overlooked because of the pressing events of the day. Still there was one purpose built mission that brought at least one German submarine within very close range of Canadian coastal waters and its observations while on patrol are telling.

There was a planned escape of Prisoners of War detained at internment Camp 70 at Ripples, NB near Minto. Coded messages were delivered through the prisoners' personal mail with a planned mass escape. The escapees were directed to make their way 250 kilometres to Cape Tormentine, NB, then cross the Northumberland Strait, and to their final destination at North Cape, PEI. A U-Boat would lie in wait for them in early May 1943. This mission was code named "Operation Elster (Magpie).⁵⁶ This bizarre task was too surreal and indicates a clear misunderstanding of Canadian geography in the undertaking. But it would have been the supreme propaganda coup had it worked. The fantastic mission proceeded anyway.

Two U-boats were independently tasked for the job. U-376 captained by Captain Friederich-Karl Marks was tasked as the primary boat. Mark's U-376 set sail on 6 April 1943. U-262, the back up boat, preceded U-376 on 27 March 1943. U-262 was captained by Heinz Franke. Franke's U-262 would assume the mission in the event that the primary boat met with misfortune or was unable to complete the mission. U-262 met with technical difficulties and had to return to port for repairs for a defective air vent. U-262 set sail once again on 7 April 1943. Each boat contained sealed orders when departed from La Pallice, France that were to only be opened under radio orders while at sea.⁵⁷

Mark's U-376 was reportedly sunk in the Bay of Biscay and lost contact with its headquarters off the coast of France on April 10, 1943. U-376 and her crew of 47 have never been found. Consequently Franke's U-262 was directed to open the sealed orders for "Operation Elster" on 15 April 1943 and make for Canadian waters.⁵⁸

The Allies were aware of the German plans and were regularly tracking German positions, so U-262's arrival was not unexpected. U-262 arrived in Canadian waters passing through the narrowest point of the Cabot Strait on 26/27 April.⁵⁹ U-262 arrived at its destination at North Point Reef, PEI and rested on the bottom in 30m of water, four miles off the Coast on 2 May 1943. U262 remained on station at latitude 46.57 longitude 63.15 for four harrowing days from 3 – 6 May 1943.⁶⁰

Much to Franke's surprise when he raised his periscope he observed a number of "Maryland" aircraft orbiting his position. He was suspicious to find aircraft over his

assigned target as there were no indications of potential aircraft threats in his orders and briefings. Franke rightly assumed that he was on a glide path of a training unit and resumed his tense vigil in anticipation of the escapees.⁶¹

Franke broke off the engagement according to orders after four days with no escapees in sight. He moved off North –North-East toward the Magdellan Islands thence southeast through the Cabot Strait via U-boat alley wary of air attack. There were a number of tenuous aircraft and coast watcher sightings that may have marked U-262's outward bound journey.⁶²

U-262's presence certainly alerted Canadian authorities who increased their efforts in the hunt for an enemy in U-262's transit path. An aerial attack was made on a suspicious target on 16 May 1943 but long after U-262 had transited the area. The credit for this attack is often given to Anson training aircraft stationed at Charlottetown, PEI.⁶³ But in fact the attack was made by Hudson aircraft from O.T.U. 31 Debert, NS.⁶⁴

Pilot Officer S.F.C Homer was on patrol in a Hudson aircraft out of O.T.U 31 Debert. His observer spotted a periscope at 2046Z at position 42.08N, 64.28W. Homer was at 3200 feet altitude at the time, visibility was 20 miles and sea state was calm. Homer rapidly lost height and made an attack from 15 degree angle astern to his target on its starboard side. As his target was about to pass under the nose of his Hudson bomber, Homer let loose with a volley of four depth charges set to 25 foot and spaced to 36 feet for 150 Knots that were dropped from 100 feet. He climbed to 400 feet and circled his explosions for 5-10 minutes. He finally left the area at 2123Z.⁶⁵

The analysis of Homer's attack suggests that he overshot his target and failed to do any lethal damage. Yet his Squadron Commander was well pleased. This inexperienced crew carried out a very good attack. The depth charges likely overshot the target by 50 feet. The depth charges should have been released earlier before the periscope was about to pass under the nose of the Hudson.⁶⁶

Homer's Hudson bomber had a 500 nautical mile radius of operation. These aircraft were placed on station in a box square of suspected U-boat activity. They had sufficient loiter time to conduct a grid search. Still the matter of an actual U-boat sighting much less an actual attack was simply a matter of chance of catching a surfaced U-boat at the right time.⁶⁷

On the other hand the German navy had a great respect for the threat of air attack. Notwithstanding that a patrol made no U-boat sightings their presence was observed by the enemy. Submerged U-boats often noted significant air activity at periscope depth on their patrols. These air patrols forced the U-boats to remain submerged to the limits of their endurance because of constant air patrol and the fear of attack once they surfaced.⁶⁸

Homer's attack was not just a tenuous sighting. A second target was subsequently attacked by Canso aircraft from 117 (BR) Squadron six days later off Newfoundland at

48.13 N 62.26W on May 21 1943. ⁶⁹ There was definitely a U-boat activity off the east coast that was pursued and attacked by assets of Eastern Air Command. ⁷⁰

Concluding Remarks – Significant Impressions?

The U-boat experiences in the Gulf of St Lawrence in 1942 made a significant impression on Admiral Dönitz. Admiral Dönitz was impressed by the number of their attacks, by both the RCN and RCAF despite the fact that not one of his submarines was sunk by Canadian pilots or the RCN. ⁷¹ The presence of air cover greatly deterred him from pursuing a campaign in the Gulf in 1943 because of this fear. It was indeed a dangerous place! ⁷² U-boats only returned to Canadian water in 1944 with the introduction of the 'snorkel' that allowed U-Boats the technical advantage of re-charging their batteries while submerged. ⁷³

Unbeknownst to Canada and its allies, a great victory had indeed been won in 1942. The U-Boat fleet was denied access to the Gulf of St Lawrence because of combined operations and because of air power in particular. It was a battle that was won through the efforts of Eastern Coastal Command augmented by the OTUs in the heat of battle. It was the virtual presence of aircraft, whether they were fully operational or under operational training, that had kept the U-Boat fleet at bay and submerged during the spring-fall 1942 and out of Canadian waters in 1943.

The OTUs are also owed a special debt of gratitude and respect. It was air power that forced a technological innovation to circumvent detection by the introduction of the snorkel that delayed a return to Canadian waters until 1944.

EAC reported 84 attacks on U-Boats between 1941 and 1945 with a resulting confirmation of 6 U-Boat kills. This was quite an achievement given the resources at hand and the relative scarcity of targets. ⁷⁴ Seventeen units participated in the Battle of the Gulf of St Lawrence. Twelve Bomber-Reconnaissance squadrons, one Fighter Squadron, and four advanced operational training units/schools participated in its defence. Neither the operational training/schools nor fighter squadron were accorded a Battle honour in this effort! ⁷⁵

In the end, it was the use of land based aircraft that underlies Canada's unknown success in the Gulf of St Lawrence. But it was not a singular victory. It required the mobilization of all its military assets to the task at hand. It was innovative for its day. It employed combined operations and hints at the necessity of a force multiplier in the maximum use of all assets that included the Operational Training units. Perhaps it was a time of desperate times requiring desperate measures, but to be sure, all rose to the occasion that paved the way to victory in 1945.

¹ Roger Sarty, **The “Battle We Lost at Home” Revisited Official Military Histories and the Battle of the St. Lawrence**, Canadian Military History, Volume 12, Numbers 1& 2, Winter/Spring 2003, pg 41

² Colonel C.P. Stacey, O.B.E., C.D., A.M., Ph.D., F.R.S.C., Director, Historical Section, General Staff, **Official History of the Canadian Army - In the Second World War Volume I ,SIX YEARS OF WAR, The Army in Canada, Britain and the Pacific**, Published by Authority of the Minister of National Defence , First Published 1948, pg 175

Source <http://www.ibiblio.org/hyperwar/UN/Canada/CA/SixYears/SixYears-5.html>

Accessed: 13 August 2010

Transcribed and formatted by Patrick Clancey, HyperWar Foundation

For access to full publication see:

<http://www.ibiblio.org/hyperwar/UN/Canada/CA/SixYears/index.html>

³ Richard S. Malone, **A Portrait of War – 1939-1943**, Collins Publishers, 1983, pg 9

Malone sheds light on this difficulty. In his opinion “It must be realized that politicians and commanders on the spot, despite the fog and confusion of battle, were frequently obliged to make decisions... based on the information available to them at that time. ...but decisions were made in the sincere belief that actions taken would best defeat the enemy.Hindsight, in consequence, can often be very deceptive; at times, it can distort the actual scene.”

⁴ Paul Kemp, **Convoy! -Drama in Artic Waters**, Castle Books, 2004, pg 101-102

Note 7 to Chapter 7 Hamilton to Somerville, 30 September 1942. Pencil draft in Hamilton Papers, National Maritime Museum

A private criticism by Admiral Sir James Somerville (RN) found in an archival letter dated 30 September 1942 is a telling tale of the state of affairs with regard to naval and coastal command aviation at the time:

“We all know that the RAF have behaved like shits as far as naval air is concerned: the old school tie means nothing to them. The First Lord and Winston hate the sight of Tovey and are trying their best to lever him out of his job and get a 'yes-man' in as CinC who will sit down calmly under this unsound Bombing Policy and allow the Navy to go on fighting with last war's weapons.”⁴

It is interesting that Admiral Somerville’s private censure, written in September 1942, expresses his frustrations just at a time when events began to heat up in Canada and elsewhere.

⁵ Ibid Malone, 1983, pg 9

⁶ C.P. Stacey, **The Private World of Mackenzie King- A Very Double Life**, Macmillan of Canada, 1976, pg 28 and pg 30

⁷William S. Hanable, Research Studies Series, Case Studies In The Use Of Land-Based Aerial Forces in Maritime Operations, 1939-1990, Air Force History & Museums Program, Washington, D.C. September 1998, pg 19

⁸ Winston S Churchill, **The Hinge of Fate**, Houghton Mifflin Company Boston, The Riverside Press Cambridge, 1950, pg 60-61

⁹ Ibid Churchill, **Hinge of Fate**, pg 127

¹⁰ Ibid Churchill, **Hinge of Fate**, pg 121 & 127-129, and
Winston S Churchill, **The Grand Alliance**, Houghton Mifflin Company Boston, The Riverside Press Cambridge, 1950, pg 112

¹¹ Ibid Churchill, **The Grand Alliance**, pg 122-123

¹² Ibid Churchill, **Hinge of Fate**, pg 110 -111

¹³ Ibid Churchill, **The Grand Alliance**, pg 122-123

¹⁴ Phillip S. Meilinger, **Trenchard and "Morale Bombing": The Evolution of Royal Air Force Doctrine Before World War II**, The Journal of Military History, Vol.60, No.2. , April 1996, pg 251

¹⁵ Ibid Churchill, **Hinge of Fate**, pg 62-63

¹⁶ *ibid* Churchill, **The Grand Alliance**, 1950, pg 122-123

¹⁷ *Ibid* Melinger, 1996 pg 269

¹⁸ *Ibid* Melinger, 1996 pg 253

¹⁹ U-Boat.Net 1995-2011, **U-Boat Fates – U-Boat Losses 1939-45**, 10 June 2011, Accessed: 10 June 2011

Source: <http://www.uboat.net/fates/losses/cause.htm>

Author's note. The data presented here was manually transcribed was a compilation of data from a review of each U-boat record of loss from 1939-1945. Some variances may be due to a difference in categorization and grouping by different observers. Consequently any resulting error is strictly my own.

²⁰ *Ibid* U-Boat Net, 1995-2011

(Author's Note to Table 1:

This data was adjusted to remove duplication of combined actions for which both the navy and air forced were simultaneously credited for a joint action. Adjustments were also made to exclude scuttling and SOS (in 1944) in order to highlight losses solely due to misadventure or accident while at sea. From 1939-1945.

This is as pure a picture as I can get it within my limited means. There may be slight differences between my data and U-boat net which is largely due to the categorization applied by different observers. It does not materially alter the big picture in the greater scheme of things. For example U-boat net yielded 37 combined naval-air attacks. I found 27 carrier borne and 5 land-based or amphibian based attacks my number rises to 32. My data was manually transcribed from U-boat net records. Any errors or omissions are my own and not the results of others. G.D Madigan 2 Jun 2011.); and

Anon. **The Battle of the Atlantic**, Canadian Naval Review, Vol.1 #1 (Spring 2005), pg 19

A contrast to this paper highlights the differences resulting from differing categorization, parsing of the data and possibly investigator bias. The big picture remains the same.

²¹ *ibid* Hannable, 1998 pg 3-4

²² *ibid* Hannable, 1998 pg 9

²³ *ibid* Kemp, 2004, pg 101-102

²⁴ *ibid* Hannable, 1998 pg 11 and pg 14

²⁵ Major (Ret'd) G.D. Madigan, **Focus: Triumph and Tragedy of Operational Training Unit 31, Debert Nova Scotia**, 7 March 2011 (submitted for publication – 7 March 2011, The Canadian Air Force Journal)

²⁶ Time Magazine, **World War: IN THE AIR: One-Way Airline**, Monday, Oct. 20, 1941

Source: <http://www.time.com/time/magazine/article/0,9171,851303,00.html>

Accessed: 14 February 2011

²⁷ Ibid Churchill, **The Grand Alliance**, pg 147-148

²⁸ Ibid Churchill, **The Grand Alliance**, pg 112 and

Ibid Churchill, **Hinge of Fate**, pg 121

²⁹ David Andrews, **The Battle of the Gulf of St Lawrence**, Royal Canadian Legion Branch # 98 © 2008 All Rights Reserved, pg 9

Source:

www.kingstonlegion.com/.../Battle%20of%20the%20Gulf%20of%20St%20Lawrence.doc and

<http://www.kingstonlegion.com/Poppy/Call%20to%20Remembrance.html>

Accessed: 2 October 2010

Andrews cites ``His last five U-boats in the theatre had encountered too much opposition and had sunk only five ships. Dönitz believed that such results could not justify a continued presence in Canada's inland waters....Still; a victory of sorts had been won. Ever-improving defences had deterred the U-boats, although it would take a post-war examination of German war records to confirm how seriously.

³⁰ ibid Hannable, 1998, pg 4

³¹ Sarty, 2003, pg 41

³² Sarty, 2003, pg 42

³³ ibid Hannable, 1998, pg 14

³⁴ Fabrice Mosseray, **The Battle of the St. Lawrence -A Little-Known Episode in the Battle of the Atlantic**, UBoat.Net 1995-2010, 29 Mar 2002.

Source: <http://uboat.net/articles/?article=29>

Accessed: 30 November 2010

³⁵ Ibid Fabrice Mosseray, 29 March 2002

³⁶ Ibid Fabrice Mosseray, 29 March 2002

³⁷ Ibid Fabrice Mosseray, 29 March 2002

³⁸ [Hugh A. Halliday, **Canadian Military History in Perspective**, Eastern Air](#)

Command: Air Force, Part 14 , [March 1, 2006](#), The Legion Magazine

Source: <http://www.legionmagazine.com/en/index.php/2006/03/eastern-air-command/>

Accessed: 27 January 2011

³⁹ Canada, National Defence Headquarters, Directorate of History, **REPORT NO. 30 HISTORICAL SECTION (G.S.), ARMY HEADQUARTERS, Army Participation in Measures taken by the Three Services for the Security of the Gulf of St Lawrence and the Lower River during the Period of German Submarine Activity, 1942-45**, 18 Nov 49 republished July 1986, pg 2

⁴⁰ The Juno Beach Centre, **Home Defence, The Creation of the Home War Establishment (HWE)** , 2003

Source: <http://www.junobeach.org/e/4/can-tac-air-hwe-e.htm>

Accessed: 20 January 2011

⁴¹ Ibid, The Juno Beach Centre, **The Creation of the Home War Establishment (HWE)**, 2003

⁴² Ibid, Roger Sarty 2003, pg 43.

⁴³ Canada, National Defence, Director of History and Heritage, File 74/13 No. 31 O.T.U., 3 February 2011, pg 2

⁴⁴ ibid, [Hugh A. Halliday](#), **Eastern Air Command: Air Force, Part 14** , [March 1, 2006](#),

⁴⁵ ibid Canada, National Defence, Report No. 30 18 Nov 49 (Original), republished Directorate of History, National Defence Headquarters Ottawa, Canada July 1986, pg 7

⁴⁶ Canada, National Defence, Director of History and Heritage, File 181.002 (D237) - **Operational Commitments - 31 O.T.U.**, 3 February 2011 (letter RCAF G 32A 1100M-10-41 (1022) H.Q. 1062-9-36, Letter "R.A.F. Schools, Debert, N.S. 25th January 1941)

⁴⁷ ibid Hannable, 1998 pg 3-4

⁴⁸ Time Magazine, **World War: IN THE AIR: One-Way Airline**, Monday, Oct. 20, 1941

Source: <http://www.time.com/time/magazine/article/0,9171,851303,00.html>

Accessed: 14 February 2011

"Sir Frederick decided to attack submarines with pure bluff. Banking on the well-founded fear that submarine men have of planes in general, he sent his flyers out in almost anything he could buy, beg or borrow. His motley "Honeymoon Fleet" consisted mostly of light Tiger-Moth trainers, no more lethal than the tiny yellow Cubs that put-put around U.S. airports. But against German submarine commanders, grooved in routine, the Tiger-Moths were almost as effective as dive-bombers. Whenever the U-boats saw a speck in the sky they submerged and stole away."

⁴⁹ ibid Hannable, 1998 pg 3-4

⁵⁰ Nathan M. Greenfield, 2004, pg 60:

Bathyscaphe effect the blending of fresh and salt, cold and warm water in an Estuary system.

⁵¹ United States of America, U.S. Naval Academy Annapolis. **Ultra and the Battle of the Atlantic**, Naval Symposium, DOCID: 3726627, October 28, 1977, Approved for Release by NSA on 07-26-2010 FOIA Case # 62049, *The German View* Jurgen Rohwer, pg 13

⁵² Ibid, **Ultra and the Battle of the Atlantic**, Patrick Beesly, pg 7

⁵³ Nathan M. Greenfield, **The Battle of the St Lawrence – The Second World War in Canada**, Harpers-Collins Publishers Ltd., 2004, pg 154

⁵⁴ A.R. Byers (Ed.), **The Canadians at War 1939-1945 Second Edition**, The Reader's Digest Association (Canada) Ltd, 1986, pg 129

⁵⁵Roger Sarty, **The "Battle We Lost at Home" Revisited Official Military Histories and the Battle of the St. Lawrence**, Canadian Military History, Volume 12, Numbers 1& 2, Winter/Spring 2003, pg 44,

Ibid, **Ultra and the Battle of the Atlantic, The British View**, Patrick Beesly, pg 7,

Ibid, **Ultra and the Battle of the Atlantic, The German View**, Jurgen Rohwer, pg 13,

Ibid, **Ultra and the Battle of the Atlantic, The American View**, Kenneth Knowles, pg 14-15, and

Battle of the Atlantic, Vol. 1, **Allied Communications Intelligence December 1942-May 1945, (SRH-009), Chapter II Section 3. Communications Intelligence and Perspective on U-boat war from beginning of 1943 to end of war.** Pg 18-19

Source: <http://www.ibiblio.org/hyperwar/ETO/Ultra/SRH-009/SRH009-2.html>
Accessed: 15 August 2011

⁵⁶ Mary MacKay, **Tale of two subs**, The Guardian newspaper/Charlottetown/Prince Edward Island/Canada , 12 Aug 2002 (in **The Powell & Pressburger Pages**)

Source: http://www.powell-pressburger.org/Reviews/41_49P/49P_08.html
Accessed: 19 March 2011

⁵⁷ Ibid Mary MacKay, 12 Aug 2002

⁵⁸ Ibid Mary MacKay, 12 Aug 2002

⁵⁹ Ibid Mary MacKay, 12 Aug 2002

⁶⁰ UBoat.net , U-262 Daily position Reports, April-May 1943

.Source: <http://www.uboat.net/boats/patrols/details.php?boat=262&date=1943-05-11>

Accessed: 20 March 2011, and

Michael L. Hadley, **U-Boats Against Canada - German Submarines in Canadian Waters**, McGill-Queen's University Press, Paper (0773508015) 9780773508019, pg 173

Release date: 1990-07-01

Source:

http://books.google.ca/books?id=LJJeZ91DyYcC&pg=PA170&lpg=PA170&dq=U-boat+operations+canada+1943&source=bl&ots=TuB5EKGzJH&sig=8FNzNNqn01NeCUGA75C4WRDzyN0&hl=en&ei=veOETbO_K_O10QGo1sHgCA&sa=X&oi=book_result&ct=result&resnum=7&ved=0CD4Q6AEwBjqU#v=onepage&q=U-boat%20operations%20canada%201943&f=false

Accessed: 19 March 2011

⁶¹ Ibid Michael L. Hadley, 1990, pg 174

⁶² Ibid Michael L. Hadley, 1990, pg 174

⁶³ Ibid Michael L. Hadley, 1990, pg 174

⁶⁴ Canada, National Defence, Directorate of History and Heritage, Public Record Office(PRO) File 199/435 – RCAF Attacks on U-Boats, 7 June 1943

⁶⁵ ibid DHH Record Office(PRO) File 199/435, 1943

⁶⁶ ibid DHH Record Office(PRO) File 199/435, 1943

⁶⁷ [Hugh A. Halliday, **Canadian Military History in Perspective**, Eastern Air Command: Air Force, Part 14 , March 1, 2006](#), The Legion Magazine

Source: <http://www.legionmagazine.com/en/index.php/2006/03/eastern-air-command/>

Accessed: 27 January 2011

⁶⁸ Ibid Sarty, Canadian Military History, Volume 12, Numbers 1& 2, Winter/Spring 2003, pg 43

⁶⁹ ibid DHH Record Office(PRO) File 199/435, 1943

⁷⁰ ibid DHH Record Office(PRO) File 199/435, 1943

⁷¹ ibid David Andrews, 2008, pg 9

⁷² Ibid David Andrews, 2008, pg 9

Source:

www.kingstonlegion.com/.../Battle%20of%20the%20Gulf%20of%20St%20Lawrence.doc and

⁷³ Fabrice Mosseray, 29 Mar 2002.

⁷⁴ [Hugh A. Halliday, **Canadian Military History in Perspective**](#)

Hunting U-boats From The Air: Air Force, Part 15 , Legion Magazine
[May 1, 2006,](#)

Source: <http://www.legionmagazine.com/en/index.php/2006/05/hunting-u-boats-from-the-air/>

Accessed: 22 March 2011

⁷⁵ Canada, Veterans Affairs Canada, **The Battle of the Gulf of St Lawrence, Royal Canadian Air Force Squadrons/Units that Participated in the Battle of the Gulf of St. Lawrence** , 10 February 2006

Source:

<http://www.veterans.gc.ca/remembers/sub.cfm?source=history/secondwar/battlegulf/airforce>

Accessed: 20 December 2010

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