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Defending Canada's Arctic

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FEATURE

Defending Canada's Arctic

Time to Revisit Some Lessons Learned

GREG TAYLOR

Editor's Note: Forty years ago, Canadian Armed Forces (CAF) personnel planned and executed Exercise LIGHTNING STRIKE 86, which explored the possibility of a Soviet threat in the Canadian Arctic. In the dying days of the Cold War, the exercise seemed irrelevant. No longer. Lieutenant-Colonel Taylor's account draws upon his long experience and memories of the operation. It reminds us of the immense operational challenges the CAF face in Canada's North; the important role of the Canadian Rangers; and the need for a "historical memory" of operations that were once thought unimportant. It is also a reminder of how quickly Canada's strategic interests can change.

> [Exercise LIGHTNING STRIKE 87 will examine] Soviet military techniques [such as] the development of so-called Spetsnaz teams … infiltrated into a country … perhaps even before the outbreak of hostilities.
>
> —Perrin Beatty, Minister of National Defence, January 1987[1]

A 2021 ARTICLE in *The Canadian Army Journal* proposed establishing a third Special Service Force to conduct Arctic operations using "paratroop and marine infantry task forces."[2] Having

[1] Digitized copy, VHS tape of Global TV evening news, January 1987, in the possession of the author.
[2] Les Mader, 3rd Special Service Force: A Paratroop/Marine Infantry Arctic Contingency Force for Canada?, *The Canadian Army Journal* 19, 2 (2021): 72.

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served several tours in the second Special Service Force (SSF)[3], two in fact in the formation Headquarters (HQ), I realised there was no historical memory of what the SSF had accomplished during its short existence, particularly during the mid-1980s when it developed an innovative approach to Defence of Canada Operations (DCO). This article, a first-person account of our innovative approach, addresses that gap in Canadian Army history.

First, however, I need to provide some context.

THE STRATEGIC ENVIRONMENT IN THE 1980S

Throughout my service the number of brigades, and their structure, personnel strength and equipment changed. Even their names changed. The brigade I joined in Petawawa, Ontario, in 1972 was 2 Combat Group. Five years later it became the SSF, and, in 1995, 2 Canadian Mechanized Brigade Group. During the period I address, 1985-87, there were four brigades with tasks as follows: Calgary, Alberta (reinforcement for the other brigades); Petawawa, Ontario (Defence of Canada); Valcartier, Quebec (NATO reinforcement of North Norway); and Lahr, West Germany (NATO Central Army Group Reserve).[4] The brigade in West Germany was the largest and most capable. For example, it was the only brigade equipped with Leopard C1 tanks. By comparison the brigade destined for North Norway had Cougar wheeled fire support vehicles, purchased as a 'tank trainer,' and never intended to be used operationally.

Canada's forces stationed in Europe understood the threat posed by Soviet Forces and their Warsaw Pact allies. In Canada, however, we never spoke about a Soviet land threat, quite the opposite. Our Arctic focus at the onset of the Cold War was the manned bomber threat, Soviet long-range bombers coming over the Pole heading south through Canada to attack the United States. This became more problematic when the Soviet Union obtained nuclear weapons and intercontinental ballistic missiles. Arctic defence was limited to air

[3] For the first Special Service Force see James Wood, "'Matters Canadian' and the Problem with Being Special: Robert T. Frederick on the First Special Service Force," *Canadian Military History* 12, 4 (2003): 17-33.

[4] Special Committee of the Senate on National Defence, *Canada's Land Forces* (Minister of Supply and Services Canada, 1989), 33-34.

force interceptors and radar stations for early warning, and even at one time Bomarc nuclear-capable anti-aircraft guided missiles. As for a land threat, Prime Minister Pierre Trudeau's statement in October 1969 was typical: "There is not now, nor is it conceivable that there ever will be from any source, challenges to Canadian Sovereignty on the mainland, in the islands … or in our territorial seas."[5]

Given similar political statements during this period, it is not surprising that the Army only paid minimal attention to Arctic defence. During the 1950s and 60s, the Canadian military researched how to survive in the harsh Arctic but little of this work had to do with how to fight. Most training exercises were in fact conducted south of the tree line, in the near-North.[6] The Canadian Airborne Regiment, established in Edmonton, Alberta, in 1968, did numerous exercises in the Arctic and at least one in Alaska. But for most of the Army Arctic training was minimal: every year small groups of about 100 soldiers staged through a training base at Churchill, Manitoba, to deploy further North on Exercise NEW VIKING. This too was not about fighting, but rather winter survival indoctrination where soldiers on snowshoes towed toboggans while Innu drove by on snowmobiles![7]

Underlying all this was the assumption that Canada was protected by her geography, safe, as Prime Minister Trudeau stated in 1969, from any challenges to our Northern sovereignty. Thus the statement from Minister of National Defence Perrin Beatty eighteen years later, quoted at the outset of this article, represented a shift in defence priorities under the government of Prime Minister Brian Mulroney. Beatty advocated expanding the size of the reserves, modernising their equipment and deploying submarines among other initiatives. As outlined in his subsequent June 1987 White Paper, he placed important emphasis on the security of and a military presence in the Canadian Arctic.[8]

And so, given this historical context, my personal account begins…

[5] Kenneth C. Eyre, "Forty Years of Military Activity in the Canadian North, 1947-87," *Arctic* 40, 4 (December 1987), 297.

[6] See Matthew S. Wiseman, *Frontier Science: Northern Canada, Military Research and the Cold War, 1945-1970* (University of Toronto Press, 2024).

[7] Eyre, *Forty Years of Military Activity in the Canadian North.*

[8] J.L. Granatstein, *Canada's Army: Waging War and Keeping the Peace* (University of Toronto, 2011), 378-79. According to Granatstein, Beatty's White Paper "died from the combination of the Mulroney governments rapidly rising deficits and the beginning of perestroika and glasnost in Mikhail Gorbachev's Soviet Union."

BACKGROUND

When I returned to HQ SSF in 1985 from commanding tank and reconnaissance (recce) squadrons in West Germany, I already had completed one HQ SSF tour, from 1980 to 1982, as a captain, first as G1 Personnel and then G3 Operations. I thoroughly enjoyed that tour and hoped to return as a major to be the G4 Logistics and Administration. But while I was overseas, the service support branches lobbied successfully for this position, so it was no longer open to arms officers. I was very surprised therefore in early summer 1985 to find my posting changed almost at the last minute from the Armour School to HQ SSF as Chief of Staff to Brigadier-General (BGen) Keith Corbould. He recognised a perception in his command that the SSF was focused on the Airborne Regiment, to the detriment of his other units. One obvious example of this was the Chief of Staff coming from the Airborne, which sent a clear message that no major in the other units was good enough for, or could aspire to, the position. His willingness to change the Chief of Staff paradigm was indicative of his analytical approach to everything.

Pleased that I was returning to another NATO task, since SSF during my first tour was responsible for reinforcing North Norway, I was surprised to discover that brigade tasks in Canada had recently changed. SSF now had the Defence of Canada role, and I wasn't impressed. In West Germany my Brigade Recce Squadron had been training with German and American divisions to fight the Warsaw Pact. How could Defence of Canada compare to that? I wasn't that interested in wandering around the Arctic in small groups, just surviving, with worse mobility than the Innu, or defending the Alaska Highway against an advancing Soviet Motor Rifle Division, a conventional brigade exercise only with snow and much colder.

I kept my disappointment to myself, because during my first informal get-to-know-each-other meeting with General Corbould I was once again surprised. I learned that he had started with a clean sheet of paper to write a Defence of Canada Estimate. A military Estimate, sometimes called an Appreciation, was a formal planning process which looked at goals, influencing factors like enemy forces and weather, and options available, with advantages and disadvantages for each. This process produced a preferred option, with enough detail to develop a plan of action. When the brigade tasks were reassigned in 1984 the brigade in Valcartier decided to look at their

newly assigned North Norway task from first principles, and began an Estimate. General Corbould thought this was a good approach, and began his own Estimate.[9] The process he initiated would very quickly completely change my view of how to defend Canada.

THE ESTIMATE AND VALIDATION EXERCISES – DEFENCE OF CANADA

LIGHTNING STRIKE 86

When I arrived in Petawawa in July 1985 General Corbould, working with two captains from Operations and Logistics, and a third, the G2 Intelligence, was already well into the Estimate process. My role was to deliver exercises to validate his emerging concept of operations and force structure. My first task in fact at the end of my handover week was to recommend the best location for the SSF winter exercise, LIGHTNING STRIKE 86. My predecessor had produced a short list of exercise locations based on criteria established by the General: maximum Hercules CC-130 winter airdrop range of 1,000 nautical miles from their base at Trenton, Ontario; realistic terrain and weather; realistic enemy scenario; possibly but not necessarily a support base; and procedures as close to wartime as possible given peacetime restrictions. From the short list I recommended Goose Bay, Labrador, and the General accepted this.

I believed I could accommodate four of the General's criteria. The one that concerned me was his requirement for a "realistic enemy scenario." The conventional wisdom about Defence of Canada often reflected the perspective of the eighteenth-century French writer Voltaire, who famously wrote that Canada was just a "few acres of snow" that no one valued. This view persisted. During our later validation exercise in February 1987 a well-respected national commentator wrote, "Since most military analysts agree that there is no threat to Canada on the ground … this is more a show-the-flag

[9] Special Committee of the Senate on National Defence, Canada's Land Forces, 73, errs in stating that LIGHTNING STRIKE began in 1982. First, SSF did not have the DCO role until 1984. Secondly, I was G3 Operations for one of the exercises mentioned, Earlton, in 1982, and it was simply a normal winter exercise in the near North, cold and with lots of snow! The 'test bed' the Senate Report describes only began in 1984/85, and originated with General Corbould.

exercise than anything else."[10] What we soon learned, however, was that there actually was a "realistic enemy scenario" to focus on. Since some information we collated might still be sensitive, suffice to say as we worked through the Estimate and exercise program, we easily identified six or so strategic targets. We didn't have open-source websites in the 1980s but this is how one of the targets we identified is described today: "(Canadian Forces Station) Alert maintains signals intelligence facilities to support Canadian military operations."[11] Given that Alert is at the top of Ellesmere Island, the closest we can get to Russia, it's not hard to imagine what Alert's signals intelligence focus is.

The first two validation exercises conducted during the winter of 1985/86 were based on the same scenario: Just prior to the outbreak of General War between the Soviet Union and the West an Aeroflot IL-62M passenger aircraft scheduled to refuel in Gander on the run to Havana declared an emergency and diverted into Goose Bay. It would be followed a couple of hours later by another. All seats in the passenger compartments had been replaced in order to jam as many enemy soldiers as possible into the aircraft, and the cargo holds were full of heavy anti-tank and anti-air weapons, with lots of ammunition, but no food, fuel or oversnow vehicles. The result was that a reinforced Soviet airborne battalion, well-equipped with heavy weapons and well-supplied with ammunition, had easily overwhelmed the Base Defence Force, capturing Goose Bay airfield and the surrounding area. Now this battalion had access to abundant local food, fuel and oversnow vehicles. The SSF task, simply stated but difficult to execute, was to recapture the airfield.

The National Defence Headquarters (NDHQ) Land Operational Research section supported a multi-day SSF wargame in early December 1985. Wargames used the technology extant then – small particle board 'boats,' with different-coloured pins and washers representing vehicles, weapon systems and troops, moving on a large scale paper map. Combat outcomes were decided by hard-copy computation tables and rolls of the dice. At our initial meeting Operational Research was skeptical of my exercise design, but a week

[10] John Best, "Canada's Arctic defence drawing more attention," *Saskatoon Star-Phoenix*, 7 February 1987, 5.
[11] Department of National Defence, "Canadian Forces Station Alert," https://www.canada.ca/en/air-force/corporate/alert.html, accessed 5 August 2025.

Lockheed CC-130H Hercules, 2012. [Photo by BriYYZ, Wikimedia Commons CC BY-SA 2.0]

later they phoned to confirm they had done the math on what two re-purposed IL-62Ms could carry and what local resources were available to be requisitioned in Goose Bay and the surrounding community, and were keen to support the wargame. They were very good at simulating the tactical environment. When we finished a half-day earlier than expected they even agreed to a request from the Airborne Regiment to run another wargame simulating a parachute assault directly on to the airfield. They quickly reoriented one map table, found some Hercules flight profiles, and launched the simulation. Unfortunately, this proved to be 'An Airfield Too Far' as aircraft and paratroopers suffered significant casualties during the drop.

My wargame didn't assault the airfield directly. It assumed a lodgement had been secured by an airborne operation well to the north-east, which was followed up, once Airborne Engineers had built a Hercules-capable airstrip, by airlanding the rest of the brigade. The wargame only examined the subsequent advance on Goose Bay. This was the first opportunity to introduce the developing Estimate and concept of operations to unit COs, their staffs and key sub-unit personnel. Three separate wargame maps were set up for the Airborne, the infantry battalion with wheeled Grizzly armoured personnel carriers, and the armoured regiment with wheeled Cougar direct fire support vehicles mounting a 76 mm gun. Each of these

battle groups had their standard attachments such as artillery and combat engineers. Weather and snow cover for January in Goose Bay, and enemy forces, were identical, but the force structures our three units played were different: one was low-tech current inventory – snowshoes or skis, toboggans, a few snowmobiles; a second was current inventory, Cougars and Grizzlies, with Lynx tracked recce vehicles as well; and the third was conceptual, based on the tracked oversnow Swedish BV-206 family of vehicles, with personnel carrier, recce and direct fire variants. No-one should be surprised that the conceptual structure significantly out-performed the others. Lessons learned were fed back into the Estimate.

Our subsequent field exercise, LIGHTNING STRIKE 86, took place in the latter half of January 1986. It began with the Airborne Regiment (minus 3 Commando on UN duty in Cyprus) parachuting near a First Nations community, Sheshatshiu, about 30 kilometers north-east of Goose Bay airfield. To meet General Corbould's requirement for "procedures as close to wartime as possible," the Sheshatshui air drop wasn't like a run-of-the-mill drop into Petawawa or any other base. In fact, staging through Trenton I was ambushed in the Mess bar by a dozen or so senior aircrew who accused me of running an unsafe exercise because they didn't have their standard pre-exercise Drop Zone (DZ) information pack. Explaining to them that the ground commander and the airlift commander were at that very moment planning the drops was not going well until I mentioned the plans officer from Air Transport Group (ATG) who, along with staff from the Canadian Airborne Centre, had done the Sheshatsui recce in the autumn, registering about thirty DZs which the commanders could choose from. Hearing that the plans officer, well respected in the Hercules community, was involved, the aircrew backed off.

At the end of the exercise some of these same aircrew were so impressed with Army planning procedures that they requested LIGHTNING STRIKE 87 be completely no-notice, assembling Hercules from wherever they happened to be when HQ SSF issued its Warning Order. This would have been very difficult for ATG to manage so they and we passed on this, even though it would have been great training. As the exercise unfolded highly trained Pathfinders inserted into the Drop Zones selected by the ground and airlift commanders reported they were unsuitable, and recommended they recce the alternates. This would have taken time of course, and

the ground commander, Colonel Bob Gaudreau, true to the concept of "procedures as close to wartime as possible," committed to the primary Drop Zones to avoid delaying the operation.

The Pathfinders were also tasked to link up with a Canadian Ranger patrol that had withdrawn from the Goose Bay area. At the rendezvous location, a Pathfinder party was unable to locate the Rangers. After about an hour they were discussing whether to return to the DZs when several Rangers literally materialised at their feet. They had dug a cave in very deep snow big enough to conceal themselves and their two snowmobiles, and had watched the Pathfinders since their arrival to ensure they were indeed Canadian soldiers and not enemy paratroopers still hunting them! The Rangers supported the Airborne Regiment throughout the exercise, and impressed the Airborne with their military skills and local knowledge.[12]

Many lessons were learned on LIGHTNING STRIKE 86. One of the most important lessons concerned telecommunications. Adhering to wartime procedures as closely as possible, the Airborne had to communicate with Trenton in order to be resupplied, and for various reasons they weren't able to do this. So despite having a Hercules flight allocated each day for resupply the aircraft didn't launch, and no rations or fuel fell from the sky. This resupply problem persisted for about three days. HQ SSF as Exercise Control was on Goose Bay airfield, with the best weather forecasting capability in the area, and also had a forward logistics group with three days combat supplies already loaded on cargo trucks, so in an emergency if airdropped resupply was not possible we could have resupplied the Airborne by road. Once lessons had been re-learned about long-range high frequency telecommunications and airborne resupply standard operating procedures, we allowed the Airborne Regiment to pass their administrative requests on a parallel satcom link that was being field evaluated by SSF Headquarters and Signals Squadron.

The exercise went a long way towards validating some basic concepts, or introduced new questions to ponder:

- Even though heavy engineering equipment was airdropped and a Hercules-capable airstrip was constructed, no follow-

[12] P. Whitney Lackenbauer, *The Canadian Rangers: A Living History* (UBC Press, 2013), 300.

on forces deployed on the exercise, with force build-up being simulated once the airfield was declared operational.

- Since General Corbould wanted the SSF to have a parachute deployable armoured recce capability he insisted that Lynx airdrop trials be conducted at the Canadian Airborne Centre in late autumn 1985 in order to airdrop, for the first time, a two-car patrol to validate the concept.

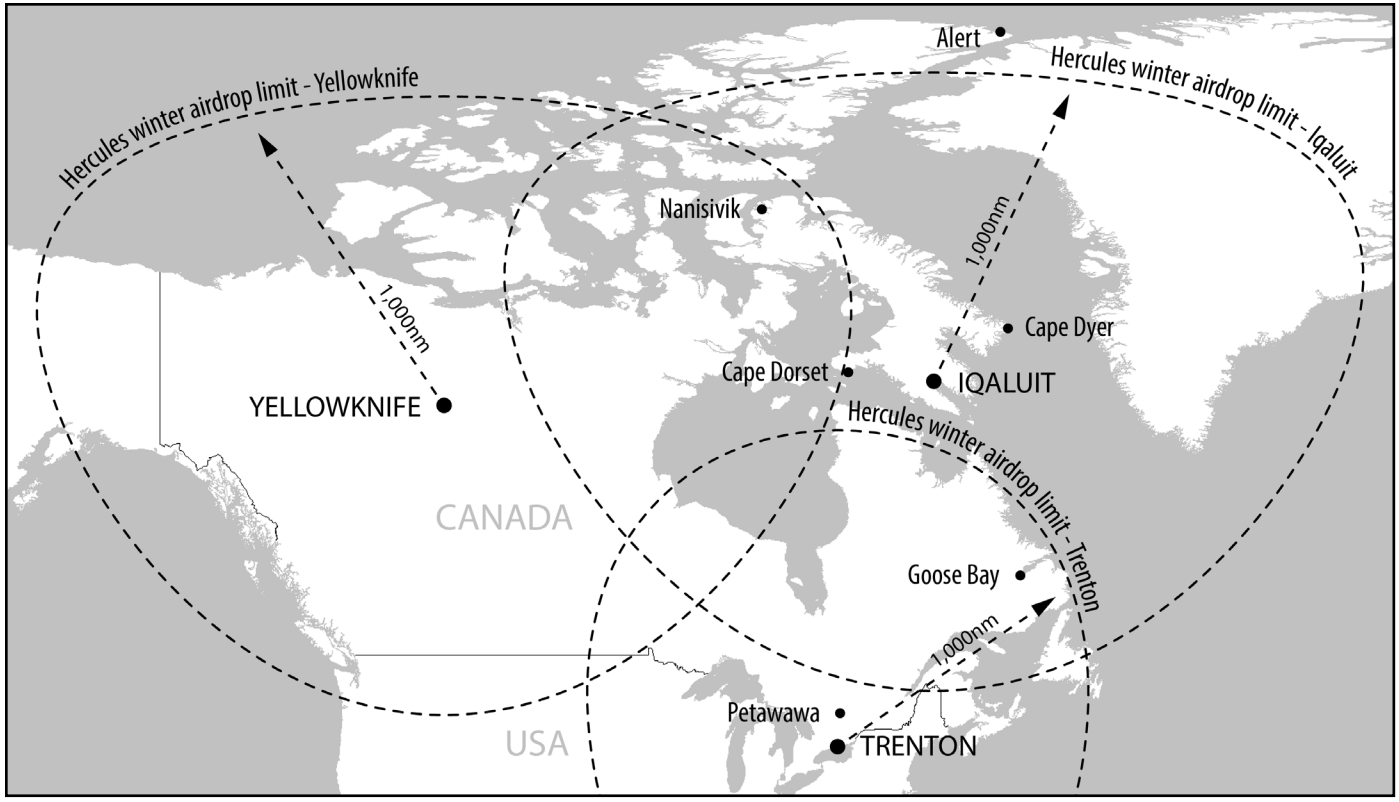
- Low-level tactics and mobility issues were examined for a current-inventory force, equipped with snowshoes and toboggans, fighting a smaller but more agile enemy covering force, simulated by the Recce Platoon of 1st Battalion, The Royal Canadian Regiment, completely equipped with oversnow vehicles, which was delaying the advance on Goose Bay.

- Another issue was the time required for helicopters to self-deploy from Petawawa and other bases to Labrador.

- Telecommunications shortfalls were also examined, for example by simulating a CP-140 Aurora standing off as an airborne radio re-broadcast platform and by, as mentioned above, field deploying the first CF experimental (and non-ruggedised) satcom ground station.

Everything that we learned was fed back into the Estimate, which was completed by General Corbould and his team in the spring.

When BGen Corbould was replaced by BGen Kent Foster in the summer of 1986 I wondered if he would support our innovative, rapidly emerging approaches to Defence of Canada Operations. A couple of days after his handover was complete, Foster called me into his office, saying he had read all the Defence of Canada material, agreed with the work thus far, and was only concerned that our exercise program wasn't moving quickly enough. The plan for 1987 was to validate a forward base concept in Iqaluit. The Hercules winter airdrop range of only 1,000 nautical miles meant that SSF couldn't project combat power directly from Trenton into much of the Arctic, but forward bases at Iqaluit and Yellowknife would make this possible. And with deployed forces in two forward locations it made sense for HQ SSF



The CC-130 Hercules' winter airdrop range is 1,000 nautical miles. Forward bases at Iqaluit and Yellowknife put much of the Arctic in range.

to co-locate in Trenton with ATG, the airlift provider. The reason we didn't want to exercise co-locating with ATG until 1988 was largely due to internal politics – we were making significant headway with ATG but thought we needed another good exercise with them before we popped the Joint question, establishing a headquarters that would integrate command of Army and Air Force elements.

LIGHTNING STRIKE 87

General Foster wanted to move the yardsticks, establishing a Joint Task Force Headquarters in Trenton for LIGHTNING STRIKE 87. The General knew Commander ATG well and phoned him while I was still in his office, getting immediate agreement to proceed! In those days to establish a Joint Task Force Headquarters, even for an exercise, both elements had to go up their respective chains to get National Defence Headquarters (NDHQ) approval at the major-general or lieutenant-general level. The HQ SSF/CFB Trenton Joint Task Force Headquarters was quickly approved by NDHQ, and worked extremely well. Before expeditionary wings and deployable command and control suites were established bases were the only option available to command, control and sustain air assets. Colonel Gord Diamond, the CFB Trenton Base Commander, thus became the Joint Task Force Deputy Commander, ably assisted by staff from ATG and the Base.

The establishment of Forward Base Iqaluit prior to the simulated outbreak of hostilities in Europe also worked well, with 2 Service Battalion providing the logistics component and the formation Recce Squadron from the 8th Canadian Hussars the protection force.[13] For the first few days of the exercise, as the Forward Base staged in, there were show-the-flag and confidence-building activities, including equipment displays, igloo building, and a hockey game, very well attended, with a local team. Mayor Andy Theriault and the 6,000 or so citizens of Iqaluit, located in south-eastern Baffin Island, were

[13] Special Committee of the Senate on National Defence, Canada's Land Forces, 74, errs in stating that Forward Base Iqaluit was established by a commando group from the Canadian Airborne Regiment. A contemporary Canadian Press article correctly states that the Forward Base involved troops from the 8th Canadian Hussars. "Northern Exercises: Inuit make up special Arctic unit," *Fort McMurray Today*, 19 February 1987, 4.

extremely supportive.[14] In fact, when I mentioned to Mayor Theriault at one point that peacetime restrictions limited what we could do, he suggested going all-in, doing everything as if it were wartime! My reply used the example that in wartime incoming Hercules would return south with non-essential townspeople. He got my point, and never mentioned his all-in offer again. As the simulated tensions increased in Europe, three representative Vital Points were established to protect the town administration building, the electrical generating station, and the satellite ground terminal, and mobile patrols using Lynx and at least one Cougar for comparative purposes were conducted throughout the town and surrounding area. After the simulated outbreak of hostilities in Europe, the war came to Iqaluit: the protection force in cooperation with RCMP apprehended a sleeper agent who had been activated to plant an explosive device at the generating station!

We conducted two airborne operations. The first demonstrated our no-notice capability to react to unexpected threats. The threat in this case was local political and media pressure prior to the outbreak of hostilities insisting that SSF prove it could extend its reach anywhere in the Eastern Arctic. Reacting to this home-grown pressure, a platoon parachuted into Cape Dorset 400 kilometers to the west. This platoon was then written out of the exercise in order to train with Dorset-area Canadian Rangers, ending with a Ranger-led snowmobile trek by some members of the platoon from Dorset to Iqaluit, a considerable accomplishment. The second operation launched after the outbreak of hostilities was also ambitious, dropping 3 Commando (minus) almost 500 kilometers northeast of Iqaluit to retake CFS Cape Dyer, a radar station on the Baffin Island coast, very near to a cliff which overlooked the partially open waters of Davis Straight. The DZ was an airfield at sea level and the objective, the radar station, was at about 2,500 feet.

The Cape Dyer operation, according to the Global TV reporter on-site, would dislodge a "strike on a remote Distant Early Warning station … vulnerable to Soviet infiltration by submarine or air," and took place in very challenging weather and terrain conditions. The reference to Soviet infiltration obviously reflected the comments by the Minister of National Defence quoted at the start of this article. Beatty had expressed his perspective that Exercise LIGHTNING

[14] Lackenbauer, *The Canadian Rangers*, 292-93.

STRIKE 87 would examine "Soviet military techniques [such as] the development of so-called Spetsnaz teams … infiltrated into a country … perhaps even before the outbreak of hostilities." This part of LIGHTNING STRIKE 87 featured a 15 kilometer approach march, ending with a very steep climb which culminated in 3 Commando actually fighting room-to-room through a very extensive unused part of the radar station to defeat the Minister's Spetsnaz threat.[15]

LIGHTNING STRIKE 87 confirmed several lessons learned from the previous year's exercise as we validated the Estimate. To cite just one major lesson, we had to simulate using the Forward Base to initiate airborne operations. ATG only had one set of equipment to load Hercules with pallets laden with toboggans, stores, etc., so both Airborne operations emplaned in Trenton, then refueled in Iqaluit before the final leg to the DZs. Procuring two more loading equipment sets for Iqaluit and Yellowknife obviously had to be added to ATG's to-do list.

A few days into the exercise, when I returned from dinner to the Joint Task Force Headquarters Operations Centre in Trenton, one of the staff replayed a tape of the 6 pm evening news on Global. That was when I first saw Perrin Beatty talking about LIGHTNING STRIKE 87 and *directly* linking it to the Soviet Spetsnaz threat. Our request for approval for a Joint Task Force exercise had apparently been briefed to the Chief of Defence Staff (CDS), Deputy Minister and Minister, and Beatty liked the concept. Unfortunately, Army Intelligence didn't! The Army G2 Intelligence phoned within the hour to accuse me of planting the story. I explained how I thought the exercise had come to the Minister's attention, that our exercise papers never mentioned Spetsnaz, and that if he had a problem with what had been said on the national news he needed to take it up with the CDS or the Minister. This was the last I heard of this, but I'm sure it didn't help our standing with Army Intelligence.

CONCLUSIONS FROM THE ESTIMATE

Generals Corbould and Foster derived many conclusions from developing the Estimate and validating it on challenging exercises,

[15] Dan Leger, "Canadian paratroopers free radar base in four-day exercise on Baffin Island," *Brantford Expositor*, 12 February 1987, 24.

[Canadian Forces photo, reprinted in *Ottawa Citizen*, 26 June 1978, D16]

which are described below. Note that these conclusions, like the preceding first-person account, are based on my recollections.

CONCLUSIONS FROM THE ESTIMATE – DEFENCE OF CANADA OPERATIONS

In priority, the main conclusions from the HQ SSF Estimate were:

1. Combat power could not be projected from Southern Canada due to Hercules range limitations. Two forward bases, in the Eastern Arctic and the Western Arctic, would enable the SSF to project throughout most of Canada's Arctic. The best locations for these were Yellowknife and Iqaluit, which were also the sites for two of Fighter Group's four CF-18 Forward Operating Locations (FOLs). The regional headquarters for the North was also located in Yellowknife. Regional staff played an extremely important role in exercise reconnaissance, planning and execution. During

the LIGHTNING STRIKE 87 reconnaissance for example they introduced us to key actors in Iqaluit and Cape Dorset, and during the exercise they provided a CC-138 Twin Otter to deploy exercise control teams and media to the airborne objectives. For actual operations, the force structure and concept of operations included a small Liaison Detachment at Forward Base Yellowknife to provide a face-to-face link between force headquarters and regional headquarters.

2. Strategic mobility was required, employing significant airborne and air transport assets to air drop up to an airborne battalion group and then deploy follow-on forces into an airhead. Once on the ground modern, robust tactical mobility was required, employing something like the BV-206 family of tracked oversnow vehicles. Finally, the diverse terrain and the vastness of the theatre of operations demanded commensurate operational mobility, employing long-range helicopters like the US CH-53, organic to the Force, which could carry significant loads and be refueled in-flight, in order to move or redeploy up to a battalion group over long distances, quickly and without having to resort to complex airborne operations using limited strategic lift resources which might be required for other CF tasks. For example, if SSF had had CH-53s for LIGHTNING STRIKE 87 the Cape Dorset and CFS Cape Dyer operations would have been airmobile rather than airborne. And for Cape Dyer the Landing Zone would have been closer to the objective, minimizing or eliminating altogether the arduous approach march.
3. A Joint Task Force Headquarters had to be established by Headquarters SSF and the strategic airlift component.

4. The SSF had to be free to maneouvre throughout the theatre of operations to engage single or multiple threats, and thus could not be tied to fixed defences. Vital Point protection elements, including protection for the two forward bases, had to be identified from the Reserves.

CONCLUSIONS FROM THE ESTIMATE – FORCE STRUCTURE

In recent years, Canadian Army participation in northern training and exercises such as Operation NANOOK[16] has involved relatively small forces, in some cases reminding me of the Exercise NEW VIKING serials that were the norm when I was a junior officer in the 1970s. And often the focus has been on assisting other government departments or civilian authorities, rather than warfighting. The SSF Estimate on the other hand presented a compelling rationale for restructuring a warfighting force, providing significant capability gains due, for example, to the acquisition of modern oversnow vehicles and long-range, in-flight refuellable heavy lift helicopters. More importantly the Estimate rationalised expanding the SSF to include an airborne infantry battalion, two airmobile infantry battalions, airborne recce squadron, direct fire squadron, and, most importantly, an aviation squadron. Here memory fails me, but the proposed personnel establishment for the SSF was probably around 4,500 all ranks, about a 30 per cent increase. Imagine therefore a future Op NANOOK that could deploy an airborne battlegroup by Hercules and at the same time an airmobile battlegroup by heavy lift helicopter, or even in relatively short order deploy the entire formation. And then imagine deploying this force operationally during a crisis!

CONCLUSIONS FROM THE ESTIMATE – CONCEPT OF OPERATIONS

In outline, the SSF concept of operations was as follows:

1. Establish a Joint Task Force Headquarters in Trenton with HQ SSF augmented by key staff from CFB Trenton. The Commander SSF would be the Joint Task Force Commander, and the Base Commander CFB Trenton would be the Joint Task Force Deputy Commander.

2. Establish Forward Bases in Yellowknife and Iqaluit. Each could house an Airmobile Battlegroup, prepared to deploy

[16] Department of National Defence, "Operation NANOOK," https://www.canada.ca/en/department-national-defence/services/operations/military-operations/current-operations/operation-nanook.html, accessed 5 August 2025.

at short notice to pre-empt or defeat an enemy incursion. Aviation Squadron CH-53s and refuelers would also be located at the forward bases. A forward logistics group from the Service Battalion plus other service support elements would remain at each forward base to support deployed operations. And Airborne elements appropriate to the threat assessment, up to the entire Airborne Infantry Battalion, would be forward deployed in one or both forward bases, as would some Hercules for no-notice tasks.

3. House combat support elements in the forward bases based on the threat assessment. Particular attention would be paid to where Airborne Recce and Direct Fire elements were based, should HQ SSF need to deploy them early on to find and fix the threat.

4. Retain a small reserve, probably no more than one airborne infantry company and/or one airmobile infantry company, in Trenton, along with the bulk of the Hercules fleet.

5. Deploy Vital Point forces, i.e. dedicated Reserve elements assigned to protect identified strategic and other targets throughout the Arctic and Atlantic/Pacific approaches, under the existing regional command structure. Once the Joint Task Force was committed to a specific operation Vital Point forces in the area of operations would be grouped appropriately under command of the Joint Task Force.

6. Deploy all Joint Task Force and Vital Point elements during a period of increasing tension, hopefully to be in place prior to the outbreak of General War.

UNFINISHED BUSINESS – DEFENCE OF CANADA OPERATIONS

In the two years or so described above there were a few issues and opportunities that were never explored fully.

Once ATG had been fully co-opted we set our sights on Fighter Group, primarily because none of our developmental exercises thus far had included close air support. A senior staff lieutenant-colonel

was invited to attend a two-day workshop in spring 1987 where we briefed the Estimate to the Deputy Commander of the Army and Army staff. In addition to securing close air support, we also had another objective. Our concept, establishing Forward Bases at Yellowknife and Iqaluit, was to build two administrative, training, maintenance, warehouse and accommodation complexes adjacent to Fighter Group's FOLs. We anticipated that Fighter Group would not be enthralled by a thousand or so soldiers bunking next door so a major part of my pitch was that we would provide increased security for their CF-18s. I was surprised by the response from Fighter Group's representative: there was no threat, and their military police section was all that they needed. If memory serves me, the section had a sergeant and six MPs, mostly doing town patrols, and was no match for Spetsnaz! Obviously, they had not been listening to the Minister when he discussed "teams … infiltrated into a country … perhaps even before the outbreak of hostilities."

During one of our annual Arctic recces we visited Nanisivik, at the top end of Baffin Island, and learned the zinc mine that was the sole reason for its existence was about to close. Housing for about 1,000 personnel, a Hercules-capable runway and a deep water port – could it be an alternate Central Arctic forward base location? We discussed this internally, but I'm not sure we ever included it in the Estimate, probably because we soon learned the mine would remain open longer than anticipated, finally closing in 2002. A few years later, based on its location near the Northwest Passage, the Navy began preparations to develop the Nanisivik Naval Facility as a refueling station to support its Arctic patrols.

The Vital Point responsibility identified for the Reserves was never explored further. This was certainly a critical part of the concept of operations. HQ SSF was prepared to advocate for the concept, including passing on our strategic target assessment, but until the Army and the Reserves bought in there was little we could or should do on our own.

Unfortunately, the Defence of Canada concept we developed did not survive. Much in the military as in other professions is personality dependent, and when BGen Foster and I were both posted in 1987, HQ SSF enthusiasm for the Estimate and concept of operations apparently waned. While LIGHTNING STRIKE 88 was lauded for its "immense geographic sweep" my sense is that most of the exercise was conducted in the South and was not based on a

realistic enemy scenario.[17] I remain convinced, however, that under Generals Corbould and Foster we had developed the right concept of operations and the right force structure.

The fundamental unfinished business we did not address was the significant costs associated with implementing the force structure. Costs for a very large fleet of BV-206 variants and heavier oversnow vehicles for specialised tasks such as fuel and ammunition transport. Costs for enough CH-53s to lift an airmobile battlegroup. Costs to build two large Forward Bases. And most importantly, costs for more soldiers and aircrew. Even if we and those that followed us had pushed the Estimate up the approval chain, and obtained significant funding, when the Berlin Wall came down in 1990 all this would likely have evaporated.

THE STRATEGIC ENVIRONMENT TODAY

In August 2022, NATO Secretary General Jens Stoltenberg capped a visit to our air force base at Cold Lake, Alberta, by emphasising Russian (and Chinese) military challenges to our Arctic.[18] For example, Russia has established a new Arctic command, including significant naval, air, army and special operations forces. It has also built new infrastructure such as Nagurskoye airbase, 500 kilometers closer to our strategic listening post at Alert than a less-capable Canadian base at Iqaluit.

But is this military challenge likely to turn into hostilities? Testifying in 2023 before a Senate Committee, Major-General M.C. Wright, Chief of Defence Intelligence, stated "the threat of a Russian incursion into Canada's Arctic is low."[19] The problem with such assessments is they are almost always near-term. Russia has economic issues now, and is militarily bogged down in Ukraine, but could there be a resurgent Russia in the mid- or long- term? Their Arctic enhancements noted above would give them an advantage in

[17] Special Committee of the Senate on National Defence, Canada's Land Forces, 74; and Gail Swainson, "Mock war games stun residents who fear terrorist invasion," *Toronto Star*, 27 January 1988, 16.
[18] Murray Brewster, "NATO chief warns Canada that Russia, China have designs on the Arctic," *CBC*, 26 August 2022.
[19] Senate Standing Committee on National Security, Defence and Veterans Affairs, "Arctic Security Under Threat," June 2023, 25.

the Arctic if Russia decided to embark on another military adventure in ten or fifteen years. Indeed, if one looks at Russia's invasion of Ukraine, it's abundantly clear that it began many years ago, and only recently metamorphised into full-scale conflict. For Canada to put in place its own enhancements, such as a warfighting Defence of Canada brigade like the SSF envisioned in the mid-1980s, takes time. You cannot decide ten or fifteen years from now, when CFS Alert or somewhere else in our Arctic is threatened or actually seized, that you need such a force. That decision must be taken now. Without a capable land force, our air and naval resources in the Arctic, along with our citizens and their infrastructure, are very vulnerable to attack and seizure. Recent announcements by the government about threats to our Arctic,[20] and a commitment to refund and revitalise the Canadian Forces, suggest this might be the time to redo the Defence of Canada Estimate to ensure the Army is fully integrated into evolving Arctic defence plans.

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ABOUT THE AUTHOR

In the 1980s, **Greg Taylor** had two tours in West Germany in 4 Canadian Mechanized Brigade Group. His first tour he commanded Leopard C1 tanks in B Squadron Royal Canadian Dragoons, then the Brigade Reconnaissance Squadron, with Lynx. In 1987, for his second tour, he again commanded Leopard tanks, rotating the 8th Canadian Hussars (Princess Louise's) into West Germany from Canada. In addition to the HQ SSF staff tours described in the article he also served four years in NDHQ in Joint and then Army force development. He retired in 1995 while an instructor at the Canadian Forces College, Toronto. A few years later, he had a key role in Army Simulation Centre support for the first and several subsequent Op NANOOK northern exercises.

He wishes to acknowledge advice and comments from two Headquarters SSF staff who worked closely with BGen Corbould on the DCO Estimate in 1985-86, G3 Operations Mark Hutchings and G2 Intelligence Brad Hall, who both reviewed earlier versions of this article. Any errors or omissions are of course the responsibility of the author.

[20] See for example Global Affairs Canada, *Canada's Arctic Foreign Policy* (Minister of Foreign Affairs, 2024), 6-15.