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## THE FUTURE OF CANADIAN SPECIAL OPERATIONS AVIATION - A STRATEGIC CROSS ROAD

Maj M.A. West

**JCSP 41**

***Exercise Solo Flight***

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EXERCISE *SOLO FLIGHT* – EXERCICE *SOLO FLIGHT*

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Maj M.A. West

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## THE FUTURE OF CANADIAN SPECIAL OPERATIONS AVIATION - A STRATEGIC CROSS ROAD

*In The Deepest Darkness, at some hour between midnight and dawn, you believe you hear them coming.*

- Michael J. Durand & Steven Hartov

There is a consensus within the academic realm and by security professionals that the global security environment in the Western world has seen a shift from a pre-cold war era, primarily focused on a state on state threat, to security risks that do not respect borders and are much farther reaching. The increase in failing or failed states and their resulting instability has brought the conduct of special operations to the forefront. The appeal of Special Operations to national governments is its ability to operate both overtly and covertly to achieve strategic effect with a smaller commitment in resources and risk. William McRaven states that what defines a successful special operation is its ability to use a smaller force to defeat a significantly larger or well-entrenched opponent.<sup>1</sup> He further identifies that it is the Special Operations Forces' (SOF) uniqueness, in addition to the employment of nonconventional tactics and equipment, that allows it to achieve this success.<sup>2</sup> These concepts were verified during the 2011 raid on the compound in Abbottabad which resulted in the death of Osama bin Landin. It is these characteristics that will enable SOF to continue to be a much demanded and utilized 'force of choice'.

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<sup>1</sup> William H. McRaven, *Spec Ops: Case Studies in Special Operations Warfare : Theory & Practice* (Novato, CA: Presidio, 1995), 1.

<sup>2</sup> *Ibid.*, 4.

Rotary wing aviation has been associated with Special Operations since its introduction to military operations.<sup>3</sup> The kill/capture mission into Pakistan for Osama bin Ladin could not have been conceived without the support of dedicated special operations aviation. This also holds true within the Canadian Special Operations context. In fact, in its present form, rotary winged assets were the first Canadian Armed Forces (CAF) special operations capability pre-dating the standup of Joint Task Force 2 (JTF 2).<sup>4</sup> This sub-unit sized force was tasked with support to the RCMP SERT (Special Emergency Response Team), charged with the task of Domestic Counter Terrorism (CT) and Hostage Rescue (HR) in Canada. With the creation of JTF 2 in 1993, a natural partnership between the existing aviation element and this new elite unit was inevitable. This was further re-enforced with the standup of the Canadian Special Forces Command in 2006. With it came the increase of Special Operations Aviation (SOA) from a sub-unit sized force to an entire Squadron dedicated to support Canadian special operations ground forces. 427 Tactical Helicopter Squadron was re-rolled and re-named to 427 Special Operations Aviation Squadron (427 SOAS).

With the creation of any unit, especially one tasked with the specialized mission like 427 SOAS, it must be resourced effectively and seen through to completion, as the potential risks of failure can be catastrophic.<sup>5</sup> Like all aviation related capabilities, SOA is dependent on two distinct factors that are not mutually exclusive: the man (unit

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<sup>3</sup> Mike McKinney and Mike Ryan, *Chariots of the Damned: Helicopter Special Operations from Vietnam to Kosovo* (London: HarperCollins, 2001), 1.

<sup>4</sup> 427 Squadron Association, "ROAR April 2009, Special Operations Aviation in Canada Historical Timeline," [http://www.427squadron.com/roar/roar\\_apr09\\_page\\_5.html](http://www.427squadron.com/roar/roar_apr09_page_5.html); Internet; accessed 04 May 2015.

<sup>5</sup> Although only nine years into its existence, the unit continues to struggle to keep up with the demand created by the current global security environment resulting in an insatiable appetite for aviation support to training and operation of CANSOF operators.

personnel) and the machine (aircraft and logistical support equipment). If not balanced correctly, the level of mastery that can be achieved in one of these factors is limited by the other. This paper will demonstrate that 427 SOAS is at a critical juncture in its development, and that neither the *man* or *machine* is being resourced to the level required to sustain a true SOA capability to meet CANSOFCOM and by extension the Canadian government's needs. As a result, if conditions are not changed, Canadian Special Operations aviation will be in jeopardy moving into the future. Given the current security environment and utility of SOF to the Government of Canada (GoC), this will limit the ability of the GoC to act in accordance with its national interests. This paper will serve to define the problem facing 427 SOAS with a view to setting the conditions for follow on analysis directly related to plotting the way forward.

In order to examine the issue, this paper will be broken down into three distinct arguments. Before examining the level of resourcing afforded to 427 SOAS, the requirement for a Canadian SOA capability must be defined. As a result, an assessment of the current security environment and the relevance of Canadian special operations will be explored. Secondly, an examination of the manpower challenges that 427 SOAS is facing will show a critical gap in the force generation of Canadian SO aviation. Finally, a look at material resourcing, specifically the aircraft platform, will round out the bleak picture ahead of the squadron. In conclusion, it will become evident to the reader that if the circumstances are not changed with respect to the resourcing of 427 SOAS, the Canadian Forces stand to lose a strategically relevant and necessary capability.

## Global Security Environment and Special Operations in the Canadian Forces

*If you cannot attack your enemy, you should attack the friend of your enemy.*

- Ramzi Ahmed Yousef, 1993 World Trade Center Bomber

The underlying culture of SOF aviation is unprecedented '*support to the customer*'.<sup>6</sup> It is a logical extension that without a *customer* (the SOF operator) there is no requirement for SO aviation. Therefore, before studying the feasibility and sustainability of SOF aviation in Canada, a study of the current global security environment and the requirement for Canadian Special Operations Forces is required. Globalization, rapid scientific and technological innovation, geopolitical shifts, resource scarcity, demographic changes, urbanization, the threat of pandemic disease, failed and failing states and the growing significance of non-state actors are some of the key factors contributing to the very dynamic and, in many cases, unpredictable security paradigm.<sup>7</sup> As the motivation of state expansionism in the 20<sup>th</sup> century has been replaced with ideological based impetuses that are driving modern day conflict, the threat has become more prolific and pervasive. Given the increased risk of trans-border threats, 'Fortress North America' no longer exists and the threat to Canada and its allies is increasing at an alarming rate. As a good global citizen, it is incumbent on Canada to contribute to global stability in line with its national interests.

The security environment that Canada can expect to face into the future is underpinned by its closest ally, the United States, maintaining global dominance. It must be accepted that this dominance will occasionally be challenged by transnational groups

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<sup>6</sup> Mike McKinney and Mike Ryan, *Chariots of the Damned...*, 4.

<sup>7</sup> Department of National Defence, Directorate of Land Strategic Concepts, *Future Force: Concepts for Future Army Capabilities*, (Kingston: Directorate of Land Strategic Concepts, 2003), 2-13.

and other non-state actors who will utilize asymmetric tactics and strategy to achieve their goals.<sup>8</sup> This, combined with the impact of globalization on the global security environment will create an existential threat to the United States and, based on proximity, Canada. This threat was realized on September 11<sup>th</sup>, 2001 with the successful attacks on the World Trade Center by Al Qaeda. These events brought with them need for review on how the Western World views its security environment. Terrorist organizations have become adept at exploiting new communication technologies, global finance networks and the ever-increasing ease of movement of people globally.<sup>9</sup> Canada's ability to interdict these terrorist organizations in the future will become increasingly relevant both to the security of Canada and its Allies. Canada must continue to maintain an ability to influence the security on the global stage as a tool to implementing its foreign policy in line with its national interests.

Paradoxically, the modern global economic constraints of maintaining a relevant and agile conventional Canadian Forces staged to respond to the spectrum of potential world security matters is prohibitive at best. The Conservative government has made a pledge to invest in the Canadian Forces with a view of modernization through reequipping the CAF focusing mainly on the Royal Canadian Air Force (RCAF) and the Royal Canadian Navy (RCN). Unfortunately, these procurements have not gone as planned and the ever-mounting delays have direct and significant impacts on the Canadian Forces ability to react.<sup>10</sup> As the delays continue to mount and the costs continue to rise, it is certain that

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<sup>8</sup> Bernard J. Brister, "Canadian Special Operations Forces: A Blueprint for the Future," in *Casting Light On The Shadows – Canadian Perspectives on Special Operation Forces*, ed Bern Horn and Tony Balasevicius, 285 (Canadian Defence Academy Press, 2007).

<sup>9</sup> Lynn E. Davis, *Globalization's Security Implications* (Rand, 2013), last accessed on 05 May 2015, 1. [http://www.rand.org/content/dam/rand/pubs/issue\\_papers/2005/IP245.pdf](http://www.rand.org/content/dam/rand/pubs/issue_papers/2005/IP245.pdf)

the Canadian Forces with need to adapt to fewer platforms than originally planned which will directly impact the scope and type of commitments that Canada is capable of offering to coalition missions into the future.<sup>11</sup> With no immediate solution insight, it is incumbent on the government of Canada to have, at its disposal, a ‘force of choice’ that still allows it to have the strategic impact it desires while managing the fiscal realities of the current global economic situation.

Given the security environment and constraints presented above, Special Operations in Canada has become increasingly relevant. Western states suffered from a false sense of security that grew from the end of the Cold War and the reduction in threat of state-to-state conflict. The events of 9/11 significantly altered that sense of security.<sup>12</sup> For many Western governments special operation forces have become the ‘force of choice’. Generated out of a history as being viewed by conventional commanders as ‘black sheep’, the post-Cold War fragmented world defined by decreased stability resurrected their importance.<sup>13</sup> The ultra-high readiness posture, small footprint, flexibility, technological advantage and ability to span the military/political line provided governments with an enticing alternative to conventional forces.<sup>14</sup> Irregular warfare has become the predominant nature of conflict and, by definition, special operations forces are well suited to combat this threat.

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<sup>10</sup> Philippe Legasse, *Recapitalizing The Canadian Forces’ Major Fleets: Assessing Lingering Controversies and Challenges* (Canadian International Council, 2012), 2.  
<http://opencanada.org/wp-content/uploads/2012/12/SSWG-Paper-Philippe-Lagasse-December-2012.pdf>

<sup>11</sup> *Ibid.*, 4.

<sup>12</sup> B. C. Derry and Canadian Forces College, *Aerospace Power: The Critical Enabler to Special Operations Forces*, Vol. JCSP/PCEMI 34-18 (Toronto, Ont.: Canadian Forces College, 2008), 4.

<sup>13</sup> Bern Horn, “‘Avenging Angels’: The Ascent of SOF as the Force of Choice in the New Security Environment”, in *Castling Light on the Shadows: Canadian Perspectives on Special Operations Forces*, ed Bern Horn and Tony Balasevicius, 158 (Canadian Defence Academy Press, 2007).

<sup>14</sup> Bernd Horn and Emily Spencer, “Force of Choice: SOF As A Foreign Policy Enabler,” in *Special Operations Forces Building Global Partnerships*, ed Emily Spencer, 2 (Kingston: Canadian Defence Academy Press, 2012).



Canadian Special Operations Command (CANSOFCOM) defines special operations forces as:

. . . organizations containing specially selected personnel that are organized, equipped and trained to conduct high-risk, high value special operations to achieve military, political, economic or informational objectives by using special and unique operational methodologies in hostile, denied or politically sensitive areas to achieve desired tactical, operational and/or strategic effects in times of peace, conflict or war.<sup>15</sup>

By being small yet powerful, special operations forces can rapidly force project and have impact from tactical through to strategic levels with minimal notice.<sup>16</sup> These characteristics not only lend themselves to the current security environment, but also allow national governments to affect aspects of their national foreign policy discreetly.<sup>17</sup> Many missions undertaken by SOF are politically sensitive and public disclosure could cause significant strategic ramifications.

Does Canada need special operations? In today's security environment, the answer is clearly affirmative. Up to this point, with the exceptions of the October Crisis and the Air India bombings, Canada has been spared the brunt of the attacks by terrorism.<sup>18</sup> Although the Royal Canadian Mounted Police (RCMP) have the lead for counter terrorism in Canada, CANSOFCOM provides unique capabilities that are not integral to the federal police force. As outlined in the Canada First Defence Strategy under 'Delivering excellence at Home', the document highlights the imperative to "[a]ssist civil

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<sup>15</sup> Emily Spencer, Canadian Defence Academy and Canada. Canadian Armed Forces. Wing, 17, *Special Operations Forces: A National Capability* (Kingston, Ont.: Canadian Defence Academy Press, 2011), V.

<sup>16</sup> David A. Charters, "Special Operations Forces: An Economy Of Force Option For Canada?", in *Special Operations Forces: A National Capability* (Kingston, Ont.: Canadian Defence Academy Press, 2011), 114.

<sup>17</sup> On top of their speed and flexibility, SOF can be deployed discreetly and with surgical precision to strike a target with minimal collateral damage. These characteristics are attractive to many Western governments.

<sup>18</sup> David A. Charters, "Special Operations Forces . . .", 133.

authorities in responding to a wide range of threats – from natural disasters to terrorist attacks.”<sup>19</sup> CANSOFCOM forces are uniquely positioned to accomplish a counter terrorism mission and are an essential element to Canada’s deterrence and defence from attacks on Canadian soil.

The scalability, small organizational footprint combined with the unique capabilities of SOF affords governments the flexibility to take military action in areas where it is normally too politically sensitive to deploy large-scale conventional forces.<sup>20</sup> As a middle power, Canada must be cautious in how it chooses to use its hard power in the ever increasingly globalized environment. Special operations allows the Government of Canada to exercise its hard power internationally alongside its allies without risk of jeopardizing relationships with other states.<sup>21</sup> The ability to provide a smaller force capable of achieving strategic level effects will be key to achieving success moving forward. Canada must remain a contributor to coalition missions and efforts if only to avoid problems in other domains of bilateral relationships such as trade with its global partners.<sup>22</sup>

Given the importance of Canadian Special Operation Forces, the link must be established between specifically dedicated special operations aviation and special operations ground forces. As of February 1, 2006, 427 Special Operations Aviation Squadron (427 SOAS) was given to CANSOFCOM from the Royal Canadian Air Force

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<sup>19</sup> Canada. Department of National Defence, "Canada First Defence Strategy", [http://www.forces.gc.ca/assets/FORCES\\_Internet/docs/en/about/CFDS-SDCD-eng.pdf](http://www.forces.gc.ca/assets/FORCES_Internet/docs/en/about/CFDS-SDCD-eng.pdf), 7.

<sup>20</sup> Bernd Horn, "'Avenging Angels' ...", 158.

<sup>21</sup> The United States continues to advocate for increased global security burden sharing. The United States and the international community will continue to turn to Canadian governments for increased commitments to global conflicts and reduction of threats to Western threats.

<sup>22</sup> David A. Charters, "Special Operations Forces ...", 136.

(RCAF) under operational command (OPCOM) to the Commander CANSOFCOM.<sup>23</sup> It cannot be denied that the removal of a maneuver element from the Canadian tactical aviation community did not have significant impacts; one of the key factors considered in the new 1 Wing force employment concept.<sup>24</sup> By extension, the support of SO aviation to CANSOFCOM has been a significant priority.

Although traditionally created in times of war, it was not until the failed United States mission on the 24<sup>th</sup> of April 1980 to free 52 diplomats held hostage at the U.S. embassy in Iran, that the importance of dedicated special operations aviation became evident.<sup>25</sup> The fact that there was not a standing unit/capability in the United States that was trained and postured to conduct an operation of this magnitude required the force generation of an ad hoc unit to provide aviation support to the mission. The Holloway Report, commissioned to look into the failure of Operation Eagle Claw, determined this to be a contributing factor.<sup>26</sup> The failure of Operation Eagle Claw led to the creation of the United States Special Operation Command and as one of its subordinate units, the 160<sup>th</sup> Special Operations Aviation Regiment (160<sup>th</sup> SOAR).<sup>27</sup> McRaven supports this concept in that he points out through the analysis of eight case studies that there remains a need to

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<sup>23</sup> LGen Lucas, Chief of the Air Staff, *Transfer of Command Authority – 427 Squadron*, (NDHQ Ottawa: file 3010-1(D Air SP), 27 January 2006), 1.

<sup>24</sup> Department of National Defence, *Tactical Aviation Force Employment Concept* (Ottawa: DND Canada, 2011).

<sup>25</sup> Special Operations helicopter support was born out of the Korean War. The concept was reaffirmed during the Vietnam War where SOF aviation was generated to support the secret war fought by the Military Assistance Command Vietnam – Studies and Observations Group.

<sup>26</sup> United States Department of Defense, *"the Holloway Report"* (Washington: Department of Defense, 1980), 32-37.

<http://nsarchive.gwu.edu/NSAEBB/NSAEBB63/doc8.pdf>

<sup>27</sup> Federal Research Division, Library of Congress, *A History of the 160<sup>th</sup> Special Operations Aviation Regiment (Airborne)* (Washington, D.C., 2001), 1.

[http://www.governmentattic.org/2docs/Army\\_160thSOAR\\_Histories\\_1991-2001.pdf](http://www.governmentattic.org/2docs/Army_160thSOAR_Histories_1991-2001.pdf)

have “a standing special operations force that is trained, equipped and supported at the best possible levels.”<sup>28</sup>

The aviation effects desired by special operations ground forces cannot be achieved simply by having high readiness conventional aviation. It requires continuous and habitual training that breeds a tactical understanding of the unique aviation requirements of the ground force.<sup>29</sup> It also requires a force that consists of members that share the same commitment to the mission and their fellow soldiers. This is accomplished in the special operations community through extensive screening and selection. McRaven also notes that the constant throughout all of his eight case studies was the motivation of the individual soldiers. All were volunteers and all went through a rigorous screening and training process.<sup>30</sup>

The relevance of special operations moving forward cannot be negated. Given the current environment combined with the forecasted increased levels of instability with respect to global security, well-equipped and trained special operations forces are critical to the Canadian security enterprise. Without specially selected people and specially designed equipment to conduct the unique missions demanded of special operations aviation forces, the ability to meet these demands becomes untenable. Having explored the relevance of SOF in the global security environment from a Canadian perspective, it is necessary to conduct an analysis of the recruitment procedures and required expertise of the people involved in an SO aviation capability.

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<sup>28</sup> McRaven, *Spec Ops ...*, 387.

<sup>29</sup> Derry and Canadian Forces College, *Aerospace Power ...*, 49.

<sup>30</sup> McRaven, *Spec Ops ...*, 390.

## The Man – The People Behind Special Operations Aviation

*Wars may be fought with weapons, but they are won by men. It is the spirit of men who follow and of the man who leads that gains the victory.*

— George S. Patton Jr.

The underlying conceptual theory of special operations is built upon five fundamental truths. These truths form the basis on which all special operations are generated. They are widely accepted throughout the western special operations organisations and are the core to the culture:

1. Humans are more important than hardware.
2. Quality is better than quantity.
3. Special Operations Forces cannot be mass produced.
4. Competent Special Operations Forces cannot be created after emergencies occur.
5. Most Special Operations require non-SOF assistance.<sup>31</sup>

The order in which these truths are presented is significant. In the Commander SOCOM's 2010 Posture Statement, Admiral Olson remarks "...the value of adaptive special operations forces is at least as much in their mindset as in their skill set."<sup>32</sup> This concept remains critical when understanding the unique requirements of special operations aviation.<sup>33</sup> The transfer of command authority (TOCA) acknowledges that "CANSOFCOM and SOA support requires the creation of specific and specialty skill sets, as well as certain mental and physical attributes."<sup>34</sup> If a special operations

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<sup>31</sup> Department of Defense: United States Special Operations Command, "*United States Special Operations Command Fact Book 2015*" last accessed 05 May 2015, 56.

<http://www.socom.mil/Documents/2015%20Fact%20Book.pdf>

<sup>32</sup> Admiral Eric T. Olson, Commander United States Special Operation Command, 2010 Posture Statement, 1.

[http://democrats.armedservices.house.gov/index.cfm/files/serve?File\\_id=7e7090cb-6be2-4d46-b880-73cfad8f6bc5](http://democrats.armedservices.house.gov/index.cfm/files/serve?File_id=7e7090cb-6be2-4d46-b880-73cfad8f6bc5).

<sup>33</sup> Many conversations on special operations aviation manning are often centered on aircrew, but in order to sustain a SOF aviation capability, the qualities sought in aircrew are also common to those desired in aircraft maintenance and logistic support personnel.

organization cannot recruit, select, and retain the airmen/airwomen with the right mental and physical attributes, the sustainability of an effective special operations aviation capability comes into question.

This relationship between 427 SOAS and CANSOFCOM represents a ‘first’ for the RCAF. The authority given to the Commander of CANSOFCOM to assign missions, deploy units, and reassign forces outside of the RCAF command apparatus is a level of delegated authority not seen in the modern day RCAF. Although this new relationship allowed for significant flexibility in the force employment of 427 Sqn by CANSOFCOM, the RCAF did maintain what was termed ‘residual responsibilities’. The focus of these residual responsibilities was centered on flight safety, operational/technical airworthiness issues, and the control of “[p]ersonnel management of core Air Force personnel.”<sup>35</sup> The career management by the RCAF of key trades, such as aircrew and maintenance technicians, creates a challenging environment in which to recruit and retain the ideal SOF aviation specialist. When viewed through the RCAF’s lens, there is level of logic that rings true with respect to maintaining control over the human resources (HR) management. Given the size of the Royal Canadian Air Force, to take a portion of its trained effective strength and remove it from the larger system significantly ties the hands of RCAF human resources to manage the larger system. The validity of this argument is sound but must be weighed against the impact on being able to sustain a trained and effective SOF aviation unit. Given that dedicated SOF aviation has proven itself through history to be an integral enabler to the greater SOF enterprise, human resourcing of 427 SOAS must be regarded as a priority.

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<sup>34</sup> LGen Lucas, Chief of the Air Staff, *Transfer of Command Authority ...*, Annex A 16.

<sup>35</sup> *Ibid.*, 15.

Upon the re-role of 427 Sqn to a SO aviation unit, there was a significant, although not fully understood, change to how the unit was required to operate. As a tactical helicopter squadron, it was designed and manned as a squadron subordinate to 1 Wing, the home of the Canadian tactical helicopter capability.<sup>36</sup> As a special operations unit, there is an increased demand on resources such as communications expertise and logistical support given the often-extended lines of communication imposed by operating outside of established theaters. As noted in a briefing note to the Director of Military Career's from CANSOFCOM, "427 SOAS is currently operating on a legacy tactical helicopter organization and personnel structure which is inadequate to meet its classified operational mandate."<sup>37</sup> These logistical stressors are compounded by the fact that the squadron no longer deploys as a formed unit. The common sized maneuver element is sub-unit or smaller. This finds 427 SOAS supporting multiple sub-unit sized deployments simultaneously.<sup>38</sup> These detachment level deployments combined with the unique technology employed by CANSOFCOM, significantly increases the demand for support assets such as supply and communications personnel.

The requirement to have a screening and selection process for Special Operations Aviation has been a contested topic between the RCAF and CANSOFCOM. The question of how to put together a special operations team is not an easy task given the range of environments, operational variables, and mission sets that a SOF could be

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<sup>36</sup> This also meant that it was organized to be a divisional level asset supported by the associated divisional level sustainment resources. The legacy establishment was designed to deploy as an entire unit with the capability to forward deploy its sub-units for short durations.

<sup>37</sup> Maj G.N. Fleming, *Briefing Note to Director Military Careers: 427 SOAS Manning And Tour Length* (Canadian Forces Base Petawawa), 09 January 2015.

<sup>38</sup> Richard Morris, *Canadian Special Operations Aviation: A Strategically Relevant Force*, Vol. JCSP/PCEMI 36-33 (Toronto, Ont.: Canadian Forces College, 2010), 48.

expected to carry out.<sup>39</sup> Currently 427 SOAS is the only unit within CANSOFCOM which does not have a specific selection process for its personnel.<sup>40</sup> 427 SOAS does conduct a screening process, which involves a rigorous interview led by a board of existing squadron members, a background check and a psychological assessment. There is no direct assessment of a candidate's ability to conduct his/her duties under stress or demonstrate his/her ability to apply abstract problem solving skills. Although the screening process has improved the success in finding suitable candidates, there is still a waste of valuable resources towards ill-suited members in their specific SOF training. Screening and selection will never achieve one hundred percent success in identifying the right candidate, but 427 SOAS would stand to benefit from a selection process to ensure its' limited force generation capacity is maximized. Opponents to a SOF aircrew selection model would argue that if a pilot has made it through his/her wings training, that the rigorous pilot training system should be sufficient to act as the SOF selection process and an additional process would be a waste of resources. Like all other SOF members, a SOF aviator requires specialized skills, traits, and qualities that are not necessarily in line with the targeted traits of other selection processes.<sup>41</sup>

There are three main phases to the selection of a special operation forces member: Screening, Selection and Training.<sup>42</sup> 427 SOAS conducts both screening and training of its members. It is in the selection phase that 427 sqn needs to focus. During selection, candidates can be evaluated under conditions that they can expect to operate under and a

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<sup>39</sup> Tom Dececchi and Bernadette Dececchi, "Selection And Preparation Of Team Members For Special Operations," in *Choice Of Force: Special Operations For Canada*, ed David Land and Bernd Horn, 237 (Kingston: McGill-Queen's University Press, 2005).

<sup>40</sup> T. A. Morehen and Canadian Forces College, *A Selection Process for SOF Aviation in Canada*, Vol. JCSP/PCEMI 35-44 (Toronto, Ont.: Canadian Forces College, 2009), 1.

<sup>41</sup> *Ibid.*, 47.

<sup>42</sup> *Ibid.*



better assessment of their likely success in the special operations training can be made. It is in this environment that a candidate's true ability to operate under stress can be assessed. A former 160<sup>th</sup> SOAR pilot states that “[i]f you didn’t have the patience, perseverance, determination, and nerve, the 160<sup>th</sup> SOAR (A) was not for you.”<sup>43</sup> These desired traits are common to 427 SOAS and without a specific selection process; the squadron will not operate to its full potential.

Compounding the issues of selection is the changing demographic of the RCAF. In the April 2002 Auditor General Report, focused on National Defence Recruitment and Retention of Military Personnel, the Chief of the Air Staff is quoted as saying “the most critical area for the Air Force is the attrition of experienced pilots...”.<sup>44</sup> As of 2013, the pilot trade within the RCAF was two hundred and thirty eight pilots short representing just fewer than fifteen percent of the total pilot trade.<sup>45</sup> The average age of an aircraft technician, as well as experience level, has also been in decline. Factors such as the predicted global pilot shortage and the growth of technically demanding industries such as Canadian oil and gas, has seen high rates of release in technically based Air Force trades. These statistics are cause for concern given that 427 SOAS recruits from the same pool as the RCAF. Balancing skill, ability and technical mastery becomes a fragile house of cards making it impossible to support one community without being a detriment to another.

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<sup>43</sup> Michael J. Durant and Steven Hartov, *In the Company of Heroes* (New York: G.P. Putnam's Sons, 2003), 149.

<sup>44</sup> Office of the Auditor General of Canada, *Report of the Auditor General of Canada to the House of Commons: Chapter 5 – National Defence – Recruitment and Retention of Military Personnel* (Minister of Public Works and Government Services Canada, 2002), 5.  
<http://www.oag-bvg.gc.ca/internet/docs/0205ce.pdf>

<sup>45</sup> Department of National Defence, *Annual Brief Career Managers - Pilots*, Power Point Presentation, 2003.

The unsung heroes, in many cases in SO aviation, are the men and women who work to ensure that there are aircraft on the flight line serviced and ready to meet the demands of the next mission. As a result, it is critical that a SO aviation unit invests equally in their support personnel as it does to its aviators. Add the unique SOF specific skills, and their continued technical development, it is logical that the requirement for an individual to remain at 427 SOAS for an extended period is required to see return on the training investment. 427 SOAS, through CANSOFCOM, has determined that the current tour length of the average technician is inadequate to see this return. They also identify that the number of technicians that are assigned to the unit, straight from their ab initio training, is unsustainable.<sup>46</sup>

Similarly, to the technician trades, aircrew are seeing similar deficiencies. From a sheer numbers perspective, the pilot trade is the only occupation within the RCAF that is not within acceptable preferred manning levels (PML).<sup>47</sup> Exacerbating the problem, there has been a high level of release of experienced pilots. The RCAF's response has been to increase production of new pilots. This situation created a sharp decrease in overall pilot experience levels. This, combined with the ever-declining yearly flying hours (YFR), has caused an increase in time required to force generate Aircraft Captains with an ever decreasing pool of experienced aviators to train them. This phenomenon is amplified when viewed through the 427 SOAS lens. The training requirements necessary to take an ab-initio pilot from wings to special operations qualified Aircraft Captain is 5-6 years. A tour length of at least eight years is required in order for that experience and knowledge

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<sup>46</sup> Maj G.N. Fleming, *Briefing Note to Director Military Careers ...*, 09 January 2015.

<sup>47</sup> Department of National Defence, "Annual Brief Career Managers - Pilots," Power Point Presentation, 2003, slide 12.

to be passed on to new aircrew members.<sup>48</sup> This tour length requirement is in competition with the demands of the conventional tactical helicopter training system, which requires experienced aircrew to train the future pilots and flight engineers.

Until recently, the establishment of 427 SOAS has been adequate to sustain the demand placed on it by CANSOFCOM units.<sup>49</sup> As the command continues to grow and the demands continue to increase on the squadron, holes in its structure are beginning to become evident. Its ability to resource and sustain, from an HR perspective, is beginning to reach critical levels. The high operational tempo combined with the ultra-high levels of readiness places great strain on the members of the squadron. Given that the squadron has recommended an eight-year posting term for new pilots and technicians to the Director of Military Careers, it must ensure that the pace is set at a level which the member can sustain for that duration. In the near term, the addition of a selection process to 427 SOAS current screening and training process would mitigate some of these concerns by ensuring the unit recruits the people that fit the demands of special operations personnel.

Striking a balance between the needs of the RCAF against the unique requirements of owning and employing a SO aviation capability is no easy task given the current constraints. The necessity to effectively staff a SO aviation unit in Canada remains extant. Without specially selected personnel, 427 SOAS' ability to provide flexible, adaptable and timely aviation support will be limited. In order to continue to have a

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<sup>48</sup> Maj G.N. Fleming, *Briefing Note to Director Military Careers ...*, 09 January 2015.

<sup>49</sup> 427 SOAS has been predominantly focused on domestic counter terrorism and support to force generation activities for other CNANSOF units. Since 2010 the number of operational deployments outside of Canada has significantly increased placing further demands on manning levels within the squadron.

relevant and capable SO aviation squadron, a requirement for more effective and efficient human resourcing of 427 SOAS is critical. Having explored the fragility facing 427 SOAS with respect to manning the unit into the future, an examination of the equally bleak state of the current and future equipment at the squadrons disposal must be taken into account.

### **The Machine – Equipping Today's Canadian Special Operation Aviation Force**

*The helicopter approaches closer than any other (vehicle) to fulfillment of mankind's ancient dream of the flying horse and the magic carpet.*

- Igor Sikorsky

Admiral McRaven has stated that in order for special operations forces to succeed, they must achieve relative superiority over their enemy.<sup>50</sup> Ian Lagford, in his article on Australian Special Operations: Considerations and principles, identifies that a key premise in which Special Operations Forces operate is their ability to "... operate at the very edge of technological and philosophical development."<sup>51</sup> As a 'force of choice' for the Government of Canada, CANSOFCOM must continue to further its development of technology to allow it to carry out the challenging missions in parts of the world absent of robust logistical assets and key enablers often found in well-established coalition/alliance theaters. This technological overmatch significantly contributes in the achievement of relative superiority.

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<sup>50</sup> McRaven, *Spec Ops ...*, 4-8.

<sup>51</sup> Ian Langford, *Australian Special Operations: Principles and Considerations*, (Australia: Army Research Papers, 2014), 15.

In discussing special operations aviation, the concept of technology is increasingly important. As identified earlier in this paper, to have a robust SOF aviation capability you need to have the people with the right attributes, but without suitable equipment, their potential cannot be fully realized. As a result, an analysis of the future of Canadian special operations aviation must include a review of current and planned future airframe improvements.

The acquisition of the CH-146 Griffon by the Government of Canada in the mid 1990's brought with it significant controversy. The CH-146 has a minimal level of militarized equipment allowing it to fulfill a role in support of the Canadian Army and domestic search and rescue operations.<sup>52</sup> The aircraft is a twin-engine light utility helicopter primarily used for tactical transport of troops and material and has a maximum speed of 260km/h and a max range of 656 km.<sup>53</sup> The latter statistics are the main detractors from the platform. At first glance, the figures do not appear to impose significant limitations. When cargo is added to the aircraft for the purposes of transport, its primary mission set, these figures drastically decrease. Combine these limits with high altitudes above sea level and high temperature conditions which further decrease rotary wing performance, the utility of this platform comes into question.

The CH-146 has been used to support Canadian domestic special operations since its acquisition. The CH-146 was never envisioned to support the wide range of tasks that

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<sup>52</sup> The aircraft is based on the Bell 412EP, a civilian helicopter designed as a light utility helicopter that accommodates both cargo or and personnel.

Bell Helicopters "*The Bell 412*," last accessed 05 May 2015, [http://www.bellhelicopter.com/en\\_US/Commercial/Bell412/1291148331859.html#/?tab=highlights-tab](http://www.bellhelicopter.com/en_US/Commercial/Bell412/1291148331859.html#/?tab=highlights-tab)

<sup>53</sup> Royal Canadian Air Force, "*CH-146 Griffon*," last accessed 05 May 2015, <http://www.rcaf-arc.forces.gc.ca/en/aircraft-current/ch-146.page>

427 SOAS is expected to carry out under its current mandate.<sup>54</sup> Given its limitations, that platform is not without its benefits to Canadian SO. The aircraft has demonstrated its utility in domestic urban environments. Its size has also proven valuable in the maritime environment allowing the insertion of special operators to points on vessels that other platforms in the RCAF fleet would not be able to support. What the aircraft lacks in support to current special operations requirements is the ability to provide sufficient levels of precision tactical air lift over long distances. Based on the experiences gained in the Afghanistan theatre of operation, the CH-147 Chinook is the platform of choice to fulfill this role. Although a significant capability, it too has its drawbacks. The CH-147 comes with a significant logistical tail and requires a large amount of strategic airlift to deploy. The CH-146, on the other hand, can deploy three airframes and a minimal detachment to conduct a specific mission within the capacity of one CC-17 Globemaster. When measured through the amount of lift provided by chunks of strategic airlift, the flexibility of the CH-146 is an asset. For more effective and efficient operations, the SO aviation fleet would see a combination of platforms providing an increased number of 'tools in the toolbox' to SO planners.<sup>55</sup>

The likelihood of achieving a utopian solution is unlikely given the size and resources available to the RCAF and CANSOFCOM. Instead, what is occurring is a plan to extend the life of the CH-146 without the financial support to basic modernization programs to keep it flying while a replacement project is initiated. Two key takeaways were

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<sup>54</sup> Morris, *Canadian Special Operations Aviation ...*, 50.

<sup>55</sup> Jim Dorschner, "Instructions Not Included-Thoughts On Building A Canadian Special Operations Aviation (SOA) Capability," *Canadian Military Journal* 9, no. 3 (Spring 2009).  
<http://www.journal.forces.gc.ca/vo9/no3/13-dorschner-eng.asp>

identified with respect to the future of the Griffon/Light utility capability program in a briefing prepared for the Commander of 1 Canadian Air Division in February 2014:

1. A future capability gap already exists in the utility/tac security/CASEVAC element of the balanced Tac Avn capability.
2. GLLE [Griffon limited life extension] is late to need and is at risk due to investment plan review; key CH146 stakeholders (CSS, SAR, CA, CANSOFCOM, CanadaCOM, CEFCOM) must understand this risk and consider GLLE support.<sup>56</sup>

Without intervention, the current life expectancy of the CH-146 is 2021. The Griffon Limited Life Extension (GLLE) is designed to extend the life of the CH-146 by at least 10 years past the current estimated life expectancy.<sup>57</sup> There are already avionics within the aircraft that are identified as obsolete and will not be sustainable past 2020.<sup>58</sup> The GLLE program has looked to rectify these deficiencies but it has not received the required funding to proceed through the long Canadian procurement process. The GLLE project is already behind and the project office has identified that if the project is not started within the year, there will be a capability gap as airframes are processed through the upgrade maintenance line. This gap will grow if there is any delay to this project.<sup>59</sup> Compounding this issue is the ever-developing civilian aviation sector that is becoming increasingly dependent on GPS technologies and standard ATC procedures that rely on specific aircraft position identification equipment. Currently the CH-146 does not have a certified GPS with which it can legally navigate. Without these updates, the CH-146 will be significantly restricted in its ability to operate in our own airspace or that of other

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<sup>56</sup> Department of National Defence. Royal Canadian Air Force, “*Griffon Limited Life Extension (GLLE)*,” *Info Brief to Comd 1 CAD*, Power Point Presentation, February 2014.

<sup>57</sup> *Ibid.*

<sup>58</sup> *Ibid.*

<sup>59</sup> *Ibid.*

countries. Although a unique platform for Canadian special operations aviation is unlikely, the requirements of this capability need to be taken into account when deciding on the replacement of the CH-146. CANSOFCOM is in an ideal position to help inform the statement of requirements for Griffon replacement. Given the relatively small numbers of airframes required, the squadron could participate in a 'buy and try' analysis that supports further project development while filling current CANSOFCOM gaps.

Given that the average major capital procurement in the Department of National Defence takes 16.9 years, the project, as identified to the Commander of 1 Canadian Air Division, is already behind schedule. If CANSOFCOM is to maintain technological overmatch with a view to supporting Canadian special operations into the future, a solution to the dependence of RCAF tactical aviation to provide sufficient technologically superior equipment in the medium term and a new emphasis to rectify the CH-146 deficiencies need to be addressed. If this does not occur, the current capabilities of 427 SOAS will remain stagnant and run the risk of irrelevance as CANSOFCOM operations continue to evolve in line with the national security priorities moving forward.

## **Conclusion**

427 SOAS has reached a critical juncture in its evolution as a Special Operations Aviation Squadron. Nine years into its new special operation mission, the unit has established a base line capability that is poised to be built upon. The impending collision of an obsolescent aircraft and critical experience and manning shortages has placed this national capability in a precarious space. In order for it to grow along with CANSOFCOM and increase its effectiveness in support of operations, 427 SOAS must



be provided with the appropriate resources. The global security environment continues to remain unstable with new threats to Canada's national interests continuing to emerge.

Without a tier one special operations capability, enabled by world-class special operations aviation, the Canadian security infrastructure is significantly weakened.

Fiscal and resource pressures continue to plague the Department of National Defence and the Canadian Armed Forces. Special operations aviation must be regarded as a key capability in the CAF arsenal and must be prioritized and resourced appropriately with a view to maintaining a relevant SO aviation force. With human resourcing pressures mounting and an aging platform, Canadian Special Operations aviation is at a critical risk of collapse. As the fourth SOF truth states 'Competent Special Operations Forces cannot be created after emergencies occur.'<sup>60</sup> If the current capability is lost, the required resources and time to regenerate it will be significant. As this paper has only looked at defining the challenges facing 427 SOAS, a further analysis on the way forward is required. The options analysis must focus on maximizing synergies within the rest of the Canadian Armed Forces with a view of complimenting existing capabilities available and focusing on the niche capabilities directly associated with SO aviation. If 427 SOAS is not better resourced in the short term, the Canadian Forces and the Government of Canada stands to lose a relevant, effective tool as a key component of what has become Canada's 'Force of Choice'.

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<sup>60</sup> Department of Defense: United States Special Operations Command, "United States Special Operations Command Fact Book 2015" last accessed 05 May 2015, 56.  
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