

# *Canada's First Eastern Arctic Patrol, 1922*

**First Person Perspectives**



Compiled and Introduced by  
**P. Whitney Lackenbauer and Grace Chapnik**

**Arctic Operational Histories, no.9**

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FIRST-PERSON PERSPECTIVES

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BRIAN  
MULRONEY  
INSTITUTE OF  
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Brian Mulroney Institute of Government  
St. Francis Xavier University  
5005 Chapel Square  
Antigonish, Nova Scotia, Canada  
B2G 2W5

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# The Arctic Operational History Series

The Arctic Operational History Series seeks to provide context and background to Canada's sovereignty and defence operations and responsibilities in the North by resuscitating important, but forgotten, official and first-hand reports, histories, and archival material from previous generations of Arctic operations.

Recent experience has demonstrated the continuity of many of the challenges and frictions that dominated Arctic operations in decades past. While the platforms and technologies used in previous eras were very different, the underlying challenges – such as logistics, communications, movement, and sustainment – remain largely the same. Unfortunately, few of the lessons learned by previous generations are available to today's operators.

Adam Lajeunesse  
Series Editor

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## List of Acronyms

CGS	Canadian Government Ship	LAC	Library and Archives Canada
CGMM	Canadian Government Merchant Marine	NWT	Northwest Territories
DLS	Dominion Land Surveyor	QTC	Qikiqtani Truth Commission
ed.	editor	RCMP	Royal Canadian Mounted Police
HB	Hudson's Bay (Company)	RG	Record Group
HBC	Hudson's Bay Company		
HMS	His Majesty's Ship		

# INTRODUCTION

## “Canada for the Canadians”: Canada’s First Eastern Arctic Patrol, 1922

*P. Whitney Lackenbauer and Grace Chapnik*

In the early 1920s, the Canadian government’s interest in the Arctic grew. In the eyes of civil servants like J.B. Harkin and pundits like Vilhjalmur Stefansson, Danish explorer Knud Rasmussen raised particular concern. In 1920, the Dane wrote a letter in response to a notice sent from Ottawa to Greenland<sup>1</sup> which some officials in Ottawa perceived to suggest his singular authority over the “Polar Eskimos.” Rasmussen claimed that:

It is well known that the territory of the Polar Esquimaux [Inuit] falls within the region designated as “no man’s land” and there is therefore no authority in the district except that which I exercise through my station – an authority which I have hitherto had no difficulty in maintaining chiefly because the Polar Esquimaux [Inuit], when reasonably treated, adopt a very rational attitude toward all decisions which the station considers it advisable to take.... Fully conscious of the work which is ahead and of the responsibility I assume, I venture to close with the observation that, in order to carry out the protective measures indicated in this statement, I shall need no assistance whatever from the Canadian Government.<sup>2</sup>

Did Rasmussen’s assertion of *terra nullius* extend to Ellesmere Island and Canada’s other Arctic islands? Did he intend to claim Canadian territories for Denmark?

Historians Janice Cavell and Jeff Noakes have demonstrated how misconceptions and political intrigue fuelled Canada’s move towards the active

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<sup>1</sup> Peter Schledermann, “The Muskox Patrol: High Arctic Sovereignty Revisited,” *Arctic* 56, no. 1 (March 2003): 102.

<sup>2</sup> Knud Rasmussen, March 1920, quoted in Schledermann, “The Muskox Patrol,” 102. On the “Polar Esquimaux” referring to Inuit inhabiting northern Greenland, see Janice Cavell and Jeff Noakes, “The Origins of Canada’s First Eastern Arctic Patrol, 1919–1922,” *Polar Record* 45, no. 233 (2009): 98.

administrative occupation of the Arctic.<sup>3</sup> Canadian-born explorer Vilhjalmur Stefansson sounded the alarm to try to spur the federal government to action, insisting that the Danes would attempt to claim Canada's Arctic islands. The most effective way to stop the Danish advance, he argued, was to establish a Canadian presence in the north before Rasmussen could do so. This served as the genesis of the perceived need for an official Eastern Arctic patrol.<sup>4</sup>

The Dominion of Canada had been showing the flag in the Arctic since 1903.<sup>5</sup> The first missions were directed at foreign interests, specifically whalers and explorers, and had led to assertions of Canadian jurisdiction and a sweeping sector claim by Captain Joseph-Elzéar Bernier in 1909.<sup>6</sup> However, there had been no official Canadian presence in the area since Bernier's 1910 expedition (the third of his prewar patrols in the Canadian Government Ship (CGS) *Arctic*). Thus, when rumours circulated in Ottawa in the early postwar period that other nations were preparing to occupy sites in Canada's North, the risks seemed palpable. The Danes, long established in Greenland, were reportedly planning an expedition to Ellesmere Island, an area they regarded as unclaimed. The Norwegians had a historic but undeveloped claim to the islands west of Ellesmere, thanks to the explorations and discoveries of Otto Sverdrup in 1903-1905. Stories about American-sponsored explorations appeared in newspapers, and a recently published American atlas showed Ellesmere in the same colour as Alaska – an ominous sign to concerned Canadians.<sup>7</sup>

In 1919, the Department of the Interior created the Advisory Technical Board, comprised of a small group of senior civil servants, to investigate these threats. At their initial meeting, board members grappled with two main issues: determining whether the Canadian title to the Arctic islands was worth developing; and, if so, recommending what steps should be taken to establish such a title. Their study focused on the islands of the Eastern Arctic, where the Board

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<sup>3</sup> See Janice Cavell and Jeff Noakes, *Acts of Occupation: Canada and Arctic Sovereignty, 1918-25* (Vancouver: UBC Press, 2010).

<sup>4</sup> Cavell and Noakes, "Origins of Canada's First Eastern Arctic Patrol," 98-99, 101-2.

<sup>5</sup> Richard Diubaldo, *The Government of Canada and the Inuit, 1900-1967* (Ottawa: Indian and Northern Affairs Canada, 1985), 14.

<sup>6</sup> Janice Cavell, "Sector claims and counter-claims: Joseph Elzéar Bernier, the Canadian government, and Arctic sovereignty, 1898-1934," *Polar Record* 50, no. 3 (2014): 293-310.

<sup>7</sup> On these developments, see Gordon W. Smith, *A Historical and Legal Study of Sovereignty in the Canadian North: Terrestrial Sovereignty, 1870-1939*, ed. P. Whitney Lackenbauer (Calgary: University of Calgary Press, 2014); Cavell and Noakes, *Acts of Occupation*; and Cavell, "Sector claims and counter-claims."

found compelling reasons for Canada to perfect her claim, even though neither the federal government nor Canadians more generally perceived the potential value or importance of the islands.<sup>8</sup> For example, the islands might play a significant role in civil and military aviation, thus making it “undesirable and dangerous to allow another nation to get a foothold in the north now that aerial navigation has become so far advanced.” The Board also opined that the Arctic Archipelago might well contain vast reserves of mineral wealth or oil. Accordingly, it was in Canada’s immediate interest to develop its sovereignty claim.

None of the major legal reports written in 1920 and 1921 suggested that the government utilize the sector principle to bolster Canada’s sovereignty position in the Arctic. Instead, all appealed for further acts of occupation.<sup>9</sup> Occupation required more than just a symbolic act such as the hoisting of a flag. It required a physical presence and the establishment of government administration in the area.<sup>10</sup> By this logic, agents of the Canadian government were going to have to go north. The Royal Canadian Mounted Police (RCMP) had already established a presence in the Yukon, in the Mackenzie, and along the fringes of Hudson Bay.<sup>11</sup> It seemed natural that now the Mounties should be sent farther afield.

The potential Danish “threat” to Ellesmere Island most concerned the Department of the Interior. The Advisory Technical Board outlined a tentative plan in case evidence showed that the Danish government was planning to support an expedition into Canada’s Arctic Archipelago in 1920. Its members recommended that Canada should attempt to borrow an airship from the imperial government, which could be loaded with a group of RCMP constables and a winter’s worth of supplies, then launched from Scotland towards the Pole.

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<sup>8</sup> Canada, Department of the Interior, *Report by the Sub-Committee of the Advisory Technical Board* (henceforth *ATB Report*), (n.d. 1919?). There are apparently several drafts of this report, extending well into 1920. The one referred to here is probably the first draft, which was submitted to the Commissioner of the RCMP in January 1920. Library and Archives Canada (LAC), Record Group (RG) 18, accession 1984/-85/084, vol. 33, file G-516-37. On the ATB, see Cavell and Noakes, *Acts of Occupation*, 57-62.

<sup>9</sup> See Peter Kikkert and P. Whitney Lackenbauer, *Legal Appraisals of Canada’s Arctic Sovereignty: Key Documents, 1905-56*, Documents on Canadian Arctic Sovereignty and Security No. 2 (Calgary and Waterloo: Centre on Military and Strategic Studies/Centre on Foreign Policy and Federalism, 2014).

<sup>10</sup> *ATB Report*.

<sup>11</sup> The essential study is William R. Morrison, *Showing the Flag: The Mounted Police and Canadian Sovereignty in the North, 1894-1925* (Vancouver: UBC Press, 1985).



Over Ellesmere Island, the police could parachute onto the island in time to greet the Danes.<sup>12</sup> Given the state of Arctic aerial navigation and parachuting technology, it is fortunate for the police that this hare-brained pre-emptive scheme was never carried out.

Although the members of the Advisory Technical Board emphasized the need for Canada “to get there first,” it was mid-1920 by the time senior decision makers had fully considered its report, and the summer shipping season was by then too far advanced for Canada to mount even an emergency expedition to the northern islands that year. In any case, the Danes did nothing to threaten Canada’s sovereignty. This left Ottawa to proceed at a leisurely pace with the planning and the preparations for an expedition the next year. John Davidson Craig of Dominion Lands Surveys and the International Boundary Commission was assigned overall command of the planning and of the expedition itself. Captain H.C. Pickels of Mahone Bay, Nova Scotia, was appointed ship’s captain. The Department of Marine and Fisheries transferred the old wooden-hulled sailing ship CGS *Arctic*,<sup>13</sup> which had served as a floating lighthouse during the First World War and had been in disuse ever since, to the Department of the Interior.<sup>14</sup> It required substantial refurbishing to return to northern service. Even when completed, RCMP Constable Herbert Patrick Lee described it as a “sturdy, rather clumsy-looking craft” that was “squat, broad of beam and of tremendous strength.”<sup>15</sup> Whatever its limited aesthetics, *Arctic* would serve as a platform for the Government of Canada to project its sovereignty over the High Arctic.

While *Arctic* underwent repairs, however, Prime Minister Arthur Meighen and his administration began to question the very need to send an official

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<sup>12</sup> In point of fact, the Danish government was quite helpful to Canada when the expedition was actually launched, and it continued to provide assistance from 1922 to 1925. See Smith, *Historical and Legal Study*, and Cavell and Noakes, *Acts of Occupation*.

<sup>13</sup> David Eric Jessup, “J.E. Bernier and the Assertion of Canadian Sovereignty in the Arctic,” *American Review of Canadian Studies* 38, no. 4 (2008): 421, <https://doi.org/10.1080/02722010809481722>; Harwood Steele, *Policing the Arctic: The Story of the Conquest of the Arctic by the Royal Canadian (Formerly North-West) Mounted Police* (Toronto: Ryerson Press, 1936), 221.

<sup>14</sup> Richard S. Finnie, “Joseph Elzéar Bernier (1852-1934),” *Arctic* 39, no. 3 (September 1986): 272, <http://pubs.aina.ucalgary.ca/arctic/Arctic39-3-272.pdf>.

<sup>15</sup> Herbert Patrick Lee, *Policing the Top of the World* (London: John Lane, 1928), 5. The government also considered proposals that did not use *Arctic*, including a possible airdrop of RCMP officers, which was deemed unfeasible. Leslie D. Livingstone, “Twenty-Five Years Amongst the Eskimos,” speech, Empire Club of Canada, Toronto, 25 October 1945, <https://speeches.empireclub.org/details.asp?ID=60434>.

Canadian presence north. Loring Christie and other senior advisors soberly assessed the actual evidence and downplayed the Danish threat, thus diluting the need for an Arctic mission.<sup>16</sup> “Doubts and disagreements in official circles about Stefansson and his role, coupled with the entry of English explorer Sir Ernest Shackleton as a rival to Stefansson, led the Canadian government to drop its plans for a 1921 expedition in May of that year,” historian Gordon W. Smith summarized. “The work of repairing and outfitting the *Arctic* continued at a slower pace, but Captain Pickels, who had immediate charge of this work, died on 1 October 1921, and the ship was left in winter quarters at Quebec until June 1922.”<sup>17</sup>

When planning and preparations for the anticipated 1921 patrol ceased, William Lyon Mackenzie King, the leader of the Opposition, demanded to know why. Meighen claimed that the expedition had not actually been cancelled but had merely been put off until the following year because of the high costs involved. Was this irresponsible? Should Canada accept the additional expense given the rumour that “another power just might be contemplating the same action”? Meighen insisted that there was no pressing need for action and that Canada’s sovereignty claims would not be undermined by waiting a year. He did assure the House of Commons that if any other power made a move in the Canadian Arctic, “the Government will not hesitate to take action to protect the interests of Canada.”<sup>18</sup> He did not say what that action would be or how the government would take it.

The perceived Danish threat had all but blown over by the summer of 1921. Most Canadian officials accepted the repeated Danish assurances that they had no interest in contesting Canada’s sovereignty over the Arctic islands. Accordingly, the “fear about what Denmark might do in the archipelago was gradually replaced by concern over what Canada herself ought to do,” historian Gordon W. Smith later observed.<sup>19</sup> The Danish ‘threat’ and the legal appraisals it spawned inspired the “transformation of Canada’s earlier Arctic policy – in which proclamations and other purely ‘formal acts of possession’ were deemed sufficient – into a more active and sustained postwar program that emphasized

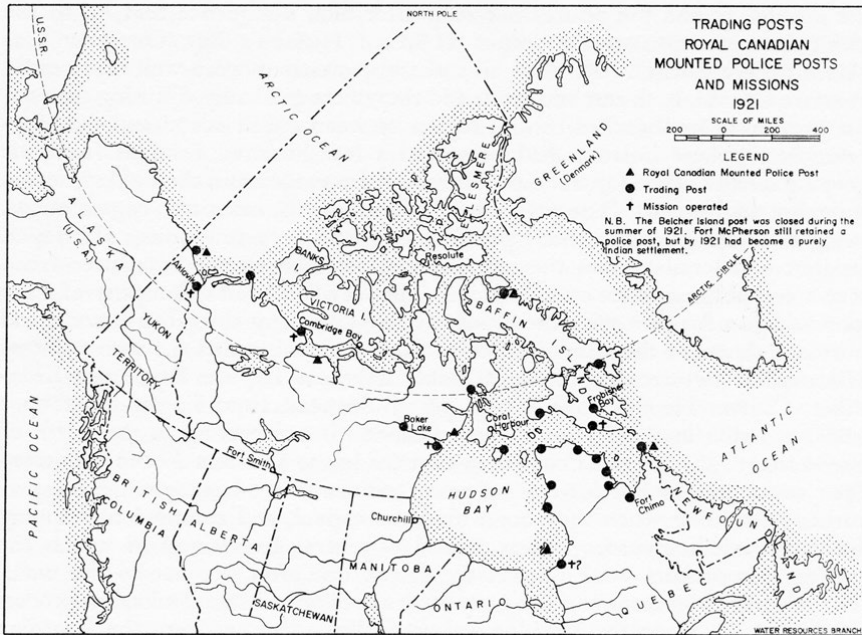
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<sup>16</sup> Cavell and Noakes, “Origins of Canada’s First Eastern Arctic Patrol,” 104-5.

<sup>17</sup> Smith, *Historical and Legal Study*, 341.

<sup>18</sup> House of Commons, *Debates*, 30 May 1921, 4106.

<sup>19</sup> Smith, *Historical and Legal Study*, 265.



Diamond Jenness, *Eskimo Administration: II. Canada* (Montreal: Arctic Institute of North America Technical Paper No. 14, 1964), 24.

the need for ‘acts of occupation’ even on remote and uninhabited northern islands like Ellesmere.”<sup>20</sup>

Nevertheless, J.B. Harkin, Director of the Dominion Parks Branch of the Department of the Interior, “stubbornly maintained his belief in the Danish threat”<sup>21</sup> and encouraged officials to develop and refine plans for the effective occupation of the Eastern Arctic during the year-long lapse in activity. They paid considerable attention to the notion that a claim to sovereignty based upon the fact of occupation required both physical presence and the provision of government administration. In the Canadian case, however, the occupiers and the administrators were to be one and the same. As Northwest Territories (NWT) Commissioner William Wallace Cory saw it, “in order to establish occupation it is necessary to perform certain administrative acts and that the Police Force should be empowered to act as Customs Officers, Immigration Officers, Post-

<sup>20</sup> Cavell and Noakes, *Acts of Occupation*, 6.

<sup>21</sup> Cavell and Noakes, “Origins of Canada’s First Eastern Arctic Patrol,” 97.

masters, etc.”<sup>22</sup> International convention deemed symbolic acts such as the building of a cairn, the reading of a proclamation, or the hoisting of a flag to be inadequate to support a claim to sovereignty. Canada’s response was to provide a symbolic presence and a symbolic administration. It did not matter that it was extremely unlikely that anybody would require the practical services provided by the police detachments. Senior federal officials saw the presence of the police detachments in the North to “close up what might be called the front door of the Arctic Archipelago.”<sup>23</sup>

In early 1922, the newly elected Liberal government breathed new life into the Arctic patrolling project. Harkin and his allies argued that the Danes still posed a threat to Canada’s Arctic sovereignty and that, with *Arctic* refitted, the costs associated with mounting a maritime patrol would be modest. Consequently, the government decided in May to resume the mission.<sup>24</sup> On 9 June 1922, the Northwest Territories and Yukon Branch of the Department of the Interior received instructions to prepare hastily for an Arctic voyage that summer.<sup>25</sup>

To mount the patrol, the Government of Canada had to find a new captain. It turned to seventy-year-old master mariner Joseph-Elzéar Bernier. Bernier had been out of government service since 1912, when the Borden administration forced him to resign for engaging in personal fur trading while on government missions.<sup>26</sup> Nevertheless, in several key respects, Bernier was the most competent

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<sup>22</sup> Cory to Perry, 12 March 1921, *RCMP Northern Sovereignty*, vol. 1, quoted in Kenneth C. Eyre, *Custos Borealis: The Military in the Canadian North, 1898-1975*, ed. P. Whitney Lackenbauer (Peterborough: North American and Arctic Defence and Security Network, 2020). See also Morrison, *Showing the Flag*.

<sup>23</sup> *ATB Report*.

<sup>24</sup> Cavell and Noakes, “Origins of Canada’s First Eastern Arctic Patrol,” 108.

<sup>25</sup> Smith, *Historical and Legal Study*, 341.

<sup>26</sup> Jessup, “J.E. Bernier,” 420. Bernier was notorious among his contemporaries for his unabashed fundraising and self-promotion. In one 1906 anecdote published in the *New York Sun*, the Captain advertised his plans to go north “incessantly with any man, group of men or society that would listen to him. He was glad if anybody would promise to give him even \$5.” *New York Sun*, 15 July 1906, quoted in Jessup, “J.E. Bernier,” 414. On Alfred Tremblay’s desire to lead the 1922 expedition, see Shelagh D. Grant, *Arctic Justice: On Trial for Murder, Pond Inlet, 1923* (Montreal and Kingston: McGill-Queen’s University Press, 2002), 130-31. On Bernier’s jockeying for the role, see Marjolaine Saint-Pierre, *Joseph-Elzéar Bernier: Champion of Canadian Arctic Sovereignty*, trans. William Barr (Montreal: Baraka Books, 2009), 272-74.

captain available. His résumé included various unique achievements, including a transatlantic speed record between Great Britain and Canada, and having served as the youngest captain in Canadian history at the age of seventeen.<sup>27</sup> His previous Arctic experience as captain of *Arctic* on four northern expeditions had affirmed and expanded Canadian sovereignty in the region.<sup>28</sup> A *Globe* article described him as the natural choice, extolling how Bernier “has been a familiar figure around Ottawa while



Captain Joseph-Elzéar Bernier (Kapitaikallak), aboard CGS *Arctic*, 1922. LAC PA-118126.

promoting his various excursions, and people at the Capital know him as an amiable old sea-dog, kindly and debonaire, talkative but inclined to emphasize his one great idea.” During his many trips, the captain had given “some definition to the vast Arctic bounds of the Dominion”<sup>29</sup> – an important role given the apparent sovereignty imperative in the early 1920s.

Captain Bernier’s appointment as captain overcame the most significant roadblock to launching the Eastern Arctic Patrol in 1922. Nevertheless, other small hiccups needed to be settled. For instance, the medical doctor chosen for the mission in 1921 had fallen out of contact with the government. His replacement, Dr. Leslie David Livingstone, was inexperienced in polar travel but filled with curiosity.<sup>30</sup> Although Craig scuttled plans to send a larger and more varied group of scientists (because they would have little time ashore to do their work during the expedition), members with scientific, technical, and administrative responsibilities included the surveyor and meteorologist L.O. Brown, the assistant surveyor T.P. Reilly, the cinematographer G.H. Valiquette,

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<sup>27</sup> Jessup, “J.E. Bernier,” 409, 413; Janice Cavell, “‘As Far as 90 North’: Joseph Elzéar Bernier’s 1907 and 1909 Sovereignty Claims,” *Polar Record* 46, no. 4 (October 2010): 372, <https://doi.org/10.1017/S0032247409990556>.

<sup>28</sup> Finnie, “Joseph Elzéar Bernier,” 272; Jessup, “J.E. Bernier,” 414.

<sup>29</sup> “A Bystander at the Office Window: Explorer at Seventy,” *The Globe*, 20 July 1922, 5.

<sup>30</sup> Livingstone, “Twenty-Five Years.” For more detailed background, see Dudley Copland, *Livingstone of the Arctic* (Ottawa: self-published, 1967).

and the commanding officer's secretary W.H. Grant.<sup>31</sup> Squadron Leader Robert Archibald Logan of the Canadian Air Force was ordered, at the last minute, to join the expedition after the Department of the Interior approached the Air Board to supply an aviation expert. The Advisory Technical Board had sensed that the war-inspired technology of aviation, and the promise of extensive further development, would have an important significance to the Canadian North. In turn, the Air Board wisely decided to conduct a thorough investigation of the Arctic climate and topography before sending aircraft and equipment to the Arctic or attempting any actual flying.<sup>32</sup> By sailing with the expedition, Logan became the first member of the Canadian military establishment ever to serve in the Arctic – albeit as an aviator without an aircraft.

As the team came together, so too did the plans. Unlike his earlier expeditions, Bernier noted that “the routine now took on an administrative character, so that the Officer-in-Charge, John Davidson Craig, B.Sc., D.L.S., was an administrative official of the Department of the Interior charged with establishing Mounted Police posts, post offices, customs houses, and attending to all official routine for the Canadian government.” Accordingly, Bernier described his duties as being of a “navigational and advisory nature.”<sup>33</sup> For its part, the Royal Canadian Mounted Police perused its nominal roll to identify potential candidates. “The expense of establishing posts in the Polar regions would be heavy, and the posts were to be few in number, and consist of only three men each,” Herbert Patrick



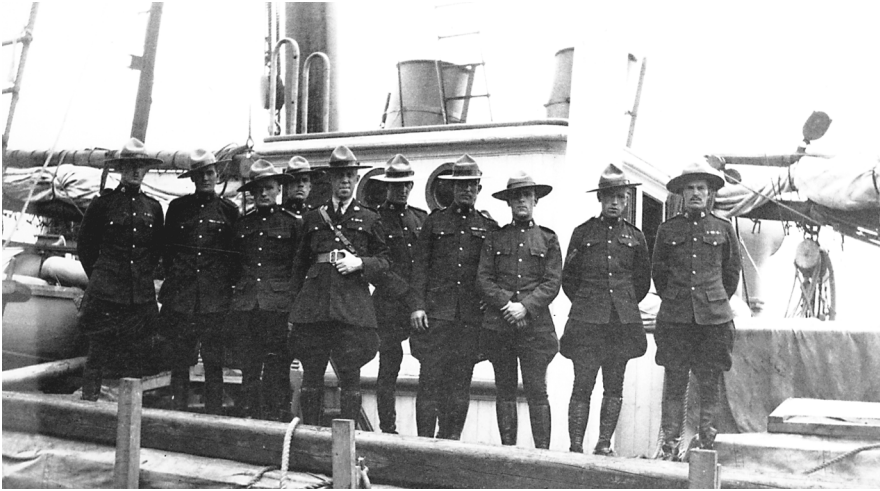
J.D. Craig on CGS *Arctic*, 1922. LAC e01085065-v8.

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<sup>31</sup> Smith, *Historical and Legal Study*, 343.

<sup>32</sup> Ernest Cable, “Air Force: Leader in the Arctic,” in *De-Icing Required!: The Historical Dimension of the Canadian Air Force's Experience in the Arctic*, ed. P. Whitney Lackenbauer and W.A. March (Trenton: Canadian Forces Air Warfare Centre, Canadian Aerospace Power Studies Series No. 4, 2012), 1.

<sup>33</sup> Joseph-Elzéar Bernier, *Master Mariner and Arctic Explorer* (Ottawa: Le Droit, 1939), 372-73.



RCMP Inspector C.E. Wilcox and his men aboard CGS *Arctic* on their way to open the first police detachments on Baffin and Ellesmere Islands. W.H. Grant Collection, LAC, PA-176557.

Lee recounted. Inspector Charles E. Wilcox, with two decades of service in the force, would command the nine RCMP officers sent north on the Eastern Arctic Patrol to establish posts at Pond Inlet, on Baffin Island, and Craig Harbour, on Ellesmere Island. Corporals Herbert Patrick Lee, Finley McInnes, and B.C. Jakeman, as well as Constables Edward Anstead, Charles George Fairman, Leonard Frank Fielder, H.P. “Ernie” Friel, William Burgett McGregor, and H.J. Must, volunteered.<sup>34</sup> Lee emphasized how

none of us knew exactly where we were going, or could visualize what lay before us on the new frontier of the North. We simply knew that we are going farther beyond the Arctic Circle than the Mounted Police had ever penetrated before, into a mysterious land where few men have ever trod. And we knew too, that it meant being cut off from civilization for at least two years, being far from home and everything that we held dear. But the chance for adventure was one we have never dreamed of and every man of that little party considered himself more than lucky.<sup>35</sup>

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<sup>34</sup> Steele, *Policing the Arctic*, 232.

<sup>35</sup> Lee, *Policing the Top of the World*, 3.

This would be the first Arctic experience for most of the forty-three men selected for the inaugural Eastern Arctic Patrol, and their first-person accounts indicate tremendous enthusiasm and curiosity.

“Compared to the government expeditions of the pre-war years, the times and circumstances had changed dramatically,” historian Shelagh Grant observed. “There would be no gala send-off or press coverage when the ship departed from King’s Wharf at Quebec City, only a few family members saying private farewells.” The government insisted on a low profile, issuing “strict orders to maintain secrecy until all the proposed police posts had been established in the Arctic Islands.” The ship’s radio communications were brief and in code, and Department of the Interior officials censored all news releases before they were distributed publicly.<sup>36</sup> As the NWT Commissioner informed Prime Minister Mackenzie King in July 1923, these measures were deemed necessary owing to “the importance of achieving certain results in connection with the maintenance of sovereignty in the north without attracting undue publicity.”<sup>37</sup>

### The First Eastern Arctic Patrol

After five weeks of “feverish activity,” all was ready aboard *Arctic* in Quebec Harbour on the evening of 17 July.<sup>38</sup> As Craig recounts in the first document in this volume, “the engines turned over under their own steam for the first time in several years,”<sup>39</sup> and the expedition sailed early the next morning. After overcoming minor engine problems that caused short delays, the ship proceeded through the Strait of Belle Isle to the west coast of Greenland, where it traced the coast northerly to 74°N to avoid the ice fields covering much of Baffin Bay.

The details of the voyage are recounted in the first-person narratives that follow. On 30 July, the ship crossed the Arctic Circle. “Grog was served with dinner to celebrate the event,” Lee recounted. “We felt that now we were really in the Arctic at last, steaming still farther into the mystic land of romance and

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<sup>36</sup> Grant, *Arctic Justice*, 131–32.

<sup>37</sup> W.W. Cory to William Lyon Mackenzie King, 5 July 1923, LAC, RG 85, vol. 602, file 2502, pt. 2.

<sup>38</sup> The 950 tons of cargo included 500 tons of coal for the ship and 150 for the police posts that were to be built, 225 tons of lumber to build quarters for the men who would occupy and administer the Eastern Arctic, and 75 tons of food and other supplies to sustain the police detachments for two years. Smith, *Historical and Legal Study*, 342.

<sup>39</sup> Craig, *Canada’s Arctic Islands: Log of Canadian Expedition 1922*, 11.



adventure north of the famous 66<sup>th</sup> parallel of latitude.”<sup>40</sup> Expedition members marvelled at initial encounters with the ice, polar bears, and passing icebergs, which they captured with the many cameras onboard. The written records exude a spirit of adventure, the enthusiasm amongst the government party and police officers similar to that of tourists on an Arctic cruise.<sup>41</sup> “It is a happy trip for everybody in the expedition for they are called to write a page of history that their children will read about with pleasure of the doings of their father, and I am sure that the Canadian Nation as a whole will be proud of those that made it possible that all our heritage became ours,” Bernier proclaimed to the crew on the evening of 31 July.<sup>42</sup>

Captain Bernier recognized that the technical staff and young RCMP officers had received little instruction to prepare them for the north, and he sought to provide this – as well as ensure that their relations with local Indigenous people were respectful. Offering insights into how to deal with Inuit fairly and justly, Bernier’s lecture emphasized that:

It is good to bear in mind that an Eskimo has become a Canadian since we took possession of the Arctic Islands and he should be looked upon as a Canadian, do not ever promise him anything that you do not intend to fulfill because a native has also a very high sense of honour and he will never deceive you wilfully and above all treat him as you wish to be treated yourself.

The success of the mission depended upon cordial relations with Inuit and amongst expedition members in an extremely cramped ship. Regular exercise and social activities would help to maintain a fit body and mind. For those who were not paying careful attention, he distributed copies of his address “for study at their leisure.” Both Craig and Grant also included it verbatim in their journals.

Good morale and a spirit of camaraderie reflected solid leadership and a shared sense of purpose in the face of challenging conditions. Despite the fresh coat of paint on the outside of the ship, *Arctic’s* engines and fittings were in poor shape, requiring numerous stops for repairs. In the cramped living quarters, crew and passengers struggled to sleep owing to the stench rising from the bilges. A half century later, Major Logan recalled that he could still smell the “disinfectant, dead rats, dead fish and rotten vegetables.”<sup>43</sup> The McInnes and Grant accounts note similar olfactory displeasure. As Shelagh Grant highlighted, “there were also

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<sup>40</sup> Lee, *Policing the Top of the World*, 8.

<sup>41</sup> Grant, *Arctic Justice*, 134.

<sup>42</sup> See J.D. Craig diary, 31 July 1922, 27-31 in this volume.

<sup>43</sup> Quoted in Grant, *Arctic Justice*, 133.

humorous moments, like the time Bernier brought out a case of wine to toast the crossing of the Arctic Circle, only to find that the cook and steward had been ‘into the sauce’ and had filled the bottles with cold tea.” The captain produced a bottle of Jamaica rum from his personal stores and poured everyone a double portion, thus ensuring buoyant morale. “Yet under the surface of the excitement and frivolities lay more sombre thoughts of what lay ahead,” the historian astutely noted. No one had heard from RCMP Staff Sergeant Alfred Herbert Joy since he had arrived in Pond Inlet in September 1921 to investigate the murder of a white trader named Robert Janes (the second officer on Bernier’s 1910–11 expedition), so “no one quite knew what to expect.”<sup>44</sup>

The ship reached Button Point (Sannirut) on Bylot Island on 15 August 1922. Inspector Wilcox planned to visit the trading post and police detachment at Pond Inlet / Mittimatalik), but pack ice prevented the ship from entering and landing in Eclipse Sound. Instead, Bernier’s nephew Wilfred Caron and five Inuit from the Sannirut post paddled out in an old whaling boat to meet the ship, greeting their old friend Kapitaikallak (Bernier’s Inuktitut name) with great



CGS *Arctic* in the ice near Bylot Island, 1922. LAC e010858069-v8.

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<sup>44</sup> Quoted in Grant, *Arctic Justice*, 134. Joy’s instructions from RCMP Commissioner Aylesworth Bowen Perry on 6 July 1921 informed him of his appointment as Justice of the Peace in the NWT, Coroner, Special Officer of the Customs, and Postmaster of a post office at Pond Inlet. He was to carry out all responsibilities associated with these appointments; his “general duty” was “to enforce law and order in all the district tributary to Ponds Inlet” and his special duty was to investigate the murder of Janes. Although the letter said little directly related to sovereignty matters, an earlier letter from Perry to the President of the Privy Council, recommending Joy’s appointment, spoke of “administrative acts to confirm authority and possession over that territory.” Joy went to Pond Inlet on the Hudson’s Bay Company (HBC) ship *Baychimo* in the summer of 1921. Dr. L.J. Jackman, the medical officer of the expedition, said in 1948 that Joy had proclaimed Canadian sovereignty at Pond Inlet on 1 September 1921. See Perry to President of the Privy Council, 24 June 1921, LAC, RG 85, vol. 1515, file 1009-28 pt. 2; Perry to Joy, 6 July 1921, LAC, RG 85, vol. 1515, file 1009-28 pt. 2; Jackman to Louis St. Laurent, 21 April 1948, LAC, RG 85, vol. 1515, file 1009-28 pt. 2; and Jackman to Marius Barbeau, 30 April 1948, LAC, RG 85, vol. 1515, file 1009-28 pt. 2.

excitement. "The Eskimos are great fellows for shaking hands on meeting and leaving you," expedition secretary W.H. Grant noted in his diary. "They were taken down below and fed, afterwards appearing on deck. We had one of them up teaching him how to skip and he had quite a lot of fun and did well. They seem to be able to pick up things quickly and imitate everything you show them."<sup>45</sup> After the meal below deck, Caron arranged for an Inuk guide, and together they led two policemen from the ship in crossing the ice to summon Staff Sergeant Joy.<sup>46</sup>

The expedition members' first encounters with Inuit elicited mixed commentary. While waiting for the policemen to return, Craig and a small group of men went ashore to visit Captain Henry Toke Munn's trading station at Sannirut and the small Inuit camp (with one canvas tent and two sealskin *tupiiit*) adjacent to it. The young expeditionary secretary was taken by Inuit women dressed in sealskin boots and pants, with the hoods of their *amauti* (parkas) trimmed with green and red braids, and their facial tattoos piquing his curiosity. Dr. Livingstone, however, painted a more dismissive portrait of Inuit in his recollections of landing on Baffin Island on 18 August, where

for the first time [I] was introduced to the most primitive of the Eskimo. They were a dirty rather unkempt lot, the men with long lanky hair topped by tam o'shanter handed down to them by Scottish whalers. The women were short and squat, invariably, whether married or single, carrying small children in their hoods. They were all more or less garbed in sealskins which was the staple source of clothing. Their clothing was supplemented by such imported articles as they could purchase from traders or whalers.<sup>47</sup>

Dr. Livingstone and others would contrast what they saw as the shabby state of appearance of Canadian Inuit with the clothing and traits of their Greenlandic kin.

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<sup>45</sup> W.H. Grant Diary, 134 of this volume.

<sup>46</sup> *Report of the Royal Canadian Mounted Police for the Year Ended September 30, 1922* [hereafter "RCMP Report 1922"], *Sessional Paper No. 21* (Ottawa: King's Printer, 1923), 21.

<sup>47</sup> Livingstone, "Twenty-Five Years." The doctor noted that the visit represented "practically their first introduction to the practice of medicine," given that "the non-productiveness of the country" meant that "little vegetation of medicinal value was produced, with the result that unlike the Indians the Eskimo had next to no pharmacopial drugs."

Fortunately, the expedition leadership was more appreciative of Inuit and their expert knowledge of the land, which would be key to sustaining a permanent police presence in Inuit Nunangat (the current name for the Inuit homeland in Canada). Special Constable Qattuuq (Kakto in the documents), his wife Ulaajuk (Ooralloo), and their four children agreed to leave Pond Inlet to accompany Inspector Wilcox and six of the RCMP constables through their first winter at the Craig Harbour detachment. Historian Shelagh Grant recounted that they had reservations:

After much persuasion, Qattuuq ... finally agreed to accompany the police on the promise that it would only be for one year. His wife, Ulaajuk, was reluctant to leave, having four young children aged between three months and eleven years. Then just minutes before the ship departed, they finally packed up their *tupiq* and boarded the CGS *Arctic* – or “*Aati*” as it was called in Inuktitut. The young couple had earned the distinction of being the first Inuit hired by the RCMP north of Hudson Strait, but they would find the company of six policemen poor substitute for their friends and relatives. For Ulaajuk especially, it was a lonely and unpleasant experience.<sup>48</sup>



Qattuuq, his wife, Ulaajuk, and their children at Sannirut, prior to boarding CGS *Arctic* to work at the new RCMP detachment on Ellesmere Island. W.H. Grant Collection, LAC, PA-209524.

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<sup>48</sup> Grant, *Arctic Justice*, 137.

The Inuit family's presence, however, would prove essential to the Mounties, with Qattuuq sharing his subject matter expertise on living and travelling in Inuit Nunangat and Ulaajuk making winter clothing for the constables.<sup>49</sup>

The visit to Sannirut also led the expedition leaders to adjust their plans. Joy reported to Inspector Wilcox on 17 August, having travelled for more than thirty hours by canoe and dogsled to reach Wilcox on the ship. "Film footage shows him wearing a wool plaid shirt and knitted cap, his eyes sparkling and a grin stretching from ear to ear," Shelagh Grant observed. "In a re-enactment of his arrival scene for the camera, he is standing up in a canoe atop a qamutiik pulled by a team of dogs, as opposed to running alongside a sled that was pulling the canoe. Joy had received a hero's welcome."<sup>50</sup> After he shared the detailed reports that he had produced based on his investigations over the previous year, Inspector Wilcox and Commander Craig updated Joy on developments across the north and made preliminary plans for a trial of those responsible for the death of Robert Janes. The conversation eventually turned to the more immediate local situation, where the constable provided a sober appraisal of persistently poor ice conditions. Accordingly, Inspector Wilcox decided not to try to reach the post but to push on to Ellesmere Island and establish a detachment there, sending Joy back to Pond Inlet to watch over the prisoners and leaving the landing of stores at Pond Inlet for the return voyage.

CGS *Arctic* departed from the waters around Bylot Island on 18 August and sailed towards Ellesmere – a critical location, controlling sea routes to the north and west via Smith and Jones Sounds, as well as the route to the Sverdrup Islands<sup>51</sup> – to establish a police post there. "The northwest coast of Coburg Island was a beautiful sight when we passed it" on 20 August, Bernier recounted. "Six glaciers identical in width, grade



Mr. Lemieux observing at the binnacle on CGS *Arctic*. LAC a102619-v8.

<sup>49</sup> Tragically, within a year, two of their four children died of influenza, within days of each other. Lyle Dick, *Muskox Land: Ellesmere Island in the Age of Contact* (Calgary: University of Calgary Press, 2001), 289; Schledermann, "The Muskox Patrol," 103.

<sup>50</sup> Grant, *Arctic Justice*, 136.

<sup>51</sup> Steele, *Policing the Arctic*, 234.

and extent, were in sight, flanked at either end by one narrower and much steeper." He observed "hundreds of small seals," "literally millions of water-fowl, principally little auks," several bears, and fourteen walruses "asleep on a pan of ice within a hundred yards of the ship" that evening.<sup>52</sup> The many photographs taken en route reinforce that the expedition members were captivated by the sublime natural surroundings through which they sailed.<sup>53</sup>

Environmental conditions continued to reshape plans. When ice blocked access to Fram Fjord, the most easterly inlet on the south coast of Ellesmere, the Mounties decided to establish their post in a small bay close to King Edward VII Point at the southeastern tip of the island, which Captain Bernier and Inspector Wilcox named Craig Harbour in honour of the expedition leader. "Then followed eight days of feverish haste and almost unceasing work," Bernier recounted. "Two years equipment and supplies for seven men had to be taken ashore and sorted out, while living quarters and a storehouse had to be erected or at least brought so far along towards completion, that the police could with safety be left to their own resources."<sup>54</sup> Major Logan, the representative of the Air Board, found a sufficiently level and smooth site for an aerodrome on the opposite side of the valley, which he marked by planting the Canadian Air Force ensign. As the documents in this volume attest, expedition members completed photographic, cinematographic, and physical surveys of the area. Plane table and photographic surveys were made of the area; observations for latitude, longitude, and azimuth were taken; and a bronze tablet marked "Canada, N.W.T. 1" was set in solid rock, "signifying the first tablet set in Franklin District under the direction of the North West Territories Branch" of the Department of the Interior.<sup>55</sup>

With the bay at Craig Harbour filling with ice on the night of 28 August, Bernier "decided that winter in the harbor was too close at hand to take any further chances." He picked up the last mail and bade farewell to Inspector Wilcox, his six men, and Qattuq's family in a blinding snowstorm. *Arctic* steamed out of the bay with three long blasts of her whistles just after midnight.<sup>56</sup> At Wilcox's request, the expedition sailed to Dundas Harbour on Devon Island to inspect a possible headquarters site. The lack of communication and easy travel

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<sup>52</sup> Bernier, *Master Mariner*, 373.

<sup>53</sup> On the Arctic sublime, see Chauncey C. Loomis, "The Arctic Sublime," in *Nature and the Victorian Imagination*, ed. U.C. Knoepfelmacher and G.B. Tennyson (Berkeley: University of California Press, 1977), 95-112.

<sup>54</sup> Bernier, *Master Mariner*, 373-74.

<sup>55</sup> Smith, *Historical and Legal Study*, 343.

<sup>56</sup> Bernier, *Master Mariner*, 374.

between Devon, Ellesmere, and Baffin Islands, the unexpected delays that the expedition had already encountered, and a shortage of Inuit helpers led him to postpone construction of the Devon Island post for another year. Again, Major Logan seized the opportunity to document local conditions and assess prospects for landing aircraft in the area.

On the return voyage to Pond Inlet, *Arctic* passed by Captain Munn's ship, *Albert*, off Button Point (Sannirut) on 1 September, prompting a visit from Caron and his crew of a dozen Inuit – four of whom remained to help the expedition members unload the police supplies and equipment at the post planned for nearby. The Eastern Arctic Patrol reached the entrance to Pond Inlet on 2 September, but once again *Arctic* encountered impassable ice that delayed its advance. Still unable to reach the Hudson's Bay Company (HBC) post near Salmon River, the ship anchored in Albert Harbour, where the crew unloaded twenty-five tons of coal and took on 120 tons of stone for ballast. Inuit workers provided vital assistance for which they were paid with tea and sea biscuits, tobacco, ammunition, and beads. Then, following in the tradition of the whaler captains who had plied those waters, Bernier hosted a party on the deck of the ship. About 150 Inuit attended, with expedition secretary W.H. Grant describing the women "in native dress with beads worked in all over their deer-skin clothes although some had on sealskins. They were a jolly lot, some big, some small, fat and lean ... The women seem to have padded shoulders and partly padded ankles ... Lime juice was served to them as well as hard tacks, the music was started



"Ponds Inlet Eskimos on board 'Arctic,'" 2 September 1922. W.H. Grant Collection, LAC, e002282909.

consisting of an accordion and a violin and they started to dance a sort of square dance and some other dance.” After the festivities ended at around midnight, the Inuit visitors returned to Munn’s ship, *Albert*, where the trader simultaneously translated Craig’s explanation to the Inuit group about why the police had come to Pond Inlet.<sup>57</sup>

Soon after Munn and Caron departed on *Albert*, the HBC ship *Bayeskimo* – a new vessel boasting modern communications equipment that had been launched the previous year and that Craig looked upon with envy – appeared in the sound.<sup>58</sup> Both ships managed to get close enough to the beach in front of the trading post, allowing *Arctic* to begin landing the supplies and equipment for the RCMP post. As Finley McInnes narrates, it was an arduous task operating the motorboats between the ship and shore amidst the ice.<sup>59</sup> Members of the expedition met with Inuit living in caribou-skin tents around the HBC buildings, captured the scene in photographs, and distributed spare clothing to the local residents. A bronze tablet, No. 2, was set in a large boulder as a survey marker, but a shortage of time meant that only preliminary survey work was accomplished. “A considerable amount of material was immediately sent ashore and a beginning was made on the Mounted Police quarters,” Bernier recounted, until ice pans began to menace the ship in the late afternoon of 7 September:

The whistles barked a warning and the working party ashore immediately came aboard. The *Bayeskimo* hoisted anchor likewise and ran for safety, steaming about during the night to avoid the ice. That night was a bad one. A heavy wind accompanied by driving snow entirely cut off sight of land, while the ship was almost completely at the mercy of rushing ice pans.<sup>60</sup>

Bernier insisted that *Arctic* not stay any longer than was required, with the HBC Post already located there and local Inuit available to help Joy and his new detachment. Accordingly, the group resumed unloading operations the next day and, when the last loads were sent ashore around 4 p.m., the captain weighed anchor. “The last letters were received and farewells said,” Bernier noted, “and about 9 p.m. the whistle bade farewell to the men ashore, and incidentally set a hundred dogs mournfully howling.”<sup>61</sup> Staff Sergeant Joy, who had been living at the recently established HBC post, was left in charge of the new RCMP post,

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<sup>57</sup> Grant, *Arctic Justice*, 138. See also W.H. Grant diary in this volume, 148–49.

<sup>58</sup> Craig’s daily journal, 5 September 1922, in this volume, 74–76.

<sup>59</sup> Finley McInnes, “First Trip to the Arctic,” in this volume, 194.

<sup>60</sup> Bernier, *Master Mariner*, 374.

<sup>61</sup> Bernier, *Master Mariner*, 374.



with the three remaining members of the RCMP (a corporal and two constables) assigned to serve with him.<sup>62</sup>

On its southbound voyage, the ship sailed across Baffin Bay and called at Disko Island, Greenland.<sup>63</sup> The Canadian testimonies are revealing in their praise for the Greenlandic community at Godhavn (Nuuk) and the role of the Danish colonial government. “The whole place is as bright as a new pin, neat and orderly, well kept and a credit to the Danish Government,” Craig noted in his diary on 13 September. “The inhabitants show the same healthy signs of loving care by a Paternal government.” Such language is jarring in 2022, but it speaks to the mentality of the time, which saw the extension of colonial state control as a benevolent force. “The Danes have apparently gone after this question of protecting the Eskimos in the proper manner,” Craig observed. “The contrast between conditions here among the Eskimos and conditions among the Eskimos we left only a few days ago at Ponds Inlet is not only marked but painful. Instead



“Group of Natives at Godhavn,” September 1922. Department of Indian and Northern Affairs Canada, LAC, accession 1974-366.

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<sup>62</sup> Originally, Dr. Livingstone had planned to stay at Pond Inlet that winter, but plans changed when a member of the surveying crew suffered a serious accident and required daily attention. Grant, *Arctic Justice*, 139.

<sup>63</sup> Smith noted that “the Canadians showed no inclination to try to ignore or circumvent formalities and regulations in Greenland, as they suspected the Danes themselves had done in Ellesmere,” and Inspector Wilcox had secured advanced permission for the ship to land at Godhavn. Smith, *Historical and Legal Study*, 344.

of the filth, squalor and horrible smells of the settlement at the [Hudson's] Bay Post and Captain Munn's Post with the squabbling dogs, dirty youngsters and piles of refuse, we have a neat clean settlement and everything spick and span." He applauded how "the government takes care of the natives by force both physically and morally and no doubt many a good leaf with regard to handling the Canadian Eskimos could be taken out of the Danish records of their experience since they have fathered the Greenland Eskimos." Other testimonies by Eastern Arctic Patrol members also extolled the efficiency of the Danish administration in Greenland. For Craig, the lessons were clear: "the time has come when the Canadian Government must step in and protect not only the caribou and the musk-ox but the Eskimos themselves."<sup>64</sup> His appeals did not prompt action in Ottawa, however, apart from Northwest Territories and Yukon Branch director Oswald Stirling Finnie's promise to send someone to examine the situation and make a report.<sup>65</sup>

When the members of the Eastern Arctic Patrol returned to Quebec on 2 October 1922, they were greeted with media fanfare – a contrast with the quiet setting in which they had departed from the Quai du Roi a few months before.<sup>66</sup> *The Globe*, Canada's most widely circulated English-language newspaper, published six articles on the patrol, two of which offered front-page coverage that amplified Canada's sovereignty through "to the shadow of the North Pole."<sup>67</sup> Captain Bernier noted that the news media attention brought the Arctic into a sharper Canadian focus. "All that country in the north and westward which before was marked on the map in a vague, uncertain kind of way we may now claim as a part of the Dominion of Canada," he proclaimed. "The Dominion extends to the North Pole. It is for us to claim it and make sure of it. That land, barren and bleak as it may seem, is for us to use in some way."<sup>68</sup>

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<sup>64</sup> Craig diary in this volume. Others echoed a similar sentiment. "All the settlements have a remarkably neat and clean appearance," Bernier noted. "The native people look healthy, contented, well dressed and prosperous. It is to be hoped that in the course of time our Canadian Eskimos will present as satisfactory an appearance." Bernier, *Master Mariner*, 374.

<sup>65</sup> Grant, *Arctic Justice*, 141.

<sup>66</sup> Saint-Pierre, *Joseph-Elzéar Bernier*, 274-75.

<sup>67</sup> F.C. Mears, "Prepare to Push Boundary to Shadow of North Pole," *The Globe*, 13 July 1922, 1; "Embarks Today for Arctic to Guard Canada's Rights," *The Globe*, 18 July 1922, 1.

<sup>68</sup> "Bystander at the Office Window," 5.

Craig, in his writings, also reinforced that the driving idea was to ensure that “Canada [remained] for the Canadians.” The expedition leader laid out his logic in a 5 September diary entry:

This is a point that should be looked into for the future, the old cry of “Canada for the Canadians” might be wisely enforced here. Denmark keeps Greenland absolutely for Danes and it would appear to be a good business to charge foreigners a much higher license than British Subjects so that fake? purely scientific parties like Rasmussen’s and MacMillan’s would find little or no [inducement] to come into the country. Captain Munn and his company have considerable money invested in the northland, Rasmussen and Macmillan have practically none and still they can come into the country by paying a nominal fee and interfere with the business of legitimate traders [to] the extent of four thousand dollars and this in one locality only. The home trader should be better protected.<sup>69</sup>

The fact that Munn, an English trader, generated less suspicion than a Dane/Greenlander and an American also spoke to Craig’s – and Canada’s – sense of loyalty at the time.<sup>70</sup> It also testified to a perceived sense of need to demonstrate Canadian control over and in its Arctic. “Canada’s northern sovereignty did not, as Harkin so fervently believed, hang on the immediate establishment of effective occupation in 1921–1922,” Cavell and Noakes astutely noted, “but once that occupation had become a fact, the likelihood of actual challenges was dramatically reduced.” The patrols provided “irrefutable proof of Canadian jurisdiction over the archipelago.”<sup>71</sup>

The RCMP officers who remained at their new northern outposts contributed to Canadian sovereignty in a direct manner, representing, in the words of historian Morris Zaslow, “the most important single administrative agency in the North during the interwar period.”<sup>72</sup> Smith concluded that:

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<sup>69</sup> See Craig’s diary in this volume.

<sup>70</sup> See, for example, the documents in Janice Cavell, ed., *Documents on Canadian External Relations: The Arctic, 1874–1949* (Ottawa: Global Affairs Canada, 2016), and P. Whitney Lackenbauer and Peter Kikkert, “The Dog in the Manger—and Letting Sleeping Dogs Lie: The United States, Canada and the Sector Principle, 1924–1955,” in *International Law and Politics of the Arctic Ocean*, ed. Suzanne Lalonde and Ted L. McDorman (Leiden: Brill Nijhoff, 2015), 216–39.

<sup>71</sup> Cavell and Noakes, “Origins of Canada’s First Eastern Arctic Patrol,” 108.

<sup>72</sup> Morris Zaslow, *The Northward Expansion of Canada, 1914–1967* (Toronto: McClelland and Stewart, 1988), 202.

The main accomplishment of the expedition was the establishment of Craig Harbour and Pond Inlet, each of which was to serve triple duty as RCMP post, post office, and customs house. Craig summarized this and the other achievements of the expedition in his published report. He observed that the Janes murder case, the presence of traders, and the entry almost every season of expeditions from outside warranted the maintenance of RCMP posts, and he already envisaged the establishment of several others.<sup>73</sup>

By the end of the summer, Wilcox and his men were established in the forlorn camps that were to be their homes for the next two years. The RCMP posts established at Craig Harbour on Ellesmere Island and Pond Inlet on Baffin were the beginnings of what was to become a far-flung net of Arctic police posts.<sup>74</sup>

The subsequent story of the RCMP presence in the High Arctic has been woven into the basic fabric of that region's history, and the summer cruise of *Arctic* and its successors to re-supply the police posts and to support an ever-increasing range of government services became an annual activity.<sup>75</sup> As Shelagh Grant summarized about the Pond Inlet detachment established in 1922, "over the next year Joy would be a role model, teacher, and mentor for Corporal Finley McInnes (Uqarajuittuq), Constable H.P. Friel (Makkulaaq), and Constable William MacGregor (Umilik)." With no crimes reported and no investigations, they collected information from Inuit about the region and its history, producing local maps showing the locations of their camps, wildlife resources, sled trails, and caribou crossings." The Mounties "also learned about Inuit culture and acquired some Inuktitut. Their education while on patrol encompassed some of the small but crucial details of Arctic life, such as how to keep hungry dogs out of one's snow house, the importance of stowing dog harnesses and leads on top of a snow house to prevent them from being eaten, the ability to predict a weather change, and the art of using a dog whip without wrapping it around one's head. Assistance

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<sup>73</sup> Smith, *Historical and Legal Study*, 343.

<sup>74</sup> For example, due to limited space, *Arctic* could not support the original plan to establish a post on North Devon Island, materials and stores for which had remained in storage in Quebec. After wintering at Craig Harbour, Inspector Wilcox deemed it an unsuitable headquarters for the northern detachments and promoted Dundas Harbour along Lancaster Sound, which was usually clear of ice for longer than Jones Sound, boasted a harbour well protected from all winds, and had "room and shelter for buildings and a good anchorage close at hand." *RCMP Report 1922*, 21.

<sup>75</sup> See C.S. Mackinnon, "Canada's Eastern Arctic Patrol 1922–68," *Polar Record* 27, no. 161 (1991): 93–101, and Smith, *Historical and Legal Study*.

was given to the sick, where and when possible.”<sup>76</sup> The RCMP developed deep admiration and respect for the Inuit and their ways of life, emerging as “the self-appointed guardians of the Inuit” in the interwar period.<sup>77</sup> The mixed legacies of this relationship remain with us today.<sup>78</sup>

## An Introduction to the Sources

When the Eastern Arctic Patrol returned to the south, some members of the expedition put pen to paper – while others had been typing their reports along the journey. These first-hand accounts offer poignant insights into the 1922 expedition, narrating what happened from various perspectives as well as revealing the values, ideas, and goals of these men in their own words.

### John Davidson Craig

The official published log and unpublished daily journal of the expedition leader and Department of the Interior employee J.D. Craig provide the perspective of the man in charge. With the innocuous title of “advisory engineer” responsible for planning and executing the 1922 expedition,<sup>79</sup> Craig bore the main responsibility for seeing the mission’s goals completed, and this onus is reflected in his writings. His journal focuses primarily on the mission and the patrol’s accomplishments, offering less insight into the day-to-day social life than other narratives in this volume. Nevertheless, it is an indispensable source of detail on what happened where, as well as the challenges that the expedition had to overcome. While newcomers to the region marvelled at what they considered exotic, Craig’s writing presents the north as simply another part of his home country. In this sense, his narratives supported the government’s goal of integrating the Arctic into the Dominion, treating it as an integral and inherent part of Canada.

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<sup>76</sup> Grant, *Arctic Justice*, 141.

<sup>77</sup> See Ryan Shackleton, “‘Not Just Givers of Welfare’: The Changing Role of the RCMP in the Baffin Region, 1920–1970,” *Northern Review* 36 (2012): 5–26.

<sup>78</sup> See, for example, Qikiqtani Truth Commission (QTC), *Paliisikket: Policing in Qikiqtaaluk* (Iqaluit: QTC, 2013); Courtney Edgar, “Inuit org wants RCMP to acknowledge historical wrongdoings,” *Nunatsiaq News*, 12 September 2018; and Kent Driscoll, “Monument marking Inuit RCMP contribution in Nunavut unveiled in Iqaluit,” *APTN News*, 2 December 2021, <https://www.aptnnews.ca/national-news/monument-marking-inuit-rcmp-contribution-in-nunavut-unveiled-in-iqaluit/>.

<sup>79</sup> Grant, *Arctic Justice*, 97.

## William Harold Grant

William Harold Grant had never been north before 1922. Born in Ottawa on 13 January 1901, he tried to enlist in the Canadian Expeditionary Force in August 1915 by claiming to have been born four years earlier. His attestation paper lists his occupation as clerk.<sup>80</sup> In his role as the Eastern Arctic Patrol's secretary, he typed (and perhaps wrote) the official diary journal for J.D. Craig, as well as producing an initial report for Major Logan on aviation in the north, which was attached to Craig's published report.<sup>81</sup> Grant also kept a personal diary that contains his reflections on daily events and adopts a much different tone than the other written works.

In many respects, Grant's diary takes on characteristics of an adventure story, documenting weather, landscapes, exotic flora and fauna, and the personalities of

the expedition members. It is a rich source of insight into the social life aboard the ship and the relationships between members – from pranks and poker games used to entertain the party while at sea, to incidents such as spills in the dining hall, to interpersonal friction. In his 31 July lecture, Captain Bernier warned the members of the patrol that

sometimes a man has an ill feeling toward his neighbour; he should take no notice of this, but go out and take plenty of exercise and drive that feeling from his mind. [If] it is not rectified before he leaves this feeling will invariably go on for years. When a man sees the same face



Captain Bernier with William H. Grant, secretary for the 1922 Eastern Arctic Patrol. W.H. Grant Collection, LAC, PA-209174.

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<sup>80</sup> "Grant, William Harold," LAC, RG 150, accession 1992-93/166, box 3739-12, <https://central.bac-lac.gc.ca/.item/?op=pdf&app=CEF&id=B3739-S012>.

<sup>81</sup> See Grant diary, 20 September 1922.

day after day and month after month he gets tired of seeing it and takes particular notice of all the small wrinkles that are on that face, which seem to get larger and larger in his sight until he wishes he was miles away from it.

Grant's deteriorating relationship with the ship's cameraman, George Valiquette, was a case in point.<sup>82</sup> His frustrations about alleged favouritism (and the captain purportedly hoarding wine and booze) reveal the pervasiveness of gossip, as well as the petty jealousies that arise during a long expedition.

Because Grant's personal diary was not intended for a public audience, he mentions dynamics, blunders, and humorous moments omitted from the official reports. Descriptions of the awful heat and stench of *Arctic's* lower decks, crew members getting drunk on homebrew and looking for fights, and playing cards and reading to kill the boredom during long stretches on open sea, provide unparalleled glimpses into life aboard the vessel. His detailed observations of Inuit reveal both curiosity and appreciation, confirming his expectations (noted in his diary on 31 July) that "Eskimos are a fine people and very sociable both amongst themselves and with strangers." If his diary entries and photographs are indicative, he made positive impressions on the Inuit whom he met – and vice versa, including a sixteen-year-old Inuit girl whom he found particularly attractive and danced with on 3 September. "The missionaries have been at work amongst some [Inuit]," he noted four days later, "... and from my point of view they are doing more harm than good." He did not disclose his reasons, but he lamented leaving Inuit Nunangat given that he "found the natives so sociable and they would do anything for you and they are all honest."

### Herbert Patrick Lee

Herbert Patrick Lee joined the Royal North West Mounted Police in February 1920 and served as a Mountie until early January 1925, when he moved to the United States and wrote books based upon or inspired by his Arctic experiences. The excerpt relating to the 1922 expedition from his memoir *Policing the Top of the World* (published in 1928)<sup>83</sup> furnishes polished descriptions of the

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<sup>82</sup> *Editors' note:* Grant claimed that the entire patrol disliked Valiquette, yet none of the other accounts confirm this allegation.

<sup>83</sup> Lee quickly followed *Policing the Top of the World* with several other books, including *Baffin's Gold*, *Heritage of the North*, *The Girl from Baffin Island*, *Hell's Harbour*, and *North of the Stars* (1936). While working as a reporter for the *New York Sun*, he was killed when hit by a freight train on Long Island on 11 November 1936. Lee Point, located at 76°23'40" N, 82°16'00" W, Ellesmere Island, Nunavut, is named after him.

Arctic land and seascapes, the ship's "battle" with the ice, and interactions with Inuit. "The natives had seen comparatively few white men, and their tribe [*sic*] was the most northern of all tribes living north of the American continent," Lee wrote. "Between Pond's Inlet and the Pole stretched a vast frozen wilderness devoid of a single human being." Reflections such as this evoked a strong sense of isolation – and of the pioneering nature of the trip to Ellesmere to establish an RCMP post literally north of the Inuit lands.

### Finley McInnes

Finley McInnes offers a Mounted Police voice on the 1922 Eastern Arctic Patrol. Born on 19 September 1893 in Lucknow, Ontario, McInnes earned a first class engineer's certificate and was travelling across Western Canada when the First World War broke out. He enlisted in 1915, served overseas with the Canadian Expeditionary Force until taken prisoner during the 2<sup>nd</sup> battle of Ypres in 1916, and remained a prisoner of war until November 1918. Less than a year later, in August 1919, he enlisted in the Royal North West Mounted Police. He was promoted to corporal in 1920, applied for northern service the following year, and headed to Pond Inlet on the Eastern Arctic Patrol with two other Mounties, where he would serve under the guidance of Staff Sergeant Alfred Herbert Joy.<sup>84</sup>

McInnes's account differs from the others in that he narrated it retrospectively, while in his mid-eighties, in the late 1970s. Because more than a half century had passed between the Eastern Arctic Patrol and McInnes's recollection, the sands of time had worn away some of the particulars of his story, but what his narrative lacks in detail it compensates for in insight. Known as "Uqarajuittuq" ("the man who did not talk much") amongst Inuit at Pond Inlet, McInnes took a keen interest in Inuit, accompanied them on extensive hunting expeditions, and sought out their expert knowledge. "His early diaries reflect an unusual sensitivity, affection and respect for the indigenous peoples," Shelagh Grant observed, "and his reports on criminal investigations were usually accompanied by requests for clemency and understanding."<sup>85</sup>

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William J. Hulgaard and John W. White, *Honoured in Places: Remembered Mounties Across Canada* (Surrey: Heritage House, 2002), 98.

<sup>84</sup> "Biographical Note: Corporal Finley McInnes, RCMP 1919-1936," Shelagh Grant Papers, Trent University.

<sup>85</sup> "Biographical Note: Corporal Finley McInnes."



**Robert Archibald Logan**

Major Robert A. Logan, an officer with the Canadian Air Force, wrote his account of the Eastern Arctic Patrol after the party returned to Quebec. Born to small land-owning farmers in Middle Musquodoboit, Halifax County, Nova Scotia, on 17 August 1892, Logan helped his mother on the farm while attending high school before continuing his education at the Nova Scotia Technical College and the University of Alberta. He began surveying in 1910 and received his Dominion Land Surveyors certificate in 1914. He enlisted in the Canadian Expeditionary Force in Edmonton on 29 January 1915, studied flying at the Curtiss Aviation School in Toronto (at his own expense), received his pilot certificate, and went overseas to serve with the Royal Flying Corps as a second lieutenant. During the war, he distinguished himself as a pilot and navigator and was involved in training other pilots. On 8 April 1917, he was shot down behind enemy lines in an aerial attack led by the famous German ace Baron Manfred von Richthofen ("the Red Baron"). He survived the crash and was captured by the German Army along with his observer, Reginald Harry (the son of the mayor of Edmonton). They spent the remainder of the war (630 days) as prisoners of war in six different German camps.<sup>86</sup>

After the war, Major Logan studied meteorology, aerial navigation, and wireless communications. In 1920, he took charge of the Ground Instruction School at Camp Borden, training airmen for the fledgling Canadian Air Force (formed in May 1920). In early 1922, he was assigned to join J.D. Craig (another land surveyor by training) on the Eastern Arctic Patrol. Officials recognized that before air operations could be safely and effectively undertaken in the Arctic, they would need to amass precise information about the climate and working conditions that aircrews would face. Accordingly, Logan's task was

to endeavour to obtain as much information as possible regarding flying conditions (in the Arctic Archipelago), and from investigations made actually in the country concerned to submit suggestions which might be of assistance in determining the types of aircraft suitable for use and methods for their employment in various ways in the northern Archipelago.<sup>87</sup>

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<sup>86</sup> Based on biographical sketches in Provincial Archives of Alberta, Robert Logan Fonds, and Dalhousie University Archives MS-2-580 – Robert A. Logan Fonds, as well as his attestation paper in LAC, RG 150, accession 1992-93/166, box 5715-35.

<sup>87</sup> R.A. Logan, *Report of Investigations on Aviation in the Arctic Archipelago carried out during the summer of 1922* (henceforth *Logan Report*), DHH 74/414, reproduced in this volume.

Given Logan's expertise as a surveyor and his robust knowledge of meteorology, aerial navigation, and wireless (radio), as well as his previous experience in northern Canada, the officer proved "splendidly qualified for the task."<sup>88</sup> While the main focus of his report is the logistics of bringing flight to the Arctic, his goal overlapped significantly with that of the broader expedition. Logan was charged with shrinking the distance between north and south via aviation. He emphasizes in the opening of his report:

Just as the horse replaced the ox and the motorcar replaced the horse as the chief factor of transportation in towns and country, so in time will aircraft and wireless replace the canoe and dog-train as the chief means of travel and communication over large areas of Canada which today can only be reached with great difficulty with ordinary methods of travel.

His mission paralleled the patrol's effort to integrate the Arctic into Canada as a whole.

Logan's comprehensive report on aviation in the Arctic naturally reflects his personal background and the organizational environment of which he was a part. As a member of the defence establishment, he looked at the Arctic Archipelago from the point of view of a military strategist. He also assumed that pioneering aviation enterprises in the North would, of necessity, be carried out under government sponsorship and that the Canadian Air Force would be the agency that carried out the actual work involved. This latter aspect does not mean that Logan saw the Canadian Air Force having a uniquely important role to play in opening up the North. Rather, it reflects the primitive state of the organization of aviation in Canada at the time. In 1922, the Mackenzie King administration was in the process of merging civil and military aviation under a single director of the Canadian Air Force within the Department of National Defence. While it was possible to distinguish between flying done as purely military training and flying done "in support of other government departments," all the actual work was done by the same group of people using the same group of aircraft. Logan was selected by the Air Board in his capacity as an expert on aviation, not in his capacity as an officer of one of the three fighting services.

Logan produced a formal report rather than a diary. His conclusions were prescient, connecting sovereignty aspects of northern policy to the realm of security. Logan warned of a scenario in which some great Slavic power, such as Russia, descended upon Europe. Arctic aviation would be ideal for Canada to

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<sup>88</sup> J.R.K. Main, *Voyageurs of the Air* (Ottawa: Queen's Printer, 1967), 76.

destroy the aircraft of this enemy state as a preventative measure. In many respects, the officer's thoughts were a generation ahead of their time, correctly anticipating the development of aviation technology and even the potential enemy that Canada would face during the Cold War. Logan built an analytic model which depicted four classes of global aviation, explaining that the last two classes (which included sub-Arctic and Arctic flying) would require special equipment, skills, and support facilities. On the grounds of defence alone, he urged that Canada should take the necessary steps to master northern flying. The "Logan Report" is an important historic document containing the first suggestion that the Far North had a strategic role to play in the defence and security of Canada.

### **Note on Context**

The authors' writing styles and turns of phrase reflect the era in which they wrote, and we have wielded a light editorial hand to preserve that context. For example, the word "Eskimo" was still in common usage, and, although it has now been replaced by "Inuit," we have retained the original term as it appeared in the original documents. Certain parts of this volume also contain gendered language and what Library and Archives Canada describes as "historical language and content that some [readers] may consider offensive, for example, language used to refer to racial, ethnic and cultural groups." Nevertheless, we have retained the language from the primary sources "to ensure that attitudes and viewpoints are not erased from the historical record,"<sup>89</sup> with full anticipation that this material should invite and stimulate further discussion.

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<sup>89</sup> LAC, "Historical language advisory," <https://www.bac-lac.gc.ca/eng/about-us/about-collection/Pages/notices.aspx#lang>.

## Members of the Expedition

John Davidson Craig, expedition leader

Captain J.-E. Bernier

Lazare-Désiré Morin, First Officer

Léonidas Lemieux, Second Officer

Dr. Leslie D. Livingstone, Doctor

W.H. Grant, secretary

Major R.A. Logan, surveyor

L.O. Brown, surveyor and meteorologist

T.P. Reilly, assistant surveyor

G.H. Valiquette, cinematographer

C.J. Blair, radio operator

Inspector C.E. Wilcox, RCMP

Corporal Finley McInnes, RCMP

Corporal B.C. Jakeman, RCMP

Constable H.P. Friel, RCMP

Constable C.G. Fairman, RCMP

Constable L.F. Fielder, RCMP

Constable H.J. Must, RCMP

Constable E. Anstead, RCMP

Constable H.P. Lee, RCMP

Constable W.B. MacGregor, RCMP

Albert Thériault, Chief Engineer

Philippe Laperrière, Second Engineer

Gaston Barras, oiler

Lucien Dendron, oiler

Albert Leclerc, stoker

Henri Legrand, stoker

Josaphat Boulanger, stoker

Donat Bertrand, stoker

Honoré Morin, cook

Emile Deschênes, cook's assistant

George-J. Vinet, steward

Gérard Dubois, assistant steward

J.E. Vaillancourt, waiter

Samuel Fleury, waiter

Adjutor Leclerc, boatswain

Napoléon Normand, quartermaster

Claude Vigneau, quartermaster

Napoléon Chassé, quartermaster

Joseph-W. Poitras, seaman

Hypolite Arsenault, seaman

Alfred Lévesque, seaman

First Officer Morin, Captain Bernier, and Second Officer Lemieux. LAC e10858058-v8.

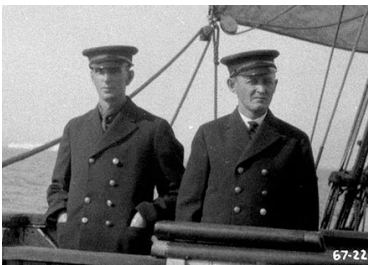




Technical Officers: Craig, Brown, Logan, Blair, Grant, Reilly, Livingstone, and Valiquette. LAC e10858058-v8.



Mounties. LAC e10858061-v8.



Engineers: Theriault and LaPierre.  
LAC a102578-v8.



Oilers. LAC a10858079-v8.



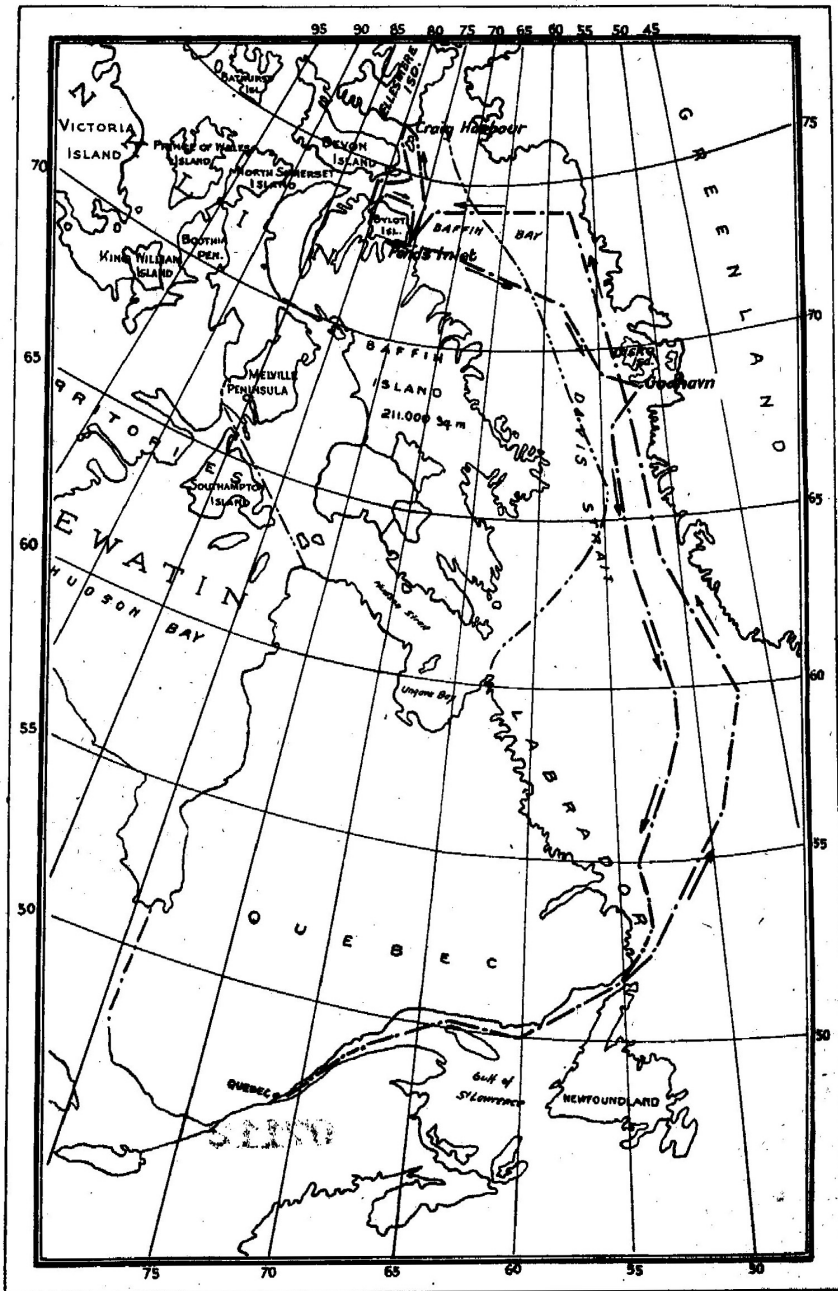
Firemen. LAC a102580-v8.



Steward's gang. LAC a102579-v8.



Crew of CGS *Arctic*. LAC a10858082-v8.



"Track of the C.G.S. Arctic, 1922," in J.D. Craig, *Canada's Arctic Islands: Log of the Canadian Expedition 1922* (Ottawa: King's Printer, 1923), frontispiece.

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J.D. Craig, “Canada’s Arctic Islands”

CANADA’S ARCTIC ISLANDS  
*LOG OF CANADIAN EXPEDITION*

1922

By J. D. CRAIG, B.Sc., D.L.S., M.E.I.C.  
International Boundary Commission

WITH AN APPENDIX  
AVIATION IN THE ARCTIC  
BY MAJOR R. A. LOGAN  
Department of National Defence



J.D. Craig

F. A. ACLAND  
Printer to the King's  
Most Excellent Majesty  
Ottawa  
1923



CANADA'S ARCTIC ISLANDS  
The C. G. S. "Arctic" Expedition During 1922

BY J. D. CRAIG

One of the greatest, possibly the greatest, of Canada's unexploited treasures of natural resources may develop in that region known as the Arctic archipelago, which lies north of the mainland of the North American continent and to the westward of Greenland. While this whole region is ordinarily looked on as a vast, icebound, inhospitable, and barren waste, the Canadian Government has been sending occasional expeditions to explore and report upon it and gradually the amount of information available concerning it is increasing. Just as Alaska, years ago, was considered by the majority of people to be practically valueless, so there is even to-day a strong belief in many quarters that our northern islands have practically no economic value. Alaska, however, has proved to be a source of no inconsiderable revenue, as had been foreseen by those who were instrumental in promoting its purchase by the United States, and to-day those who have had the opportunity of analyzing the data on file about, our northern islands believe that some day, possibly in the not too distant future, our little known far northern districts will prove to be more, than merely a source of interest to the explorer, the big game hunter, and the trader.

The islands of the Arctic [archipelago] extend from the north side of Hudson bay and Hudson strait, in 62 degrees north latitude, to 83 degrees north latitude, a distance of 1,500 miles. Their greatest extension westward is along the 73rd parallel, from the west side of Baffin bay to 125 degrees west longitude, a distance of 500 miles.

Following is a list, subject to corrections, of the islands having an area greater than 500 square miles, with their approximate areas: (a)

Area	square miles
Southampton.....	19,100
Baffin..	211,000
Bylot..	5,100
North Somerset..	9,000
Prince of Wales..	14,000
King William....	6,200
Victoria.....	74,400
Banks..	26,400
North Devon..	21,900
Ellesmere....	76,600
Axel Heiberg..	13,200
Cornwallis..	2,700
Bathurst.....	7,000
North Cornwall..	600

King Christian....	2,600
Amund Ringnes..	2,200
Ellef Ringnes..	4,800
Eglinton..	700
Melville..	16,200
Prince Patrick....	<u>7,100</u>
	520,800

(a) The above list does not include islands reported by Canadian Arctic Expedition, 1913 to 1918.

This, it might be pointed out, is slightly greater than the combined areas of Alberta and Saskatchewan.

## The Expedition of 1922

In line with the policy of the Government, and continuing the work inaugurated years ago when expeditions were sent north under Commander A. P. Low and Captain J. E. Bernier, the Department of the Interior, through its North West Territories Branch, organized an expedition in 1922, and the result was the establishment of police posts, customs houses, and post offices at various points throughout the North, the intention being to establish additional similar posts from year to year until there is assurance that Canadian laws and regulations will be well administered in the regions controlled by these outposts of civilization.

Certain facts brought out in 1920 by the investigations conducted by the Reindeer and Musk-Ox Commission impressed upon the Government the necessity of taking immediate steps to protect both the natives and the big game in the far north. Trading companies, British and foreign, were establishing posts and sending expeditions into that region, and it seemed expedient to have the Canadian Government represented on the ground by members of the Royal Canadian Mounted Police.

It was at first intended to send an expedition north in 1921, but this was later abandoned. Captain H. C. Pickels, of Mahone Bay, Nova Scotia, was appointed in command of the ship *Arctic* upon her transfer from the Department of Marine and Fisheries late in 1920. Captain Pickels had had long experience in northern navigation and came highly recommended by Dr. W. T. Grenfell, of Labrador fame. He had immediate charge of all work in connection with the repair and outfitting of the ship from the time of his appointment until his regrettable and very sudden death on October 1, 1921. During his comparatively short connection with the Department, he had endeared himself to all by his cheery good will and by his devotion to his work, and his untimely demise was much regretted.

The ship remained in winter quarters until June, 1922, when Captain J. E. Bernier, who had been appointed to succeed Captain Pickels, took command. Captain Bernier's previous experience in the north, both on Government expeditions, when in command of the *Arctic* on some of her previous voyages, and on private enterprises in command of a ship of his own, made him a particularly valuable official for the Government from every

point of view and the experience of the past season showed that their confidence in him had not been misplaced.

On June 9 instructions reached the North West Territories Branch to go ahead with the work so that it was only by the very closest kind of co-operation between the Department of Marine and Fisheries, the Royal Canadian Mounted Police and the Department of the Interior that the expedition was enabled to sail from Quebec on July 18.

The writer had the honour of being chosen as Officer in Charge of the Expedition, the duties of this office also including the general supervision of all repair work in connection with the ship and purchasing of supplies for the voyage.

The C.G.S. *Arctic* had been for several years in the lightship service under the Department of Marine and Fisheries, acting in that capacity during the season of navigation at the Lower Traverse below Quebec. By Order in Council she was transferred to the control of the Department of the Interior for the purposes of the expedition, the understanding being that the work in connection with the refitting and outfitting should be done by the Department of Marine and Fisheries at Quebec and should be paid for at cost by the Department of the Interior. The Police were to purchase their own supplies and outfits, including lumber and other material for their quarters, the Department of the Interior, through the C.G.S. *Arctic*, merely acting as transportation agent to carry police personnel and supplies to the sites selected for the posts.

The hurry and bustle and more or less orderly confusion around the ship may be better imagined than described. It was some few days after June 9 when matters really got well under way, and when it is considered that between that time and July 18, when the expedition sailed, boilers and engines were overhauled, sails bent on, the interior and exterior of the ship painted and supplies for forty-five men for sixteen months, police equipment, and supplies for their men for two years, six hundred and fifty tons of coal and three and a half car loads of lumber were purchased, assembled, and loaded aboard the ship, the wonder is that after getting away from Quebec, and settling down to the ordinary routine of a sea voyage, many articles were not found to have been either forgotten or stowed in some forgotten spot, or so as to be inaccessible when needed, Such, however, was not the case, and surprisingly few occasions arose when any article legitimately needed could not be produced almost immediately.

An unsuccessful attempt was made to have an aeroplane and aviator accompany the expedition, but, after many consultations and much correspondence with the Air Board, this was abandoned, the necessary funds not being available. An arrangement was, however, effected by which a representative of the Air Board accompanied the expedition as observer. The expedition was fortunate in having Major R. A. Logan appointed as the Air Board's representative. Besides being a qualified aviator, he is a Dominion Land Surveyor and a Nova Scotia Land Surveyor. He had taken a special course in meteorology with particular reference to aviation, and in addition was well up in wireless work, having developed a small portable radio set for use in the field by surveyors and others desirous of getting correct time for observation purposes.

Mr. L. O. Brown, D.L.S., of the Geodetic Survey, accompanied the expedition as surveyor, with Mr. Thomas P. Reilly, of the International Boundary Surveys Branch, as assistant. Their duties were to survey such posts as might be established, and to map, topographically, as much of the surrounding country as possible: Mr. Brown also acted as meteorological observer during the trip.

Dr. L. D. Livingstone, of Douglas, Ontario, and late of St. Luke's Hospital, Ottawa, was appointed medical officer of the expedition; Mr. W. H. Grant of the Canadian National Railways, secretary, and Mr. George H. Valiquette of Ottawa, cinematographer.

Much consideration was given to the question of having geologists, mineralogists, and other scientists accompany the expedition, and while it was realized that it was very desirable to make every effort to secure scientific information such as they might collect, at the same time it hardly seemed good policy to occupy three or three and a half months of the valuable time of these men for the sake of the information they would be able to secure during the total of the six or eight, or possibly ten, days they would be ashore during the voyage. It is hoped that it may be possible to use as bases of operation the posts established in 1922 and those to be established in the future, so that trained scientific observers may be able to remain in the north throughout at least a year, and that in this way there will be rapidly acquired that detailed and accurate knowledge concerning the country which is so necessary to its future development. There is great need also of that intensive examination which a region receives only from the prospector. If some means can be found of inducing the prospector to take an interest, we may hope to see speedily a real development of its natural resources, as there is every reason to believe that, with the many indications of the presence of minerals of various kinds, some one, or more, of these will be found to be of real economic importance.

It may be of interest here to quote from a report prepared by an officer of the Geological Survey regarding the possibilities of the mineral resources of the archipelago:—

"It is the duty of the geologist to map in such detail as is consistent with the time allotted to the work, the different geological formations and to report on their lithological characters, structural and age relations. He does not engage in prospecting for minerals. He points out the different areas where geological conditions exist that are favourable to the occurrence of minerals. It is the prospector who searches for minerals and serves as the real pioneer of the mineral industry. In this work he relies on the geological maps and reports to direct him to the localities where his work is most likely to be successful.

"Because of the lack in the Arctic islands of the close intensive work of the prospector little is known yet about the economic minerals. Our knowledge of the geological features, however, enables us to say that the possibilities of the occurrence of large and valuable deposits of minerals are worthy of very careful consideration. Geological formations are found in these islands similar to those in which economic minerals of great importance occur in the southern part of Canada and in the United States."

After mentioning coal, a good quality of which has been found in many localities, and also lignite, bituminous shale, copper, graphite, gypsum, iron, mica, and some of the precious metals, the report goes on:—

"It is not suggested that all or any large number of these minerals will be found, but it seems probable that prospecting of the pre-Cambrian rocks would lead to the discovery of one or more in commercial quantities. Graphite and mica have been mined on Baffin land and [cryolite] on Greenland.

"It is only in very recent years that the discovery of the rich ore bodies of Sudbury, Cobalt, and Porcupine has revealed to Canada the latent mineral possibilities of her vast northland. Even now the public is beginning to direct its attention to the mineral possibilities of the Arctic islands, and inquiries regarding the same are received at the Department of Mines."

### **The Start for the North**

After five weeks of feverish activity inside and out, the ship, on the evening of July 17, appeared ready for sea. Her cargo was on board and stowed: 500 tons of coal for ship's fuel; 150 tons for use of police posts for two years; 225 tons of lumber for the police buildings; 75 tons of cargo, consisting of police equipment and stores for two years, and supplies for the ship's crew for sixteen months in case she should be frozen in over the winter—a grand total of 950 tons. The lumber loaded on the ship was sufficient for only three posts, though it had been hoped to be able to establish four during the season. As it was, however, the ship had an enormous deckload and it was absolutely impossible to carry any more equipment or supplies. It may be noted here that the ship as loaded at Quebec was drawing twenty feet forward and twenty feet, six inches, aft.

About eleven o'clock on the evening of July 17 the engines turned over under their own steam for the first time in several years and at 5.45 o'clock the following morning, without any trial trip or any further delay, the ship left the King's wharf at Quebec, where she had been lying during the outfitting and loading, and started on her voyage.

The ship left the dock primarily to have her compasses adjusted in the harbour by the Government inspector, but in reality on the first leg of her summer's voyage, a voyage which might easily be extended to eighteen months, if the ship should be caught in the ice.

On board were the police party consisting of Inspector Wilcox and nine men; the ship's five officers and crew of twenty men under Captain Bernier; the ship's doctor, the representative of the Air Board, the surveyor and assistant surveyor, the cinematographer, the officer in charge and his secretary—a grand total of forty-three souls.

After the adjustment of the compasses had been completed to the satisfaction of the Inspector, the Captain ordered all sails set, as there was a fair wind blowing, and under both sail and steam the Arctic left Quebec in the midst of the farewell salutes by the whistles and sirens of most of the craft in the harbour.

The first result of the hurried departure and of the omission of the trial trip, was the blowing out of a water-gauge glass on the boiler which occurred just after the ship left the dock. This necessitated the "blowing" of the boiler so that the glass could be replaced and also the hiring of tugs to manoeuvre the ship while the compasses were being adjusted. Shortly after setting underway down the river another gauge glass gave away under the pressure of the steam, the flying glass this time cutting the face of the chief engineer who

happened to be passing at the instant. Sails had to be lowered and the anchor dropped, while the boiler was “blown” again and repairs were made. These two instances were only the forerunners of a series of minor accidents, such as packings blowing out, valves cracking, and babbitt “burning out,” most of which could be traced to the extremely hurried outfitting. However; none of these accidents proved to be serious, nor did they occasion any great delay, and it was indeed fortunate that none of them happened at a time when the safety of the ship might have been endangered had the engines failed for even a short period.

The last mail was sent ashore with the pilot at Father Point and the voyage may be said to have really begun. Fresh head winds in the vicinity of Anticosti gave everyone a good shaking up and sorted out the “sailors” pretty thoroughly from the “landlubbers.” The strait of Belle Isle was entered on the evening of July 26 and next day the *Arctic* was out on the Atlantic with numerous icebergs in sight. The course was set well to the eastward in order to avoid the bergs and field-ice brought down along the Labrador coast by the southerly current, and to enter as soon as possible the northerly current off the coast of Greenland which would assist the ship on her way to the extent of a knot, or a knot and a half an hour which, with the *Arctic* heavily laden as she was and able to steam only about three and a half knots per hour, was well worth considering.

Fair, though light, breezes aided the ship and the coast of Greenland was first sighted on August 2, Mt. Umelik, 4,710 feet in height, being identified by Captain Bernier, at 8 o'clock on that morning. The coast is very rugged in appearance with many small hanging glaciers on the hillsides and larger glaciers in the valley bottoms, some of them coming down apparently to the water's edge, while in the background, overtopping all, could be seen the dim outline of the ice-cap which covers all of Greenland, except a comparatively narrow strip along the coast. At the distance the vessel was then from the coast, forty-five miles, no vegetation was in evidence.

It is interesting here to note that a letter was sent afloat in a partially inflated pilot balloon by Major Logan. The balloon looked very weird as it drifted off to leeward, a six foot sphere at the mercy of the waves and winds. The letter, which was addressed to Major Logan's mother in Nova Scotia, was received by her in November, having been picked up by a fishing boat off the southerly part of Greenland and forwarded to Denmark on the mail steamer, and thence to Canada.

As the ship gradually worked her way northward along the coast, there was less and less darkness at night until in the latitude of Disko island, about 69 degrees north latitude it was quite light even at midnight. The loom of the ice of the “middle pack” too became increasingly more apparent as advance was made to the north. The ship's course was shaped so as to keep her about midway between this middle ice and the coast, as Captain Bernier did not anticipate being able to find a passage through to the westward until much farther north.

### Threading the Ice Fields

This so called “middle-ice” consists of ice carried down from the north by the winds and currents, and from year to year, and even from month to month, varies greatly in

extent, position and character. The name "middle-ice" is probably given to it because it is usually found about midway between the coasts of Greenland and Baffin island, though on the return voyage in September, nothing was seen of it as it had been, apparently, all driven towards the coast of Baffin island by the prevailing northeasterly winds. Smith sound discharges a great deal of ice into Baffin bay, and a large quantity of ice also results from the breaking away of the ice in Melville bay. These packs form the "middle-ice" and a number of attempts were made to get through it once a latitude had been reached where the Captain's experience led him to expect that a passage could be found. Many leads and lanes were followed up but all seemed to lead to an impasse until finally on August 11, he was forced to anchor to the ice in latitude  $74^{\circ} 30'$  almost abreast of the Devil's Thumb, a well known landmark on the coast of Greenland.

Three days before this on August 8 there had already been a stop of several hours duration as the ship was unable to force her way further through the ice. Advantage was taken of the opportunity to make some minor repairs and adjustments in the engine room and to refill the fresh water tanks from one of the many pools of fresh water on the ice. The water in these pools is of a peculiar greenish shade and from the "crow's nest" can be easily distinguished from the pools of salt water.

Here while anchored to the ice, Doctor Livingstone noticed a bear, heading for the ship. Bruin had apparently observed it from a distance and was coming straight across the ice, swimming the intervening lanes of water as he came to them. Rifles were hastily brought out and after the bear had approached within about one hundred yards, a volley rang out which brought him down for a moment. Other shots followed and he was soon hors de combat. A canoe was despatched to tow him to the ship, where he was pulled out on the ice and his pelt, a not very valuable summer skin, was removed. For those who fancied it, his flesh made a welcome addition to the ship's larder. Several other bears were seen during the next few days but they were not so accommodating as this one and did not come within rifle shot of the ship and of course there was not sufficient time to go after them.

By 4 a.m. the ships tanks were nearly full, about 10,000 gallons of fresh water having been added to our supply. The repairs and adjustments to the engines and auxiliaries were completed shortly afterwards and the ship was on her course again by 6 a.m. Up to this time there had been only a few light flurries of snow, but we now had a real snowstorm, about four inches falling on August 11 and making all realize that they were gradually getting north far beyond the limits of the temperate zone.

By the morning of August 13 the ice south of Melville bay, where the ship was held up, had been opened up somewhat by the tide, assisted by the influence of a gentle northeasterly breeze, and by the movements of two or three large bergs which, driven by some deep current, were eating their way through the ice-field off to the south and west. Following up a slowly opening narrow lane leading southwest, and breaking through into some other small patches of open water by charging the heavy ice at full speed, we were able to work our way two or three miles to the southwest. In the meantime the northerly breeze had freshened considerably, opening up the ice gradually, and by noon we had progressed so far that open water was plainly visible throughout 90 degrees on the western

horizon, and much to the satisfaction of all on board, the ship could resume her course to north Baffin land.

### **Ponds Inlet Blocked with Ice**

After a pleasant passage across Baffin bay, Bylot island was sighted early on the morning of August 15, but it was evening before we got abreast of Button point, the southeasterly extremity of the island. Ponds inlet was found to be well filled with loose ice through which a whale boat could be seen working its way out towards the ship. Coming alongside it was found to be in charge of Mr. Wilfred Caron, Captain Bernier's nephew and agent here for Captain Munn of the Arctic Gold Exploration Company, and manned by an Eskimo crew.

They speedily came aboard and while the ship proceeded slowly up the inlet, a consultation in the chart room developed the fact that we were the first ship to arrive from outside, and that the ice was still solid from a point about seven miles farther up the inlet. This was a real disappointment as we had hoped to be able to proceed to the site selected for the post, some twenty miles from Button point, so that we might discharge part of our cargo. It was decided to despatch Caron, two of the Mounted Police, and two Eskimos over the ice to the Hudson's Bay Company's post to ask Sergeant Joy—who had come to Ponds inlet in September, 1921, to investigate the murder of the trader, Janes, and who had been living at the Hudson's Bay Company's post, — to come to the ship for consultation with Inspector Wilcox.

Sergeant Joy reached the ship the following evening and after a short consultation returned to the post, the ice proving to be so solid that the ship was absolutely unable to force her way through it. It was thought advisable to proceed to Ellesmere island and establish the post there, after which it was hoped that the ice in Ponds inlet would be so broken that it would be possible to reach the post.

Sailing northward along the east coasts of Bylot and North Devon islands, and crossing Lancaster and Jones sounds, Ellesmere island was sighted on the morning of the 20th, with Cobourgh island abreast of us. Ice conditions here appeared very unfavourable but by taking advantage of various lanes of open water we were able to make our way into the passage between Ellesmere island and a small island named Smith island, off cape King Edward VII.

The northwest coast of Cobourgh island was a beautiful sight. There were six glaciers, all of about the same width, of the same grade, and extending about the same distance inland, with the mountain spurs between them of about the same width. These six glaciers were flanked at either end by one narrower but much steeper glacier reaching down from the neves inland. North Devon also was very beautiful. The whole coast seemed to consist of alternate mountain spurs and glaciers, the latter reaching down apparently to sea level as no foreshore was visible, due possibly to the fact that the Arctic was some 35 miles off shore. To the north could be seen Ellesmere island from abreast of Smith island to about cape Tennyson. In this distance there were three large glaciers, the most westerly being quite prominent. The glacier nearest the passage between Smith island and Ellesmere island we named Wilcox glacier. It is a narrow glacier which spreads out into a very regular



fan shape before it discharges into the sea. There is also, farther to the east, an island which does not appear on any of the charts. Captain Bernier had never seen this part of the coast before as he passed here in 1908-9 during a heavy snowstorm. It is understood that Peary and Sverdrup passed along this part of the coast also in bad weather.

Just inside of Smith island our first "oogjook" or bearded seal was killed. There were also hundreds of small seal in sight and literally millions of waterfowl, principally little alp. Several bears too were seen on the ice during the day while in the evening fourteen walrus were counted asleep on a pan of ice within one hundred yards of the ship. The doctor and two of the Mounted Police succeeded in shooting one walrus of another herd during the evening and this was hoisted aboard.

### Craig Harbour Selected

Fram fjord had been tentatively selected as the site of the Ellesmere island post. From Sverdrup's description of the fjord, it seemed to have many of the qualifications desirable for a post, and we hoped to be able to reach it and to make an examination of it. The ice, however, was found to be solid for some miles outside the entrance to the fjord, and we were forced to abandon the attempt. The following day, the ice not having opened up at all during the night, we explored a small harbour just inside of Smith island, which was named Craig harbour by Inspector Wilcox and Captain Bernier, and in the afternoon sailed along the coast toward cape Tennyson, until again stopped by solid ice.

During this trip a sketch was made of the hitherto uncharted portion of the coast and Wilcox glacier, Cory glacier, and Stewart island were named, after Inspector Wilcox, Mr. W. W. Cory, Deputy Minister of the Interior, and Honourable Charles Stewart, Minister of the Interior.

Conditions for approaching Fram fjord proving to be no more favourable next day, it was rather reluctantly decided that we could delay no longer and that perforce, the post must be established at Craig harbour.

There followed eight days of feverish haste and almost unceasing work. Two years' equipment and supplies for seven men had to be taken ashore and sorted out, while living quarters and a storehouse had to be erected, or at least brought so far along toward completion that the police could with safety be left to their own resources.

The first to be taken ashore were Kakto and his family. This Eskimo and his wife and four children, the oldest a girl of eleven, had agreed to come up from Ponds inlet to stay with the police for a year. We had hoped to be able to persuade two or three families to come north and settle around the post, but so many were absent from the inlet during our short stay there that this family came north alone. Kakto seems to be a good reliable Eskimo, with a fair knowledge of English and should be of great assistance to Inspector Wilcox and his men.

The harbour proved to be shallow and though anchored in only about seven fathoms of water, the ship was about one and a quarter miles from the landing place. This distance, even with launches to tow the small boats, took a considerable time to cover, and as laden boats could be taken to the landing place only at or near high water, the landing of supplies seemed to progress very slowly. The tides in the harbour were very strong, carrying in and

out large quantities of ice, some of it comparatively small pieces which occasioned no worry, but some of it in such large masses that the anchor had to be hoisted, and the ship kept under way, to dodge the ice. With most of the ship's officers and crew assisting with the unloading, practically all the responsibility for the ship rested on the Captain who, on one occasion, was continuously on duty for fifty hours without ever leaving the deck.

Craig harbour is about three miles wide at the seven fathom line where the ship was anchored, and about one and one-half miles wide at the head of the bay, the water shoaling very gradually towards the head of the bay. The valley is flat and low, with the foot of the glacier about two and a half miles from the shore line and apparently still receding. It is evident that it is many years since the glacier actually discharged into the waters of the bay.

From a short distance off shore an old shore line is quite apparent, showing that since some not very remote age, geologically speaking, the land has lifted, the elevation of the old shore line now being about forty to sixty feet. At the same time there were seen, only some few feet above the present high water mark, the stone foundations of several old Eskimo igloos. From the condition of these ruins, and from the moss and lichens growing on them, they must be several hundred years old, so that the uplift of the land antedates that considerably.

The valley is surrounded by limestone-capped granite hills from 1,800 to 2,000 feet in elevation, cut into by many tributary valleys or draws, and it is quite apparent from the new appearance of much of the material at the mouths of these draws, that nature is still very busy in her many ways and that geologically speaking, the valley is still "young."

After going thoroughly over the whole valley, it was decided to place the buildings on the northwest side at the foot of the cliff and close to high water mark. This site gives good protection from northerly and northwesterly winds, ensures the best view out over Jones sound, and takes greatest advantage of the early spring and late fall sunshine.

The waters of the bay abounded in sea lice, or the "shrimps" on which Greely and his men lived for so long, and an occasional small fish, species unidentified, was seen. On shore no animal or bird life was seen although a couple of very old caribou horns were picked up, a fox track, and some rabbit traces were noticed and also a few musk-ox tracks. However, with the millions of little auks and other waterfowl just outside the harbour, and the numerous bear, walrus and seal in the bay between here and Fram fjord, there would appear to be no need for apprehension concerning the game supply. It is altogether likely that some of the valleys farther to the westward of Jones sound would also provide abundant game at certain seasons of the year, as from Sverdrup's descriptions they appear to be much more attractive than that in which the post was situated.

No grass was seen, and only one small piece of willow about one-quarter of an inch in thickness. The only vegetation here was moss and heather.

### Site For Airship Landing

Major Logan was able to find a site sufficiently level and smooth for an aerodrome on the opposite side of the valley.

A plane-table and photographic survey was made of the valley and its vicinity, and a bronze tablet was set in solid rock, the markings of the tablet being "Canada, N.W.T. 1,"

signifying the first tablet set in Franklin district under the direction of the North West Territories Branch, Department of the Interior. Observations for latitude, longitude, and azimuth, were taken by Mr. Brown over this tablet with the six-and-a-quarter inch Berger transit; Major Logan also observing with his sextant and an artificial horizon.

The observations showed the post to be situated in latitude 76° 10' north, and longitude 81° 20' west of Greenwich.

On August 26 a scaffold on the Royal Canadian Mounted Police living quarters on which three men were working gave way, and Mr. Reilly, who was assisting the carpenters at the time, sustained painful internal injuries in the fall. He was transported to the ship on an improvised stretcher, suffering considerably, and spent practically the entire remainder of the voyage in bed in the chart room, being able to come out on deck with the aid of crutches only a few days before the ship reached Quebec.

On August 28, all equipment and stores were ashore and it was decided that if the weather held favourable, we would remain a few days to assist with the buildings. That night, however, the bay filled with very heavy ice and a bad snowstorm came on, and as from one to three inches of ice had been forming in the harbour each night; Captain Bernier decided that winter in the harbour was too close at hand to take any further chances, and, picking up the last mail and saying the last farewells to our fellow passengers, Inspector Wilcox and six of his men, we steamed out of the harbour shortly after midnight.

It must be admitted that the inspector looked rather forlorn going ashore in our launch in the dusk, with so much snow flying that the shore was entirely invisible, and the harbour full of running ice. However, having made arrangements for a system of communication by smoke signals as soon as the ship came in sight next year, we began our return journey, having established the most northerly post office in the world, with the, possible exception of one on the island of Spitzbergen. This new outpost of Canadian civilization, consisting officially of a police post, customs house and post office is only slightly more than eight hundred miles from the north pole.

Working our way southward through much loose ice, we again skirted the east coast of North Devon island, and having rounded cape Warrender, spent part of a day making, at the request of Inspector Wilcox, an examination of Dundas harbour, with a view to establishing at some future date a headquarters post there for the north. The harbour is some four or five miles long by about one and one-half miles wide, and is almost completely landlocked. At its southeastern corner is a good site for the post, well sheltered from winds and sea, and with a good anchorage close by, while from a small hill nearby a commanding view may be had of Lancaster sound.

Leaving Dundas harbour, an attempt was made to reach Ponds inlet by going down through Navy Board inlet to the westward of Bylot island, and thence through Eclipse sound. Reaching Canada point, however, solid ice was seen ahead and we were forced to go around Bylot island to the eastward. To our great disappointment Ponds inlet was found to be still full of ice, though it had been broken somewhat since our first visit. The ship was able to work her way almost up to the post, but a change in the tide swept the ice back through the inlet and we were obliged to enter Albert harbour for shelter. This is situated on the north coast of Baffin island about ten or twelve miles east of the Hudson's

Bay Company's post. Sergeant Joy had, however, been able to board the ship by small boat while we were near the post and he remained on board as our guest until we left for the south.

We took advantage of our three days stay there to load about one hundred and twenty tons of stone for ballast, being assisted in this by several Eskimo. About twenty-five tons of coal also were landed here to save time later or should unloading prove to be difficult at the post, and in addition, a photographic survey of the harbour was made by Mr. Brown and his assistants.

In the harbour for part of this time Captain Munn's ship the *Albert* was with us, and after his departure, the *Bayeskimo*, the Hudson's Bay Company's supply ship, arrived.

### Ponds Inlet Reached at Last

The *Arctic* and the *Bayeskimo* were able to reach the post on September 6 and anchored in a temporary harbour formed by a large pan of ice held back by an iceberg grounded in the shallow water off the post. The weather was very favourable and considerable material was sent ashore during the day. A beginning was made on the Mounted Police living quarters, much more rapid progress being made than at Craig harbour owing to the experience gained there, and owing to the fact that the workers had the assistance of several Eskimo.

About 5 p.m. with nearly every one ashore working, a large pan came drifting down with the change of tide, and after the sharp peremptory barks of the whistle had recalled the shore party to the ship we hoisted anchor and made for more open water, farther from shore and correspondingly safer, the *Bayeskimo* doing likewise.

That night proved to be a bad one, a heavy wind accompanied by driving snow entirely cutting off all chances of seeing the land, while the ship was almost completely at the mercy of the rushing ice pans. With the approach of daylight, however, and the change of the tide, the weather cleared and the ship again anchored off the post and unloading was resumed. The time was seen to be so short, however, that even those of the technical personnel, who could be spared, acted as stevedores, while Captain Bernier, to release a man for other duties, acted as winchman.

The last loads were sent ashore about 4 p.m. and almost immediately thereafter the anchor was weighed and the ship had to move out on account of the ice coming in, as before, under the influence of the tide. We were able to get somewhat closer to shore later on in the evening, and received the last letters, and said farewells; then about 9 p.m. with three long blasts of the whistle, which started all the dogs in the village howling, the *Arctic* began to force her way eastward out of the inlet towards the open sea and home.

During our short stay the carpenters had made good progress with the house, but it was not nearly complete. There was no hesitation in leaving the police, however, as they would be able to get assistance here both from the Eskimos and from the Hudson's Bay Company.

As at Craig Harbour, a bronze tablet, No. 2, was set in a large boulder behind the Mounted Police buildings, indicating that the official survey starts at that point. Owing

to our short stay there, however, it was possible to do only the preliminary work comprising phototopographic surveys in the vicinity of the post and some triangulation.

Affairs in this district were found to be in very capable hands, under Sergeant Joy's charge. He had come here by the Hudson's Bay Company's boat in 1921 to investigate the murder of the trader Janes, who, it was alleged, was killed by Eskimos to the westward of the inlet. He had gone after the body and after great difficulties and hardships, had found it and brought it to the inlet where he held an inquest. He then put three Eskimos under arrest and summoned several others as witnesses. It is expected that as a result a court will be sent north in 1923 to adjudicate on the case, so that the Eskimos may see that Canadian laws must be respected and may learn to expect justice in all their dealings with the white men, and to appreciate the fact that white men will be punished just as Eskimos will be for any wrong doing.

Captain Munn, on his arrival from Cumberland gulf, reported that a fanatically religious Eskimo there had run amuck and had killed several of his neighbours. These murders will probably be investigated at a later date.

Twenty-four hours of continuous effort working through the ice brought us to open water inside of Button point, some of the ice, particularly off Brodeur island (Albert harbour) being very solid and on one or two occasions requiring repeated charges by the ship at "full speed ahead."

Contrary to expectations, no "middle ice" was seen while crossing Baffin bay, the probable explanation being that it had been driven towards the southeasterly coasts of Baffin island by the almost continuous northerly and northeasterly winds of the preceding two or three weeks.

### **Visit Paid to Godhavn, Greenland**

After a good passage across the bay, the ship arrived off Godhavn, Disko island, Greenland, early on the morning of September 13.

Inspector Wilcox, being unable to procure either dogs or Eskimo boots (kamiks) at Ponds inlet, had asked us to call at Godhavn on our return trip to endeavour to arrange for a supply of these to be called for by the ship on her way north in 1923. His letters from the Danish authorities, granting permission to land and to make purchases, he had handed to us, and after the ship had been visited by some Eskimos in kayaks, who offered to pilot us into the inner harbour, we went ashore in our launch and presented our credentials and letters.

We were warmly greeted, first by Dr. Porsild, scientist in charge of the experimental station at this point, and by his son, the assistant scientist. Dr. Porsild, who speaks perfect English, explained that the District Inspector was absent at the time, and that he himself was just on the point of leaving in a launch to take the mail across the sound to a steamer which was ready to leave for Denmark. He introduced us to Mr. Neilson, the Government agent, who was kindness itself. Although he does not understand or speak English as well as Dr. Porsild or his son, we were easily able to make him understand our needs and he explained that, although in all probability the Godhavn settlement itself could not spare

the dogs and boots the Police wanted, he had no doubt that they could be collected from some of the other settlements, and that he would be glad to have us call for them in 1923.

Only about two hours were spent ashore but the visit though brief, was most interesting. The settlement is indeed an oasis in the desert. The houses, particularly some of those occupied by the Government officials, are very attractive and quite pretentious, being built of lumber imported from Denmark and are nicely painted in red with white trimmings. Neat, clean, well laid out paths lead from one point to another in the settlement, with quite large warehouses in the vicinity of the landing place. The Government scientific station and the residence of Dr. Porsild are situated across the harbour, unfortunately for us, too far away to be visited in the short time at our disposal.

We appeared to be a source of great interest to the inhabitants of the village, as they certainly were to us. Mr. Neilson informed us that the *Arctic* was the first foreign ship to visit the port for some years.

Most of the men of the settlement were apparently absent from the village, probably engaged in their regular pursuits, but the party was enthusiastically welcomed by those who happened to be home, as well as by the women and children. The natives, or Greenlanders, as they prefer to be called, seemed to be happy and prosperous, and all appeared to be clean, and well and comfortably dressed, some of the women even donning their holiday attire in honour of the visit. These natives, judging from their features and build, seemed to be of all types from pure Eskimo to almost pure Scandinavian, the result no doubt of the many years, one might even say centuries, of contact, first with the old Norsemen, and later with the modern Danes. The population of Greenland, we were informed by Mr. Neilson is about 13,000, of whom some 300 to 350 are Danes.

The women's dress was particularly attractive and sensible. They wore a smock of heavy linen or cotton, generally in a checked pattern, and lined usually with very heavy red flannel. The wide neck and the sleeves were trimmed with fur, or plush, sometimes with touches of embroidery on white linen. They wore no skirts, only short neatly fitting sealskin breeches, decorated with what, at first sight, appeared to be bead work, but which was really a pattern made by sewing on to a strip of leather numerous minute brightly coloured pieces of thin leather in a pattern. The Amount of patience necessary for some of the more elaborate of these decorations must be very great. We were informed that the natives themselves have been taught by the Danes to tan and dye their own leather for this purpose, and also to make the long varicoloured boots (kamiks) which complete the summer costume. These boots are very neatly made, being of course hand sewn, with waterproof soles of "oogjook," or bearded seal, and are worn over a lining or stocking of sealskin, with the foot of caribou or baby musk-ox, the fur being worn next the skin, and the stocking being finished off at the top, when it comes outside the breeches, with a band of fur, plush or of finely embroidered linen. The boots themselves are of various colours, dark blue, purple, bright red and some of them pure white. The leather is soft and pliable, and the finish indicates a high degree of skill in tanning and dressing. The boots also are decorated with strips of the same fine coloured leather work as used on the breeches.

In one of the other settlements, Godthaab, farther to the south, the natives have their own newspaper in their own language, all the work in connection with the printing,

editing, and publishing being done by themselves. They have also, we were told, their own photograph galleries. The Danes, in short, seem to be devoting a great deal of time and energy towards making the natives self-supporting and self-respecting. The scientific stations, for there are others besides that at Godhavn, were established and are maintained by the Danish Government, solely for the purpose of carrying on investigations for the benefit of the natives, such for instance as ascertaining what vegetables, if any, can be made to grow at the various stations, and how best to treat the skins for export, and other similar problems. The natives are being taught the value of export trade and are being encouraged in making articles suitable for sale elsewhere, and in turning out products that will have a commercial value. Their principal trade is in furs, skins, fish, and oil. About 30,000 sealskin, 11,000 barrels of blubber, chiefly seal, and about 3,800 barrels of sharks' livers are bought annually from the natives, also 1,500 white and blue fox skins, a few bear skins and a little eider-down. The catch of white whales and narwhals has fallen off so considerably that it is unimportant, and very few reindeer skins are now obtained, though these formed a few years ago one of the chief articles of export. The quality of fox skins has also deteriorated considerably.

After a couple of hours ashore, the Commander invited Mr. Neilson and Mr. Porsild out to the ship for lunch and they gladly accepted. After meeting Captain Bernier, they were shown over the ship and expressed themselves as astonished at the completeness of her equipment and her comfortable interior arrangements, though they did not seem to be particularly impressed by her exterior appearance, her sides being badly scraped by the ice and showing in many places the red paint of her body as when painted for lightship duty, and her spars and sails being almost black from the smoke of the soft coal we had been burning.

They were intensely interested in the wireless equipment, and looked over with evident appreciation our file of daily bulletins of world news, provided by our wireless operator.

Shortly after lunch our visitors departed for the shore and with a salute of three long blasts of the whistle, the *Arctic* was once more on her way on the last "leg" of the voyage, the Captain holding a course well to the westward so that we might get clear of the northerly current along the coast before heading south, which he did when we had reached longitude 57 degrees west.

At 8 p.m. on September 14 we crossed the Arctic circle and, as on the northerly voyage, the Captain at dinner paid tribute to Father Neptune in a few well chosen words, the crossing of the "Circle" here being an occasion somewhat similar to the crossing of the "Line" at the Equator.

After a good trip south the Arctic ran into heavy head winds in the vicinity of Belle Isle and was unable to enter the strait until the evening of September 23. Except for further fresh head winds in the vicinity of Anticosti, the trip up the gulf and river to Quebec was uneventful and, picking up the pilot at Father Point, the ship reached Quebec on the afternoon of October 2, having been delayed somewhat by the smoke of the forest fires raging at various points in the townships south of the river.

## Results of the Trip

The net results of the trip may be briefly enumerated. Police posts, post offices, and customs houses had been established at two points, Craig harbour, Ellesmere island, and Ponds inlet, Baffin island.

The post at Craig harbour is a double post, that is, there are there an Inspector of Police, in charge of the district, a corporal and five men. This is actually the personnel of a central headquarters post which, it is hoped, will be established elsewhere in 1923, when Craig harbour will become a sub-post with probably three men as its staff.

At Ponds inlet a sergeant of the police had been quartered with the Hudson's Bay Company for a year investigating, as above mentioned, the murder of a trader named Janes. He was reinforced by a corporal and two men, and material was landed to erect a police living quarters and storehouse, as well as supplies and equipment for two years.

Dundas harbour, in the south coast of North Devon island, was visited as already stated and examined with a view to its suitability as a site for a headquarters post.

Our ability to get time accurately by wireless enabled us to check the positions of several points on the charts and enough evidence was secured to show that the existing charts are seriously in error in many places, due probably to the fact that the clocks or chronometers of the old explorers were incorrect, there having been no possibility in some cases of checking them for periods possibly as long as two or three years, depending upon the length of their voyage. These charts should be revised.

The observer of the Air Board accompanying the expedition secured valuable data, his conclusions in brief being that there are many places in the Archipelago suitable for the erection of aerodromes and the construction of landing places, thus obviating the necessity of using hydroplanes in the north, an exceedingly dangerous operation over waters apparently, clean and open, but necessarily containing many pieces of small ice, difficult to "spot" from a rapidly moving plane.

His conclusion was that the weather during the latter days of May, and in June, July and part of August, appears to be almost ideal for aviation, the twenty-four hours of continuous daylight making conditions particularly favourable. It may be easily seen that a very large amount of patrol and survey work could be done during this period.

His recommendation is that an experimental air station, equipped with two small machines, and with a personnel of two pilots and two mechanics, should be established at some central point such as Ponds inlet and maintained throughout a year so that information might be obtained by actual observation covering a longer period than merely the few weeks occupied by a voyage such as that of last summer.

Phototopographical [*sic*] surveys were made of Craig harbour, Albert harbour, and Ponds inlet, and a moving-picture panorama was secured of Dundas harbour.

Although the Government has intimated that additional posts will be established, it is as yet undecided exactly where they will be placed. There is need for one at Cape Sabine, on the east coast of Ellesmere island, and it is expected that an effort will be made to establish this in 1923. It is reported, however, that no boats were able to get north of cape York last season. If similar conditions continue this year, it may prove more convenient to establish the headquarters post already referred to possibly at Dundas harbour, as Lancaster sound



is known to open early and to remain open until a fairly late date. There would appear to be need for a post, say next year, somewhere farther to the westward, possibly on Bathurst or Melville island.

The necessity for police supervision is shown by the Janes murder case and by the reported murder last year at Cumberland gulf of five natives by another member of the tribe.

Besides the Hudson's Bay Company, there are other traders at various points, and there are, almost every season, expeditions both British and foreign, so that it would seem most advisable to have the Government represented on the ground by the Royal Canadian Mounted Police, who may always be relied upon to see that law and order are maintained and that every one gets a "square deal."

The possibilities of the country are great in many ways and it only remains for the Government to continue to show its interest in it by establishing and maintaining these posts, when the resulting increased knowledge concerning the regions will stimulate additional interest by private individuals and corporations, and a natural healthy development will speedily follow and undoubtedly result in a great, and much needed, improvement in the general living conditions of the present population.



First Inuit to come aboard the ship, 13 August 1922

## APPENDIX

### AVIATION IN THE ARCTIC

A Reconnaissance of Flying Conditions in the Eastern Arctic Archipelago, 1922.

BY MAJOR R. A. LOGAN, *Department of National Defence, Canada*

During the past few years many changes have taken place in the method of travel and transportation in all parts of the world, and as the North West Territories cover a very wide area, transportation is one of the greatest problems in exploring and developing the resources of that part of Canada.

One of the latest methods of travel being the employment of aircraft, it was considered advisable to investigate conditions affecting aircraft operations in the northern part of the territories by sending an experienced air pilot to accompany the expedition to the Northern archipelago on the C.G.S. *Arctic* during the summer of 1922.

Through the co-operation of the Air Board, the writer who was attached to the Canadian Air Force, was released from duty at Camp Borden, Ontario, and was attached for about five months to the North West Territories Branch, Department of the Interior. During this period he was a member of the expedition under the command of Mr. J. D. Craig, D.L.S., and visited various points in the Arctic islands extending as far north as latitude 76 degrees 20 minutes or about 820 miles from the pole. On his return he made a report of his investigations on which the following is based.

The *Arctic* left Quebec on July 18, 1922, and proceeding via strait of Belle Isle to the west coast of Greenland, followed the coast northerly to latitude 74 degrees in order to pass around the north end of the ice fields which cover hundreds of square miles of the waters of Baffin bay. After several days of zigzagging through the ice fields Button point, on Bylot island, was reached on August 15, 1922.

The intention was to visit the settlement at Ponds inlet, but owing to the ice still blocking the inlet it was found more advisable to proceed first to Ellesmere island and on the return to call at Ponds inlet in the hope that by that time the ice would probably have drifted out.

The ship proceeded north to the vicinity of Fram fiord, on Ellesmere island with the object of establishing a police post somewhere in the neighbourhood. Owing to the exceptionally mild summer there had been no heavy seas to break up the ice, which consequently blocked nearly all the inlets. Fram fiord being one of these, it was decided to establish the post in a small bay named Craig harbour.

Several days were spent here in investigating local conditions, both upon the low land, at the head of the bay, and on the tablelands in the interior of the island. The best site for an aeroplane landing-ground on the lowland was surveyed, and marked by leaving a Canadian Air Force ensign. After the duties of the expedition were completed at Craig harbour the ship proceeded to Dundas harbour, on North Devon island, where opportunity was also taken to observe local conditions and to investigate the possibility of utilizing any of the adjacent area as landing grounds for aircraft.

On the return voyage a visit was paid to Navy Board inlet and the entrance of Ponds inlet was reached again on September 2, but the ice was still too thick to permit the ship to reach the settlement until four days later. Here an aerodrome was surveyed and marked on the ground and local conditions were investigated as far as time would permit. The ship returned to the south calling at Disko island, Greenland, en route, and reached Quebec, October 2, 1922.

Though the season for actual investigation was very short, it has been made clear that the possibilities are such that a more thorough investigation should be carried out by extending the period of actual residence to at least one year, in order that investigators may see the country at various points, not only at its best, but also at its worst.

As the information which the general public has regarding the north country is at least one hundred years old, the impression prevails that the North West Territories are just mounds of snow and ice sticking up above the polar sea. If one read only books of such a date regarding the parts of Canada we know, especially the Prairie Provinces, he would get an impression very different from fact. The natural resources lie there unknown and just as the railway hastened the development of Western Canada so may aircraft aid in the north.

It may surprise many people to realize that two thousand miles north of Ottawa the general climate of the winter season is no more severe than in many of the more northerly settled parts of Saskatchewan and Manitoba, and that there are hundreds upon hundreds of square miles of land bare of snow in summer, covered with beautiful towers, grass and moss supporting innumerable animals including caribou, musk-ox and foxes, while there are immense areas of coal and indications of many other minerals.

As the interior of the islands is practically unknown and even the coastline only very roughly sketched in on the charts, aircraft can serve a very useful purpose in connection with surveying and exploring the country. Its other uses will be in the transportation of men and material, where other means would entail much time, expense and hardship. Aircraft may also be used to great advantage as an assistance to marine navigation in locating open water and ice fields. In general it may be said that aircraft in the form of aeroplanes equipped with skis, and with sufficient protection for engines may be used for the greater part of at least five months of the year.

Conditions affecting other sciences such as wireless and photography which are used in connection with aircraft were found to be very favourable. By means of a small portable wireless set weighing only a few pounds signals were received from Panama, Berlin, France, and many intermediate points, and all indications pointed to very favourable conditions for all wireless reception.

While certain conditions affecting aircraft operating in the Arctic archipelago are distinctly different from those prevailing in parts of Canada where flying operations have also been practicable during five months of the year, conditions in these parts of the Arctic are favourable for long cross-country flights, in so far as frequent landing places are concerned, and this during the season of the year most suitable for survey work and investigation of the natural resources of the country.

## 2

### J.D. Craig's Daily Journal of the 1922 Arctic Expedition



Four "Old Salts":  
Brown, Craig,  
Livingstone, and Logan  
in sailors' attire

35-22-C.

**July 18th, 1922.**

The "Arctic" left the wharf this morning at 5.45, intention being to adjust the compasses and get out on the tide, however after a few minutes a gasket blew out and it was necessary to anchor. It took two hours to repair gasket and when engine was started again something went wrong with one of the water gauge glasses and the boilers had to be blown and in order to avoid delay a tug was secured to swing the ship to adjust the compasses while the water gauges were being repaired.

The chromatometers were sent aboard by a launch during the morning, as were the members of the crew who had been left ashore. I came aboard by tug about 3.p.m., having been advised by the captain by wireless that the ship would be ready to [sail about] that time.

It was 5.30 p.m. however before repairs were completed and the anchor weighted. This operation was found to be very difficult owing to the fact that in adding on some forty fathoms of new chain a shackle had been put in the wrong way and when the shackle

reached the windlass it had to be assisted over by block and chain. This shackle will be reversed as soon as possible.

Started down stream at about 5.30 p.m. and had only gone a short distance, about six or seven miles, when trouble developed with the feed pump and it was found impossible to get water into the boilers so it was necessary to anchor again. After a couple of hours the anchor was weighed for the third time and with the foresail and square sail set we made good progress down stream with the tide.

### **Wednesday, July 19, 1922.**

Fair progress was made all day today with the square sail. Foresail and Mizzen sail set.

Everybody busy all day getting ready to send last mail ashore at Father Point.

### **Thursday, July 20, 1922.**

Passed Father Point at about 1.00 a.m.. Sending Pilot and mail ashore by tender. During the day fair progress was made under sail and steam; one boiler having to be blown to repair a blown out joint.

Sextants were adjusted and the usual observations taken for time and longitude. The Captain is using every effort to get the ship, ship shape.

The Northwest Mounted Police moved about fifteen tons of coal from the forward deck aft thereby improving the trim of the ship considerably and making her steer much more easily.

Brown got out his thermometers and has them in the pilot house taking readings three times a day. He also secured a wind gauge and anemometer from Mr. Lemieux the second officer which records the speed of the wind and the same time that he makes the other readings, due allowance of course being made for the direction of the wind and the course and speed of the ship.

The Captain sent his victrola down to the saloon and we tried out some of the new records in the evening and during the day Grant started to list the library books so they can be circulated.

### **Friday, July 21, 1922.**

We made fair progress during the morning although the wind rather headed us. It was fresh enough at times to cause a slight jump and one or two members of the party thought they were sea-sick, their condition improved however in the afternoon and everyone was about as usual.

Valiquette has to date about six hundred feet of film exposed mostly in [short] lengths on miscellaneous subjects both at Quebec and since leaving.

In the evening the wind became dead ahead and all sail was taken in and the boat proceeded under steam only making not over two and one-half to three knots per hour.

The mounted police moved fourteen more tons of coal from the forward deck to be supplied to the engine for fuel.

### **Saturday, July 22, 1922.**

Rather unsatisfactory day, strong head winds up to thirty-five miles all day. We are abreast of west cliff trying to make Charleton light. Have to tack ship several times and making very little headway.

During the late afternoon one of the water gauge glasses blew out necessitating shutting down the engine for two or three hours. Engineer's face cut slightly by blowing glass.

Several members of the expedition somewhat under the weather account of the sea.

Foggy in the evening and Captain had to take soundings several times to make sure he was not getting too close to the north shore. Too much static in the evening for any wireless work.

### **Sunday, July 23, 1922.**

Morning,-

Breaks bright and clear, gentle breeze from the south west, ship once more on her proper course. Engine running O.K. again and all sails set. Last night heavy rain squall between 12 midnight and 3.00 a.m.; all sail had to be taken in as Captain feared heavy wind. A steamer passed us in the fog fairly close last night.

Afternoon,-

Fresh breeze north east; all fore and aft sails set and making about four knots per hour. Several sick; attendance light at meals. Sky very heavy.

Sighted Table Head Light in evening and later Heath Point. Getting a cross bearing, distance about seventeen miles, about south west.

Very hot below and temperature in second engineer's room 120°. Several rooms leaking including saloon. Sparks'<sup>1</sup> outfit drowned out last night and again today; he does not know yet how much damage has been done. Fiddles in use on table.

The Andanis, Montreal to Plymouth passed us outward bound seven miles to the northward. Belle Isle reports through her north east winds outside and lots of [bergs].

**Monday, July 24th, 1922.**

Wind, sky and sea the same. Wind luffing up a little and we are on a better course about east south east by the compass.

Everyone is either on deck or in bed. Clears up in the afternoon and wind slackens off somewhat.

Brown says if I ever have any money to invest I will buy some dry land probably a mountain with no water in sight. When the Doctor was asked what he wanted for breakfast he said "Bring me an island please". Captain Bernier offered Riley an orange from Florida and Riley said "I would not take a diamond from South Africa".

**Tuesday, July 25th, 1922.**

Wind dropped during the night and everything bright and clear this morning. Light north-east breeze and ship about on another tack last night at midnight. Bay of Islands Newfoundland is now almost abeam (9.00 a.m.).

Police again passing coal aft. Wind pulls around slightly to the north during the afternoon but remains light. We pass the C.G.M.M. Pioneer inward bound in the afternoon.

**Wednesday, July 26th, 1922.**

The wind shifted to the south west during night but remains light. Morning clear and bright.

We passed the S.S. Afghanistan at 9.30 a.m. inward bound.

Wind freshens up and remains light but variable all day.

We enter the Straits of Belle Isle at 3.00 p.m. and see our first ice. During the morning pass several [bergs], as in the afternoon and a great many more during the evening; also several inward bound steamers including the Empress of India; Newfoundland fishing villages all along south coast and several small settlements on the Labrador coast.

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<sup>1</sup> *Editors' note:* Nickname given to the wireless operator, C.J. Blair.

Cameras very busy this afternoon particularly when the first big [berg] came along.

**July 27, 1922.**

MEMORANDUM

[Conversation] with Captain Bernier regarding a new boat for future work, he considers that the "Arctic" is practically finished for northern work. If considerable money were spent on her she might be made to last for five years but he does not think it advisable to spend the money on her. She would have to be refitted throughout and to be satisfactory should be re-rigged so she would not have depend as much on her engine.

The most suitable boat according to the Captain would be a boat of say about 600 tons about the size of the Arctic of steel double framed and particularly in the bow and otherwise reinforced with a longitudinal central bulk head, water tight, and four other bulk heads, dividing the ship in all into ten water tight bulk heads. It might also be well to have her sheeted inside, this making a double hull and providing carrying capacity for at least some of the 100 or 125 tons of crude oil to be used in her [diesel] engines, which he considers the only satisfactory solution to the northern power problem. She should be flush decked and with her [accommodation] between deck as on the "Arctic". Requiring only slightly over 100 tons of crude oil a great deal of which might be carried between the outer and inner hull she would have plenty of room left for carrying space without necessitating carrying any load on deck. She should have a speed of from 7 to 10 knots per hour so that less dependence would be necessary on the sails in the open water and so that more power would be available for making her way through the packed ice in the north. She should [preferably] be Barkentine rigged which would enable a smaller crew to handle her and so save expense. The fore and after sails should be rigged on the standing gaffs and booms with brails to furl the sails on the mast.

Captain Bernier considers that a boat of this type might be built in England and satisfactorily outfitted at a cost of about \$150,000.00.

**Thursday, July 27, 1922.**

We passed Newfoundland about 2.00 a.m. and at 8.00 a.m. Double Island light abeam.

Course North East Magnetic. Light wind. Wind varies to the south east in the afternoon and remains light.

Passing numerous icebergs some of them fairly large. Good display of aurora in the evening. Blair takes down serial and changes lay out of insulators.



**Friday, July 28, 1922.**

Wind light and fair. Passing by numerous icebergs and calves all day of all sorts of fantastic shapes.

Everybody photographed during the afternoon. Coolness in the evening quite noticeable and temperature on deck about 8.30 p.m. 44°.

**Saturday, July 29, 1922.**

Fair wind very light all day. Course slightly west of north to get back to 55th meridian, as we were forced east to keep out of the ice. Passed through last of the ice this morning about 4.00 a.m. and since then there has been none in sight.

Sparks made an attempt last night to get in touch with Belle Isle to find out when the Baie Esquimaux passed through the straits, but was unable to do so. He also attempted to get the Baie Esquimaux direct but with no results. She is probably several hundred miles to the northeast by this time as she was heading for Port Burwell, though it is possible she may be held up in the ice somewhere as from appearances there seems to be a considerable quantity along the coast.

**Sunday, July 30, 1922.**

Morning. -

Wind still fair and slightly stronger; ship making about six knots per hour. The morning longitude observation shows us to be still about seventeen miles east of the 55th meridian so we are still holding a course north 35° east.

Mr. Wilcox, Captain Bernier and myself had a long talk on the bridge about the suitability of Fram Fjord as a site for the more northerly post on Ellesmere Island.

Captain Bernier has prepared a memorandum setting forth a great many points for the benefit of the Royal Canadian Northwest Mounted Police during their winter stay in the north, points based on his experience of several winters in the north regarding particularly health and the necessity of keeping busy through the dark period particularly. Brown is preparing a short memorandum giving rough methods of setting a watch so that the police may reset their time pieces if they lose track of the time. Captain Bernier also gave Mr. Wilcox the dates at which the sun is last seen in the fall from Salmon River near Ponds Inlet and first seen in the spring in the same place; November 9th and February 2nd respectively. On this latter date the sun is barely visible from Salmon River while on the third it is completely above the horizon for the first time. This may be useful in case they lose track of the calendar during the winter.

Also had a lengthy talk by the Captain regarding previous expeditions to the North and particularly regarding his original method of drifting across the pole from the Bering Sea, the method now being adopted by Amundson [*sic*].<sup>2</sup>

**Sunday, July 30, 1922.**

Afternoon. -

Wind freshens a bit and still fair. Considerably more hazy than yesterday.

Captain Bernier gave us a very interesting talk on life in the north (see memorandum this date).

Sparks is still trying to reassemble his apparatus after its recent soaking. This evening he is getting British Press and also hears Christiana, Rome and other European Stations. This morning Mr. Logan with his portable set got time signals from Panama and later from [San Diego], Cal.

**Monday, July 31, 1922.**

Address delivered by Captain J.E. Bernier on board the C.G.S. "Arctic", July 30th, 1922 to members of the Arctic expedition outlining the purpose of the expedition, life in the North and especially offering suggestions and advice to those members of the expedition, members of the Royal Canadian Northwest Mounted Police, who are to winter in the north.

CAPTAIN J.E. BERNIER delivers his address as follows:-

"Commander Mr. Craig, Inspector Mr. Wilcox and gentlemen, it is very fortunate for us that the Canadian Government has appointed Mr. J.D. Craig in charge of this expedition and I am sure that we as a body will endeavour to do our utmost to fulfill the wishes of that Government, to take possession and keep our northern heritage, which was taken by such men as Franklin, Parry, McClure, McClintock, Young, Mares and others. The time has come when Canada is to occupy her own territory, for we are sure that there is wealth as well as other things to be found in the north, such as coal, silver, a great quantity of mica, pyrite which contains a percentage of platinum and a good deal of sulphur, which is valuable at this time. Gold has been discovered in several places but not in large quantities, however, it has been found in small deposits in several places."

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<sup>2</sup> *Editors' note:* Norwegian polar explorer Roald Engelbregt Gravning Amundsen (1872-1928) was the first to reach the South Pole, the first to make a ship voyage through the Northwest Passage, and one of the first to cross the Arctic by air.

Captain Bernier then spoke at some length enlarging on his letter to Major C.E. Wilcox, which reads as follows:-

"I respectfully submit herein an outline which if followed is in my opinion the best way to employ time while in the Arctic regions. This for the guidance of you and your men:

SEPTEMBER,- This month should be employed in getting coal out of the mine.

OCTOBER,- Seal hunting for winter stock, fishing salmon out of the lakes and preparing same for winter. Making land marks around the different places near your abode to enable you to locate your house in a storm and trapping foxes.

NOVEMBER,- It is time to begin to build a snow wall around your home, say six feet thick and keep extending the snow wall according as the snow is getting harder; also make snow blocks to place a tier of same about a foot thick on the roof of your house.

The sun will set on the horizon and will be seen for the last time at noon on the 9th day of November and this would be the best date to commence eating but two meals per day; say breakfast at 9.00 a.m., dinner at 4.00 p.m. and a very light supper at 9.00 p.m. Lights should all be out by 10.30 p.m. During this month is also the best time for trapping.

DECEMBER,- Trapping should be carried out from 10.00 a.m. until 3.00 p.m. The men should place a stick of some description near each trap numbering same and take bearings of the location of these traps from their abode so as not to get lost. In the event of their becoming lost they must not worry, but immediately dig a hole in the snow bank and got into same blocking the entrance with a block of snow and keep as warm as possible.

DECEMBER, continued.- During the dark period it is a good practice to make preparations for [an elaborate] Christmas and New Year's [Holidays] and to give the Eskimos a good substantial meal during those [holidays], also a dance now and then to keep body and soul together. The men cannot be too good towards one another and should there be any difference between them it is advisable to practice patience. Outside exercise between the hours of 10.00 a.m. and 3.00 p.m. should be kept up regularly no matter how severe the weather may be, as it ensures the men to the severe weather, hardships and at the same times tests out their clothing.

JANUARY,- This month should be used in preparing for trips in view; that is getting commeticks<sup>3</sup> ready, dogs trained and gear in order so that when the time comes the

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<sup>3</sup> *Editors' note:* kamotiks or qamutiik are Inuit-style sleds.

men and dogs are fairly accustomed to travel, trapping and fox hunting. Every skin secured should be attended to daily and after the sun appears have all skins hung out on a line for bleaching.

FEBRUARY,- On February 2nd the sun will appear at noon to the view of those at Salmon River for a short time only and on February 3rd the full sun will be visible.

This month is the coldest month of the year and every caution should be taken against frost bites. You can get easily frost bitten but you cannot be as easily cured.

MARCH,- The sun begins to give a good daylight, but the weather is not so good, there being frequent snowfalls and heavy, therefore, do not venture far away unless you are well protected and with an Eskimo guide; you should then be able to build your own snow house within an hour: do not trust to others to build it for you, always do this yourself and be master of all your doings, also be comfortable rather than perish in a canvas tent and regret it too late.

APRIL,- The daylight had now reached such an extent that it is now necessary to wear goggles while the sun is shining.

The seals come on the ice and there is no reason why you should not adapt yourself like an Eskimo and kill your own seals; by perseverance a man does mostly anything. Trapping ends in this month but bears are out all the time and you should not go out without being armed with a .303 rifle, ammunition and always go out in pairs for safety and do not separate.

MAY,- The sun appears all the time and there is no more night. You should keep your old habit and go to bed at 10.00 or 11.00 p.m. at the latest although you do not feel sleepy you should rest at least seven hours, for an hour you lose after midnight you lose one hour of your life.

Seals are plentiful on the ice and now is the time for that industry.

JUNE,- This month is one of the best in the year for vegetation is getting started and the snow is melting away and bird life makes it worth living. This is the time for selecting specimens in bloom, but travelling on the ice is very wet on account of the water accumulating on same. Furs are out of the question and water tight boots are required.

JULY,- The water now runs out of all the rivers and brooks it is now time to fish for salmon where a lake discharges into a river is the best place. A stock should be made, dried and sealed and put away in barrels.

When a salmon is taken split it down the back clean it out of all blood and insides, salt it and put it in position so that the water will run from it for one day. The second day take it out and wash it, taking all the slime off it. Salt and place in a slanting position so that the salting will run off, then after another day put it into a barrel sprinkling some loose salt over each fish as placed there until the barrel is filled, let stand for two days, which will produce more room in the barrel, add more fish to properly fill your barrel, place on the head of the barrel, stow away with the bung up and fill the barrel with a pickle made of salt and water of sufficient strength that will float a potato. Each day as the pickle filters through keep adding more until the barrel is completely full, then insert the bung making it water tight. Your fish is then ready for one or more years as long as the barrel remains full of pickle and your fish is also of a quality good enough to place on any market.

AUGUST,- You should now be ready for coming home by the boat that will come for you. It is good to bear in mind that an Eskimo has become a Canadian since we took possession of the Arctic Islands and he should be looked upon as a Canadian, do not ever promise him anything that you do not intend to fulfill because a native has also a very high sense of honour and he will never deceive you wilfully and above all treat him as you wish to be treated yourself.

A word of advice as regards to keeping healthy:-

Do not eat too much at any time, take plenty of exercise, read good books and do not become lonely, every dark cloud has a silver lining. Do not make a hill out of a mountain and speak in a friendly manner to those that you consider are not your social equal; especially during the dark days take care not to become dirty where there is so much snow which will make very fine water.

Wishing you and your men the best of luck throughout your long Arctic sojourn, believe me, I am”

Yours very sincerely,

Continuing Captain Bernier said:-

“Since I took possession of all the Arctic Islands the Eskimo have become Canadians and it is our duty to treat them as such and to do what we can to make them feel at home.

During the dark days sometimes a man has an ill feeling against his neighbour; he should take no notice of this, but go out and take plenty of exercise and drive that feeling from his mind. [If] it is not rectified before he leaves this feeling will invariably go on for years. When a man sees the same face day after day and month after month

he gets tired of seeing it and takes particular notice of all the small wrinkles that are on that face, which seem to get larger and larger in his sight until he wishes he was miles away from it. The men should live together in harmony.

I am sure that after a man has spent one year in the north he will contract arctic fever, which may last a life time and he will experience such a calling that he will always want to return to the north.

It is a happy trip for everybody in the expedition for they are called to write a page of history that their children will read about with pleasure of the doings of their father, and I am sure that the Canadian Nation as a whole will be proud of those that made it possible that all our heritage became ours.

I will now ask you all to rise and give three hearty British cheers to our Commander Mr. Craig."

Cheers were given by all most heartily.

The second Ship's officer Mr. L. Lemieux then proposed cheers for Captain Bernier saying,-

"Now gentlemen I will ask you to give three cheers for our gallant Captain Bernier."

To this everybody responded lustily.

Replying Mr. J.D. Craig said;-

"I think you will all agree with me that it is not only a very great pleasure but a very great honour to be with Captain Bernier on this expedition, the object of which he has put so clearly and forcibly before us.

It is a great mission we are on although we may not realize it at the present moment. Captain Bernier has behind him a wealth of many [years'] experience in the north and has learned many valuable lessons. Not only this but he has the happy faculty of being able to put those lessons before us in an interesting way and to impart his knowledge to us and you can see he wants to give us all the information he possibly can.

I do not think that you have ever heard and I am sure that I have never heard so much good common sense and practical advice in such a short compass as Captain Bernier has given us this afternoon. Even to those of us who hope, at least, to see Quebec in the fall, his talk is nothing but good advice and good points. I am sure that we all appreciate Captain Bernier's kindness in giving us this most interesting address".

The meeting then broke up.

**Monday, July 31, 1921.**

Drifted almost due north all day in the fog. Fair wind, very light. Cleared up somewhat in the late afternoon and breeze held around to the south east slightly.

Passed one berg in the afternoon.

**Tuesday, August 1, 1922.**

Fresh easterly breeze put us along pretty fair today until about 4.00 p.m. making 141 miles from noon yesterday until noon today the biggest day's run to date. We are almost on the [55<sup>th</sup> meridian] in longitude 66° 20'. Considerable rain up until noon with low clouds. Wind drops about 4.00 p.m. and a heavy ground swell is rolling in from the south east.

We crossed the track of a steamer according to Captain Bernier who thinks it passed yesterday or the day before, direction apparently about one point east of our [course].

One of the firemen with a bad hand, which is swollen with an infected broken blister.

We passed several icebergs during the afternoon and early evening. The Captain thinks we should see some of Greenland's mountains tomorrow.

Captain and steward issue oil skins to crew this morning.

The engineer has been using salt water in the boiler for over a week now and we hope soon to get some fresh water off the ice.

**Wednesday, August 2, 1922.**

Mount Umelik, 4,710 feet in height in sight at 8.a.m.. Wind is very light and course about north east magnetic. Ship rolled so heavily last night all sail had to be taken off for fear of carrying away something.

Mount Kidtlast, 4,080 feet, is abeam at 1.00 p.m. Our course is now almost east magnetic. The wind heading [us] off from the north and blowing quite fresh. Air is clear but low clouds obscure sun all day and it is quite cool.

Finished stowing our deck coal this a.m. and there appears to be about 30 tons of it now in the bunkers; Captain Bernier estimating that we have used between 70 and 75 tons since leaving Quebec at the rate of about 5 tons per day.

At 8.00 p.m. Mount Kakitsiak is off to starboard, looks to be well over 4,000 feet in height and distant probably 45 miles. The whole coast is very rugged looking with many small glaciers hanging on the sides of the hills, larger glaciers coming down the valleys

some of them to water's edge apparently and in the background overtopping all may be seen the outline of the ice-cap. The base, however, prevents a really good view in detail.

We have passed the latitude at Gotthaab, the latitude at noon being  $64^{\circ}20'$ .

Logan sends mail south in floating [balloon] at 7.30 p.m.

#### **Thursday, August 3, 1922.**

Wind still blowing freshly from the Nor'ard and we had to come about on the starboard tack at 4 a.m., coming about again on the Port tack at 8.00a.m. We are now off Cape Sukkertappen which is distant probably 15 or 20 miles.

Wind [came] dead ahead in the afternoon and all sails taken in. Boat proceeds under steam only making not over 3 knots per hour. The Captain thinks that the new propellers made for the boat last year have not got enough pitch and are too thick, as the boat used to steam at about 6 or 7 knots per hour and apparently the engine is turning over as well as ever.

Several whales were sighted in the morning.

#### **Friday, August 4, 1922.**

Boat still under steam only. Light head wind still blowing from the north. Considerable fog through the night and early this morning, clearing up however about 9.00 a.m.

Valiquette took series of pictures [of] deep sea sounding machine operated by Second Officer Lemieux.

Grant has been doing some considerable copying of memoranda and reports concerning Canada's title to the Northern islands for inspector Wilcox.

The R.C.M.P. are sorting out some of their stores which have been in the Fo'c'sle.

At 11.00 a.m. we are off Holstenborg. We are now opposite Holstenborg and are about 25 miles off shore.

Last night the ice blink from the middle pack was quite apparent in the west and northwest. The Captain thought the pack was from 25 to 30 miles to the west of us.

The sounding this morning gave a depth of 65 fathoms with a gravel bottom.

Noon observations showed that we were just crossing the Arctic Circle and Captain Bernier ordered an issue of grog all around at dinner. In a neat little speech he drew the attention of the officers to the fact that we were now crossing from one of King Neptune's territories into another; from the temperate zone into the Arctic zone and at



his request we filled our glasses and drank to the health of Father Neptune hoping that we were doing the proper thing and that he would smile on us with smooth seas and a fair wind and so help us on our way.

During the afternoon in clearing things out of the fore hold a couple of hundred pounds of over dead fish was discovered and since this has been put overboard the obnoxious smell on the ship with which we have been bothered ever since leaving Quebec has largely disappeared. We still have with us, however, the effects of the coal dust. The run up the coast from Belle Isle to the latitude of Cape Farewell was made mostly with a fair wind and the whole ship forward of the smoke stack became covered with a thin coat of coal dust and everybody who happened to be on deck at that time got coal dust in their hair, ears, throat and clothes. This is still with us although the effects are gradually disappearing.

Washing water is short owing to the leak in the tank so that both as to underwear as to person, most of us are far from being as clean as we would like to be.

The engineer has so far been unable to determine the cause of the rapid depreciation of the water supply. From the amount of water at times in the port corridor aft it would seem there is a leak somewhere in the connection above that point but it cannot be determined until the deck load has been removed.

The engineer however, seems to think that the trouble is mostly the feed pump or [its] connections. He seems to think a great deal of water was wasted there.

We have been using salt water in the boiler for some considerable time and latterly a leak has developed in the [condenser]. The Captain had promised to tie up an ice floe for fresh water at the first opportunity and during that time the engineer hopes to overhaul the feed pump and [its] connections and to repair the [condenser] by plugging the leaky tubes.

The dynamos are also very unsatisfactory, the smaller one has hardly been used at all as [its] governor cannot be made to control it properly. The larger dynamo is better, but it also races considerably at times. As we have daylight all night now the dynamo will only be used when Sparks is re-charging his storage batteries, as the engineer seems to think that the dynamo uses a great deal of steam. He claims in fact, that it uses as much steam as all the other auxiliaries put together.

During the afternoon the fog closed in on us again; although the wind remained dead ahead and we continued under steam alone. Course northeast magnetic.

Brown has prepared for the police several memoranda on setting of watches by the sun and stars and a perpetual calendar. He is also constructing a sun dial for them.

**Saturday, August 5, 1922.**

Still in the fog this morning with a light head wind the same as yesterday. It clears about 10.30 a.m.

The R.C.M.P. attempt to catch a cod although Captain Bernier is willing to bet [ten] to one that there will be no results. Usual A.M. and noon observations taken. Many bergs are in sight all around. We are about abreast of Disko Bay. Soundings show that we are still on the bank, the edges of which is shown by the line of stranded bergs off to the northwest. It is also noticeable that the water is not of the same deep green colour that deep sea water has. We got into deeper water during the afternoon. Captain Bernier shot at some birds (?) on a berg.

The fireman who has the felon<sup>4</sup> on his hand is still suffering a good deal. The large felon is doing well but the doctor still gets great quantities of pussy matter out of it twice a day. The smaller felon which was lanced today is doing well.

We have made a good run since noon yesterday in spite of the head wind as we have been aided considerably by the northerly current on the coast of Greenland. One of the feed pumps still continues to give the engineer a good deal of trouble. The manifold blew out this afternoon and caused a slow down of the engines for a couple of hours while temporary repairs are being made. This is only another instance showing the really poor condition in which the ship was allowed to sail. The cause of course was the need of haste as every day lost in Quebec meant two working days lost in the north and this counts very heavily in the short Northern season and no boat but a Government boat would have been allowed to sail in the condition the "Arctic" was in. A great many little weaknesses have developed since we sailed and these could only have been found out before sailing by a reasonable trial trip. The boat left practically as soon as the engines were found out to turn over, no real attempt being made to have them turn over satisfactorily. The dynamos have also given us a good deal of trouble; the smaller one has hardly been used at all and the governor of the larger one regulates so poorly that Sparks has burned out his [condenser] several times owing to too high voltage. The dynamo engine is apparently in very poor adjustment as it rattles badly as it runs. There is also a great deal of side slack in the crosshead slides of the high pressure cylinder of the main engine. This can only be adjusted by stopping the engine and the Captain is unwilling to do this only when he can tie up to a flow and take fresh water aboard.

Major Logan got time from [San Francisco].

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<sup>4</sup> *Editors' note:* A felon is a fingertip abscess (filled with pus) deep in the palm side of the finger, usually caused by bacterial infection.

**Sunday, August 6, 1922.**

Last night was very thick and foggy, the fog condensing on the rigging and dropping to deck like a heavy rain. It cleared away at 6.30 a.m. to bright sunshine; wind light and dead ahead. It was a most beautiful day with everyone on deck busy with cameras shooting the bergs until about 4.30 p.m. when the fog closed in on us again.

Disko Bay was crossed during the night and Gotthaven was abeam this morning and Disko fiord at noon.

A line of icebergs between the northerly and southern currents was very apparent this morning to the westward; also a fig bank on the middle pack. This bank being visible for from 40 to 50 miles to the south and we spent a couple of hours watching a very beautiful [berg] with several large caves in it. Valiquette had his camera turned on it during most of this time and was successful in getting some photos of it while calving. After calving it rolled a great deal (30°) for over half an hour and we hoped that it would split and that we might be able to get good pictures of it in the act, but it remained solid until the fog closed in.

We passed a whaling outfit about midnight, the mother boat with her reduction tanks on deck, the "Lille" of Christiana and three smaller whalers, one of the latter a steel boat with a harpoon gun on the bow. The boats were headed southward and the "Lille" was apparently heavily loaded.

Valiquette got pictures of the boats as they passed, though the light was not any too good at that time.

**Monday, August 7, 1922.**

Light head wind all day until 7.00 p.m. when it shifted somewhat to the westward and all sail was set.

It was quiet all day and cool with many bergs in sight all the time. In the evening and through the night occasional snow flurries.

**Tuesday, August 8th, 1922.**

Still under sail this morning but the wind is heading us off some and we have to tack once or twice.

Snow flurries continue at times and the temperature is about at freezing.

Afternoon the icepack is visible to the westward about two miles distant and the Captain thinks we are very near the head of the middle pack.

The second feed pump goes out of commission and the engine has to stop for a short time. After pump repairs are made the main engine is started again long enough to get us into the pack. Captain Bernier went up to the [crow's-nest] in a gantline and directed operations, both as to speed of the boat and direction. He soon saw ice with fresh water on it. He afterwards explained that the pools of fresh water have a greenish blue appearance while those of salt water are of a darker green, owing to the fact that a hole usually connects them with the sea below. The ship was soon made fast to a large pan with the ice anchors and the hand pumps were got onto the ice and hose connected; everyone meanwhile enjoying to the utmost the opportunity of stretching their limbs on the ice.

[While] rigging up the second pump the Doctor who had been very busy with his field glasses discerned a bear approaching rapidly from the northwest. He at once gave the alarm and soon 10 or 12 rifles were on deck with the eager marksmen behind them. Everyone was called on to the ship and Captain Bernier sent those with rifles up on to the fo'c'sle, cautioning them not to fire until he gave the word of command. By actual count there were twelve rifles in all. Valiquette was on the top of the wheel house with his moving picture camera and several other cameras were of course in readiness.

The Captain allowed the bear to approach within 100 or 125 yards and at the word of command a volley rang out and the bear who was just clamouring over a small pinnacle of snow rolled over and over several times and lay still. Naturally one would think that he was dead, but getting to his feet he made for the next lane of water and swam across. As he climbed up the ice at the other side of the lane several shots were fired. Some of them apparently hit him, but he managed to get out and cross the cake of ice and drop in the water again on the far side. He was getting pretty weak however, and while he was trying to get on to the ice again another shot (fired by the Doctor) hit him and he slipped back into the water where he remained paddling around, when another shot caught him and his struggles ceased.

A canoe was soon in the water and two of the Mounties and Sparks went after him. One final shot from close quarters made sure he was dead and he was towed back to the ship by a noose around his neck and was soon on the ice being skinned and cut up. "He" turned out to be a female bear of about 600 pounds and quite fat.

After the excitement was over things settled down to normal again and the pumps were manned to fill our tanks with fresh water from the pools in the ice.

A heavy snow storm came up about 6.30 p.m. and lasted a few minutes.

The engineer meantime had been making repairs to his pumps and also making adjustments to the main engine in an attempt to quiet the knock which has been bothering him for some time.

The captain expects to get away before midnight and will go off to the eastward and further north some distance before attempting to make a crossing to Ponds Inlet although we are now almost in the latitude of that place.

Most beautiful sunset I have yet seen tonight at 11.30 p.m., but sun hovers just below horizon all day and keeps everything as light as day.

### **Wednesday, August 9, 1922.**

The taking on of water was completed at 4.00 a.m., about 10,000 gallons in all being pumped on board into the water tanks by two small hand pumps; the Mounties doing by far the greater proportion of the pumping. This means about 50 tons of water and leaves the boat about 1-½ ft less draft forward and 1 ft. less draft aft than we left Quebec.

The repairs to the steam pumps and to the engine were completed and the ship left the ice about 5.45 a.m. and was on her course at 6.00 a.m. in a thick fog. An attempt was made to get well into the pack but it was found that what at first appeared to be a passage through was merely a large bay in the pack and the Captain was forced to retreat and we have been all day zig-zagging along through the loose ice on the eastern edge of the pack looking for a possible way through.

It has cleared up at times but has been mostly foggy with occasional snow squalls and there is now, it being 11.00 p.m., about ¼ of an inch of snow on deck.

The Captain has been gradually forced to the conclusion that the ice we are now in is Melville Bay ice and that there may not be many middle passage between the Melville Bay ice and the southern pack ice. This conclusion seems to be the more reasonable in view of the various signs he has noticed which tend to show that the spring in the north has been very backward: There was a great deal more snow than he expected on the mountains on the Greenland shore and the ice tonight on the shore (somewhere below Upernavik) is much heavier and thicker than he expected to find it. All of this seems to show that we may have to go around the Melville Bay ice before finding a passage through to Ponds Inlet.

The Doctor and Lee have been out shooting all day at seals of which a great many have been seen as we work out way through the ice. The carcass of a dead seal was seen on a small pan of ice, but no bears have been seen today.

Several times during the day we have been close into what the captain calls the main pack, that is, solid ice extending north and south and west as far as can be seen, without the slightest appearance of any opening through it.

The engine has been running very well all day and in the smooth water among the ice the boat seems to make good time. This is probably accentuated by the fact that we are running most of the time close to the ice which naturally seems to help the impression that the boat is making better time than usual. The engineer says that a close examination of the boiler which he blew last night shows that not more than 1/32 of an inch of scale formed during the two weeks he has been using salt water. The knock in the main engine has been considerably reduced although it is still apparent to a slight extent.

The Doctor reports that the fireman's hand is doing very well; he can now move his fingers slightly.

#### **Thursday, August 10, 1922.**

About 11.30 last night Captain Bernier thought that he had come to the opening leading through the pack and headed more to the westward, but he was disappointed however, and he had to come back towards the northeast and we have been working our way along the edge of the pack all day looking for a way through.

We have had several light snow storms and the temperature is three or four degrees below freezing so that everything looks quite wintry.

Two polar bears were seen on the ice at different times but were too far away to make any attempt to go after them. There are also plenty of seals and a great many ducks; the latter called by the Captain "Divers" although nobody seems to know their exact species. They have a pure black head and body and are white underneath.

Many bergs are floating around among the pack of ice and the Captain spent the afternoon in the [crow's-nest] trying to find a lane westward but was unsuccessful.

The islands off the coast of Greenland are in sight in the distance, though we are not sure of our latitude as we have had no observations for two or three days.

This evening the joint of the feed pipe blew out about 8.30 p.m. in the engine-room and the engines were forced to stop for some time.

#### **Friday, August 11, 1922.**

After a delay of a couple of hours we went ahead at half speed with the steam in one boiler only; the weather, however, got so thick with snow and fog that the captain had to tie the boat up about 2.30 a.m. and we did not get going again until after 8.00 a.m.

It has snowed off and on all day and we have gone into two or three lanes which lead only into solid packed ice, and this evening we are a little north of the latitude of the Devil's Thumb. There is a little open water in our immediate vicinity, but the Captain can find no open water either near the land or to the north and west: he thinks that the pack has not yet broken away from the mainland, but hopes that the present east wind, which is fairly strong, will move the ice out very shortly so that we may get across to the westward.

We have seen no sign anywhere, nor have we heard anything by wireless of the Baie [Esquimaux] or the Albert the latter being Captain [Munn's] boat. It hardly seems possible that they have got through the pack while we were unable to find any open lead and they do not appear to be in sight anywhere ahead so it is presumed we have passed them somewhere.

The Captain is going to tie up to the ice for the night and take on more fresh water, hoping to find more open water tomorrow.

Stopped snowing tonight although the sky is still overcast, the sea is good and the islands off the coast of Greenland and the ice-cap on Greenland are plainly visible a few miles to the east and north east.

### **Saturday, August 12, 1922.**

We remained tied up until noon although the morning broke clear with the sun showing from time to time. By noon the Captain had decided that there was enough open water to warrant our making an attempt to get to the westward; and from then until 6.00 p.m. we worked our way through various leads almost due west and at 6.00 p.m. tied up again having made about 20 miles.

It is a beautiful clear evening and we are hoping that the action of the tide and the breeze which is very light will before very long open up one or more of the various cracks in the vicinity so that we may be able to get through further to the west. The water sky in that direction indicates that we have not very much farther to go through solid ice and the Captain thinks that another 15 or 20 miles would see us in practically open water, where, after making a little more westing we could set our course for Ponds Inlet in open water.

The Doctor and Lee are out on the ice stalking a seal and two [of] the other Mounties are prowling around among the broken ice to the [south].

The Captain is issuing sweaters and shirts to the men and will issue mitts the next time the weather turns a little cold.

It is a quiet beautiful summer evening and quite warm on deck, there is little or no breeze, and if it were not for the tremendous quantity of ice which surrounds us one would hardly believe that we were so far north. The observation at noon today showed that we are in about latitude 74° 49' N.

There is a comparatively large open spot of water just east of us, which owing to the reflected light is exactly the same colour as the sky and it is quite easy to imagine that the ice on the far side of this open water is away above the horizon hanging in the sky.

The coast of Greenland is still visible in the distance to the eastward.

### **Sunday, August 13, 1922.**

This morning the ice had opened up somewhat with the tide and with the motion of two or three large icebergs, which were eating their way through the ice-field off to the south and west.

We remained tied up to the ice cake until 8.00 a.m. when Captain Bernier decided to make an attempt to get away. He followed up a narrow land leading southwest which was only two or three feet wide last night and after breaking through into some other small patches of open water by taking the heavy cakes of ice at full speed, he was able to work his way off to the southwest about two or three miles. In the meantime a fresh northerly breeze had sprung up and the ice appeared to opening up considerably and by working through from one lead to another and from one open spot to another he got so far to the west by noon that open water was plainly visible throughout to 90° on the western horizon and all hands were glad to hear the order again to set all sail. The Mounties as usual assisted in this and it was not very long before the ship was running along under steam and sail at about six knots, and in the course of one hour or two the icepack was only a memory, gentle reminders remaining, however, in the form of two or three bergs, which were still visible on the eastern horizon.

The sun was brilliant all day until early evening when it clouded up somewhat and altogether the day was a most enjoyable one; everyone feeling happy that we were once more on our way westward.

Valiquette made an attempt later in the evening to get a movie of the sun-dog, which made [its] appearance about 8.00 p.m.

A few seals were seen on the ice this morning but no bears.



Major Logan got the time tonight from Germany and Blair has been overhauling his seven valve receiving set all day. He got the press from England as usual with four valves, the hearing being fair.



"Dovekies" little birds previously referred to [as] "diver", or "hell diver". Black head and body, white underneath

### **Monday, August 14, 1922.**

The sun was below the horizon last night for forty-eight minutes; the only two nights that we have seen the midnight sun being those two we were tied up in the ice-pack. We have been cutting south since then somewhat and the sun's declination has been rapidly decreasing so that as it is now quite late in August we will probably not again see the midnight sun this year.

Today has been a very quiet day. There has been a very light breeze from the nor'ard nearly all day and the ship has been rolling quite badly in a northerly ground swell, much to the disgust of the passengers. This evening, however, the breeze has freshened considerably and we are making a good six knots under steam and all sail.

The launches have been overhauled and their engines put in running order for Pond's Inlet and the Mounties have sorted out considerable of the stuff that will be needed as soon as we arrive there.

The Captain says that if it is clear in the morning we will see the outer line of bergs marking the limits of the continental shelf and that before tomorrow night we should see the mountains of the coast and if the wind holds we should reach Ponds Inlet some time Wednesday morning.

We have passed a great many flocks of Little-[auks] or Dovekies today. These are the birds [previously] referred to as "Divers", with the black head and body and white underneath.

... Owing to the bad rolling of the ship, and the smell which seemed to be stirred up in consequence, everybody, that is most of the passengers including myself were not feeling just as well as we might. We were not sick at our stomach or fed the fishes, but at the same time we felt indisposed and did not eat a very hearty meal.

We have got so used to the ship not rolling while we were in the icepack that no doubt this was largely contributory to our indisposition while she was rolling.

Reach near Pond Inlet

Got a report from Caron re Rasmussen's men – nothing heard of MacMillan & his party

**Tuesday, August 15, 1922.**

This morning at 6.30 we raised Bylot Island, the white tops of the mountains appearing just above the horizon at that time and distant about 60 or 65 miles.

The wind continued light from the north and we jogged quietly along all day seeing only an occasional iceberg until just outside of Button Point when we ran into considerable loose ice. This ice we found later was not from Pond's Inlet, but had drifted down from Lancaster Sound under the influence of the northerly wind of the last few days and great quantities of it can be seen off shore all the way down the coast of Baffin Island to the south.

Captain Bernier is still of the opinion that we came through the pack off Greenland at practically its narrowest point and that our course paralleled the northern edge of the pack within a point or two so that we were not at any time more than probably 30 or 40 miles north of it on our way across.

As we approached Button Point a whale boat was seen making its way out through the ice and several tupecks or tents could be seen on shore. The boat was manned by Mr. Wilfred Caron, Captain Bernier's nephew and Agent for Captain Munn with five Eskimos on the oars. The ship was headed to meet them and they were soon aboard. Almost the first question asked by Captain Bernier was if any other boats were ahead of us and there was great rejoicing when we found that we were first in.

Valiquette got good chances to shoot the whale boat as we approached it and later to shoot Caron and his Eskimos, as they climbed up the side of the Arctic and later got close ups of some of them. The Eskimos certainly lived up to all descriptions both as to looks, clothing, physique and odour. Brown was heard to remark something like this after standing near them for one or two minutes, "and to think I really complained once of the smell of bilge water".

A consultation in the chart room, there being present Inspector Wilcox, Captain Bernier and myself, developed the fact that the ice had only gone out of the inlet on the 12th inst. and that as far as Caron knew the *Arctic* would not be able to get further than about five or six miles above Button Point. This was the condition of the ice as reported to him some days ago by his Eskimos and there has been no westerly wind since to drift any more ice out of the inlet.

The [Hudson's] Bay Company's post where Sergeant Joy is living was established last year about 10 or 12 miles west of the Button Point. Caron has no one with him but old Eskimos and their families none of whom, even if he could spare them, would be of any use to Mr. Wilcox. Sergeant Joy it seems has only six dogs and no Eskimos at all. After considerable discussion it was decided that rather than wait here until the ice opens so that the detachment at Pond's Inlet might be established it would be better to proceed at once to Ellesmere Island and return here after establishing the detachment at Fram Fiord. To this and Caron one of his Eskimos with Constable Anstead are going with Caron's small boat to Ponds Inlet and the H.B. Company with a letter for [Sergeant] Joy, advising him of the situation and requesting him to come down as soon as possible with ten dogs and a couple of families of Eskimos and also to bring a supply of moccasins for the Ellesmere Island detachment.

The boat is meantime proceeding up the inlet making her way slowly among the drifted ice and the men with the small boat will go ahead from the point where the Arctic becomes blocked.

The inlet itself is very beautiful. The water is dead calm and the almost perfect images of the mountains on either side are broken only by the pans of ice of all sizes which are floating out on the tide. The sharp contrast between the deep shades of the hills on the northern side of the inlet where very little snow is apparent on the hills from the deck of the ship and the almost completely snow covered hills on the southern side of the inlet is very marked; these latter hills especially being very beautiful, tipped as they are with the pinkish rays of the sun, which is now well to the north.

Major Logan has our Eskimo friend cornered and is making the best of his time framing up an Eskimo vocabulary, writing it down in the native shorthand. The native in question is quite typical as to size and colour, but the fact that he wears a scotch tam (cap) with a tassel on the top, and that his features are fairly regular, would seem to show that some years ago there had been Scotch whalers in this district.

We did not have any opportunity of seeing the women and children of the party, as they did not come out to the ship in the whale boat.

Caron reports also that Rasmussen's men were at Strathcona Sound during the winter trading, having come there from their winter quarters at Repulse Bay (Lyon Point). They did some trading at Strathcona Sound and sent some mail into to Ponds Inlet and also advised them they would be at Ponds Inlet this winter in person. Nothing has been heard of MacMillan or his party.

Caron does not seem to think that they had any more snow than usual this winter or that the winter was any more severe than usual, although, according to Captain Bernier,

both the amount of snow still on the hills and the fact that the ice only went out of the inlet on the 12th instant seemed to show that the winter was very severe. Caron explained this discrepancy by the fact that the spring has been particularly quiet; since May there has been almost continuous sunshine and fine weather with very little rain, very little snow and very light winds and there have not been any gales at all to break up the ice.

**Wednesday, August 16, 1922.**

Caron explained last night that an epidemic has carried off over 100 dogs during the winter. This is rather discouraging news as Mr. Wilcox wanted to get dogs here to take north. Caron also said that very few moccasins were made, his Eskimos having only made one pair during the winter. He thinks that we might be able to get them from the Hudson's Bay Company, although the supply of "oogjook" or big seal is very limited.

The skin of this seal is shaved and cut into pieces of the proper size for soles for their moccasins and it is then chewed by the Eskimo women until soft enough to be sewn. It is a great resister of wear and tear and very seldom becomes slippery. The lighter skin of the smaller seals are used for the uppers of the moccasins, which reach almost to the knee, and the whole forms a perfectly water-proof piece of foot gear.

Another difficulty that looms up is the fact that the Eskimo are now in the hills hunting "tuktoo" or deer skins for clothing and it might take a couple days to collect Eskimos to go north.

In the meantime up until this morning we had drifted back from where we were tied to the ice near Carsoon River about two or three miles, and as the ice ahead appears to have broken up considerably during the night, due to the influence of the strong tidal current, the Captain is going to make another attempt to get further into the inlet.

The Captain suggested today that the main station for the R.C.M.P. might be established here at Albert Harbour near Mount Morin with a sub station on Button Point; this latter would form a good look-out place for the police to occupy during the spring and summer months and would also avoid delay in the future if the ice should not have gone out by the time the supply ship arrived. The goods could be unloaded at the point and later taken in small boats up to Albert Harbour. When four or five stations have to be supplied during the summer it will be important to avoid unnecessary delay at any of them.

The attempt to get further up the inlet was rather unsuccessful, as we succeeded only in getting about as far as the point where we had tied to the ice last night and we are forced to tie up again as we had not power enough to force the ship through the broken ice.

On the way up we "landed" Valiquette on a cake of ice to let him get pictures of the "Arctic" coming to the ice and attempting to force her way through it. He looked rather pathetic on the floe with only his camera and one biscuit, the latter being kindly [supplied] in case we were not able to pick him up again by the steward.

Two canoe loads of hunters went out ashore at different times during the day. The only game seen was a couple of ptarmigan.

We started westward about 4.00 p.m. and after coming through some broken ice got into an open lead, which took us up as far as King George Cape, where we ran into solid ice that had been unbroken since last fall. A short attempt was made to break our way into this along the narrow crack but it had to be abandoned.

The captain again filled the tanks with water. There is no sign yet of Jakeman, Anstead or Caron.

#### **Thursday, August 17, 1922.**

We remained tied up to the ice nearly all day. It was fine in the morning, but clouded up in the afternoon and we had one or two light showers.

The Doctor and Blair stalked seal, also two of the firemen and MacGregor and Friel were on the hunt. Last night Grant and Valiquette wandered far afield getting home pretty late, being about 2.30 this morning; they seeing no game other than seals. The two firemen shot three Narwhal, but only succeeded in landing one on the ice. They brought home the tail of this one as proof.

About 5.30 p.m. Major Logan discovered two sled parties considerably this side of Kamio Bay.

After supper Captain Bernier tried for about one hour to break his way further into the ice, which had been considerably softening by the mild weather of today. The attempt, however, was not very successful as the ice is still pretty solid and the Arctic has so little power. About 7.30 p.m. the sled parties reached the edge of the ice and we tied up again.

Wilfred Caron, Jakeman and Anstead returned with Sergeant Joy and six Eskimos with sixteen dogs. Wilfred and the Mounties with Kaktoo had left the ship at midnight the night before last and reached Ponds Inlet after about 20 hours rather hard going, a great deal of the distance being over broken ice. An Eskimo was [then dispatched] to the Hudson's Bay post eight miles further west, advising Sergeant Joy of the [ship's] arrival and asking to him to come down and if possible to bring dogs and Eskimos for the Ellesmere Island party. Sergeant Joy left the [Hudson's] Bay Post about 6.00 this morning reaching Ponds Inlet shortly after 8.00 a.m. and after a delay of about one hour

and one-half left again with Caron and the Mounties for the ship, reaching here as already stated about 7.30 p.m..

It was thought at first that there was no possibility of getting either Eskimos or dogs but Kaktoo finally consented to go north and it was arranged by which four of Sergeant Joy's dogs are being taken north, the Sergeant taking in exchange four of Kaktoo's dogs which are at Ponds Inlet. We expect to pick up Kaktoo's wife and family and two more dogs at Button Point where we stop to put Caron ashore.

So far Mr. Wilcox has not been able to get any moccasins, the natives however, report that Captain Munn's ship is now at Button Point and it might be possible to get some from him or at least to get some oogjook hide from which some may be made by Kaktoo's wife. Kaktoo's eldest girl is about 11 years old and she also is expected will help considerably with the sewing both of moccasins and clothing.

Sergeant Joy with the remaining five Eskimos started back for the [Hudson's] Bay Post about 11.30 p.m. and we immediately cast off and left for Button Point.

### **Friday, August 18, 1922.**

We reached Button Point about 4 a.m. and sent a boat ashore with Kaktoo and Caron. Kaktoo's wife demurred somewhat at first when told of the proposed arrangement by which she would pull up stakes and migrate to Ellesmere Island, but in the midst of the debate while things were going very slowly on shore the Captain with malice forethought gave several very instant blasts of the whistle and after that everything moved very rapidly and Mrs. Kaktoo and her four children with all her worldly goods were soon on board the "Arctic" and we pulled out again shortly after 5.00 a.m. It is to be noted that in spite of all the hurry she was able to spare enough time to paint her face in the formal manner of the Eskimos indicating that she was a married woman. It has not yet developed whether she did this as a warning to the various members of the expedition. A lot of the ship's gear was cleared out of the [Lazarette] aft and they appear to be very comfortable in there. Mrs. Kaktoo has spent all day sewing on moccasins.

Considerable ice was encountered going north of the east coast of Bylot Island, but nothing serious, although some of the pans were so large that the [ship's] course had to be changed so as to go around them and we lost several hours in this way.

The coast of Bylot Island is very forbidding looking. Bold promontories with deep bays between. The capes are 1,000 feet to 2,000 feet high with peaks in behind ranging up to probably over 5,000 feet in height at the northern end. The bays have many glaciers running down them, some of them still discharging into the water and others which have apparently receded somewhat, showing the typical turtle-back ice front in the valley. One was seen just north of Point Bathurst with an icefront of probably over five miles

wide. On account of the fog this glacier could not be traced inland to any great distance but from the [size] of the stream from the valley it must drain a neve of considerable size. The north shore of Bylot Island as seen from a point somewhat north of Cape Byam Martin is even more rugged in appearance, the mountains seem higher and the peaks sharper and the glaciers more numerous, but there is the noticeable difference that there is a fore-shore from 2 to 5 miles wide all along the northern coast; this according to Captain Bernier. This apparently corresponds to the strip of tundra on the Arctic near Demarcation Point and like its western twin is a good hunting place for caribou at certain times of the year.

Several walrus have been seen today on the icepans and although the artillery was on deck in force no shots were fired.

We are now it being 7.00 p.m. crossing Lancaster Sound on a course magnetic northeast by east and there is a bank of very heavy fog for a few miles ahead of us. The wind is very light but from the northeast.

### **Saturday, August 19, 1922.**

This morning we are off Philipot Island on the south east corner of north Devon. Considerable ice in sight in large pans. Wind fresh from the northeast and the sea obscured by banks of fog in places. Later on sail was set and we had to beat to windward.

About 9.30 a.m. the Captain spied a bear stalking seal on an icepan and ran the ship in and Mr. Bruin was finished by a volley from the forecastle. Chassi<sup>5</sup> got in one of the first shots and the finishing touch was a bullet in the head by Anstead. Chassi and Vignault took a rope out over the ice and the bear was hauled aboard and proved to be a male weighing probably somewhat over 1,000 pounds. This means fresh meat for a few days and lots of good feed for the dogs.

In the afternoon we continued beating up to windward along the coast of north Devon among the drift ice, some of which was in very large pans. Philipot Island seemed to be very low and flat mostly plateau like in effect. North Devon is rough on its eastern coast but not nearly as high as the eastern coast of Bylot. There are, however, several glaciers of considerable size, one in particular discharging into Baffin Bay, but the mountains do not appear to be as high with the valleys consequently not as deep. All the slopes appear to be more gradual and a great many of them seem to be moss covered. Owing to the fog nothing could be seen except in the immediate vicinity of the coast.

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<sup>5</sup> *Editors' note:* Nickname for Napoléon Chassé, the quartermaster, used by Craig and Grant in their diaries.

In the evening the wind veered around to dead ahead and sail had to be taken in and we are not 9.00 p.m. on our course under steam [along] heading into a fresh breeze. The weather cleared up about 11.00 p.m. and the wind veering somewhat to the northeast, sail was set again and we continued on the same course.

**Sunday, August 20, 1922.**

At 7.00 a.m. Captain Bernier wakened me and asked me to come on deck to look the situation over. I found that he had made fast to an icepan about abeam of Cobourg Island and about south of Smith Island. The coast of North Devon was plainly in sight to the south and west and with Ellesmere Land to the north and east. Cone Island was also visible to the westward of Smith Island and between these islands and the ship was [what] appeared to be a solid pan of unbroken last [year's] ice. The weather was bright and clear and after looking the situation over carefully we decided that it was better to attempt to get around to Smith Island by a lane which appeared to be opening to the eastward of us towards Cobourg Island leading forth from there.

The northwest coast of Cobourg Island was a beautiful sight and it could be seen for miles. There were six glaciers all about the same width, the same grade and extending about the same distance inland with the mountain spurs between them of about the same width. These six glaciers flanked on either end by one narrower but much steeper glacier reaching down from the neves inland. North Devon also was very much beautiful. The whole coast seemed to consist of alternate mountain spurs and glaciers, the latter reaching down practically to sea level although no fore-shore was visible from the distance at which we were. To the north could be seen Ellesmere Island from abreast of Smith Island to about Cape Tennyson. In this distance there were three large glaciers, the most westerly being quite prominent. The glacier that is the first east of the passage between Smith Island and Ellesmere Island we named Wilcox glacier and is a narrow glacier which spreads out into a very regular fan shape before it discharges into the sea. There is also further to the East an island which does not appear on any of the charts. Captain Bernier has never seen this part of the coast before as he passed here in 1908-9 during a heavy snow storm. It is understood also that Peary and Sverdrup also passed along this part of the coast in bad weather.

The lane proved to be a good one and led northerly for some distance then north-westerly into open water with occasional pans and considerable drift ice right up to the passage between Smith Island and the point of Ellesmere.

Our first walrus a medium sized male about 1200 to 1800 pounds. There was a bigger one with him we did not shoot.

Shot an oogjook size of a small walrus 800 pounds.



Just as we were well through this passage an oogjook was spotted on a small pan of ice and Chassi and the Doctor between them managed to nail him and he was soon hoisted aboard. When I first went on deck after hearing the excitement I saw a seal ("oogjook" is the Eskimo equivalent for bearded seal) on the pan; Captain Bernier said it was a small walrus but my own diagnosis was confirmed by Kaktoo who at once said it was an oogjook.

The waters on the southern entrance of the passage east of Smith Island were literally alive with water [fowl] and seals. There were lots of seal visible nearly all the time and literally millions of water [fowl]; the rocky coast of Ellesmere apparently being an ideal nesting place for the birds. One of the Mounties after the seal had been hoisted aboard and when it lay on the deck near the bear made the remark (well we have two water closets, five Eskimo dogs, an Eskimo family consisting of a father, mother and four children, the better part of a bear's carcass and a seal, no wonder the ship smells).

After getting the seal aboard we headed directly for Fram Fiord, the entrance to which could be seen about 6 or 7 miles to the northwest. On the way the Doctor and Lee got another shot at an oogjook but both were high. Getting within about three miles of the entrance to Fram Fiord we ran into considerable drift ice and then solid through which it was impossible to force the boat and the Captain tied up to an icepan with a small pool of fresh water on it to replenish the ship's tanks, hoping that by that time he would have some idea as to whether the ice was going out of the harbour or coming in, the latter appearing the most probable.

Here too game was plentiful. There is a large glacier discharging into a bay directly north of us and somewhat to the north & east of the entrance to Fram Fiord. The drift ice off the discharging face of this glacier is literally alive with seals and on the solid floe to the west of the entrance to Fram Fiord we saw two bears before we had been here an hour. This evening the Doctor and two of the Mounties are out trying to get some more seals. They came back in about one hour with a walrus. The ship in the meantime had become surrounded with drift ice and the Captain gave the order for half speed ahead to get out of the edge of the pack so that the walrus could be towed to the ship's side. As his lordship was hoisted aboard by the fish-fall estimates of his weight varied from 1,200 to 1,800 pounds. He will be kept until we select a place for the post and then taken ashore and carved up for the dogs; his hide will make traces for the dog harness and his tusks will probably be kept as souvenirs.

The Doctor said that this walrus was accompanied by another which seemed to be fully as large again. Later in the evening towards midnight when it was too late to take a photograph we passed close to a pan of ice with fourteen walrus apparently asleep on it. The Mounties yelled at them and tried to disturb them but they paid no attention and it was not considered advisable to shoot any more at present.

The ice between where we tied up and the mouth of Fram Fiord looks solid and it does not appear at all likely that we will be able to get into the fiord for several days and a lengthy delay at this time of the year in this latitude is out of the question.

As an alternative to establishing a police detachment somewhere in Fram Fiord there is a bay on Ellesmere Island facing Smith Island which seemed when we passed this morning to offer some chance of making a suitable location. It is altogether likely that we will spend at least part of tomorrow in investigating the possibilities of this bay.

### **Monday, August 21, 1922.**

We cast off from the icepan at 7.00 this morning and headed for the small bay just inside of Smiths Island to make an investigation. We landed there about 9.30 a.m. in two boats. The bay is about one mile and one-half deep and about the same in width at the head. The bay itself is shallow the lead giving 11 fathoms about 1½ miles or 2 miles from the head of the bay, [the] water gradually shoaling up from that point. The southern side of the valley is more level and appears to be drier and has a greater growth of flowers and other vegetation than the north side of the valley. The glacier at the head is receding and is practically dead showing very little signs of life. Several small streams are running at present over the valley bottom among the different morainal ridges and there are several flat spaces on the north side of the valley which would also make a good location for the detachment, having the additional advantage also of receiving much more sun light than the southern side of the valley. The valley walls are steep and bold, approximately 800 ft. [height of] disintegrating rock, which weathers and runs down the numerous small gulleys and spreads out in the usual fan like shapes at the foot of the valley. The top of the walls appear to be of much softer rock and much lighter in colour which weathers and looks almost like sand at a distance although close up it is simply fine rock particles.

The bay itself was full of sea lice or the shrimps such as Greely and his men lived on for so long, but no other water life excepting an occasional small fish unidentified was seen. On shore no animal or bird life was seen although a couple of very old caribou horns were picked up; a fox track and some rabbit traces were seen. Five old Eskimo tupeks<sup>6</sup> were seen on the north side of the valley close to the beach. They were very old, the circle of rocks being well grown in with moss and the stone [entrance] being visible only in some cases. There also was discovered the skull of a small whale and several other whale bones with it which were very old.

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<sup>6</sup> *Editors' note:* Presumably a reference to tupik, an Inuit dwelling. We have usually seen this term used in reference to summer sealskin tents, rather than stone and sod dwellings.

Mr. Wilcox was undecided as to which side of the valley he would locate on if it became necessary to put the detachment in this Bay which was tentatively named Craig Harbour.

Major Logan's investigations showed him that there would be no trouble at all in finding suitable ground for an aerodrome and landing field in the valley and from what he has seen in this valley he is able to reconstruct his ideas of many of the valleys and bays he has seen on the way up, but only in the distance from the ship.

We returned to the ship at 11.30 a.m. and as the ice towards Fram Fiord still showed no signs of opening up Captain Bernier suggested that we should sail around King Edward 7th Point to the eastward and investigate the hitherto uncharted portion of the coast between King Edward 7th Point and Cape Tennyson. We passed Wilcox glacier about 2.30 p.m. and ran into solid ice about one hour later. A large glacier just to the west of Cape Tennyson we named "Cory" glacier and the hitherto unknown island "Stewart" after the Honourable the Minister of the Interior.<sup>7</sup> This island is about  $1\frac{3}{4}$  or 2 miles long in a northeasterly southwesterly direction and its highest point would appear to have an elevation of 950 or 1,000 feet. The attached rough sketch shows the general lay out of this part of the coast.<sup>8</sup>

Captain Bernier was able to pick out with his glasses the cairn built by himself in 190-,<sup>9</sup> claiming this portion of Ellesmere Land for Canada and naming the point King Edward 7th Point. It is about  $1\frac{1}{2}$  miles east of the extreme south western point of King Edward 7th Point and about 40 feet above water line on a small rocky ledge surrounded by slide rock. Captain Bernier is suggesting to Mr. Wilcox that he should destroy the cairn and remove the record, placing it in a new cairn on the extreme southwest point so that this will be known as King Edward [VII] Point.

We returned to our old quarters of the night before and tied up in about the same position to a pan. Most of the loose ice had been blown out by the fresh northwest wind but there was very little change in the unbroken ice inside of that. It was rather peculiar that while it blew fresh from the northwest all afternoon here and as far east as Wilcox glacier, east of that the wind was from the south east light, apparently off Cobourg Island.

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<sup>7</sup> *Editors' note:* The Hon. Charles Stewart (1868-1946) served as Minister of Interior from 1921-30 (except for a brief interlude in 1926).

<sup>8</sup> *Editors' note:* There was no sketch attached to either of the two copies of the document that we consulted.

<sup>9</sup> *Editors' note:* 1907. The cairn was "on a small point red rock, solid, 12<sup>th</sup> August 1907." See Capt. J.E. Bernier, *Report on the Dominion Government Expedition to Arctic Islands and the Hudson Strait on Board the C.G.S. "Arctic" 1906-1907* (Ottawa: King's Printer, 1909), 50.

**Tuesday, August 22, 1922.**

At 5.00 a.m. we cast off from the pan and made for Craig Harbour. After breaking up several large pans of ice in the opening of the harbour so that they would not bother us later on Captain Bernier anchored in 10 fathoms; later in the day moving into 7 fathoms. The boat's launches were immediately lowered and loaded the first two getting ashore about 9.30 a.m. Chips<sup>10</sup> immediately got busy sorting out the sills for the store house after Mr. Wilcox had decided that it should be placed on a small flat near the waters edge. It would seem possible, however, that this flat may be covered with water by some of the higher tides, but there is no evidence at present of any water having been over it for some time.

Brown, Reilly, Grant and myself selected and made a preliminary measurement of a base for plane-table and Camera work and selected several camera stations on the rim of the hills surrounding the valley. Later Brown and Grant commenced shore traverse work starting from West Base Station. Reilly and myself accompanied by Major Logan climbed to camera station No. 4 a rocky summit elevation about 2,000 feet on the southeastern side of the valley. While I was taking conditions and reading angles Logan went on up to a summit further back about 500 feet higher and from which he was able to overlook all the country to the south east including Cape Tennyson, Cory Glacier and Stewart Island. The Doctor did some exploring on the north side of the valley and went about 2 miles north across the flat top of the valley to a point where he was able to look down into the bay where we had spent two nights and could see the large glacier in the northeast corner of the bay and also the entrance to Fram Fiord.

Kaktoo and his family went ashore on one of the launches about noon and his tupek is now located in the vicinity of the new storehouse.

It is now 10.00 p.m. and the last boat loads for the day are just going ashore to take advantage of the high tide for landing some of the heavy stuff. It was found this afternoon at the low tide that the boats grounded too far out to allow them to be unloaded. One boat almost capsized when it struck the ground in shallow water and dropped its deck load of lumber into the water almost on top of one of the sailors who was lucky enough to be able to jump on top of it and rafted it ashore.

The *Arctic's* old launch has developed into quite an hurdle jumper. Coming out tonight at 8.00 p.m. she struck two or three rocks at full speed nearly [precipitating] the forward deck load of passengers into salt water. The new launch runs very well and is quite fast.

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<sup>10</sup> *Editors' note:* Chips may refer to the head carpenter.

One good deed performed today was the casting of the six boxes of over ripe cod-fish into the ocean and it is to be hoped this will not drive all the seals and walrus out of the vicinity.

Valiquette was busy getting snap movies of the unloading and the [beginning] of the location of the police buildings.

### **Wednesday, August 23, 1922.**

The surveyors, [carpenters] and Major Logan went ashore by the first launch about 8.30 a.m. The weather was foggy with occasional minutes of clear weather with a great deal of fog hanging around the mountains.

Reilly, Logan and myself tried to get up on to some of the hills on the north side of the valley to take topographical photographs but we were caught by the fog at about 750 feet up where we stayed for half or three-quarters of an hour until it had been snowing for some time and it was so uncomfortable that we cached the instruments and came down again. Major Logan spent the rest of the day investigating the possibilities of a flying field and aerodrome on the southern side of the valley and Reilly and myself joined the labourers and packed lumber, stores and building supplies from the beach to the site of the new living quarters of the police; the result being stiff backs, sore shoulders and a huge appetite.

We paddled out to the ship to ask Captain Bernier to send a launch ashore for Major Wilcox and his men. They reached the ship in time for the second table at supper and will go ashore at high tide tonight about 11.00 p.m. with all boats loaded. The landing happens to be almost impossible with loaded boats at anything below about half tide so that every advantage has to be taken of the higher tides, which come at present at rather inconvenient hours.

Grant and Brown continued their shore traverse and they will be ready tomorrow to take up some of the inside work.

The weather this afternoon was very unfavourable, there being heavy fog all day with occasional snow storms and when the hills have been partly cleared it was easily seen that considerable new snow had fallen in the upper levels. When Brown brought his plane-table aboard about 7.00 p.m. it had over a quarter of an inch of snow on it.

We have at last discovered that the Arctic has a deck. Up till the present time for us the deck has consisted of the upper surface of the deck load of lumber covered by [tarps,] and lashed down with 1¼ inch rope. Tonight however, on coming aboard, we were surprised and pleased to find that to get to the bridge we have to now climb a ladder from the deck instead of simply walking over the deck load and stepping on to the

bridge. The Captain promises that by the time we reach Quebec we will think we are travelling on a yacht.

The engineer today took advantage of the opportunity to blow the boiler, which he was unable to look into at Melville Bay when we first were able to get fresh water. The real reason for blowing was the fact that the check valve was out of order and on examining the boiler after being blown he found that the salt deposit due to the use of salt water for two or three weeks was not over  $1/32$  of an inch in thickness.

No one has as yet been able to say just why so much fresh water is being used on the ship. Captain Bernier says that up to date considering the size of the boiler and engine and the number of the crew and passengers on board that we have used about three or four times as much water as was necessary. Nobody makes any particular claims to have kept especially clean or to have done any particularly large amount of washing and the engineer says that it certainly cannot be due to him having used the entire amount of fresh water for the boilers as his [condenser] has been working satisfactorily ever since leaving Quebec, but at the same time the tanks continue to lose water at a surprising rate. Possibly after we have got completely rid of our deck load we may find that some of the connection from the tanks are faulty, but up to date the whole affair remains a mystery.

Valiquette was very fortunate today in being able to get some distinctive Eskimo pictures. He got Kaktoo's wife cleaning a bear skin although it was rather to be regretted that she was using purely civilized small sized chopping knife as a skinning knife instead of the usual Eskimo article and she was sharpening it every few minutes on a real honest to God [butcher's] steel. He also got good shots of the interior of their skin tupek, although it was held up [tipi] fashion to some old oars, which Kaktoo had managed to get hold of some way or another. He also got some good views of the Kaktoo children playing. The boy who is probably around 9 or 10 years of age can handle one of the long Eskimo whips very very well. The handle is of course very short, not over a foot and is not entirely rigid and the remainder of the whip including the lash is at least 25 feet in length. This kid who is not over 3 feet high can make the tip of this long whip land just about where he wants it. The second mate of the ship who is about 6 feet one inch in height and has driven dogs down south from time to time picked up the whip thinking that he could at least make a decent show at cracking it and the result was the [wrapping] of the last couple of feet of the lash around his neck. He said that one attempt was enough and in future he would practice in seclusion. Valiquette also got Kaktoo in the act of spearing a seal from the ice.

The Police House has got along to the stage where they will start putting on the rough flooring tomorrow and we will probably get part of the roof on as well. The last loads went ashore tonight at about 10.00 p.m.

**Thursday, August 24, 1922.**

This turned out to be another exceptionally fine day, bright sunshine all day with a very light breeze from the northwest or west and only occasional wisps of fog on the higher snow peaks.

The carpenters went ashore on an early boat and the balance of the working staff left the ship just before 9.00 a.m., Mr. Grant not having got up in time to get his breakfast.

The Doctor and Major Logan went up to the glacier at the head of the valley today and figured that they went about 7 or 8 miles reaching an elevation of nearly 3,000 feet. They overlooked this whole section of Ellesmere Land from Fram Fiord and further west around to Smith Island and Cory Glacier. The Doctor said they got a good view of the north part but it still appeared to be some distance off. One of the firemen also had a long trip up the same glacier. No game was seen and they were practically on the snow and ice all day.

Mr. Brown continued his plane-table work finishing the traverse of the beach and is making good progress up the valley on the north side putting in contours. Reilly and myself occupied stations Nos. 2 and 1 with the transit and camera, leaving a cairn at each point. We went up by way of an easy gully just east of station No. 2, thence along the flat top of the ridge to station No. 1. We came down from Station No. 1 almost direct to the new post by way of a [rocky slide] and both strongly advise anyone else to come down some other way. The rocks are laying, particularly at the upper part, at a little higher slope than the angle of rest and it would be a very simple matter to start a big rock slide down any of these gulches. The rocks are very sharp and most of them quite large and we both felt much more comfortable when we were back in the valley.

A great deal more coal and lumber was gotten ashore and the house now has the rough floor in and all the roof timbers in place and about half the first sheeting is on the building.

At noon or about noon when loading the police launch to take ashore, the load put the boat down so low that the top of the centre board box was below water level. This could not be seen on account of the top load of lumber and the boat sank at the [ship's] side. The lumber of course promptly floated off and the boat after going down to the full length of her painter turned over and dropped all the coal except two sacks and came to the surface again bottom up. Two or three other boats were being loaded at the [ship's] side at the time and just at the critical moment a pan of ice came along with the tide, the said pan being at least 20 feet in thickness and between the upsetting and sinking of the police launch and the necessity of getting the other boats out of the road of the drifting ice there was considerable excitement for a few minutes. Two men were on the boat

when it filled, one of them clamboured on to the ship and the other stayed on the lumber which was quite sufficient to float him. A rope was passed around the lumber and it was tied and towed ashore and beached.

The Captain continued to be surprised at the weather. Just a few days later than this ten years ago he was on one of the hills of North Devon across Jone's Sound from here and [in spite] of the fact that he had on his winter furs and of the exertion of clambouring 1,700 feet and coming down again he said that he was very very cold and his furs were covered with a coating of frost nearly one inch in thickness. Today on the contrary was again a real summer day, bright sun all day and everyone on shore worked in their shirt sleeves and even on Station No. 1, which is nearly 2,000 feet in elevation it was quite warm and comfortable.

The Captain took in a launch and three boats at about three-quarters tide, leaving the ship about 10.00 a.m. and they returned about midnight.

### **Friday, August 25, 1922.**

Today again broke bright and clear with no wind. A good deal of ice was running with the tide and the Captain had been up at least once through the night to force the ship ahead by working the engines and shearing the ship from side to side. There was not as much new ice in the bay this morning as yesterday when it was nearly one inch thick; during the day, however, some of the new ice that drifted past the ship was about two and one-half inches in thickness. This came in to our Bay from around the point towards Fram Fiord. This formation of new ice shows according to the Captain that the short summer is near an end.

Brown and Logan observed for latitude and longitude this morning and Brown for [Azimuth] also. Brown selected an observing point on a huge rock for a short distance behind the police quarters and afterwards tied it in to the triangulation. He also continued with the plane-table work. Reilly and myself occupied West Base with the transit and camera and also the station on the south shore of the bay. From this latter point we paddled back to the ship through the drifting ice which had become so troublesome in the meantime that the Captain to avoid some very large thick pans had to hoist anchor and get the ship under steam. The anchor was not dropped again until 6.00 p.m. as the ice continued to run heavy all afternoon.

This evening a heavy fog has settled on the ship and the boats are being loaded to take ashore on the tide later. The inspector is taking the first loads of stores and hardware ashore tonight and hopes to complete them tomorrow and thinks that he may be able to let us go some time on Sunday. There is a good deal of lumber piled in different piles near the police quarters on shore and he wants this sorted and piled properly and moved



to one side somewhat so he can lay the sills for the storehouse. The Technical and Scientific staffs including myself have volunteered to do this with Reilly as Foreman piler and sorter. The upper ceiling was completed on the house today and a good deal of the outside sheeting. By tomorrow night the house should be in pretty fair shape.

The wireless sets, both the [ship's] set and Logan's personal set continue to receive well and we get news regularly from Germany, England and the United States and the time as before from various stations at different hours of the day if we want it. Blair says that he hears Glace Bay all the time quite loud and although the program which was arranged to be sent from Barrington has never been received even while we were in the Gulf and off the coast of Labrador it is quite evident that a ship in these waters properly equipped can easily be reached at any time in Glace Bay. The wireless headquarters at Ottawa of the Naval Department were advised by Blair while we were in the straits of Belle Isle that he was getting nothing from Barrington, but no reply was received to the advice nor has Barrington been heard since.

The Doctor and Blair were out for a couple of hours this afternoon looking for oogjooks, but got nothing.

### **Saturday, August 26, 1922.**

The boats went ashore for the last trip last night about 11.00 p.m. One launch and one of the boats got back at 1.30 a.m. and the rest of the boats did not get back until after 3.30 a.m., the tide continuing to "happen" at the wrong time as far as we are concerned.

This morning broke very very foggy and the first launch started for shore with the [carpenters] in charge of Vignault. After cruising around for forty minutes or so they returned to the ship not having been able to find the head of the bay. Some of the rest of us got into the launch and Captain Bernier took charge of having the advantage of an occasional sight of the sun by this time, he was able to land us on the extreme southeastern corner of the bay, from which point we had to walk about 1¼ miles to the site of the Post. The bay on the southern side is very shallow from some distance out, probably three-quarters of a mile and there are no boulders on the bottom and unlike the northern side of the bay we were able to go ahead at full speed with the bottom just below the bottom of the boat and still no chance of striking an odd boulder. A few minutes later the Doctor, Valiquette and Grant came ashore in the canoe.

A great deal of lumber was moved from where it had been thrown indiscriminately on the beach and was piled properly. The first boat loads came ashore about 2.00 p.m., the launch having brought in our launch an hour earlier.

Brown set a bolt marking his observation point and cut reference arrows in neighbouring boulders and he also photographed these and wrote detailed descriptions for future references.

The sills for the storehouse were laid and most of the trimming was got into position. About three o'clock a scaffold on which were working MacGregor, Poitras and Reilly on the main hut gave way and dropped the three men to the ground. The two former escaped without any bruises, but Reilly fell heavily on some lumber and appeared to be badly hurt. [Fortunately] it was at a fair stage of the tide and [Captain] Bernier was just making a landing with the launch and a boat and the boat which has come in previously had been unloaded. Reilly was immediately placed on a stretcher improvised from one of the police spring beds and was taken to the ship where he was hoisted aboard on the springs in slings and was put to bed in the chart room as it was found to be impossible to get him down the companion-way. The Doctor made an examination and could discover no broken bones although Reilly complained of severe pains, one particularly at a spot beside his backbone and one in the back muscles of his thigh, also internal pains in the pit of his stomach, stating regarding the latter that he thought his truss had hurt him in the fall. He is resting at present, it being 8.00 p.m., fairly quietly, but complains that this latter pain has gone farther around to the other side, the left, and he has urinated three times since coming on board ship. The Doctor had made up a liniment and is applying it from time to time and says that nothing further can be done except to await developments. It seems that in cases like this although apparently no bones have been broken there may have been severe internal strains which will eventually effect possibly the bladder or kidneys or some other of the neighbouring organs.

The Captain figures tonight that he will have got ashore by midnight approximately half the police stores for this point and that it will take another day and one half or possibly two days to get the rest of them ashore. There is considerable coal ashore already and only enough is being put in each boat now to ballast it sufficiently to allow a good upper load of stores to be packed aboard.

The fog cleared off around noon and the sun came out and since then it has been another of the exceptionally fine days of which we have had several since coming here.

### **Sunday, August 27, 1922.**

Just at midnight last night a walrus with the tusks described as at least three feet long came up alongside the ship not more than thirty feet away and made faces at the Doctor who happened to be on the bridge at the time. This of course was too much of an insult to be entirely disregarded and the Doctor dashed immediately down for his trusty weapon and from the bridge succeeded in wounding the animal; there was great excitement for awhile. Mr. Walrus could be seen flapping around more or less unguided

and the Doctor called for a harpoon. Mr. Wilcox had a pretty fair one which unfortunately he had already given to Kaktoo, the only other one was in a drawer in the Doctor's medicine locker; said drawer refusing to open freely. Finally, however, the drawer was forced with the aid of a corkscrew and the harpoon was temporarily attached to the small end of a pike pole and the Doctor assisted by Valiquette and MacGregor started valiantly forth in the canoe to bring the cripple back to the ship. Said cripple, however, was a tough nut to crack. The harpoon absolutely refused to enter and attempts to jab it in only seemed to waken Mr. Walrus up and the Doctor finally had to put another shot in from close quarters. This last shot proved fatal to the walrus and he sank promptly. The Doctor mostly makes light of the battle among the ice-cakes and MacGregor has not yet gone on record concerning it, but Valiquette's description would indicate that he at least would almost certainly view the next battle from the deck of the ship rather than from the canoe.

This morning again broke bright and perfectly clear with no wind. The boat load of [carpenters] went ashore early as usual followed later by the others who were assisting. Before noon, however, the sky had clouded up and there was considerable low fog, while a smart breeze sprang up from the northwest. This made it very unpleasant on shore but the work went on as usual.

I went over to the camera station on the south shore of the bay and retook one of the pictures, the negative of which had been light struck while Valiquette was making a test development.

Lunch was sent ashore to the workers about 12.30 noon and the men on the ship began to load the boats about the same time. By 4.00 p.m. the last of the stores for this detachment were ashore and all that now remains is to give as much assistance as possible in finishing the buildings and to get the men's kits ashore. If the weather permits we will be probably here another two or possibly three days. At the present moment, it being 10.00 p.m., a large pan which appears to be three or four miles in diameter in diameter is bearing down rapidly on the ship from the northwest and the Captain is having to anchor so as to be prepared to dodge it. We anchored in seven or eight fathoms of water and it would not be very much of a trick for a pan like this to put us ashore in the shallow bay. The Captain has had steam on the ship practically ever since noon when the ice began to move rapidly, and when coming out in the launch about 5.00 p.m. we had to chase the *Arctic* for some little distance in the open water as she was under steam at that time. The inner bay was full of ice and two or three times on the way out it looked as if we might have to turn back and wait on shore until the ice had cleared away somewhat. The second boat load of workers who came off to the ship about one hour later had little or no trouble in reaching the ship.

When coming into the passage between Smith Island and Ellesmere Island a week ago we all noticed what appeared to be an old high water mark along the base of the cliffs forming the coast. From the ship at a distance it looked as if it might have been caused by ice being jammed on the shore possibly under the pressure of gales from the westward. When we got ashore, however, this more or less indefinite line was found to be so high, say forty or fifty feet above high tide mark, that it was easily seen that it could not have been caused by any wave action and must have been the high water mark at some distant time in the past. From our camera station No. 1 on the hills on the north shore of the bay looking down on to the flat part on the south side of the valley there are numerous water marks paralleling the present beach and at various distances apart, the whole from that distance having the appearance of a plowed field with quite regularly spaced furrows. In the centre of the valley where the gravel has been carried down more or less recently by the streams from the glacier these marks are not visible of course, but there are one or two other tongues towards the northern side of the valley that have not been cut by glacier streams for a good many years, and on these tongues these same marks are visible paralleling the present beach. All this would tend to show that the land in this section is rising out of the water. As to the length of time since this movement started, the only indication so far noted of its age is the fact that just behind the spot where the police buildings are being erected are the remains of Eskimo stone tupeks already noted. These tupeks are estimated by Captain Bernier from their appearance and the amount of moss that has grown over them as being certainly not less than two hundred years old, and as these tupeks are not more than five or ten feet above present high water mark already referred to it must have been a great many years ago that the high water tide was then level to the water.

Major [Logan] today took his Air Force flag ashore and set it on the portion of the flat he had staked out by small piles of stones for the location of the most northerly aerodrome in the world. He was photographed with the flag and by the flag alone and with the Eskimos. He himself being in formal uniform.

A point to be noted here is that the Eskimos in one respect at least resemble their dusky [brethren] of more southern climes the Indians. Like the Indians of Fort Yukon, Alaska and of the Yukon Territory during the summer the Eskimos here as represented by Kaktoo and his family seem to do most of their work at night. Kaktoo usually during the afternoon does a few odd chores for Mr. Wilcox when specially requested to do so, but ordinarily he and his family seem to only waken to activity about the time that we are leaving for the ship for our evening meal and when we return in the morning it is usually quite apparent that he has been working the greater part of the night. Possibly a bear skin may have been cleaned and pinned out to dry or a walrus might have been butchered and dismembered and the blubber and skin sorted out, or it may be that a pile of moss or rabbit droppings shows that his wife has been collecting during the night.

Work on the buildings progressed favourably and they should be in good shape at this time tomorrow night.

The "Arctic Junior" the old launch of the ship which was originally a steam launch is about all in; the hull is twenty-two years old having been built at the same time as the ship and the engine is also getting rather decrepit and causes a great deal of trouble. It does not appear at present that it would be worth while to bring this launch north again and a new one similar to the one built and fitted out this year should be [provided] next year.

### **Monday, August 28, 1922.**

The weather took a turn for the worst [last night], a stiff northwest breeze bringing in fog and snow and worst of all considerable ice. The Captain kept the ship under steam all night and about 4.30 a.m. in trying to get into a good position for sending the boats ashore at 7.00 a.m. with the [carpenters], got caught between two rather large pans and it was after 8.00 a.m. before a change in the tide opened the ice up somewhat and we were able to get out into more open water. The launch got ashore through the ice with much difficulty taking all the police with the kits of those who are going to stay here except that Mr. Wilcox remained on board to finish up correspondence assisted by Lee.

The men in the launch helped somewhat around the buildings, moving in the stove and some other heavy stuff and got back to the ship about 1.30 p.m.-?-

It snowed on and off considerably during the day, but barometer began rising again during the afternoon and it looks as if tomorrow might be much more favourable. The northwest wind has dropped considerably, but has driven so much loose ice into the bay that the launch in charge of Mr. Lemieux which left the ship about 5.30 p.m. to bring the [carpenters] aboard was unable to get more than a few hundred yards away from the ship towards shore, where it was caught in the ice and the ship had to force her way through to get the launch aboard again and since then had been stuck in the ice herself. It is impossible to imagine without having seen it how even loose ice will hold the ship. Of course the *Arctic* has not very much power, the trouble seeming to be rather with the propellor rather than with the engine, but she steamed full speed ahead for nearly one hour without apparently having any impression on the ice when suddenly the key-stone or rather they key base of ice gave way and the boat thereafter made good progress and we are now just in open water.

As soon as the change in the tide has loosened the ice up somewhat, Mr. Wilcox and Lee are going ashore so that if conditions are not more favourable tomorrow we can go away south.

Reilly appears to be much better today; he is in better spirits and has a fair appetite and is not at all nervous as he was [last night] and early this morning. The accident however unfortunate it was for Reilly was quite as unfortunate for the Doctor, as it is now obviously out of the question to leave him here with the police although it had been quite decided for him to stay. Chassi had been under the weather somewhat today, being all in after the exertions of the past week, but not sufficiently so to need medical attention. The Captain has been on duty continuously for fifty hours and begins to show signs of the strain. He probably will take little or no rest until we are well away from this rather dangerous position as far as the ice is concerned. It is easily to be seen that if we have a few hours heavy snow followed by a cold spell that we could very probably be frozen in solid.

The Captain has had the crew trimming ship all day as since unloading the stores here she has had a bad list to port and now nearly everything movable on deck has been transferred to the starboard side and the ship is again almost on even keel. The Captain had intended taking ballast here to trim ship, but it looks now as if ice conditions would force him to postpone taking ballast until we reach Ponds Inlet.

We leave Craig Harbour.

### **Tuesday, August 29, 1922.**

The ice packed so solidly in the Bay last night that instead of sending Lee ashore with Mr. Lemieux who was to pick the [carpenters] up, as soon as the tide had opened the ice up sufficiently, Captain Bernier thought it better that Mr. Wilcox should go ashore with that boat instead of waiting until morning as was originally intended. Weather conditions were none too good and the Captain was afraid if he waited until morning that it might be even more difficult to make a landing. By midnight there was a lane of clear water almost all the way into shore although this lane was not very wide; the launch was loaded and we said goodbye to Mr. Wilcox and Lee at 12.10 a.m. Mr. Lemieux was back with the launch and the [carpenters] at 1.15 a.m. and as soon as the launch was hoisted on the davits<sup>11</sup> the Captain gave the bells for full speed ahead and we left the harbour, working our way out through the ice in quite a heavy snow storm with King Edward VII Point just visible on the port side and Smith Island on the Starboard.

When Mr. Lemieux got ashore he found the police and our [carpenters] all in bed, they having worked until 7.00 p.m. without anything to eat since lunch and then started to open provision boxes and after getting something to eat and doing a little more work they decided that probably they would not be called for until morning and so turned in.

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<sup>11</sup> *Editors' note:* A davit is a crane-like device used to support, raise, and lower equipment such as boats and anchors.

Chips especially was very glad to get back to the ship. They report that they had completed roofing the living quarters and had got in about half of the second flooring and also had tacked up considerable of the building paper preparatory to sheeting the walls inside. The range was in position but as there was no hole in the roof for the stove pipe they had not started a fire, although an oil stove had been burning in Mr. Wilcox's tent.

When we got outside King Edward VII Point we found a large icepan blocking our course and extending so far to the eastward that the Captain [thought] at one time we might have to go around Cobourg Island to the north instead of coming down through Lady Ann Strait. A lead was found, however, and the ship was worked back into the strait and we have been on our course all day. We are now, it being 10.30 p.m., rounding the southeast side of Philpot Island and the Captain expects to be in the vicinity of Dundas Harbour about 8.00 o'clock in the morning, when if conditions are at all favourable we will make a landing and possibly take a few soundings.

We have come through considerable ice today and although at times the weather was not too bad it has been foggy and occasionally snowy during the evening. The wind has been light and fair and although no sails have been set except the fore square-sail for an hour or so, the ship, in her lighter condition, steams at about six knots per hour and also steers much more easily than she did when heavily loaded.

Reilly's condition shows considerable improvement and the Doctor thinks that no serious complications will ensue.

Major Logan has moved into the room vacated by Mr. Wilcox and Grant, Valiquette and two of the "quartermasters" are occupying bunks vacated by the men left at Craig Harbour.

The Doctor got a shot from the bridge at a walrus this afternoon, but the walrus is still alive and healthy.

A word here might not be amiss regarding the work performed by all hands in connection with the unloading of supplies and the erection of the buildings on shore. The [carpenter] and Poitras and usually the Bo's'n went ashore every day on the first boat and came back to the ship on the last boat, which left shore generally shortly after 6.00 p.m. On Mr. Normand the [carpenter] evolved chiefly the responsibility of selecting the proper pieces for sills, flooring, studding, joists and etc. and getting them together in the proper combination. The police themselves usually assisted with the loading of the boats and went ashore with the boats and unloaded them there and stacked the goods on the beach. As already mentioned the tide had to be taken advantage of and it was usually possible to get about five boat lands ashore per tide. A great deal of

the work unloading the ship and considerable of the work on shore was performed by the crew of the ship outside of the engineer and some of his assistants who spent part of the time in getting the engine and boilers into good shape. After the Government party had got pretty well through with their surveying and other work on the shore, they turned to also assisted materially in getting stuff ashore and in getting into shape the stuff that had already been brought ashore as well as working when the stuff that had already been brought ashore as well as working when opportunity offered on the buildings. It was only thus by taking advantage of every tide to the fullest and by every man working to the limit that the considerable quantity of lumber and stores needed for the detachment was gotten ashore in the week.

It would appear advisable in the future to bring along two or three carpenters who could assist the ship's [carpenter] in getting the buildings together. Some of the police had a scanty knowledge of carpentry and were able to help Chips considerably, but two or three men [thoroughly] conversant with the erection of this type of building to assist the carpenter would be almost invaluable and would save a great deal of time. It would also seem advisable to have a couple of tents, a cooking outfit and say one [week's] stores in hand for five or six men so that the building party could be sent ashore in the first load and would thus be able to work a full day every day without being delayed in the slightest by the tide or by the necessity of timing their trips ashore and back to the boat by the tide.

During his last day on the ship Mr. Wilcox and I had several talks with the captain about arrangements for the next year and the result of this consideration is embodied in a letter to Mr. Wilcox, copy of which is on file under this date.

The eastern coast of North Devon resembles in many respects the eastern coast of Bylot Island, consisting like the latter of bold headlands alternating with glaciers of various sizes. From the north eastern corner of the island on to Philpot Island there are some fifteen of these glaciers, some of them discharging into the sea and those not so active with their terminal moraine at a greater or less distance from the coast. Glacier No. 12 counting from the northeast corner of the island with a discharging face of about three miles was named by Captain Bernier "Valiquette" glacier. The interior of the island appears to be quite flat and Philpot Island is very flat on top.

We land at Dundas Harbour, Devon Island.

### **Wednesday, August 30, 1922.**

Last night was rather a dirty night with very heavy clouds, thick fog, a brisk northeast wind and occasional flurries of snow. Only occasional glimpses of the land could be had and as Captain Bernier did not trust the compasses very much he has obliged to get his



bearings from the occasional glimpses he got of some of the small islands off the southeast coast of Philpot Island. He was quite disappointed at not getting a sight of Hope Monument as this is one of the well known land marks of the district and at 3.30 a.m. the engine suddenly stopped and investigation discovered that the lower valve of the air pump was cracked and it had to be replaced by the spare which fortunately was on hand. The trouble in the air pump, however, was not discovered until after the condenser circulating pump had been taken to pieces and found to be alright. The break occurred about four or five miles west of Cape Warrander and after slipping along under the squaresail for one hour or so Captain Bernier decided to lay to and the ship rolled in the trough of the sea until about 8.30 a.m. when the engines were again put in commission.

After steaming down to opposite the entrance to Dundas Harbour the ship was again hove to and a launch was sent ashore to investigate the possibilities of the harbour.

One only has to see the *Arctic* without the engine running to realise what risks are taken in coming north in a boat equipped as this one is, with both auxiliary steam and auxiliary sail. In any kind of a headwind the engines alone are not powerful enough to drive the boat to windward and without the engines the ship as she is at present rigged may be said to be absolutely unable to beat to windward so that it can be easily seen what the result would be if the ship were caught on a lee shore in a gale of wind or anything approaching a gale; she would be absolutely helpless, and if the Captain was not always on alert to keep the ship well clear of any possibility of getting on a lee shore it would be a very simple matter to lose the ship. The dynamos are also in very poor shape and should be overhauled or replaced.

In the party that went ashore were the Captain, the engineer of the launch Vignault, Major Logan, Mr. Brown, the Doctor, MacGregor and myself. Dundas Harbour itself is somewhat in the shape of a bean with the entrance to the harbour facing the south, the concave side to the west and the convex side to the east; the total length of the harbour being between five and six miles. There a long narrow point stretches across the harbour and protects it from southerly winds across the sound, the entrance being probably less than one mile in width. The harbour itself is mostly deep, what shallow water there is being a couple of miles in and on the western side and towards the upper end of the bay. Two glacial streams which must be of considerable size at certain seasons discharge into the head of the bay and several other smaller streams empty into various points at the sides. The eastern side is much more precipitous than the western side where there is considerable rock foreshore between the harbour and the hills. The most suitable point for the erection of a post will be in the southeastern corner of the harbour just near the point where the long protecting point already mentioned joins the mainland. There is a harbour in this corner which has plenty of water and would give good shelter for

mooring a ship; and buildings placed close in to the southern side of the hill near there would appear to be fairly well protected in every direction. This point has also the additional advantage that if the supply ship should come and find the harbour well blocked with ice supplies could be landed in fair weather on the beach across the point from the post, the point here being not over two-hundred yards in width.

Many traces of game were seen, and on the point particularly. Tracks of caribou and musk-ox apparently of last year, plenty of rabbit traces, occasional fox tracks, but no signs of fish. The Doctor got a shot at one fox unsuccessfully and at another animal which he thinks might be a wolf, but which cannot be positively identified.

A visit was made to the supposed site of a cairn built on a low knob on the outer end of the point by Inglefield in 1853, who stayed in this harbour for one week at that time while engaged with other British ships in the search for Sir John Franklin. The cairn if such it was had been pulled to pieces many years ago and no signs of any documents could be discovered. A record was left on the ruins of the cairn, the record consisting of a Canadian cent [wrapped] in a piece of paper on which was written "C.G.S. Arctic, August 30, 1922" and signed by myself. On the extreme end of the point Captain Bernier had one of the sailors paint two sides of a large boulder with red lead making a very conspicuous mark visible for some miles at sea. They added also the words "Arctic Aout [August] 30, 1922." Two panoramas of the harbour were taken by Valiquette, one from the end of the point and the other from a knob on the western shore about one mile and one-half from the entrance.

Many old Eskimo graves were found on the shore of the bay also the evidence of several old stone igloos and a curious line of evidently specially set boulders was observed at the head of the bay in the northeast corner running almost true north and south and fairly straight. The boulders were close together at some parts of the line which was two or three hundred yards long and at other parts of the line were from twenty to forty or fifty feet apart. No explanation of this peculiar arrangement of the boulders has yet been advanced. The glacier discharging into the northwestern corner of the bay is very inactive, the flat between the glacier and the head of the bay being two or three miles deep.

The launch returned to the ship about 4.00 p.m. and although the winch was very baulky the launch was eventually hoisted on to the davits. The captain immediately set all sail and got her off on her course for the head of Navy Board Inlet the intention being to go down to Ponds Inlet by the entrance west of Bylot Island.

Blocked by ice in Navy Board Inlet had to go around north coast of Bylot Island.

**Thursday, August 31, 1922.**

There was little or no wind crossing Lancaster Sound and we entered Navy Board Inlet about 3.30 a.m. We had a light fair wind and all went well until about 9.00 a.m. when we were abreast of Canada Point and it could be seen that there was considerable ice ahead of us. From the [crow's-nest] no open water could be seen south of Low Point and after going two or three miles further south to make certain the Captain decided to turn around and head north again to go around Bylot Island into Ponds Inlet. The ice immediately south of Low Point consisted mostly of Arctic ice or growlers closely packed and mostly frozen together. South of this could be seen the new ice of last winter still unbroken and it was easily recognized that our ship would have no chance of breaking through it. It is to be hoped that Ponds Inlet has opened by this time or we will be delayed considerably.

It was 4.00 p.m. before we again got out of Navy Board Inlet and as soon as the ship could be headed eastward all sail was set and we passed Cape Hay just at 6.00 p.m.

It is just west of Cape Hay where the Eskimos reported to Captain Bernier some years ago that the remains of an old ship was found in the ice on the beach. They showed him a copper bolt taken from the wreck and as it was marked with the British broad arrow he surmised it might be one of the two boats abandoned by Belcher away to the west of here in 185-.<sup>12</sup> These two boats were frozen in and the crews unloaded all supplies and wintered ashore, coming east in small boats next summer until picked up by some other ship. The next year one of the boats was found by an American whaler(?) in the ice off the southern coast of Baffin Island. She was in perfect condition and was taken south by the captain of the boat who discovered her and sold to the American Government for \$40,000, being afterwards refitted and presented to Queen Victoria as a token of friendship and a mark of sympathy for the loss of Sir John Franklin and his party. The other boat was never heard of again and Captain Bernier upon seeing the copper bolt produced by the Eskimo, sent a man to the scene of the wreck. He took several photographs of the wreck and brought back a piece of wood teak about six feet long. He reported that the bulwarks of the boat apparently had been painted a light green and as this was the official colour of the British Navy at the time this would seem to tend to confirm Captain Bernier's theory as to the identity of the ship. Only the forward part of the ship was left the after part having been crushed off apparently by the ice. The man who visited the wreck was unable to identify it in any way. Captain Bernier watched the

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<sup>12</sup> *Editors' note:* 1854. Sir Edward Belcher, *The Last of the Arctic Voyages Being a Narrative of the Expedition in HMS Assistance ... in Search of Sir John Franklin, during the Years 1852-53-54* (London: Lovell Reeve, 1855).

coast anxiously and closely today while passing the vicinity of the wreck, but was unable from the ship to pick up anything that might be identified as the wreck.

Captain Bernier played a joke on himself last night unintentionally. He came out of his room and asked Sparks to summon the second mate who was on duty on the bridge at the time. A sudden roll of the ship slammed the door of the Captain's stateroom and then he realized that the door was locked by a spring lock and the keys were inside. He was discovered sitting in the second mate's room in his underwear and socks looking rather forlorn and everyone seemed to think it a rather good joke, but the Captain could not see it in that light and took it really seriously. The second steward was promptly sent in the room through the transom and was held up by the heels, head down, by Mr. Lemieux and in this manner the door was opened.

Note,-

See that a washing machine is on the ship next year. Table linen and bed linen is filthy and nobody can be persuaded to turn laundry man. What little washing is done is performed individually by different members of the party.

**Friday, September 1, 1922.**

We coasted all day with a light fair wind and at breakfast time this morning were almost opposite Point Walter Bathurst. The Captain had warned the Doctor that he might at any time see a bear swimming and about 9.30 the Doctor spotted a bear to seaward and was apparently making his way ashore from a berg about three miles out. Excitement reigned supreme immediately. The Captain, the Doctor and the Secretary got a rifle apiece and posted themselves on the fo'c'sle, the rest of the outfit gathered a battery of cameras, movie and otherwise and located on the bridge hoping that the Captain would refrain from firing long enough long enough to enable them to get some good pictures of his lordship swimming. The ship was brought up into the wind so as to come pretty close to the bear, who upon sighting us headed seaward. He put on a spurt and seemed to be able to go about as fast as the ship, the latter being badly crippled at the time owing to the babbitt on the crossheads where they run in the guides burning out. The Captain held his fire until we were about seventy-five yards away from Mr. Bruin and then the battle began. The rifles got in the first shots, the Captain's second shot getting the bear in the neck. The ship came up rapidly on him after this and before he was finished and while he was still plunging around and trying to dive, and raising his head out of the water several times, the cameras got in their deadly work and Mr. Bear was soon boxed up in about 20 cameras, movie and otherwise. When the bear had ceased to struggle the canoe was lowered and the Doctor and Vignault went out and towed him to the ship; a sling was passed around him and he was hoisted aboard. The time from sighting him until he was safely aboard certainly not being over thirty-five or forty minutes. Later he

was skinned and quartered and the smell of bear meat once again pervades the ship. He is a small male probably a yearling with a rather good skin.

Regarding the burned out babbitt on the crossheads. We have been running at half speed all day on account of the knock which was prevalent. It is quite possible that the engineer will not be able to take the engine down sufficiently to run in new babbitt until after we have unloaded at Ponds Inlet or rather Black Point and are taking on ballast at Albert Harbour. There is every possibility that the ice driving in and out with the tide may necessitate our keeping steam up all the time we are unloading.

About 4.30 p.m. we came abreast of Button Point where we had already seen that the Albert was anchored. Wilfred Caron came off in a whale boat with an Eskimo crew and informed us that Captain Munn was ashore pumping whale oil and that he would be up to the Hudson's Bay Post "the day after yesterday" to clear the ship reporting to Sergeant Joy. Caron and his Eskimos departed in a few minutes leaving with us three Eskimos and an Eskimo boy who had been loaned to Captain Munn by Sergeant Joy to assist him on the point. We are taking them up to help with the unloading of the police supplies. Wilfred reported that the ice has gone out as far as just west of Salmon River; also that one of the big pans we passed after leaving Ponds Inlet on our way north had drifted into the mouth of the inlet under the influence of an easterly wind and had blocked the entrance for six days. Captain Munn's ship arrived only five days ago having spent considerable time on the way up at Cumberland Gulf where Captain Munn erected some buildings. Wilfred states that Captain Munn reports that there have been several murders, five he thinks, at the gulf lately, the killings being the result of some sort of a feud between some of the native Eskimos and some others who have become Christianized.<sup>13</sup> We will probably get all the particulars of this from Sergeant Joy to whom no doubt Captain Munn reported in detail. This looks as if further police posts would certainly have to be established on Baffin Island coast next summer.

We are now (8.15 p.m.) abreast of King George Point where we were stopped by the ice two weeks ago and expect to be opposite the [Hudson's] Bay Company's Post in about two or three hours.

### **Saturday, September 2, 1922.**

Alas and alack after proceeding at a nice rate for a couple of hours after leaving King Edward Mountain we ran into loose ice, trash ice as Captain Bernier calls it. This got thicker and thicker and when we got opposite Ponds Inlet, Captain Munn's trading

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<sup>13</sup> *Editors' note:* On the Kevetuk murders, see Shelagh Grant, "Religious Fanaticism at Leaf River, Ungava, 1931," *Études/Inuit/Studies* (1997): 159-188. Finley McInnes and W.B. MacGregor later investigated these murders at Home Bay.

station, we were in the midst of heavy ice, it was dark, the darkest we have seen since leaving the Labrador coast and the wind dropped. About 4.00 a.m. we were within about three or four miles of the [Hudson's] Bay Post and making our way through a lane with loose ice south of us to the shore and a large pan north [of] us stretching almost to the northern shore of the inlet. Captain Bernier suspected, however, that this pan was forcing him on shore and tied up to it for a short time to observe. During this stop he was able by the whistle to attract the attention of the people on the shore at the H.B. Post, but he soon perceived that he had been correct in his surmise and that we were rapidly drifting with the pan on to the southern shore and the lane was closing. Shortly before 5.00 a.m. he called me and it was at once apparent that with the engine in its crippled condition we would have to turn about and run for shelter, Albert Harbour being the nearest refuge. After running eastward again for about one mile I noticed that a boat had put out from Black Point, the [Hudson's] Bay Post, and it was working its way through the loose ice towards the rapidly closing lane behind us. When I drew the Captain's attention to this boat he decided to take a chance and tie to the pan for a time so that if possible the boat could catch up to us as we surmised that it was carrying Sergeant Joy. They got aboard about 6.45 a.m. and we immediately were on our way again and it was uncanny to see the lane closing before our eyes. Where we had come through closed up in less than ten minutes, or in other words if we had had to wait ten minutes longer we would probably have been caught. We came slowly down under half steam on account of the crippled engine and two or three miles west of Albert Harbour ran into a fresh head breeze against which we were unable to make more than one mile per hour. Everyone felt relieved when we pushed a loose ice-cake aside and entered the snug little harbour, and no one was more relieved than the Captain. He said that in all his experience he had never been in quite such a helpless position.

This is only another instance that shows the need of a boat with lots of power so that she may be independent of her sails and may be handled to advantage in tight corners like we were in this morning.

Sergeant Joy confirmed to some extent the reports from Cumberland Gulf although only three deaths are reported instead of five. The story is that one of the natives "got religion" to such an extent that the other natives considered him insane and shot him although they did not kill him. They nursed him back to health apparently in a repenting mood and upon recovery he again attempted to assume control over them. One of the natives over whom he had complete control was ordered by him to shoot two others who were not so subserving and they were forthwith shot and shortly afterwards he himself was shot by one of the other natives just as he was about to murder one of the Eskimo women by breaking in her head with a hammer. Sergeant Joy is not quite sure when this occurred but thinks it was in about April or some time during the early spring. Here again is an instance where the *Arctic* should have more power. Sergeant Joy has

asked us if we can by any possibility take sufficient supplies for him down to Clyde River about half way to Cumberland Gulf where these murders occurred so that he can go down with the [Hudson's] Bay Boat (he would go with us if we would take him) and return during the winter by sled, picking up the cache at Clyde River on his way. The *Arctic*, however, is so weak that Captain Bernier absolutely refuses to attempt to go down the coast of Baffin Land on account of there being so great a possibility of being caught in the ice for the winter. If we had plenty of power it would be a very simple matter to comply with Sergeant Joy's request. I agree thoroughly with Captain Bernier in his decision, for from even the short experience that I have had with this boat in the ice I can say if it were not for Captain Bernier's almost uncanny way of scenting trouble we would have been in many a tight fix before this, even this summer which has been a particularly favourable one from the weather standpoint.

After anchoring in Albert Harbour we went in the launch to see if by any chance Sergeant Joy would consider this place as a site for their post so that we might at once proceed with the unloading here. He, however, was not very favourably impressed with the spot for though it was quite cheerful and bright today with beautiful sunlight it is hidden from all the fall and early spring suns by the high mountains immediately behind it to the south. I have not seen the Salmon River district but gather from what Captain Bernier and [Sergeant] Joy say about it that it is quite a different country from this, much more livable especially from the white man's standpoint.

We started loading ballast this afternoon and already have about 20 tons on deck. Tomorrow we will get the police coal out of the hold and replace it with ballast, unloading about half of the coal here so as to save that much time when we finally are able to get to the site of the new post. The coal left here will be taken up by the police themselves in their boats next summer. Sergeant Joy has spent the day figuring out rations and has discovered that although his post is supposed to be outfitted for two years that no allowance has been made for rationing prisoners or witnesses, and as he will have several of these on his hands from now until court convenes next summer he can only make his stores last twelve months and has requested us to turn over to him if possible a ton of [flour] and say seven hundred and fifty pounds of biscuits. As we ourselves are outfitted for fifteen or sixteen months we will be able to do this provided conditions are such that we are reasonable sure of not having to spend the winter in the north ourselves and we have left the question open until we have seen what the next few days will bring forth.

Sergeant Joy reports that there is a sick Eskimo at Black Point and we will probably send the Doctor up tomorrow. He will have to walk practically all the way and it will most likely take him six or seven hours. The Eskimo, Sergeant Joy says, is suffering from a stricture and can not urinate without the assistance of a catheter.

Major Logan got up his little aerial today and was quite successful in hearing considerable outside news. Later with his portable set and the ships aerial he got the time from [San Diego], California.

Brown and I laid out and measured a rough base on the beach on the east side of the harbour, occupied the ends with the transit and occupied to camera stations with camera and transit on the foot hills to the south. If the weather is favourable tomorrow we will get two or possibly three more camera stations so that the harbour and surroundings may be mapped from the photographs.

The Engineer and his staff are busy pulling the engine to pieces and preparing to rebabbitt the crossheads. The chief thinks it quite possible that one or more of the cylinder rings may be broken and will have to be replaced. He himself is very much under the weather and has been ever since he caught cold after being in one of the boilers about a week or ten days ago looking up some boiler trouble.

Reilly showed good improvement yesterday but does not seem quite so cheerful or confident today. He is a very restless patient and already considers he has been in bed quite long enough for any ordinary person to recover from anything and cannot understand why he cannot walk yet.

### **Sunday, September 3, 1922.**

Another bright clear day with a brisk breeze from the eastward although the breeze is not strong enough to drive the ice back into Eclipse Sound, it keeps coming up and down on each tide and it looks as if we might be forced to unload here.

Logan and Brown climbed to the little dome on [Brother's] Island and occupied it with the transit, sextant and camera. They report the wind blowing very strong on top and quite cold. I stayed [on board] with Captain Bernier in the morning thinking that Captain Munn was coming in from his station, but as he did not turn up I went up to Captain Bernier's cairn on the north side of the westerly entrance to the harbour and we occupied it with transit and camera, Valiquette also coming along and taking a panorama with his machine.

The Eskimos and the crew continued at the ballast and in the evening the launch was sent up to the village and all the women and children were brought down, joining the men here. For the benefit of the cinematographer Captain Bernier organized an impromptu dance and which turned out to be quite an affair. Valiquette got his flares out and while the officers and men were dancing with Eskimos he got some good shots of the fun, the music being provided by an accordion and violin. Later the Eskimos were taken below and fed and amused by Major Logan and his conjuring tricks to say nothing of the famous dog and afterwards they were all taken over to the Albert where Captain



Munn organized a mass meeting in the forecandle and acting an [interpreter] for myself, gave a message to the Eskimos about the reasons for sending the police here and so on. Mr. Lemieux and I got back to the ship about 5.00 a.m.

About twenty or twenty five tons of Police coal was landed here to save time at Black Point. It will be boated or [sledged] up to the location of the post later on.

### **Monday, September 4, 1922.**

Brown and Sparks occupied the cairn south of the entrance with the transit and camera in the morning and in the afternoon Brown brought in the pickets from the base as we will not be doing any more surveying work here.

There is now on board about 60 or 65 tons of ballast and we hope to have at least 100 tons on by tomorrow night, when the chief expects to have the engine in running order and we will probably try to get up to Black Point at the earliest possible moment, as a change in the weather appears imminent, the sunset tonight being what Captain Bernier calls a sick one and we are liable to be frozen in unless we are able to unload within a day or two.

This evening some of us started out in the launch with Captain Bernier to go to the village to see if we could get some more help from the Eskimos tomorrow and just as we left the ship's side we saw a steamer coming up the inlet. The steamer turned around and headed for the harbour and we went out to meet her. She proved to be the "Bayeskimo" of the [Hudson's] Bay Company and is now anchored alongside of us. She had just gone up until she saw that the upper part of the inlet was blocked solid with ice. Captain Bernier and I and two or three others went on board in the inlet for a few minutes and then continued on to the village where we secured the promise of the help of ten Eskimos for tomorrow.

### **Tuesday, September 5, 1922.**

The Eskimos were late in turning up but the Captain figures that tonight we have between 100 and 120 tons of ballast on board.

The Engineer reports the engines can go full speed any time now at one [hour's] notice and we will probably tackle the ice tomorrow. The engineers discovered that the babbitt on the crosshead did not burn off but dropped out as they found the babbitt intact down in the bilge so that it was simply a case of an accidental break in the lugs holding the babbitt in place and not a burn out. He had a piston cut and found the cylinder and piston rings in perfect condition so that these should be as good as new tomorrow.

Several of us paid a visit to the "Bayeskimo" this afternoon and stayed for tea, after which the launch took the two captains, the two doctors and others as far as the village

where they looked over ice conditions carefully and decided to make a try tomorrow morning to get through to Black Point although Captain Bernier is not at all sanguine of being able to get any distance. Captain Falk is getting very anxious to get away from here and threatens to tell Mr. Parson the District Manager of the [Hudson's] Bay Company, who managed to get to Black Point last night with the launch that he must unload here and get away. The "Bayeskimo" is not built for fighting ice and the captain does not want to take any chances of being frozen in. The Bayeskimo's launch managed to get to Flack Point last night by following a narrow lead near the shore. They left the point about 5.00 o'clock this morning on their return trip and reached the ship about 12.30 noon with two holes punched in the launch that they had stopped up, filling one with some waste and the other they stopped by tacking over it a piece of tin which happened to be aboard at the time, Mr. Parsons remaining at the point.

It was very interesting this afternoon to hear Captain Falk and Captain Bernier discussing ice conditions in the north. Captain Falk has had considerable experience but like all other Captains when they meet Captain Bernier they are ready and anxious to draw on his wonderful store of experiences in the ice in the north and he is only too willing to convey all that he knows.

The *Bayeskimo* is a new boat launched only last May. She was originally ordered some time during the war or before the war by a Norwegian firm and when she was partly built the contract was cancelled on account of the war and she was later purchased by the H.B. Company and her plan altered considerably, her under body strengthened and she was put into commission last May for the northerly trade. She, however, is not in any sense an ice boat, she is too straight wided, her stem is too straight and her rudder is absolutely unprotected, but she being a new boat, of course has good [accommodation] and once again we were impressed by the fact the "Arctic" is an old boat and old fashioned in many ways although almost perfect in design of hull, at the same time when one visits another modern ship and sees what can be done in the way of comforts and [accommodation] one is rather ashamed of the old boat and feels that something is wrong that the Government cannot afford to have the very best boat sailing in these northern waters. Government prestige suffers not only with the [companies] doing business here but with the natives. There is no doubt at all but that the Government should do everything in its power to put a new boat in the service, a boat modern in every respect and kept up in such style that there would be nothing superior to it seen either by the traders or by the natives.

Captain Falk when asked about the reindeer brought by the Company last year from Norway and landed near Amadjuak states that out of the 600 head taken aboard in Norway about 550 were landed on Baffin Land. These were in poor shape being thin and weak after their long sea voyage and covered with filth and dirt from their long

confinement in the hold of the ship. The Finns who were supposed to herd them last winter and when landed with them were surprised and disappointed to find that they were being put ashore in a country where there was no timber and they were also reported to have been very lazy during the winter. As far as can be found out this year a [census] shows that only about 211 of the reindeer can be accounted for. The remainder are either supposed to have died or possibly a small number of them may have mingled with the herds of wild caribou and so are lost to the Company. It would seem that poor judgment was used in bringing these animals over so late in the year and also in landing them on a coast where nature showed them at once that the only thing to do was to head far inland, this making it just so much harder for them to be [herded] and properly looked after. The [Hudson's] Bay Company it is understood are going to wait another year for developments before actually deciding that the transportation in the reindeer was a bad investment or before deciding to bring over any more of the animals. It would seem that unless the Government or somebody else who knows steps in and gives the company some good advice about handling these animals the whole future of the industry in this part of the country may be endangered.

ADDING to [yesterday's] notes it is to be noted that the *Bayeskimo* was in communication [last night] with the "Nascopi" [*sic*]<sup>14</sup> the latter being at the time in Hudson Straits, also to be noted that the head Canadian office of the company in Montreal communicates at will with the "Nascopi" and the "Bayeskimo", therefore, there is no reason why the "Arctic" should not be equipped with at least as good a transmitting set as the "Bayeskimo" and there is no reason why we should not be reached from Ottawa the same way that the "Nascopi" and the "Bayeskimo" are reached. Glace Bay seems to be about the best heard station according to Mr. Blair and Major Logan.

Captain Munn before leaving stated that according to his estimate the trade done by ostensibly scientific parties under MacMillan and Rasmussen had decreased his [year's] receipts by not less than three or four thousand dollars. MacMillan is known to have procured trapping and trading licenses costing him in the neighbourhood for one thousand dollars and so possibly may be said to have paid his way; so far as is known, however, Rasmussen has no licenses although Sergeant Joy will collect fees from him if he appears here next year as he promises to. This is a point that should be looked into for the future, the old cry of "Canada for the Canadians" might be wisely enforced here. Denmark keeps Greenland absolutely for Danes and it would appear to be a good

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<sup>14</sup> *Editors' note:* RMS *Nascopie* was a 2,500-ton, 285.5-foot-long steamer-icebreaker designed and built in England for the Hudson's Bay Company. From 1912-1947 it undertook thirty-four voyages through Hudson Strait as a supply ship for the Hudson's Bay Company northern outposts. HBC History Foundation, "R.M.S. Nascopie," <http://www.hbcheritage.ca/things/technology/rms-nascopie>.

business to charge foreigners a much higher license than British Subjects so that fake? purely scientific parties like Rasmussen's and MacMillan's would find little or no [inducement] to come into the country. Captain Munn and his company have considerable money invested in the northland, Rasmussen and Macmillan have practically none and still they can come into the country by paying a nominal fee and interfere with the business of legitimate traders [to] the extent of four thousand dollars and this in one locality only. The home trader should be better protected.

### **Wednesday, September 6, 1922.**

We came away from Albert Harbour about 5.45 this morning, the "Bayeskimo" having preceded us by about one hour. Both boats worked their way through considerable loose ice and anchored in open water opposite the [Hudson's] Bay Station, the "Bayeskimo" having her boats in the water and had sent her first loads ashore when we dropped anchor slightly west of her in the lee of a berg which had grounded last year and with the assistance of a pan which is jammed on the west side between it and the shore makes a fairly well sheltered harbour. According to the stakes which mark the [Hudson's] Bay's property this post was founded in the 252<sup>nd</sup> year of the company, being last year 1921 and is denoted as the U-24.

A good deal of material was sent ashore during the day, the water being calm, the haul sort and the landing such that the boats could go close to the rocks at any stage of the tide. It was found impossible on account of the pan already mentioned to land the goods within a mile or one mile and one-half of the spot selected for the police post by the sergeant and after looking the ground over he decided to put the post slightly to the eastward of the [Hudson's] Bay Company's station. The sills were all put in place today and levelled up and all the studding is in place except five or six pieces. Assisted by the experience gained in erecting the hut at Craig Harbour better time was made, not nearly so much time being lost looking for the various pieces and kinds of material. The Eskimos worked pretty well, but it is quite apparent that they need a good overseer after them all the time to do really efficient work. They are strong and willing and soon found out that it was necessary to sort the material and did it of their own accord after being shown once.

The "Bayeskimo" got all her stuff ashore and has all the affairs and gatherings of the post for the year on board except one or two boat loads. They will also have the greater part of their years accounting to do.

Our boats were all ashore and most of the men when at 5.00 p.m. Captain Bernier got anxious about the large pan which was coming merrily down with the tide and everyone was whistled aboard, the anchor hoisted, boats got in board and away we went looking for safety in open water, which was found between the pan just passing another large pan

just west of it. The "Bayeskimo" followed along the same lines and the two boats are now moored together in loose ice, the "Bayeskimo's" Captain having kindly consented to let us have about fifteen or twenty tons of fresh water of which we are again very short. This will be pumped aboard within one hour or so and will save us probably half a [day's] pumping later on, on our own accord. The Captain hopes to get the rest of our stuff on shore tomorrow and appears to be very anxious to get into open water again.

Brown assisted by the Doctor and Grant laid out and measured a base and occupied two or three stations with the transit and camera. The character of the country is not well adapted to photo-topographical work, but owing to the shortness of time at our disposal it seemed better to attempt something with the camera and perhaps be able to cover a considerable area even if imperfectly than to get a very much smaller area with the plane table.

If the ice continues as loose and open as it is at present (8.30 p.m.) Captain Bernier will again work his way back to the shelter of the berg in shore and drop anchor as we are now drifting with the ice eastward at the rate of about two miles per hour.

The weather has been mostly cloudy today with one or two very light flurries of snow, but there has been a considerable amount of snow north of us and eastward towards Albert Harbour, the mountains in these directions showing considerable new snow on them tonight.

Sergeant Joy, Doctor Stewart and Mr. Patmore of the "Bayeskimo" were unable to reach their boat on account of the ice and came aboard the "Arctic" having [later supper] with us and went on their own ship after the two boats were moored together.

#### **Thursday, September 7, 1922.**

We got our two smaller tanks filled with fresh water from the "Bayeskimo" and about 10.30 p.m. in the midst of a heavy snow storm the two ships parted company, the "Bayeskimo" reaching the old anchorage off the Post without any trouble, the ice having again opened up there with the action of the tide but before we could attempt to follow her Tom's boat which was astern in the ice had to be hoisted up on the davits and as it had no bolts, slings has to be put around it and in the darkness and the snow with the boat bumping around among cakes of ice this took some time so that when we were able to move the weather was so thick that nothing could be seen in the direction of the post and we had to wait until about 3.00 a.m. before we got away. We got back to the anchorage behind the berg about 4.15 a.m. and even at that early hour the "Bayeskimo" was putting the finishing touches to her unloading which she completed and left for the south at 5 a.m.

After the wintry night the weather turned out beautiful and calm and everyone turned to with a will. All the stuff was ashore by 5.00 p.m. and the mail was brought aboard. The [carpenters] were ashore all day and the hut when they left was ready to be floored, sheeted and roofed.

The manager and clerk of the [Hudson's] Bay Company's post paid us a visit shortly after dinner and at Captain Bernier's invitation came back later for supper.

About 5.45 the Captain had to heave anchor and get out of the road of a lot of heavy drift ice coming down with the tide. Everyone ashore made for the ship and it was quite exciting for a few minutes with a launch, a big Eskimo whale boat and a canoe all reaching the ship at the same time. Later on the anchorage cleared again and we got close enough in shore to [send] in those of the Eskimos who were going to stay at the post and to allow the [Hudson's] Bay people and the Police to get ashore. Farewells were said about 9.00 p.m. and with three long blasts of the whistle to start the dogs howling [ashore] and to say a formal goodbye we started eastward. We did not get very far however, and remained all night in thick ice drifting with the current.

#### **Friday, September 8, 1922.**

The ice slacked off a bit early this morning and the captain headed for Captain Munn's post to put the other natives ashore. They were paid off last night through Tom for their work both in assisting in ballasting the ship and in getting the freight ashore. They got a quantity of sea biscuits, ten pounds of tobacco, 100 rounds of .303 ammunition and several bunches of beads to be divided among some of the wives. In addition to this Tom got a quantity of tobacco to pay him for damage done to his boat, three of the thwarts of which had been broken during the taking ashore of the stores.

We are now about noon abreast of Beloeil Island off Albert Harbour trying to make our way out through the ice of which several very large pans are filling the channel. We drifted eastward with the ice until about 4.00 p.m. when the Captain was able to work the ship through a rather narrow lane running parallel to the north shore of the inlet and quite close to it. The Captain has what he calls the key to the situation, that is, the point where the most of the pressure between two pans comes and blocks the lane. His first attempt to break this key was unsuccessful and he backed out and charged it again, this attempt also was unsuccessful and the ship wedged herself so solidly between the two pans that the engines alone could not back her out and two ice anchors had to be put out astern and she was pulled out by the winches and engines working together. The next attempt broke the key and the ship came through into somewhat freer water. The boat worked her way through smaller icepans and cakes with gradually increasing speed until about 8.00 pm. When the squares'l was set and she fairly jumped into open water

just east of King George Mountain. This marked the change and the ship was put on her course leading out of the inlet.

**Saturday, September 9, 1922.**

We wakened up this morning with Bylot Island and Baffin Island in sight forty or fifty miles astern; a beautiful clear day with a heavy swell rolling in from the northeast and a light fair breeze. The Captain is heading due east a course which he hopes will bring him to the pack at or about the opening through which we came on our way up, although the opening he anticipates will have moved south in the meantime some eighty or ninety miles.

About 11.00 a.m. the wind hauled around more to the northwest and northward and we are now (1.00 p.m.) under all sail making a good seven knots, the sails steadying the ship considerably.

I have been discussing with Captain Bernier the advisability of keeping some of the men at work during the winter at repairs and re-rigging the ship. He thinks that three or four men or possibly more to be kept on as crew during the winter would much more efficiently put the boat in shape than to lay her up completely and have the work done by the Marine and Fisheries Department in their usually unsatisfactory manner in the spring. The ship's carpenter and one of the sailors who is also a carpenter with another sailor who is a rigger and can do splicing, could if the material is supplied, shape the topmasts and gib boom and put them in place. They could also make repairs to the deck and woodwork and [could] replace some of the [ship's] outer planking which is in poor shape and has [sprung] away from the inner skin, possibly from frost action, and could cork the deck in the many places where experience this summer has shown us leaks very badly. This morning they had to stop washing the deck as so much water was coming in to the saloon and the table could not be set for breakfast. There are many other fair sized leaks in the deck elsewhere. The same system for repairs might be worked to advantage in the engine room. That is, keep on the chief engineer and another man to overhaul the engine and get her ready for spring. A great deal of repair work has had to be done this summer since we left Quebec and most of it work which would not have been necessary if the work done by the Department of Marine and Fisheries had been properly performed. Valves have blown out, joints have had to be repacked and many other small but bothersome things have had to be attended to. These minor repairs have taken up practically all the spare time of the engineers and oilers, and in fact they have often worked overtime on them and they have had no chance at all to get the engine-room in anything like decent shape. The engine itself and all the auxiliaries are running but have not been cleaned exteriorly for some years and there has been no chance to attempt anything like this since we left Quebec, consequently the engine-room is in anything but a pleasant condition.

We continued on our course throughout the day, the breeze continued light and the ship making from four to five and one-half knots per hour at times.

Blair reports that with a small receiving set of his own and by using the ship's aerial he heard [Tokyo] today, this increasing considerably the range of stations heard from this northern country: also this evening he was talking with both the "Nascopi" and the "Bayeskimo", the former at Lake Harbour over eight hundred miles distant, the latter off Cape Walsingham probably some four hundred or four hundred and fifty miles. This talk with the *Nascopi* constitutes easily our record for transmitting this summer.

### **Sunday, September 10, 1922.**

Still on practically the same course with the breeze varying slightly to the northward so that it is now on our beam and we are making five knots with all sail set. There is no ice in sight at all today not even the few odd growlers such as we saw to the northward of us yesterday and which constitutes according to Captain Bernier the southerly outposts of the Faith Sound ice. At noon Captain Bernier thinks he can detect signs of some ice some distance off to the south east, possibly the middle pack which we may expect to meet at any time now.

The weather today is dull and calmer than yesterday. The ship made 122 knots from noon yesterday until noon today.

Reilly with the aid of a crutch made by Chips was able to get out on deck this morning and spent fifteen or twenty minutes in a chair in the sun outside much to his delight. He is naturally very awkward with the crutch and at present especially as the ship is still rolling a little bit but feels greatly elated at being able to move around at all.

We kept on our course all afternoon, wind and sea conditions being about the same. In the evening the weather got a little thicker although the wind did not increase and we had flurries of snow. One iceberg was seen about 10.00 p.m.

Several large flocks of little-auks were seen around the ship, mostly young birds on their way south for the winter.

We made up a code message for Sparks to send in to be relayed by the "Bayeskimo" and the "Nascopi". If conditions are as favourable as last night there is no doubt but that Ottawa will hear us in the course of the next few days.

### **Monday, September 11, 1922.**

Sky cloudy all day; course the same south by west and we made one hundred and sixteen miles from noon yesterday until noon today; wind continues light.



Men taking the coal out of the hold and putting ballast down. Some heavy snow squalls through the night and nearly always a few icebergs in sight. Apparently all the pack ice though, has been drifting over to the coast of Baffin Land by the strong northerly winds of the last two weeks.

Blair got out message through to the *Nascopi* and learned also that the "Bayeskimo" is still in the ice off Cape Walsingham. She got considerably to the south of there but the ice was so thick that she again turned north and attempted to circle the pack and get into Cumberland Gulf around its southern end. The *Nascopi's* whereabouts was not mentioned but she was calling for a station to relay for her to Belle Isle a message, this being in response to one broadcasted asking for the whereabouts of the *Nascopi*. This broadcasted message was heard by Blair the night before last and apparently the Company at London or Montreal are anxious to know where the *Nascopi* is. So far as is known she has not yet been able to reply giving her position but should be far enough down the coast of Labrador in a day or two to send messages in herself to Belle Isle.

### **Tuesday, September 12, 1922.**

Sea, wind, ice and sky conditions all the same as yesterday except that Hare Island and the Coast of Disko appeared on the horizon about 4.30 this a.m., later the mountains of Greenland itself could be seen between the occasional snow squalls and the sun at noon broke out clearly. At 4.30 in the afternoon we were almost abreast of Disko Fiord with the Blue Mountain about 35 miles right ahead of us. The weather was fine and clear and a gentle breeze helped us on our way. About 9.30 at night we were abreast of the Blue Mountain and the engine was stopped and we layed to until about 2.00 in the morning as the Captain did not wish to go into Godhavn Harbour until daylight.

Blair was in touch with the "Bayeskimo" about midnight and she was in the ice off Cumberland Gulf; Captain Falk wishing to know what Captain Bernier thought of conditions there. Captain Bernier said that if the ice which was apparently blocking Cumberland Gulf was growlers from the north he certainly would advise keeping clear of it especially when the tide was running. His advice was to come outside and go around into Cumberland Gulf by way of Black lead and Kikerton<sup>15</sup> and if possible to come out the same way, he having seen the ice in previous years pack solidly to the northeasterly and westerly shores. This is only one more instance of the value of wireless in these northern regions. Captain Falk has had considerable ice experience but at the same time he no doubt considers that when opportunity offers, it is well worth while for him to

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<sup>15</sup> *Editors' note:* Blacklead Island (now a national historic site) and Kekerton Island whaling stations.

avail himself of the chance to get advice from Captain Bernier whose many trips north with the "Arctic" and other ships entitles his opinion to at least weighty consideration.

**Wednesday, September 13, 1922.**

At 7.00 a.m. the ship was off Godhavn Harbour, having been on the move since about 2.30 a.m. When I went on deck the first thing in sight was a couple of Eskimos in their kayaks alongside of the ship. The kayaks appeared the same as any I have seen either in the Yukon or the Baffin Land side. They were perfectly outfitted, however, with harpoons and lances, a rack forward for the harpoon line, the line reaching aft to the bladder which was lightly tied or attached to the craft just behind the cockpit. There was also a waterproof receptacle just forward of the cockpit containing a rifle. In each case the Eskimo had the usual curtain attached around under his arms and going over the combing of the cockpit so that even though a swell might come over the deck no water would enter the kayak.

One of the Eskimos was a typical Eskimo, the other was typical Danish, one being dark haired and flat featured, the other with fair hair and Scandinavian type of countenance. Both as far as could be seen were clad in sweaters and [woolen] caps. After the ship had been stopped they came aboard, having already by signs asked if we desired a pilot to take the ship into the inner harbour. While they were coming aboard a small four cored boat hove in sight. It was soon alongside and it was discovered that the carsmen appeared to be Danish. They were all fair haired and Scandinavian type of features; wore the typical blue cotton smock of the Dane but talked Eskimo only, one of them however, being able to talk enough Danish to understand and make himself understood in conversation with Peters one of our sailors who is quite a linguist. They were also invited on board and the ship's launch having been lowered into the water in the meantime and prepared for the trip we started ashore, that is myself, Major Logan, the Doctor, Mr. Brown, Mr. Grant and Mr. Valiquette, the launch being in charge of Mr. Lemieux with Jendreau as engineer and Vignault as crew, taking Peters along as an interpreter. The points of the make and break system had been burned out during the last trip where at Ponds Inlet and the engineer being unable to find the spare points had substituted ones made of brass and of doubtful durability. We started ashore towing the Eskimo boat and two kayaks and when about two-thirds of the way in the motor began to hesitate and we were barely able to make the landing ladder in the harbour.

The first glimpse of the village or settlement was entirely satisfactory, trim buildings story or story and one-half in height nicely painted, neat paths or trails leading from one part to the other, flags flying at the school house and the landing place and considerable excitement ashore, everybody running briskly down to our boat.

On landing we were met by Dr. Porselt [*sic*: Porsild]<sup>16</sup> and his son, the Scientist in charge and the Assistant respectively of the Scientific Station at this point. Dr. Porselt [*sic*] explained that he was just leaving Eeminik with the [last mail] of the year, the mail boat being ready to leave today. This was rather unfortunate as Dr. Porselt [*sic*] talks English perfectly and it was too bad that he could not be with us during our visit. His son, however, also speaks English very well and through him and Peters our interpreter and also through Mr. Neilson the Factor or Sub-Governor of Godhavn we were able to get along satisfactorily. Our letter from the Danish Consul General at Montreal giving us permission to make purchases if necessary in Greenland and to have them charged to the Mounted Police was addressed to the Inspectors in Greenland. There are two of these Inspectors, one supervising the north district and the other the southern; the former having his headquarters at Godhavn. He, however, was absent being with the mail steamer at Eeminik so that we were unable to see him, however, we were able to get a reasonable assurance from Mr. Neilson the Factor that if we called here about the end of July next they would have thirty dogs and seventy-five pair of coomings ready for us, this having been the real reason of our call at Disko. Dogs are very scarce at Ponds Inlet and of course there are practically none at Craig Harbour so it is rather important that we should be able to make arrangements for dogs for both these posts and for the new post to be established wherever it may be next year. It was the same with the koomings,<sup>17</sup> they are very scarce at Ponds Inlet and it is imperative that a supply for next year should be secured. Mr. Neilson explained that dogs and coomings were not overly plentiful at Godhavn but that he would be able to collect them from the other settlements before next year.

Godhavn itself appeared quite as charming upon closer acquaintance as it has appeared when coming in with the launch. The whole place is as bright as a new pin, neat and orderly, well kept and a credit to the Danish Government. The inhabitants show the same healthy signs of loving care by a Paternal government

The Danes have apparently gone after this question of protecting the Eskimos in the proper manner. It may have seemed at times rather ridiculous to read that no ship could land in Greenland without special permission except under stress of weather or when needing freshwater and that when a ship was allowed to land that the officers and crew should be forced to undergo a medical examination before being allowed ashore but it

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<sup>16</sup> *Editors note*: The botanist Morten P. Porsild founded the Danish Permanent Research Station at Godhavn (now Nuuk) in 1906. His sons Alf Erling and Robert collected herbarium specimens for him. See Josef Svoboda, "'Reindeer Botanist' and the Onset of Canadian Arctic Ecology," *Czech Polar Reports* 7/2 (2007): 244-47; and Wendy Dathan, *The Reindeer Botanist: Alf Erling Porsild, 1901-1977* (Calgary: University of Calgary Press, 2012).

<sup>17</sup> *Editors' note*: All the other versions are spelled with a c but this word was corrected with pencil to start with a k.

would seem that the end had fully justified the means. There is no doubt that there is a strong strain of Danish or at least Scandinavian or some kind of white blood through most of the inhabitants at Godhavn and they like the settlement are neat, clean, well dressed, healthy and appear to be happy. The contrast between conditions here among the Eskimos and conditions among the Eskimos we left only a few days ago at Ponds Inlet is not only marked but painful. Instead of the filth, squalor and horrible smells of the settlement at the [Hudson's] Bay Post and Captain Munn's Post with the squabbling dogs, dirty youngsters and piles of refuse, we have a neat clean settlement and everything spick and span. The Danes apparently have no scruples about intermarrying with the Eskimos, but at the same time the Eskimos are kept Eskimos. The Government school does not teach Danish, only teaching Eskimo, they being taught to speak, read and write the latter correctly. There is a mission and chapel at the settlement but this appears to be almost secondary due to the fact that the government takes care of the natives by force both physically and morally and no doubt many a good leaf with regard to handling the Canadian Eskimos could be taken out of the Danish records of their experience since they have fathered the Greenland Eskimos.

It is greatly to be regretted that we did not call here on the way north so that Mr. Wilcox and his men could have had an opportunity of seeing the possibilities of the Eskimos. It is to be hoped that next year we will be able to spend profitably at least one day at Godhavn and possibly some other Greenland port so that whatever other members of the police that may be aboard will have the advantages lost to those who came with us this year.

As to the inhabitants themselves, a great many of the men appear to be typical Scandinavian both as to height, build and complexion and it may be said that they were mostly very good looking. Eight or ten of these men or perhaps more were out to the ship or were in the boat that took us out later and most of the other men in the settlement were [working at] a blubber station across the harbour thus leaving the more or less pleasant duty of welcoming us ashore to Mr. Neilson, the Factor, Mr. Porselt [*sic*], the Assistant scientist and to the women and children of the settlement.

The women cannot be allowed to pass by without being noticed. Like the men a great many of them were fair skinned with fair hair, they carry themselves well, have fine features, look most intelligent and in two ways are greatly different from their Baffin Land colleagues. In the first place they are just so clean as Baffin Land women are unclean and they are perfectly straight bodied and straight limbed, whereas most of the Baffin Land Eskimos both men and women appear to be bow-legged. The strong white strain no doubt accounts for a great deal of this. Their dress is not only fascinating but extremely sensible. As far as could be seen they wear a smock of more or less pretty shirting with a wide neck edged by a collar of fur or beadwork or both, beneath it shows

a linen "dickie" sometimes plain and sometimes embroidered but always painfully neat and clean. Around their waist they wear a broad sash say six or eight inches in width, sometimes a real sash tied with the hand or sometimes merely a broad ribbon sewed on to the bottom of the smock. None of them wore skirts, the nether garment consisting simply of a pair of seal skin panties reaching from the waist to about half way down the thigh, sometimes just plain, but usually ornamented in the front by strips of red or black coloured leather in the centre with a smaller strip made up of tiny different coloured bits of leather of about the same size sewn together in a sort of pattern what somewhat like wampum ran up and down each leg of the panties and extending almost the full length of the panties. Then they wore long boots of soft tanned leather inside of which are nicely fitted "Stockings" or liners of skin edged with fur at the top, these projecting some three or four inches above the top of the boots and coming out over the lower-edge of the aforementioned panties. There used to be a connotation not now strictly adhered to that unmarried girls wore bright red boots and ornamented panties to match and married women and widows wore black boots or dark blue. In both cases these being somewhat ornamented by strips of fancy work made up of coloured leathers matching the ornamentation on the front of the panties. It is also said that doubtful ladies wore blue or green shoes or boots, this latter disregarded. Widows in addition have a special distinguishing mark, being a band around their forehead inside of which their hair is coiffured into a switch and bound back with ribbon. This head gear looked rather amusing at first, resembling somewhat a wall trimmed azalea in a large half empty pot. It seemed as if we were quite as much an object of curiosity to the natives of the settlement as they were to us. Permission having been secured from the Factor, Valiquette at once got busy with his camera ably backed up by the other members of the camera battery and it is impossible to estimate just how many snap shots were taken. This novelty having been disposed of Major Logan took a sudden fancy to an outfit worn by one of the ladies and it may be noted he did not pick out the poorest looking of the ladies and through Mr. Porselt [*sic*] he asked her what she would take to sell him her clothes. The deal was soon made \$15.00 being the consideration and she retired to the obscurity of her home and presently appeared with her disregarded raiments on her arm and wearing another outfit far more gorgeous and much more pleasing to the eye, the principal difference being that it seemed newer and naturally less worn and that the top of the liners or stockings seemed to be of lace work, embroidered shoes also instead of being red were of pure white and of soft leather, the whole outfit being very fascinating. Brisk trade soon developed, the doctor also bought the clothes of another women, Brown bought a couple of pair of boots and others various other souvenirs. Canadian money was taken in payment, a kronen being considered equal to 25¢. The facility of the exchange being made possible by the assurance of the Factor that he would take our Canadian money from the vendors at this value and return the money to Canada through Denmark. After one hour and one half of pleasant intercourse a start was made for the ship and as our

motor refused to work the launch had to be rowed back to the ship. I came aboard with Mr. Neilson and Mr. Porselt [*sic*] in their boat and introduced them to Captain Bernier and "Arctic". They stayed for dinner and were interested in the ship and more especially in our wireless equipment, the Major's special equipment and in the late news we had on file concerning the events of the past few days in the outer world. They stayed aboard until about 1.00 p.m. when we said goodbye like old friends parting and they went ashore in their boat and we headed for the sea.

One cannot have made a visit like this without [realizing] the possibilities of the Eskimos in this northern country; In realizing and visualizing the good done by years of sincere effort by the Danish Government among these people one cannot help but notice the contrast that the effects of promiscuous intercourse between the whalers and sailors and the Eskimos on the Canadian side it would seem that the time has come when the Canadian Government must step in and protect not only the caribou and the musk-ox but the Eskimos themselves. They have come in contact up to this date with practically the roughest predators in the world and no doubt have suffered by this contrast. Morals must be established and the police must take a sincere interest in these people and try to better them. It does not seem so important that they should have religion pounded into them as they should have habits of cleanliness taught to them with religion as a secondary but inseparable consideration. They must be taught to do things of value to the outside world so their product will be saleable; they must be made industrious and by sending among them only the best type of white man as teacher and preceptor they must be made [to realize] that the white man is not always a scoundrel.

Another important point worthy of notice is that although practically all the Eskimos here are chiefly of Danish extraction and appearance, no Danish is taught in the local schools, they are not encouraged to learn Danish but are taught to read and write Eskimo correctly. This would appear to be a good example to follow. Help them in any way possible but keep them Eskimos, that is do not attempt to civilize them to the extent of making them equal to the white people; this plan not having been a success to say the least of it among the Indians, for example of the Yukon. An Indian girl in that country educated in a convent is turned loose when her education is supposed to have been completed and she feels herself too good to marry an Indian and at the same time is really not good enough to make a fit and proper wife for a white man and there is usually only one result, she becomes neither one nor the other. On the other hand in Godhavn they are kept as Eskimos and as far as can be judged by judged by outward appearance the results are most satisfactory. It seems very advisable that the Danish system of handling the native population of Greenland should be looked into very closely with a view of getting from them every possible hint of value in connection with handling our own Eskimos in the north. The contrast between the two as already stated is so vivid as to leave an ever lasting impression. It is to be hoped that the pictures taken

by Valiquette in Baffin Land and in Greenland will be of such a nature that this contrast will be strongly brought out.

We got on our course immediately after the visitors left and headed almost west as soon as we were clear of the harbour so as to get clear of the north shore current and be able to make our way without having to fight the current.

Inshore there was a considerable number of large and small icebergs, but no loose ice to speak of.

The afternoon is perfectly clear and bright and our last sight of the Greenland coast was very pretty indeed.

### **Thursday, September 14, 1922.**

By noon we had got as far west as longitude 57° W when the captain headed due south. Our course through the night was about south southwest. We are on the western limit of the Greenland loose ice as evidenced by the fact that we have been passing icebergs all day, some of those this afternoon belonging to Baffin Land although Captain Bernier was the only one aboard [who] could see the label. The wind had been freshening steadily and is still from the northward and we are now (8.00 p.m.) making eight knots under steam and the fore squar's'l and fores'l only, the mains'l, the mizzen and the head sails having been taken in to make the boat steer more easily.

We are also at 8.00 p.m. just crossing the Arctic circle and are paying tribute to Father Neptune, the Captain paying tribute by serving out hot rum (splicing the mainbrace) to all those who want it.

Reilly has been moved from his spring cot which we filched from the R.C.M.P. at Craig Harbour and is now in the Captain's bunk in the chart room. The table has been moved back, the chronometers put in the locker and there is now lots of room for the visitors to the invalid, who has been very peevish as he has been nineteen days in bed.

Valiquette was busy this afternoon trying to get movies of the ship as she rolled in the sea. There is quite a noticeable difference between the action of the "Arctic" as she is now and as she was during the little spell in the gulf as she had all her cargo aboard then and was very dead. The passengers too have altered for the better and so far there has been no cases of *Mal de mar*.

Last night Blair was unable to get in touch with either the "Bayeskimo" or the "Nascopi" although he heard the latter working Belle Isle from which it is inferred that she is pretty well down the coast by this time and that in all probability our passage of the 10th would reach Ottawa this morning. We will make another attempt tonight to get into communication with the "Bayeskimo".

The sky has been overcast practically all day until late this afternoon.

**Friday, September 15, 1922.**

The breeze freshened last night until at 4.00 a.m. the Captain stopped the engine and with only the jib, squares'l and fores'l set we made seven knots per hour. The stop gave the engineer time to tune up a little and see that everything was in good shape and when the wind dropped gain about 7.00 a.m. the engine was set to work. The wind continued to decrease and it was not long before we were under full sail. As the ship has bene rolling considerably everything on deck had to be lashed. This afternoon the wind has hauled around considerably to the westward and we are still making good time, the course being due south. The sky has been overcast all day with occasional snow squalls.

Blair last night got in touch with the "Bayeskimo" and we learned that she has abandoned all efforts to get into Cumberland Gulf on account of the closely packed ice and she is now heading for Lake Harbour. Captain Fulk reports having spoken to the *Albert*, the latter ship still not having given up her attempt to get into Cumberland Gulf.

**Saturday, September 16, 1922.**

We continued south all day; fair breeze; overcast sky; blowing pretty hard through the night and we made two hundred and one (201) knots from noon yesterday to noon today, the record so far for the trip. Occasional snow flurries; and only an occasional iceberg in sight.

**Sunday, September 17, 1922.**

Still on our southerly course almost due south although we are making a little easting now. Breeze northwesterly today and fairly strong. At noon we were four hundred and thirty-nine (439) miles from Belle Isle.

No ice in sight or no signs of ice blink on the horizon any where. Considerable difference noticeable in the feeling of the air, as it is much more balmy and not so penetrating. The nights seem very long and are rapidly getting longer, being quite dark now from 8.30 p.m. until 3.30 a.m.

**Monday, September 18, 1922.**

We continued south and made pretty good time with a fair breeze, the sky overcast at times.

Land was sighted this morning early, the Captain identifying it as a mountain somewhat south of the latitude of Port Burwell.



**Tuesday, September 19, 1922.**

The breeze freshened this morning early and blew until about noon at nearly thirty-five miles per hour from the northwest, kicking up quite a sea so that most of the passengers were quite content to remain below. During the afternoon the wind veered around considerably back and forth and remained light so that the boat held by the heavy ground swell coming in apparently from the southwest made very little progress. The sun shone only occasionally, the sky being overcast nearly all day with a light shower or flurry of snow at times. Several bergs were sighted during the day. The breeze freshened again in the afternoon, veering around to the northwest and better time was made through the night.

The sun sets now about six o'clock at night and it is still quite dark until about six o'clock in the morning.

Land was sighted again this afternoon, the Captain identifying it as the Bull Dog rock off the entrance to Hamilton Inlet. It was quickly lost sight of, however, in the haze and fog.

Blair has been attempting for over two days now to get Belle Isle but without any success.

**Wednesday, September 20, 1922.**

This morning opened very sull and the sun heavily overcast; a light breeze from the westward which about noon veered around to about dead ahead, necessitating the truing up of the squaresail and the close hauling of all the other sheets. The captain in view [of] the fact that the equinoctial gales are about due is not particularly impressed with the wind having gone from the westward around to the southward, he says it means as a rule dirty weather; the rhyme covering the question being: "Wind from the south'ard round to the east is good for neither man nor beast", whereas if the wind veers in the other direction good weather is usually the result.

Blair made another attempt today to reach Belle Isle from which we are distant about one hundred and seventy-five miles? He could not get an answer however, but was successful in securing acknowledgement of the message from the C.G.M.M. "Canadian Commander", which passed Belle Isle outward bound at 10.00 a.m., they acknowledging the messages for Belle Isle. There is apparently no reason why we should not be able to get in touch with Belle Isle from this distance except that our dynamo is in such poor condition that when it is running for transmission the armature makes such a racket that it is impossible to hear any communicating signals. I understand that this interference due to the poor condition of the armature is felt mostly when working with stations of low wave length, from which we have been getting time and news all summer not being

interfered with to nearly the same extent. In explanation, the low wave length stations are heard as a hiss which is easily confused with the buzz of the dynamo, while the far wave length stations are heard as a musical note or whistle thus being easily distinguished above the noise of the dynamo.

This is only another instance showing the necessity of either putting the ship's dynamo in such shape that it will transmit satisfactorily or getting a new generating unit. The ship's small dynamo also is not being used, for instead of using it for electric light during the day, when few lights are burning, it is in such poor shape that we have to use coal oil lamps and it would certainly seem to be a good policy to spend money on the dynamo so that we could have the electric lights all day rather than take chances of a fire on the ship with the gasoline and kerosene lamps.

There was a little excitement on deck this morning just before dinner when a shackle in the upper block on one of the lifts of the foresail gaff parted, the two heavy blocks and the wire cable rattling down on deck with a great deal of force. The bight of the rope just missing Mr. Morin's head and my own and ripping off our hats, while the blocks landed on the deck where I had just passed not ten seconds before.

The wind continued about the same getting a little stronger in the evening.

#### **Thursday, September 21, 1922.**

The wind got considerably stronger through the night and early this morning and we wallowed along all day with our nose into the same old heavy swell from the southeast, aggravated by a cross sea from the west raised by the wind now blowing. The morning observation showed that we had drifted considerably more to the eastward than had been allowed for in the dead reckoning and at noon we were one hundred and eight miles a little north of the east of Belle Isle instead of being some twenty or twenty-five nearer than that. During the afternoon the wind veered around about forty-five degrees to the nor'ard and we were able to shape our course almost direct for Belle Isle, but continued heavy cross seas make progress very slow and we are doing little more than roll around in the sea.

We have seen two or three different steamers, one of them apparently hove to some miles to leeward this morning but not asking for any help, probably some engine or boiler trouble.

Since yesterday afternoon we have seen two or three bergs and growlers, most of them corresponding to the ice report sent out from Belle Isle.

Last night when Blair was trying to get Belle Isle to ask if they had any message for us the *Calcutta* was working England and Pointe Amour told Blair to stand by until they were

through. The *Calcutta* is investigating the wreck of the *Raleigh* and presumably is reporting at length to the authorities at home. Tonight we received one message and two service messages from Ottawa via Belle Isle, Blair having no trouble receiving them.

### **Friday, September 22, [1922].**

This morning was a beautiful bright clear morning and we are still heading about south. At 8.00 a.m. the Captain tacked ship and we stood in towards Belle Isle on a course a little north of west. The captain's dead reckoning at noon made us fifty-three miles east of Belle Isle, the observations showing sixty-two miles. During the afternoon it clouded up somewhat and when we pick up the Belle Isle light at 7.30 p.m. and came abreast of it about 9.30 p.m. the log read 59 miles.

Shortly after passing between Belle Isle and Cape Bauld it began to rain and it is now 11.00 p.m. very thick and squally and the Captain has taken in the mainsail so that he may bring the ship about more readily if necessary.

Everyone appreciates the relief from the rolling which was particularly heavy last night under the influence of a heavy ground swell coming in from the northeast.

No lights are at present in sight but we should pick up Cape Norman very shortly otherwise the lead [will have] to be brought into use to keep track of where we are. Ice is also reported off Cape Norman, the wireless report being two or three bergs off the cape.

### **Saturday, September 23, 1922.**

The rain squall cleared up [last night] about 11.00 o'clock and Cape Norman light was visible on the port bow. The wind fell off a bit and a long reach took us over to the north shore of the strait and in the morning everything had cleared off and we found ourselves sailing westward with a fair breeze and the current, making seven knots per hour.

About 10.30 a.m. we passed Point Amour where H.M.S. "Raleigh" is ashore on the rocks. She is laying with quite a list to port, broadside on with the stern possibly a little nearer to the shore than the bow. Working parties were around her in a small boat but it was impossible to tell whether it was her own crew or a salvaging party. Another warship was anchored in the harbour and the "Calcutta" had just left for Quebec when we came along.

We continued on out into the gulf with a fair wind until 4.00 p.m. when the engine had to be stopped for repairs, the same babbitt having burned away as before and had to be replaced. It was not until 11.15 p.m. that the engine was again put to work; the wind, in the meantime, having dropped to almost a dead calm about 5.00 or 5.30 and we could not have made more than four or five miles in the seven hours without the engine.

**Sunday, September 24, 1922.**

The wind came around from the westward at 4.00 a.m. and we have been by the wind all day in a sea rapidly growing heavier. The wind at noon was thirty-four miles by the gauge and it is probably now, 3.00 p.m., blowing forty miles per hour.

Just after tacking ship at noon the fore gaff broke off short just inside the inner pulley of the peak halliard and things came down with a run. They have now got the mainsail stowed in the t'gallant fo'cale and are binding a storm trys'l on to replace the fores'l. In the wind that is now blowing this is no easy job, but in an hour or so the work should be completed.

When they were just beginning to bind on the storm trys'l the captain and Grant had a more or less exciting dance around the deck trying to hold one of the peak halliard blocks. They were taken off their feet and had to drop the block, it immediately heading out to leeward and came back upon the bridge where it was promptly grabbed by the bos'n.

It so happens that most of the blows we have had so far have come when the ship was on the starboard tack and most of the stuff in the rooms has been stowed to suit the list to port and now that we are on the other tack everything has to be restowed.

After the sail was bound on the wind decreased and we just about held our own until the wind dropped somewhat more and veered around slightly to the nor'ard and we made a few miles on the proper course through the night. About 10.30 p.m. the large dynamo stopped very suddenly and investigation showed that the connection rod on the governor had snapped; the small dynamo was in such poor shape that it was only after several false starts that it could produce enough current for the bridge lights and the mast head lights and these could only be used on and off so that the sidelights had to [be put] in place. All the other lights on the ship were out.

**Monday, September 25, 1922.**

Today broke better and we have made considerable progress westward, the wind having been fair during a considerable part of the day.

The men are busy splicing the broken gaff. They are putting on four splints and making the lashings of the old sounding wire which has not been off its drum for probably fifteen years. The outer layers of the wire were found to be very rusty but the inner strands apparently are very strong. They put the lashing on by means of an iron "server" in the same way that marlin is served on to wire cable. After the wire is made fast they will drive wedges in between the splints and tighten the whole splice.

The dynamo was also repaired today, the chief and his assistant making a new connecting rod. The main engine is running at about ninety revolutions, partly on account of the knock caused by the slides being out of parallel and partly due to the difficulty of raising steam, the boilers being by this time quite badly scaled from using salt water for so long.

We are tonight roughly about one-hundred miles east of Anticosti and about twenty-five miles from the north shore of the gulf.

**Tuesday, September 26, 1922.**

We were fighting a head wind all day today and up till midnight no change of any kind was noticeable. We tacked ship once or twice during the day and for all intents and purposes we practically were hove to as we did very little more than hold our own. It blew very hard between four and five this afternoon and the gauge at eight bells showed fifty-four miles plus, and there is no doubt but that it blew harder shorter after that.

The splicing of the gaff was finished [during] the early morning and the gaff was put in position and the fores'l bent on during the afternoon in spite of the heavy wind, all hands, however, getting a good soaking from the spray while working at the sail. Captain Bernier no doubt feels [easier] now that the old sail is in position again as the ship is under better control.

**[Wednesday and Thursday,] September 27-28, 1922.**

Yesterday and today we have been beating up against southwesterly winds along the north coast of Anticosti and are now 7.00 p.m. almost in line between Cape Rabast, Anticosti and Isle Peroquette off Mount Louis prospects for tomorrow being continued southwesterly winds.

**Friday, September 29, 1922.**

We lost sight of the light at Isle Peroquette about 4.00 a.m. when the bearing of the light at West Cape, Anticosti was about southeast true. A light fair wind carried us well across the gulf all day.

**Saturday, September 30, 1922.**

We passed Pointe DesMonts at 4.00 a.m. and although we had ascertained by wireless that there was mail there for Mr. Morin and myself the wind was fair and we did not stop, the captain saying that it might take as long as four hours to get a boat ashore and back.

At 2.30 p.m. we took our pilot aboard at Father Point and continued up on the river in a fog which we encountered just about here until shortly after midnight when we anchored near Red Island off the mouth of the Saguenay.

### **Sunday, October 1, 1922.**

We heaved anchor at 6.15 a.m. and continued on up the river in quite a heavy fog and a head wind but assisted considerably by the tide. At 11.20 a.m. we were abreast of Cape Dogs, the fog having practically departed leaving only some smoke and the wind having dropped considerably. It took us from 11.30 a.m. until 3.30 p.m. to make the eleven miles between Cape Dogs and Cape Salmon, where we got rather a surprise. As we came within one-half a mile of the cape we could hear some one shouting apparently through a megaphone, but did not think very much of it until we were abreast of the light house the shouts became almost frantic. Thinking that there might be some trouble, ashore we stopped the engine and prepared to lower a boat, when they put up the signal "V.G.", which translated means "what is your name?". The captain was very wrathful and ordered the boat in board again and we proceeded on our way when the shouts again became very urgent. We replied to their signal flags by spelling "Arctic" in code and the last we say of them in the smoke they were still shouting and finally showed the signal "M.O.R.", meaning, "please explain". We replied with the answering pennant indicating that we had answered their question and proceeded up on the river still puzzled by their strange actions. Captain Bernier and the Pilot are inclined to think that it is the work of some newspaper man. The official entry in the ship's log reads as follows:

"3.30 p.m. As we passed Cape Salmon the Keeper spoke to us through a megaphone and as we could not understand him we prepared one of our boats to send ashore with our doctor. As we stopped the ship in readiness to lower a boat the Keeper ran up International Code V.G. - what is your name? - we answered him spelling out our name - Arc-tic - and proceeded. The Keeper put up another message - M.O.R. - Can you explain yourself? - we put up answering pennant and sent him a Morse Code message on steam whistle as follows: "Captain Bernier's compliments"."

We made the lower traverse light-ship after considerable anxiety about 11.30 p.m., a strong tide being with us. We covered the two and one-quarter miles between the light-ship and the Blocque in ten minutes, showing that the "Arctic" was making at the time about thirteen and one-half knots per hour, probably the fastest time she has made all summer. We should reach Quarantine some time around 3.00 a.m.



Expedition member with "Chi elmo"  
and "Sparks" at Pond Inlet, 1922

3

W.H. Grant Diary

DIARY OF W.H. GRANT  
ACCOMPANYING THE ARCTIC EXPEDITION  
ON BOARD THE C.G.S. "ARCTIC"  
LEAVING QUEBEC, TUESDAY JULY 18<sup>th</sup>, 1922



William Harold Grant with head man's two wives and child on board C.G.S. *Arctic*.  
Standing: Ulaajuk (left) and Nutaraarjuk (right). Seated, left to right: Qulitalik, William H.  
Grant holding Akpaliapik, and Puttiuq. Qulitalik and Puttiuq were Takijualuk's two wives.



**Ottawa, July 9th, 1922.**

Left Ottawa at 3.30 p.m. via Canadian National and Grand Trunk Railway arriving in Montreal and left at 11.30 p.m. for Quebec.

**Quebec, July 10th, 1922.**

Arrived in Quebec about 7.00 a.m. and proceeded down to King's Wharf to board the *Arctic*. Found *Arctic* in process of loading and would not be ready to sail before next Saturday, July 15<sup>th</sup>. Met Mr. Beland, Agent, Marine and Fisheries Department and he took me up town to the Clarendon Hotel. Stayed at the Clarendon Hotel that night.

**Quebec, July 11th, 1922.**

Moved from the Clarendon Hotel to the Kind Edward. Loafed around the wharf and walked around the city seeing the sights. Took two pictures of the C.G.S. *Arctic* and one of the Moving Picture Operator Mr. George Valiquette and myself on the Terrace in front of the Chateau Frontenac. Met Captain J.E. Bernier.

**Quebec, July 12th, 1922.**

*Arctic* still loading. Took the observation motor car around the city for a trip.

**Quebec, July 13th, 1922.**

Went down to La. Liberty's to see the fur suits. Tried one on. They are made of long grey fur (I think goat skins) the coat pulling over the head and a big hood on same to enclose the head. The pants are made somewhat like riding breeches and reach to within nine inches of your heel. (There is a strap around waist, ankles and wrists. Also underwear is of goat skin.) We will get our fur boots from the Eskimos when we arrive north. The rest of my outfit consists of a sort of hunting cap, thick woolen mitts with deerskin pull overs, thick riding breeches, a sheep skin lined corduroy short coat with a [woolen] collar, flannel shirts, winter underwear and etc. Mr. Caron the manager showed us all over the factory and storage also the city from the roof.

**Quebec, July 14th, 1922.**

Still at Quebec loading *Arctic* and getting everything in readiness for the trip. Crew consists of 26 men including officers. We have 11 mounted policemen of the Royal Northwest Mounted on Board under Major Wilcox who will be left at two different posts up north and will stay there about two years. Doctor Livingstone will I expect stay up [north with] the mounted police, we also have a surveyor and handy man, an astronomer, an Air Board Man, cinematographer, Officer in charge of Expedition Mr. J.D. Craig, and myself as his secretary. We have ten Lee Enfield rifles on board,

ammunition, tobacco, liquor and etc. The ship is loaded with lumber for building police posts, three canoes for use by policemen as well as a couple of other boats, two motor launches and life boats. 500 tons of coal. We are equipped with steam and sail, having three masts. We have a wireless outfit also a wireless operator Mr. Blair.

Doctor is returning with us to Quebec

### **Quebec, Saturday, July 15th, 1922.**

Still looking around town. There are three battleships in town, HMS *Raleigh*, HMS *Constance & Calcutta*, and I do not know the other one, all of the North American Atlantic Squadron. I went down to the Basin and went over the flagship the HMS *Raleigh* and took two pictures of her. I also took some pictures of the other two laying out in the river in front of the Citadel as well as several views of Quebec. Sleeping on board tonight but too hot to sleep in my cabin so sleeping on deck with the rest of the mounted policemen.

### **Quebec, Sunday, July 16th, 1922.**

All the mounted policemen got lit up and came home to the ship about 11 p.m. They had several sailors with them and they all got into a pillow fight, one sailor was [knocked] between the *Arctic* and the *Belle Chasse* resulting in three cuts on the head and a broken collar bone. He was knocked senseless for about five minutes. The Doctor fixed him up.

Busy fixing up the Ship's Library. I have about 150 English books and 30 French ones. Mr. Craig came down and is staying at the Chateau with his wife.

### **Quebec, Monday July 17th, 1922.**

I helped the Second Mate Mr. [Lemieux] with the Power of Attorney forms for the crew. Busy loading the rest of the equipment on board. The Captain and Mr. Craig bought a lot of things for trading purposes with the Eskimos, such as clocks, mackinaw shirts, tobacco smoking and chewing, a combination hammer, screw driver and etc tool, buttons, needles, ammunition and etc. I was kept busy checking this stuff off. Fox news cameraman was down to boat and took a few shots. Sleeping on board. Started to rain about 3.00 a.m. on the 18th and we all had to pick up beds off the deck and go below and roast. I am eating in the main saloon or at the Captain's table and the food so far is pretty good.

### **Quebec, Tuesday July 18th, 1922.**

Left the wharf at 5.30 a.m. and went out into middle of stream and anchored near to the two British battleships. After breakfast we lifted anchor, allowed ship to drift down past

[the] citadel, and called a tug which pulled us all over the harbour while we tested our compasses. Tug hitched on to the bow of the *Arctic* with a long rope and kept repeatedly crossing our bows pulling us first to one direction and then to another, taking I presume all points of the compass in, while a man with a little instrument which he set over the compass on a small three legged tripod would call out the points. It is rather misty today, a pretty good wind blowing and not very clear otherwise we would be afforded an excellent view of Quebec and Levis, but at that with a few odd shots of sunlight we can get an excellent view.

Lifted anchor about 5.00 p.m. took pilot on board and started down the gulf or rather river St. Lawrence under our steam. We lifted our main square sail to help us along and continued on our course about one hour making roughly about eight miles when the sail started to carry us on to land. We put up two of our jibs to help steer the boat but apparently this did no good as we still kept drifting on to the rocks, so to prevent any disaster we dropped our anchor, took all sail down and again started down the river. The scenery is very nice in fact I might say beautiful and very different from the last time I came up the river in November, 1917. Everything is fresh and green and the farms the pure white houses certainly look nice. Prior to leaving harbour the *Empress of Britain* passed us enroute to Liverpool and I took a picture of her by the wharf. Several other boats of different nationalities passed us going and coming, in fact the harbour formed quite a picturesque sight with Levis on one side and old [Quebec] with the fortifications on the other.

Pilot Koenig our pilot from Quebec to Point Father.

### **C.G.S. Arctic, Wednesday, July 19th, 1922.**

Arrived at Father Point 12.30 midnight. Mrs. Craig departed on pilot ship or tender with pilot and last mail. Tender came right up alongside despite the rough weather and it only took a few minutes to complete this operation. All boys taking opportunity of writing last letters home. Letters were posted to all parts of the world for I handled the mail.

*Empress of Scotland* passed us on her way up St. Lawrence as did the H.M.S. *Raleigh* on its way to sea.

Saw about six white porpoises so they say, but I was down below so could not tell what they were.

Worked hard from 9 a.m. until 11.00 p.m. writing official and personal letters, also made up last payroll for the crew.

Received some Naval news over wireless and typed it out for the benefit of those on board.

Had chicken for dinner and Mr. Blair the wireless operator, when he was digging into his, made some slip and the whole portion of chicken and landed in his lap. We had great sport over this incident.

### **C.G.S. "Arctic", Thursday, July 20, 1922**

Typed U.S. Naval Press first thing in the morning which was received over the wireless previous night [about 12.30.] Pilot boat took off Mrs. Craig at two bells or 1.00 a.m. as per the above account under date July 19th, which was really the 20th.

Proceeding down the Gulf St. Lawrence under sail and steam at about 6 miles per hour. Two gibs, one front square sail. sail on front mast and rear mast. Land is on both sides about ten miles from ship and slight fog near right or south shore.

Passed lighthouse about 1.00 p.m. on left or north shore and small village. It looked nice as it nestled on the shore and consisted only of about ten or twelve small white houses.

Fixed photograph records up and filing. Played the phonograph all evening the Captain having sent his machine down to the saloon. Had pretty nice weather all day, rather cool in the evening and very dark. Ship riding nicely.

Cinematographer took a few shots. Everybody washing on deck. Served out with a quart water for carrying our supply of washing water. Sleeping on the deck as it is too hot to sleep below, also too stuffy and the odour is something fearful.

Odour bilge water

### **C.G.S. "Arctic", Friday, July 21, 1922.**

Passed Clarke City on south shore about 1.00 a.m. Still proceeding slowly down St. Lawrence but we are now in the gulf. We are not making more than four miles per hour using both wind and steam, having all sail but mizzen and squaresail up. Land is now about 20 to 30 miles away on both sides and we can barely discern same.

Sighted Island of Anticosti about noon on south or our right side about 20 miles or so off. It is 120 miles long, and is owned by an old country Frenchman by the name of Mener<sup>18</sup> [*sic*] who bought it for \$120,000. He runs a boat every 15 days from Quebec to

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<sup>18</sup> *Editors' note:* French chocolate manufacturer Henri Menier acquired Anticosti Island in 1895, and his brother Gaston Menier, a member of Senate of France, became owner upon Henri's death in 1913. Gaston sold it to the Wayagamack Pulp and Paper Company in 1926.

the island during the summer but in winter [the] island is cut off from mainland except for a couple icebreakers who visit it.

Ship rolling pretty badly and sea rather rough but not very [high as] waves only about 10 to 15 feet. Valiquette and Logan seasick and other members showing signs. Rather cloudy and cool but otherwise fair. Fixing Library. Received English and American Naval Press over wireless and I typed it out.

**C.G.S. "Arctic", Saturday, July 22, 1922.**

I with most of the mounted policemen assisted the ship's crew with sails today in tacking ship and etc. Corporal McInnis and myself were up on the fore deck in bow of ship pulling on the jib to put the ship on the opposite tack when two tremendous seas came on board and soaked both of us, wetting us up to the knees as well, as it came on board that deep. Pretty rough today, being a great deal worse than yesterday. All the expedition with exception of Mr. Craig and myself sailors and a few mounted policemen sick but we will get our turn soon.

Racks [were] got out and put on table (fiddles) for tomorrow. Mr. Morin was sitting at Captain's place in second sitting and spilled his whole dinner in his lap. It was too funny for words and he immediately got out of his place and nothing would persuade him to go back to it, he taking another place further up the board. I had to laugh, but he spoiled a good pair of pants.

Routed steward out of my bed in lifeboat and slept on deck. found it very cold and regretted I had made a steward leave my place. He did not mind it however as he found a better spot. I was cold all night.

**C.G.S. "Arctic", Sunday, July 23rd 1922.**

It has been very rough all day the waves being fairly large and rather choppy. Several of the larger waves came on board during the day and made things miserable, the water leaking though in nearly every cabin and in the saloon. The sky is dark and we cannot see the sun and the atmosphere hazy in general.

There is an awful smell down below and as soon as it hits you you feel like you want to give up all that you possess or pay your income tax to old neptune as Major Logan puts it. The worst of it is that it is not the same smell all over but is different in places.

I got sick going to bed and it is the only time that my stomach has turned. I am sleeping in the Wireless operator's cabin as there is a spare berth there, my cabin being too hot and leaky, the heat reaching as high as 120°.

### **C.G.S. "Arctic", Monday, July 24, 1922**

Calmer in the morning when we got up but it is once more pretty rough in the afternoon and the sun out of sight. We had quite an electrical storm last night with lightning, thunder and rain in galore. The sailors had to come below and change their clothes despite their oil skins. Nearly all sick including the Doctor who does not feel like living and will not even try to eat anything, he looks miserable. Mr. Brown says he only has two changes during the day; he gets up puts on his clothes and goes back to bed and at night gets up and puts on his pyjamas and goes back to bed again.

He came on deck for the first time today in the afternoon to test the wind and going to the side of the ship a big wave about the only one that came on board today struck him and soaked him. However he did not seem to mind it. Everybody that can is sitting in a sheltered spot on deck. We saw a few whales in the distance. Water still coming through decks into [salon] and etc.

### **C.G.S. "Arctic", Tuesday, July 25, 1922**

[Calm] all day as a sheet of glass. The coast of New Foundland is in sight all day.

Everybody is nearly over seasickness and feeling like living once more again and not wishing for any more islands. First, Second mates and Major Logan took time and position at noon today with their sextants, this is a daily practice.

We passed the C.G.H.M. *Pioneer* inward bound this afternoon about five or six miles off.

I gave Valiquette a No. 9 today and he nearly died. Very stuffy below and one does not feel [like] staying below decks.

The cook baked bread for the first time today and it was excellent. I came on the steward eating a great big slice of steaming bread with a smear of butter (by the way the steward is nearly always eating when I see him) and I immediately got in the line up and had a piece which was certainly excellent.

We had salt horse for the first time and it is not too bad. I am still sleeping in the saloon, the long seat which does not make a bad bed.

Received Greenwich [*sic*] time over wireless at midnight, which by the way is received every night. Wrote out wireless press in the morning. Made a list of the books in the saloon and it is up to me to act as librarian.

The mounted police are passing coal aft and they sure look a pretty bunch like a bunch of coal heavers. They get a bucket after work is finished and have a good wash on deck.

### **C.G.S. "Arctic", Wednesday, July 26th, 1922.**

Broke fair, sun shining and sea or rather straits calm as we are now going through the straits of Belle Isle. I took my typewriter up on deck to do my work as it was very stuffy and close down below as usual. Shortly after dinner we began to sight ice and before long were right in a flotilla of [icebergs] of all sizes and shapes, some of them being very picturesque and two in particular; one looking just like an old ancient castle while the other looked just like a swan swimming in the water. Most of the [bergs] bore signs of having roughed it pretty much as they were the smaller ones worn smooth by the sea. We passed within about 100 feet of quite a few of them. I do believe up until dusk we must have passed a good 60 or more [icebergs] and there were still lots in sight. At one time I counted 21 [bergs] in sight at time same time. We passed several steamers, lighthouses on the banks as well as picturesque little white fishing I presume villages on the shore. One of the steamers was the *Empress of India* and was inward bound. I would judge we passed about a dozen steamers and sighted several small sailing craft or fishing boats near shore. Weather or at least it appeared to be quite cold once we came within the region of the [bergs]. I climbed the mast and had a perch in the [crow's] nest to look around and truly it was a nice sight to see the two shores about four miles or so off with about two dozen [icebergs] of various sizes and appearance in sight as well as several steamers of various size. Everybody on deck with their cameras and I do believe a good 18 cameras came to light today. I got a picture of one of the largest [bergs] and hope it will turn out good. Moving picture camera was in operation all day as well as field glasses. Our cabin very hot and leaking as per usual. On salt horse now I guess for good. Cook can bake good bread. Mounted police peeling potatoes and carrying coal in a.m. They are at present singing in forecandle it being 10.05 p.m.

Everybody well and not wishing for any islands.

### **C.G.S. "Arctic", Thursday July 27th, 1922**

Lost sight of Belle Isle this morning for good. Labrador coast in sight all day but towards dusk we also lost sight of this. [Icebergs] in scores in sight all day and in every size and shape imaginable. We must have seen easily 150 [bergs] in the last two days and they are still with us it being now 10.30 p.m. Second officer who is at present on watch is trying

to steer clear of a large one on the starboard bow ahead of us, you can see it from the [crow's] nest but not from the deck.

Day was lovely with sun shining brightly and a gentle breeze which freshened during the afternoon and was strong enough this evening to hoist sail which had been taken in during the day.

All day we ran into flocks of ducks swimming around in flocks, single and in pairs presumably fishing. They did not seem to be very frightened of the ship and only flew away to a distance of about 100 feet. One of the Mounted Police took a shot at them but without results.

A black fish hove in sight about noon and gave us an exhibition of diving and spouting water out of his nose. He looked very like a whale and in fact I would have mistaken him for one had the Captain not told me the difference. I worked for awhile on deck with my typewriter and went below when it got too cold, the numerous [icebergs] making it quite chilly in afternoon.

Took aerial down to examine it, but when it was put up again and messages sent by wireless it still leaked so it will have to come down again.

My cabin still leaking and very hot. Valiquette busy developing rolls of films for test purposes and some of the personal rolls of members of expedition.

Mounted police busy cleaning rifles and taking in the sights.

It is a beautiful night out the stars shining brightly in the sky and some of them showing different colours, green, red or scarlet and white. The northern lights are very clear tonight and look very beautiful. Did not sight but very few boats today rather out of their course. Expect to lose most of the [icebergs] tomorrow.

Very calm.

### **C.G.S. "Arctic". Friday, July 28th, 1922.**

Got up early and went on deck. It was a lovely morning with the sun shining brightly in the sky and the sea as smooth as glass. [Icebergs were] in evidence everywhere you could look with numerous calves floating in between them. in fact it appeared as though we were in an ice flow so numerous were they. There were big ones and small ones and small pieces of ice no bigger than an ordinary piece than an iceman would deliver to your door. The Steward came on deck and said to me in the second [mate's] presence when an argument came up as to the course of the ship that how could we lose our way with all the buoys (meaning icebergs) in sight and the second mate replied, yes and if you get up close you can see the numbers on them. There was a joke on and off all day



regarding this. The bergs stayed with us all day, but towards evening were getting farther spread out and in less numbers. I could not begin to count all of them that we passed in the last three days.

In the afternoon we took moving pictures of the entire expedition in groups, also stationary snap shots and about eleven cameras came to light. Had one special pose with men with cameras.

There is a nice light wind blowing and all sails are up with the exception of the mainsail. There is a heavy ground swell on the sea which makes the boat roll about 5 degrees and this is not very pleasant.

There are only a few ducks and sea gulls in sight and they are getting fewer all the time. We are about 200 miles off the Labrador coast. Very few ships in sight.

About noon we heard a loud report and lo and behold a big berg nearly disappeared. Before the report it had two big peaks but immediately after it seemed to flatten out and kept rocking up and down something fearful for a good ten or fifteen minutes.

About evening you could see all the icebergs in the distance with the calves or little pieces strewn all around the horizon as far as the eye could reach and they looked just like a graveyard except for the reflection or mirage they cast in the water. Truly it was a nice sight.

The evening is very cool and the northern lights or aurora are once more in evidence only not to the extent they were last night.

### **C.G.S. "Arctic", Saturday, July 29, 1922.**

Went up on deck about 7.30 a.m. and it was a nice day out, the sea calm with a long swell, the sky rather hazy, which cleared off later on when the sun got strong and rather cool which got a little warmer later on in the day.

We are now completely out of sight of all ice, which we lost sight of in the middle of the night. As a result it is much warmer. Can see nothing but water now wherever you look. Did not sight any boats all day today and day rather uneventful except that we took a picture of the three remaining firemen and oilers who had not been taken the previous day on account of having to remain on duty.

The mounted police once more carried coal from forward deck aft for fuel for engine. They are grumbling at having to work, saying they are first class passengers and really I don't blame them as it is a rather dirty job.

Will be at Greenland in another week we expect, but if we do not get some more wind than we have been getting we will take longer than that.

I worked hard all day typewriting as did Val.<sup>19</sup> Got restless in the evening and walked the forward deck for over an hour for exercise. I have great fun with the second mate and the wireless operator trying to kid them. First engineer seems to be a nice fellow. The Doctor, Reilly and Maj. Wilcox playing poker this evening as is their usual pastime. Rest reading singing and playing the victrola. We skipped for awhile for exercise.

It is 11.30 p.m. now and I have just taken a turn around deck. It is rather darker than last night likely due to the absence of the ice, the aurora is still in evidence but not so much so as previous evenings and not quite so cool. Stars shining brightly and light breeze.

We had a beautiful sunset this evening and it was certainly a treat to see the sun going into the horizon of water like a big red ball of fire. The sky was tinted with several beautiful colors, purple, blue, crimson, red orange and so forth. etc etc.

C.G.S. "Arctic", July 29, 1922.

Latitude 56° 10" North

Longitude 54° 06" West.

Will the finder of this note kindly write to the originator of same to the address given below:

W.H.Grant, Esq.,

72 Clarey Ave.,

Ottawa, Ont.,

Canada.

When writing kindly state place and date found.

### **C.G.S. Arctic, Sunday July 30, 1922.**

Bright and clear with a fair breeze directly western, only foresail and squaresail set but we are making six and one-quarter knots per hour. Considerably more hazy than yesterday.

Everybody is cleaned up somewhat it being Sunday and talking about all the polar bears they will shoot if we get caught in the ice for the winter.

Table was better than usual I presume account of it being Sunday.

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<sup>19</sup> *Editors' note:* Val was Grant's nickname for Valiquette in the early stages of the trip.

The Captain gave an address to all members of the expedition in the afternoon on life up north and advice to those who are to winter there. The R.C.M.P. setting forth a number of suggestions. Mr Craig replied to the speech and I took it all down in shorthand; see copy of speech on file.

It is rather cooler out this evening, the wind has freshened somewhat and the sea came up in consequence but barely visible. Wireless operator working on his machine trying to fix it up, refer Mr. Craig's report re this.

Everybody pouring over Arctic and northern books. We put our watches ahead about 10 minutes every day when time is taken from the sun. We get Greenwich [*sic*] time over the wireless.

Expect to sight Greenland in about three days, but do not intend to touch land at that point. We intend to keep going up and all depends upon the weather how far we will go.

One of the firemen blistered his hand and blood poisoning has set in, Doctor is attending to him so I presume he will be better in a few days.

We are not running the dynamo in the daytime as we are saving power for the engine. We use some gasoline lamps during the day and really they give good light.

Our cabin is improving somewhat and I guess we will soon be able to sleep in it.

Second mate is a good fellow and we have lots of fun teasing Valiquette and joking about the Eskimos.

### **C.G.S. "Arctic," July 31, 1922.**

Address delivered by Captain J.E. Bernier on board the C.G.S. "Arctic", July 30th, 1922 to members of the Arctic expedition outlining the purpose of the expedition, life in the North and especially offering suggestions and advice to those members of the expedition, members of the Royal Canadian Northwest Mounted Police, who are to winter in the north.

[For the full text of the speech, see J.D. Craig Diary, pages 27-31 in this volume.]

### **C.G.S. "Arctic", Monday, July 31st, 1922.**

It is quite cool today and somewhat foggy all day which turns to a slight drizzle in the evening making it miserable. Wind is quite fresh but changed to north east. We really have been making as high as seven knots an hour today, really wonderful for this old tub. Boat rolling a bit.

Crew were issued out with oil skins, uniforms, caps, heavy boots and rubber boots. I have only got a slicker out of it so far.

Second mate wants me to go to sea with him this winter and we will go down south he says. Worked hard all day preparing information to be given to police for their stay north all winter.

I have all my winter underwear on now and flannel shirt and sweater and I am not a bit too warm, in fact when I go up on deck I have to put on an overcoat.

Fireman's hand a great deal better and doing nicely.

Ship is feeling a little more like home now and we are getting used to the smell. Did some skipping to give myself some exercise, I also walk around the deck about ten feet square being the only space available like a caged lion to try and stretch my legs.

Playing poker, reading, smoking, and trying to learn Eskimo language in the evening.

Brown gave me some notes for the police and doing them.

Mr. Craig passed around some cigars tonight and everybody indulging. No booze!!!!!!!!!!!!!!

Haven't shaved for about six days and I look an awful sight.

Understand Eskimos are a fine people and very sociable both amongst themselves and with strangers.

Raining hard and blowing sea getting up and ship starting to pitch now 12.00 midnight.

### **C.G.S. "Arctic," Tuesday, August 1, 1922.**

Very windy this morning and the sea is rather rough, raining until noon when it abated, boat is rolling fairly badly all morning and it is miserable on deck. I got drenched going to what we call the starboard lighthouse, and the second officer also had quite an accident in the same place. Quite a bit of spray came on board and a few seas. The wind went down about 4.00 p.m. and a great long land swell commenced which made the ship roll very badly and in fact worse than when the wind and sea was up. Had quite a time holding on to the dishes and food on the table as the fiddles has not been placed on it and we had several narrow escapes from [spoiling] a good suit of clothes.

Saw several icebergs away in the distance today and expect to sight more tomorrow as well as the mountains of Greenland. Quite a few sea gulls hovering around the ship today so we must not be so awfully far off of land.

The Captain gave me a pair of sailors pants and a shirt today. They have big bell shaped bottoms and maybe the Mounties did not kid the life out of me as everyone else regarding them.

Skipped and walked around the deck for a time to get some exercise.

Carrying all sail today and using salt water in the boilers for over a week. We expect to get some water off the ice, that is fresh water.

Slept in cabin (ours) last night and never again for some time at [any rate]. Val and I both woke up feeling half dead. It was so damned hot and stuffy it near killed us. Had quite a chewing match at breakfast voicing all our complaints.

It is not 10.30 p.m. and I have just come down from off deck. It certainly is a nice sight. The sea is lying as far as they eye can reach as calm as a sheet of glass with the exception of the long swell that is in evidence, the moon is flitting behind some light clouds in our rear just back of the stern and to the bow of the ship away off the sun is shining beyond the horizon out of sight, but it as the sky light up with a bright scarlet colour for a long distance which reflects in the sea. It is certainly magnificent and nearly light out as day.

It is the long Arctic day.

### **C.G.S. "Arctic", Wednesday, August 2nd, 1922.**

Mount Umelik, 4,710 feet in height in sight at 8.a.m.. Wind is very light and course about north east magnetic. Ship rolled so heavily last night all sail had to be taken off for fear of carrying away something.

Mount Kidtlavat, 4,080 feet, is abeam at 1.00 p.m. Our course is now almost east magnetic. The wind heading [us] off from the north and blowing quite fresh. Air is clear but low clouds obscure sun all day and it is quite cool.

Finished stowing our deck coal this a.m. and there appears to be about 30 tons of it now in the bunkers; Captain Bernier estimating that we have used between 70 and 75 tons since leaving Quebec at the rate of about 5 tons per day.

At 8.00 p.m. Mount Kakitsiak is off to starboard, looks to be well over 4,000 feet in height and distant probably 45 miles. The whole coast is very rugged looking with many small glaciers hanging on the sides of the hills, larger glaciers coming down the valleys some of them to water's edge apparently and in the background overtopping all may be seen the outline of the ice-cap. The haze, however, prevents a really good view in detail.

We have passed the latitude of Gotbhaab, the latitude at noon being 64°20'.

Logan sends mail south in floating [balloon] at 7.30 p.m.

**C.G.S. "Arctic", Wednesday, August 2nd, 1922.**

I got up and went on deck about 7.00 a.m. There were a few large mountains of Greenland barely discernible on the starboard side, which were over 90 miles away. There is a N.E. wind blowing strongly from the opposite side, and being, I understand, off the ice pack is very cold, necessitating everyone wearing heavy overcoats and mitts all the time while on deck.

We are now in Davis Strait and making fair headway. Only three [icebergs] in sight all day. Quite a number of sea gulls and a bird that can dive like a fish. It is all black but the breast and lower part of it which is white. I presume it is some sort of a hell-diver or loon. Also saw another strange bird black and white with a black head and black band around its neck. It looked peculiar and seemed interested in the ship for a little time. Two whales sighted at about 2.00 p.m.

Wind freshened at about 11.00 a.m. and sea got up a bit, wind pretty strong and very cold until about 8.00 p.m. when dropped somewhat and sea going down. Boat rolled a good bit today but not as badly as yesterday, the wind seeing to steady her. Sun rather obscured today until evening when it came to view.

Our course brought us to within 45 miles of Greenland's mountains by 3.00 p.m., when you could see them plainly and until late evening to starboard and ahead of us. They look very rocky and bare and are mostly covered with snow although a great part of them is not. They stand in pairs, clusters and single and look very nice, sticking up into the sky but rather uninviting. I would say some of the larger ones and they are mostly all large would reach about 3,000 feet in height, or more.

The Doctor has nearly all the rest cleaned out of money playing poker. Val got a sweater and a pair of white sailor pants. He looks like a little flunky in them. Logan sent an aerial [balloon] overboard with two letters in it this afternoon and it floated speedily away on the water with the wind. Poor Brown is near dead with one of the [Doc's] pills (dynamite). Still hard at work preparing information regarding the north for the mounted police.

It is now 12 midnight and I have been just up on deck. The moon is right astern on the port side, a big crimson-orange ball of fire just slightly above the horizon and water and it looks very clear and very close to us. The sun is just behind the horizon on the port bow, it has a band of crimson orange all along the horizon next to the water, next above are some clouds and above the clouds all across the sky, the sky is painted in different hues of orange crimson and yellow also white. The rest of the sky is blue the same as if it were daylight with clouds floating around all over, to the starboard bow and side the Greenland mountains appear rising abruptly out of a mist that seems to be around the

shore. The sea has gone down and is nearly like a sheet of glass and it is nearly as light [as] day and you can nearly see to read, you could do so with difficulty.

The Chief Engineer advises me not to go to sea as if I do I will never want to settle down again. He tells me to get married and settle down. !!!!!!!!!!!- ????????? I wonder?

Everybody sitting down to a midnight lunch of [sandwiches] (cheese), mince pie and coffee and the stewards tells the rest of them on making a remonstrance that they will not eat any pie as they will not sleep that Grant and Valiquette will eat it and to leave it to them (the heavy eaters).

Fireman's hand is pretty bad and we are going to try to arrange a bath to place it in hot water all the time.

We are not able to land on Greenland without permission and the only person on board that had permission is Major Wilcox. I understand you have to get special permission from Denmark. We are not going to stop at Disko Island, Greenland, as far as I can learn.

### **C.G.S. "Arctic", Thursday, August 3, 1922.**

Passing Greenland's mountains all day, came to within 15 or 20 miles of them this a.m. They are very rugged and quite high, some being over 4,000 feet, are covered in places by ice. Whole valleys are filled with glaciers, large and small, which appear to come to water's edge. You can see the ice-cap past the mountains in places which covers the interior of Greenland.

The day is bright and cold, wind fairly fresh until 4.00 p.m. when it dropped slightly and shifted around directly ahead which compelled us to take in all sail and proceed slowly under steam only. Boat rolled for awhile in the afternoon after sail was taken in.

We are [at longitude] 53° 48' west and latitude 65° 30' north at noon today being almost opposite Cape Sukkertappen. The Captain claims it is 180 miles from this cape on Greenland shore to the mainland and a few miles over toward the mainland is the ice flow or pack where the cold wind is coming from.

It is now 11.30p.m. and I have just been on deck. It is twilight out. The sun has the horizon lit up as before but it is not as pretty as then, the moon is in evidence just over the port stern and above the horizon. It is nearly full but more pale than previous nights. It goes down below the horizon about 12 or 12.30 midnight. I can only locate about four stars.

Mountains are still in sight but appear to be lower at this point or just ahead than those we just passed.

I borrowed the First Officer's clippers and Val and I cut one another's hair. We had great fun, but I must admit Val is a better barber than I am. He looks like a chink<sup>20</sup> in the hair cut I gave him and we call him Wing Ong.

Took moving pictures of Greenland coast or mountains. Several whales in sight this morning but I did not see them as I was working down below. Had midnight supper tonight.

#### DESCRIPTION OF CASTING THE LEAD OR TAKING A SOUNDING.

W.H. Grant.

The entire lead or that part of the sounding apparatus that enters the sea is about four feet long. The bottom part known as the lead, being that part which enters the water first is composed of cast lead and is 28 pounds in weight, is 1 ft. 6 in. long, being 2 inches at the top or smaller end and thickening to 4 inches diameter. A steel rod about ½ inch thick is attached to the smaller or top end of the lead and is 2 ft. 6 inches long and has an eye at the top [extremity] for the purpose of attaching the line from the reel. To this rod is attached a brass tube or case with a small hole in each end 2 ft. long and about the same thickness as the rod to which attached. Into this case you place a glass tube full of a dark brown chemical which registers the depth of the water, it acting like a thermometer, the water forcing the liquid to the upper part of the tube and the deeper the lead goes the greater weight of water forces the liquid into a smaller space. The depth of water is given on bringing the lead to the surface by measuring the length of the liquid in the glass tube on a ruled off scale for that purpose. A rough check is kept on this by means of the amount of line used to drop the lead to the bottom.

This line is composed of tough steel wire and is attached to one end of the steel rod of the lead and is wound on a reel which has a scale or indicator on the side that registers the length of wire paid out. When re-winding by means of a crank on the reel this indicator also registers the amount of line being rewound by working back to zero. There is a brake on this reel that when letting the lead to the bottom you can regulate its speed.

At the bottom of the lead there is a hole into which is placed some ordinary white soap which is allowed to project over the end. This is called "arming the lead" and is used for bringing up material from the bottom of the ocean. When the bottom of the lead hits the bottom of the sea the soap picks up gravel, stones, coral, shells or pieces of shells, sand or whichever the case may be and if the bottom is composed of solid rock it will merely put a mark on the soap. By this means that is taking a sounding, finding the

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<sup>20</sup> *Editors' note:* A derogatory term for a person of Chinese descent. Anti-Asian racism of this sort was commonplace during this era.



depth of water and what the nature of the bottom you can tell [your] position by comparing it with the soundings marked on the chart.

Attached hereto find method of taking a sounding in proper rotation.

- 1st Unfasten lead from place tied and open up reel inserting handle into brake shoe to govern speed of reel when running out.
- 2nd Arm the lead by placing soap in hole at bottom allowing it to project.
- 3rd Place glass tube full of dark brown chemical in brass case on side.
- 4th Set lead ready for casting by lowering it over side nearly touching water.
- 5th Cast lead allowing line to pay out from reel until it strikes bottom then apply brake stopping reel.
- 6th Place handle on reel and re-wind up wire.
- 7th Pull lead on board, remove glass tube from case holding it upright. Also cut off bottom of arming or soap.
- 8th Measure glass tube on scale for that purpose to ascertain depth of water [and] check up with what appeared on indicator on reel when full length of wire was paid out. Examine arming.
- 9th Close machine and fasten lead in place on rail of ship.

### **C.G.S. "Arctic", Friday, August 4, 1922.**

Rather warmer to-day. Fog enveloped us at 1.00 a.m. this morning and is still with us it being now 12.00 midnight. It got rather thin in the afternoon and we thought it might clear off, but towards the evening it thickened and we cannot now see only a few feet past the ship. We are not blowing our fog horn as there is no danger of running into any other ships away up here. No sail carried on ship as the little breeze that we have which is very slight is dead ahead.

We crossed the Arctic circle at noon today, drank father Neptune's health with rum and port wine. The Captain gave a little speech and toast at the first table and the second officer at the second, I am on the second table as I like it better the crowd are more sociable and know they are living. I had what they call a Bos'ns nip, half a tumbler of rum and the rest of the glass filled up with port wine. I had two of those and a glass of port. I sure was feeling fine after dinner so took a [holiday] and went on deck with my revolver and tried to shoot some sea gulls. Blair would not touch any booze and got sore

when the little waiter wanted to coax him and told him to "take it to hell out of this you damn fool". We sent our compliments to Father Neptune by wireless.

Mr. Craig followed our example and had Brown cut his hair.

Moving pictures were taken this morning of the second officer taking a sounding. Depth was found to be 65 fathoms and the lead picked up a piece of coral from the bottom  $\frac{3}{4}$  inch by  $\frac{1}{2}$  inch, in Davis Strait off Holstenborg, Latitude 66° 30' North Longitude 55° 00' West. See description of taking soundings attached describing lead as well. There are plenty of shell fish and other fish just here.

Second officer drank all the water Val put on deck to get cold and kidded him that Father Neptune took it or that fresh water evaporated up here like gasoline and I think he believed the latter.

I had a good sleep this afternoon. Fireman's hand is still pretty bad, doctor has lanced it.

### **C.G.S. "Arctic", Saturday, August 5, 1922.**

Foggy nearly all day and still foggy it now being 11.00 p.m. The sun tried to come out and shine this morning but made a poor fist of it. Rather raw and very cold. I have my winter underwear on, a flannel shirt, then a sweater and on top of that a sheepskin lined coat and I am not any too warm.

Icebergs in sight all day in every direction and all sizes and shapes, from an ordinary sized chunk of ice that you would put in your refrigerator to veritable mountains. The wind is blowing dead ahead and we are proceeding slowly (3 knots per hr.) under steam. The fog is blowing all over and one instant one spot will be clear and the next completely hidden so that you will all at once see an iceberg close, or far away then it will suddenly vanish and re-appear several times before losing sight of it for good. There are an awful number of bergs but the fog keeps hiding them on and off. We passed through a field of small chunks of ice at about 7.30 p.m.

We are nearly opposite Disko Bay and the mountains of Greenland have faded away until you can barely see them like a haze on the horizon. Possibly they will show up more plainly when the weather clears.

Passed within 500 yards of a gigantic iceberg at 3.20 p.m. which was aground in 62 fathoms (252 feet) of water. It looked like a huge rock or mountain and must have been quite a bit over 100 feet out of the water. There was a large vein which I would say was from 6 to 10 feet wide of clear ice running on one corner of the berg to the top, which was caused the Captain said by the berg cracking at one time and fresh water filling up the crack and freezing there, I have noticed the same thing on two or three other bergs. This was the only portion of the berg that was clear ice, the rest being white like

[marble], you would almost think it was a big chunk of white marble. All the bergs I have seen so far are the same. There was some sand on one corner of the berg which I presume blew there at some time. I have noticed dirt or sand on quite a few bergs up here, but not on those in Strait of Belle Isle or Gulf St. Lawrence. On the corner facing the ship all in a little bunch looking like sparrows perched 8 sea gulls. They looked awfully funny and Captain Bernier borrowed a rifle and took a shot at them, whereupon they all flew away. Moving pictures were taken of it, at a time when the fog had cleared away allowing us to have a view of the berg.

Sighted 3 more hell divers and saw them take a deep dive, some porpoises and a lot of seagulls.

Our position at noon to day was Lat. 68° 1' N. Long 50° 20' W.

Feeling sick today and not going to eat for about 3 meals as bothered badly with indigestion, presume due to lack of exercise.

Have a big rope with a hook and a piece of pork overboard fishing. The line is paid out about 150 feet and has about 50 pounds of iron on it for a weight. No luck so far. Val doing some developing this evening and I am pacing the bridge trying to get a little exercise.

### **C.G.S. "Arctic", Sunday, August 6th, 1922.**

I slept all morning until 1.00 p.m. missing breakfast and dinner as well as lunch and supper yesterday to see if I cannot stop my spell of indigestion. I hear that we passed a lot of bergs this morning and in one group alone there were 25; moving pictures of which were taken.

I went on deck at 1.30 p.m. or near 2.00 p.m. and we were just abeam of Disko Island. Between the ship and the island a large berg floated and the centre was completely gutted out so you could see right under it in two arches, one running each stream and in this way got gutted out before breaking loose. The mainland of Greenland had completely faded away, but Disko Island is quite plain being only about 15 miles off. It is not nearly as rugged as the mainland appeared to be, not so high and has less ice on it. It appears like a vast rock with ice here and there on it which drops in a sheer precipice hundreds of feet, and very likely thousands of feet high right down to the water's edge. The height and island in general appeared to be more or less uniform. Moving pictures were taken and operator got the arched berg just as she was calving and rocking about.

At 3.15 p.m. a fog suddenly blew on us shutting everything out of sight once more. They say until then had been nice and sunny and fairly warm out of the wind. Wind is dead ahead and no sail in correspondence up.

Valiquette, Blair and several Mounties all have their hair clipped right off as have some or most of the sailors and firemen.

At 11.30 p.m. sighted the smoke of three ships, passed two of them going southward on port side of us at 12.15 p.m. One was a small one with a harpoon gun on bow, and boat was not bigger than an ordinary tug and was named K 21 K "Havern." The other about I should judge 3,300 tons was named the "Lille" and was from Christiana. We passed the other one also going southward on our starboard bow. It was a small boat like the first one and was named the K 5 K, and had a harpoon gun on the bow. All three had a white band on the funnel with small red band inside and the larger ship had the letters "S.C." on funnel as well. We sighted a fourth one away off to starboard near the land too far away to discern anything plainly. All of them appeared to have one funnel and two masts and carried sails. They all seemed to have a quite large crew on board for the size of them. I should say they had from 10 to 20 men on board, some of them waved to us and we waved back. They had a lot of washing out on deck. They are more fortunate than we are for we have no water to wash with. I think the large ship was the mother ship for the three small ones, which were whalers and I presume discharged their catches on to the large one.

12.45 p.m. The mountains of Disko are a very pretty sight just now. A mist hides the bottom of them but the top is quite clear and shows beautifully, rising out of the mist with the many glaciers strewn in all directions over them. The fog is mostly cleared but it is very cold on deck it is now 12.45 p.m.

They took a sounding today around 8.00 p.m. found 75 fathoms of water there being 6 feet to a fathom and brought up something stuck to the arming that looked like gold. They take soundings every 2 hours in a fog where there is any bottom to be found to ascertain their position. They also always have a man in the [crow's] nest during a fog to watch for icebergs. Whenever it is dark at night they place a man in the [crow's] nest for the same purpose.

Saw several what I call "hell divers" and one small flock of ducks today.

It is so light out now at night that one can see quite easily all night to read a book. We have not had any nice sunsets lately as the weather has always been hazy or foggy.

Light breeze sprung up at 12.30 p.m. and we hoisted one sail but had to take it down before very long.

### **C.G.S. Arctic, Monday, August 7th, 1922.**

About 6.00 a.m. they came down and wakened up the moving picture operator to go on deck and take some shots of some icebergs. We passed quite closely to several very large

ones and on one of them there was a seal sleeping. We missed getting the picture of the one with the seal on it though.

There are innumerable bergs of all sizes shapes and etc in sight and I am nearly sick of looking at them. It is a great temptation to try and take a snap of every big one but if we did we would soon have no films left. They all appear to change completely as we see them at the different angles, caused by the movement of the ship and it is funny how they change so completely you would not recognize them as the same berg. Quite a few of them have earth of some description on them, quite a few have caves in them, and some of them are entirely smooth, having I presume turned over exposing the side that had formerly been under water. I took a picture of two big monsters together and another or one large one, a veritable mountain and I should judge easily 20 or 30 times as large as the ship. They are all lined on every side of us like gaunt castles and rocks, islands or in fact anything you like to name as they have so many shapes and all are of a colour and appearance like white marble.

It is very cold out today but quite a bit clearer and everybody up on deck walking around trying to get a little exercise. The Captain gave me a nice sweater.

We came in sight of the mainland of Greenland in the afternoon, but it is a very long way off being I should say easily 80 miles. It appears to be more low than the coast further south although it must be all of 5,000 feet high and partly covered with glaciers. Passed some fjords.

Captain says that he thinks they will proceed north about 2 days longer then turn east and try to find a channel through the ice pack, which is to our east about 20 or 30 miles. He says we might get through right away and then might be held up for two weeks as the pack is constantly shifting around.

Everybody playing rummy. Ship is rolling a wee bit today. Still getting news over the wireless.

Now 10.30 pm the wind has veered around a bit to north E. and all sail up. It is also snowing a little out.

### **C.G.S. "Arctic", August 8, 1922.**

Went on deck this morning and it is cold with a pretty fair breeze blowing; all sail set.

The R.C.M.P. are moving their lumber from the top of the chart room to behind the wheelhouse.

Sighted an iceberg or possibly it is two of them on the horizon that look just like a large "14" rising out of the water. At 10.15 sighted the middle ice pack on our port bow about

four miles to the port side. It appears from here to be a solid, flat, continuous expanse of ice with here and there large and small icebergs looming up in the sky out of it like, large castles or mountains, relieving the vast expanse of ice.

It commenced once more to snow and blow at 10.30 a.m. and it is coming down in good style. This however only lasted a short time and it once more cleared up leaving a little snow on deck. There does not appear to be quite so many large bergs in sight. We fancied we saw a couple of bears through our glasses on the pack but cannot make sure from here. Had some fun snowballing Val in the Starboard lighthouse.

The engine stopped running somewhere around 1.00 p.m. ... About 2.00 p.m. the Captain gave orders to proceed into the ice pack which was on our left or port side and try for some fresh water, and a little after 3.00 p.m. we were disturbed in the saloon by the boat striking a couple of pieces of ice which jarred her somewhat.

On going on deck we found ourselves in the middle of the ice pack, which stretched as far as the eye can see on three sides of us. It is composed of large pieces of ice of varying sizes about eight (8) feet deep. These are jammed closely together in small fields with channels of water both narrow and wide in between them in zig-zag fashion everywhere. The snow has fallen over all this which hides the cracks between cakes of ice and makes it very dangerous walking. Numerous icebergs loom up in all directions and of all sizes out of the pack.

On getting far enough into the icepack we put out a couple of ice anchors, hooking them on to a large pan of ice and with the aid of a winch drew the ship into position broadside to the pan, there being several pools of fresh water. Meanwhile mostly everybody had got down by a ladder over the bow sprit or by means of the cables and ropes hanging from same and were stretching their limbs on the ice pack, taking pictures and also getting a good fresh drink of ice cold water, I among the number. ... I took three pictures of the ship in the ice floe and had one taken of Blair and myself with the Arctic and hand water pump for a background. The captain had directed our course into the pack from the [crow's] nest having gone up on a gantline (rope suspended from pulley on mast attached to seat). He also located fresh water from this vantage point.

One hand pump and sufficient hose was lowered down the side of the ship onto the pack and connected up in readiness to pump water, but it was found that the hose connections were leaky so another pump had to be procured and was set up with some difficulty as we had to change the connections, owing to their being too small.

In the meantime the Doctor and two Mounties were walking around the ice floe looking for seals and just as Blair and I joined them found one which Lee had a shot at with his

rifle, but I do not think he hit it as we did not see it any more. We had great fun walking around the ice and I certainly enjoyed the drink of cold water, but it was also risky.

While we (Blair, 2 Mounties, the Doctor and myself) were looking for more seals,<sup>21</sup> all at once the Doctor gave a jump and said "Holy gee look look there is a bear" and nearly fell over himself looking for a rifle. We all took a look through the glasses and sure enough there was a white polar bear about 500 yards off nosing around. He apparently had not seen us and went some distance off to the left of us and we thought we were going to lose him, but he turned around after a little and started to make straight for us. The Doctor could not stand this any longer and [there] only being one rifle he started off at a mad tear for the ship to get another one and inform the Captain of our find. He sure looked funny tearing over the ice.

The bear had by this time came to within about 400 yards of us and we got a very good view of him through our glasses. Lee was contemplating a shot with his rifle when we heard the Captain shout for everybody to come on board and wait and the bear would come up; the Doctor having informed him of what he had seen.

We reluctantly obeyed and went back to the ship, got on board and found everything excitement and everybody looking for a rifle. I dove down to my cabin and got my camera, also my revolver, which I loaded in case I might get a chance to use it. When I came on deck the bear was making straight for the ship at a good rate of speed and everybody was quiet, waiting the word to shoot from the captain. There were 12 rifles and their owners were mostly all in the bow.

The bear came to within 100 yards of the ship before the captain gave the word to fire and stood up several times during his course to his full [height] and snuffed at the air. When within 100 yards of the ship the captain gave the order to fire and twelve rifles blazed away in a volley. I got a snap of him as he was standing up just before they fired with my camera.

After the first volley the bear seemed to give a jump in the air and rolled twice, then lay still for a few seconds, when he got up and started to walk off to the left across the ice, between 2 pieces of ice. He got out of the water on to another piece of ice once more and lay crouched down for the space of a couple of seconds when some more shots were fired and he once more dove into another channel of water further on, swam across the channel and tried to get out on to the ice, but being weak he was having some difficulty when somebody fired (I think it was the Doctor) and he slipped back into the water again. Another shot struck him and his struggles finished.

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<sup>21</sup> *Editors' note:* We have slightly adjusted the ordering of this sentence for coherence.

A canoe, one of those on board for the mounted [police's] use up north, was unpacked and launched. I helped to launch it and was going to get into it but one of the Mounties objected to my doing so and I had quite a little difference over it, resulting in both of us being left behind.

The bear was secured and towed back to the ship, a final shot having been fired at close quarters to make sure he was dead, by a rope around his neck, Sparks and two Mounties being in the canoe. He was then pulled up on the icepack, a few pictures taken (I took one) of him and was then skinned and cut up; the skin and meat being taken on board for our use. "He" turned out to be a female bear and was quite fat, being, so the captain and several others who had been up north before, about 600 pounds and fatter than those generally found. I should say he would be about 7 feet high when standing. The captain says that they will always walk right up to a ship or a person without any hesitation. He also said that this was a small one in comparison with the most of them.

After the excitement had subsided the pumps were again manned and are now in operation it being 10.00 p.m. We expect to have enough water by midnight when we will pull out of the icepack.

The doctor and two Mounties went hunting in the canoe later on but did not get anything. Moving pictures were taken of the events and should be pretty good.

Several seals were later sighted and fired at but without results.

11.00 p.m. and still pumping. A fog has settled in over the pack shutting mostly everything from view.

### **C.G.S. "Arctic", Wednesday, August 9, 1922.**

Refer to daily journal for particulars regarding pumping of water and starting away from flow, also in connection with performance of engine.

Weather is pretty cold now with occasional snow flurries, and is rather dull all day.

We tried to make a way though the ice pack this morning heading for Pond's Inlet to the west of us but owing to the ice being packed too thickly or close together we had to turn around and make for the edge of the slow once more where the ice was not so deep and farther apart. While we were in the thickest part of the pack and were zig-zagging around the pieces or rather pans of ice and going over those that we could not clear we saw numerous seals in pairs, single and bunches of about 10 to 14. They are swimming in the water around the ice in all directions with their little black heads bobbing up now and again until you can see their chests and now and again a bunch of them will swim ahead of the ship diving and bobbing up. When they dive they sort of take a little jump in the water flourish their tail for a second and then are gone. Quite a few of them are



out sleeping on the larger pieces of ice only to dive into the water on our approach. A few now and again [swim] quite close to the ship, but at the slightest sound or movement they are instantly gone.

The ice in towards the centre of the pack is thick and deep being I should say 8 ft deep, but towards the outside of the floe it is only about 1 to 2 ft. deep and not so thick there being more spaces of water, it is also more rotten (being sort of gutted out by water and in some cases slush) than that in the centre of the pack. There also appears to be more or less new ice about two to six inches deep which no doubt has formed this year.

It is rather fascinating to see the ship zig-zagging in and out through the large pans of ice and going over any that get in her way splitting them into pieces, bumping into other large pans more solid and sheering them off to one side and in doing so sometimes giving the boat quite a jar and setting her off her course a few feet. It certainly would not do for a nervous person to be aboard as they would be in torment every time the boat gave a jar, which is every couple of minutes.

Some of the fellows the Doctor among the number are on deck taking pot shots at the seals, but it is useless as if they hit them they will only sink, not float as will a bear.

There are still numerous icebergs here and there in the icepack, but there do not appear to be the number that we saw previously, just prior to our coming into the ice flow.

There is a man in the [crow's] nest nearly all the time now. The captain or mates direct the ship mostly from the bridge however, taking the clearest road through the floe.

We have had bear three times today[:] breakfast having bear steak, dinner having bear stew, and supper having roast bear. It is very good and is nice and tender, not tough as the fellows that have been up here before say the most of them are. Some of them will not eat it, but I think it is just because they saw it running around the day previously.

Saw a really tremendous iceberg at 11.p.m. through the mist.

The seals have become more scarce as we have got out more to the edge of the pack and where the ice is more rotten and not so thick, but we still see quite a few. They appear to be rather small and black all over and look like little round balls floating on the water, that is their heads do, as the rest of them is under water. They sure can dive and swim.

We spluid [*sic*] the main brace at dinner today and steward shipped one over on everybody by placing a port wine bottle full of rum on the table. Some of the dear little "sissie boomb baha" got an awful jolt the poor little dears!

**C.G.S. "Arctic", Thursday, August 10, 1922.**

Cloudy and rather dull all day today with light snow storms all day which increased to a steady fall in the evening.

We are still on the outer skirts of the icepack and dodging here and there as the channel is best and going over pieces of ice and ice pans that get in our way. To the west, north and south of us the icepack stretches as far as the eye can see and is mostly one vast expanse of jammed pieces of ice over which the snow has fallen making it look as one almost unbroken stretch of white snow and ice with large bergs rising out of it. There are occasional channels between pieces of ice but in the main pack they do not continue very far, except an occasional bay. We are at the edge of the pack where the ice is more open and have been making good progress all day until about 8.00 p.m. when the engine was stopped to take a sounding. When signalled to proceed the feed pipe to one of the pumps burst, filling the engine-room with hot water and steam and forced the engine to stop; also the dynamo. The squaresail was hoisted to keep the boat on her course and away from three large icebergs which are just ahead of us; two on the port bow and the other one on the starboard. They are immense monsters and one is pretty well cracked so it would be very dangerous if we got near them,

At about 12.30 noon we sighted a huge polar bear to port on the ice and again at 2.00 p.m. we sighted another huge white monster to starboard on the ice about one mile distant. He was stalking a seal at the time we saw him but when he perceived us he immediately swam across from the piece of ice he was on to the pan of ice nearest us which would then be about 1,000 yards away. He must have swam a good 100 yards. On coming out of the water he started off at a walk towards us, when one of the Mounties went below and brought up a rifle with which he took two or three shots at him, but they apparently only frightened him for he immediately set through my field glasses and he certainly did not hit him.

We have been seeing numerous seals all day as well as plenty of ducks of apparently two species. One of them have a pure black head and body and are all white underneath (these being what I have previously called "Hell Divers" and the Captain says they are "Divers"). The other kind I noticed were all black with the exception of a red tail and a slash of white on each wing.

The seals are mostly all black but I noticed one or two were partly gray or white, sort of spotted thickly in parts, and one large fellow in particular lying out on a cake of ice was about half white or grey.

I stole some water on the chef and had a nice bath in the wash basin and used the same water to wash out two towels.

There is an officer up in the [crow's nest] now nearly all the time directing the course of the ship through the ice.

Now 11.30 p.m. snowing steadily and there is over 1 inch of snow on the ship.

### **C.G.S. "Arctic", Friday, August 11, 1922.**

It is still snowing out having snowed all night and blowing a little bit. It was very cold in the morning but got somewhat milder towards the afternoon. There is about four inches of snow on deck and it is just like a winter day in Ottawa.

We are still in the icepack and are dodging around as usual, but there appears to be more of a channel all day today than previous days, however, we have to continually zig-zag around and bump into and over pans and cakes of ice and snow.

We ran into a large field of ice and stopped for a few minutes, I think to see if we could not get some fresh water, but being unsuccessful we backed out, turned around, and proceeded on our way, but not until after taking a sounding.

Moving pictures were taken of the snow storm as well as the ship grinding her way through the ice. I also had a picture taken with my camera [with the other] Bo's'n and myself on deck, mostly with a view of showing the amount of snow that had fallen up till that time.

Fish to eat all day today and the bear was missing, we had a cake at supper and Mr. Brown passed around cigars. We quite often strike a larger cake of ice than usual and it near sends us off our feet. Everybody only shaves about once per week when they do so they certainly look funny and very pale. I shave every four days.

Nothing much to do today except walk around the deck and once on the ice and do a few minutes typewriting.

Noon observations today showed us to be at latitude 74° 34' N. and tonight we are just abeam of the small islands off the Greenland coast, they being about 15 miles off on our bow and starboard side. Greenland being still farther. We are abreast of one by the name of the Devil's Thumb. They look very pretty on the horizon and are very rugged, not so much so as the mainland, and nearly covered with ice and snow. You can plainly see the ice-cap over Greenland, which in places only leaves the peaks of the mountains sticking out and must be in places a couple of miles thick. There are large glaciers over some of the islands or partly so. There is always two men at the helm or wheel when we are going through ice, but we have not enough power to break through solid ice.

About 10.45 p.m. we ran into the main icepack and put out hose and a hand pump to fill up one of our water tanks that had been emptied due to the feed pump pipe bursting thereby emptying the boiler.

I got down and had a walk on the ice. There was about 1 ft. of snow on it which hid the water underneath and I went up to my knees in water a couple of times.

About 11 p.m. the Doctor sighted another polar bear and he and two Mounties got a canoe down to go after him, but after travelling about a mile and a half in the ice lost him from view. The ice in the mean time had shifted around, (it appears to be slowly moving all the time although you can hardly notice it) and they had a hard time to navigate back to the ship, the channel they having taken on leaving having completely closed. None of them know how to paddle and they sure looked a sorry bunch. The Mounties are as tight as the devil and I cannot manage to get out in the canoe – damn the blasted sparrows! - there are three Canadians or rather four among them that are nice fellows but the Englishmen I have no use for. There are a couple of seals in sight and a couple of ducks, but they have been mostly absent all day, due no doubt to the snow storm.

It is now about 12.30 and the sun is shining over the islands directly ahead a big mass of fire, it shines on the icebergs casting long shadows and the mountains on the islands and mainland are in large spots shining just like copper or gold and you would think they were partly composed of gold. The shadows lengthen and grow short as the sun travels around the horizon and the golden spots in the mountains also change. The sky is most beautiful being composed of nearly every imaginable colour, the ice flow is constantly changing and the sun shows up the large glaciers and icepack on the land plainly. Moving pictures were taken of the sun at 12.30 p.m. as well as the ship from the ice, also the men pumping and I held a flare to make it a little brighter and by doing so burned my [mitt].

I cannot find words to express adequately the [loveliness] of the scene, but it is certainly more than anything I have ever set eyes on.

### **C.G.S. "Arctic", Saturday, August 12, 1922.**

We moved away from the icepan where we had tied up for the night about 12.45 p.m. and proceeded on our way. There were quite a few sea gulls swimming around the ship when we pulled away which had no doubt congregated during the night. It is hard to say night now, for it is just as light out during the night as during the day.

We have had a nice day all day with the sun shining quite strongly so that it sort of put a warmth into the air which was very cold up till now. It is certainly a change for the better after all the rotten weather and snow we have been having.

We have been crashing through almost solid ice all day from 6 inches to 1 and 2 feet and at times large pieces of six to eight feet thick until 6.00 p.m. when we once more tied up. We struck occasional channels in the ice and soft spots which was composed of thin ice and slush. The boat pushing the slush under the thin ice as it proceeded through made it appear as if steam were issuing from her slides. Several times as we struck deeper and stronger ice than usual I thought we would stick but we slowly pulled through and once gained more speed as the ice became weaker and thinner or we struck open water.

It is certainly a funny sensation to stand on deck and see yourself cut right through a field of ice no water being visible. The ice is closely packed as far as we can see and in some places all jumbled up about eight feet in height one piece on top of the other.

This evening, Lee, the Doctor, and two others are out on the ice stalking seals of which there seemed to be plenty all day, but without results. I have managed to get a rifle but no ammunition as yet so here is hoping.

You can tell where there is open water of any large quantity by the sky, which appears to be very dark right over it, caused I believe by a mist or fog which rises from it; the sky over the ice being very clear.

Noon observation showed us in latitude  $74^{\circ}49'$  N. Longitude  $59^{\circ}$  and we are just about opposite DeGeers island off [the] Greenland coast. I believe that instead of being opposite the Devils Thumb yesterday we were sixty miles past or north of that at that time having passed it the day previously. We were only nine hundred and eleven (911) miles from the north pole today at noon.

The steward is doing the washing, table cloths and etc. today and is going around talking like a [Chinese person].

Ever since we struck the ice the log has been taken in.

It is now 12.00 midnight and it is freezing outside. The water that was open around the ship has now a thin coat of new ice on it. The moon is up high in the sky but only about a three-quarter moon and very pale. The sun is now close to the horizon being about [its] own diameter above it and does not go down any further but commences to rise again. It reaches [its] lowest point about 12.00 midnight. It is very pretty out and one does not feel like going to bed as it is as light out as day.

Had midnight lunch consisting of cocoa, biscuits and [sandwiches].

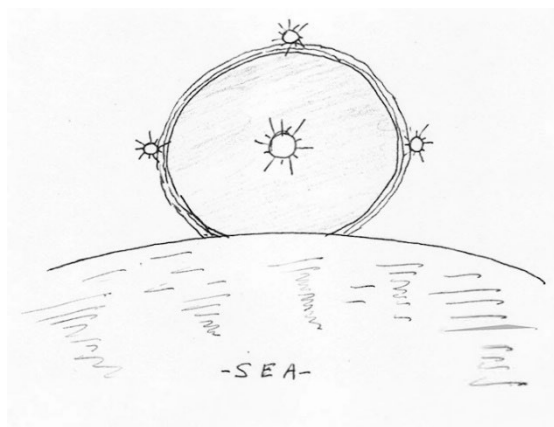
The Doctor and Lee got fairly wet on the ice tonight.

**C.G.S. "Arctic", Sunday, August 13, 1922.**

The daily journal covers mostly everything excepting that it does not give a description of the sun dog, which I will try and outline herein.

The sun was shining about 20° above the horizon fairly bright on the nights in question, around the sun appeared a complete circle of dark sky or darker atmosphere than was apparent outside of this circle; the dark circle was edged completely around, with the exception of a small bottom portion which was hid below the horizon, by a sort of rainbow, or rainbow effect, the sun being directly in the centre and on each extremity of this circle, close alongside the rainbow appeared three little suns, one on the top, and one at each side in direct line with the sun vertically and horizontally. They appeared to be about one-third the size of the sun in the centre. No doubt the fourth little sun would have appeared if the bottom small portion of the circle had of been above the horizon and sea.

Below please find a sketch of the sun dog, called by sailors "Sun-Dog" because of the fact of the large sun being the mother and the four little ones the pups as it were:-



**C.G.S. "Arctic", Tuesday, August 15, 1922.**

A good outline of the day's events has been given in the Daily Journal, copy of which is attached hereto.

Just before dinner (I would say near 11.00 a.m.), I went on deck and lo and behold, land was in sight, Bylot Island to our right or north and beside it on our left bow and to the south Baffin Island; Ponds Inlet being in between these two islands. To the right or north about four miles off shore there were quite a few large icebergs acting as buoys or sentinels, showing that we were approaching land and right in to within a half mile or a

mile of shore stretched a second line of bergs which were grounded no doubt. Bylot Island which is to the north of Baffin Land did not appear to have nearly so much snow on it as the latter named place and was quite bare on the south side, due to the strongest rays of the sun shining on that side, which was quite a contrast to the almost totally covered mountains of Baffin Island. On closer view Bylot Island appears to be composed of a sort of red rock and green and half brown colour growing over it from the water to the edge of the hills or mountains and partly up same. The northernmost side of the island appears to have quite a lot of ice and snow on it and in one place you can see quite plainly with the glasses where a large quantity of ice has slid down the side of the hill and left a huge track behind it, scraping the ice and snow right down to rock and earth. The Baffin mountains appear to be higher and slightly more rugged than those of Bylot island the latter being quite smooth and more or less even. I should say some of Baffin mountains or nearly them all would be around 3,000 feet in height and are nearly entirely covered with snow, ice and large glaciers some of which come right down to the [water's] edge. The icepack stretches for about two or three and possibly more miles out from the land and is composed of all sizes of cakes and pans of ice; however, it does not appear to touch Bylot Island to any extent, as far as we can observe from the mouth of the inlet, which is also full of floating pans of ice some of them fully 6 to 8 feet deep. The mouth of Pond's Inlet is about 20 miles across and narrows to 5 miles at Ponds Inlet settlement up the inlet about 15 miles or more.

About 6.30. p.m. we were met by an old whaling boat manned by five Eskimos and Wilfred Caron, Capt. Bernier's nephew. The Eskimos set up a yell of delight when we were fairly near then and clapped their hands in the air above their heads, also waving and shouting to us. The Captain answered in Eskimo which made them yell again. After a little manoeuvring on the part of the *Arctic* we finally got the boat alongside and the party with the exception of one of the Eskimos came on board, he staying with the whaling boat which we now towed astern and it was his work to keep it from bumping into pieces of ice as we proceeded on our way.

The white man who was in charge was clad completely with the exception of his cap in seal skins and he looked very picturesque, the furs being of slightly different colour and made in a sort of pattern. He had on also seal skin boots with hair or fur lining which are made water proof. They reach nearly to the knee and have no laces being pull overs and in shape like a moccasin. The Eskimos were similarly attired [as] to footwear but wore corduroy pants and a sort of [canvas] coat, only one of them having seal skin clothing on.

We had great fun talking to them or trying to, and giving them something to eat, smoke, taking pictures and having great fun in general. They are only little fellows, nearly all of them would come under my armpit, are a lot like [Japanese persons] in appearance,

except that most of those we saw had a sort of regular and well shaped nose somewhat like an Indian's. They have long hair, their moustache and [beard] are very thin and like their hair very black and coarse. They have brown slanting eyes and which appeared to be sore, I presume from snow blindness. They were all old Eskimos, the youngest being 38 years. The odour was lovely I must admit! Something new in the line of perfume. They are very jolly and good natured. They walk somewhat like a [Chinese person] but are much more peppy. Major Logan showed one of the Eskimos his gold teeth and he let a yell and jumped up clapping his hands. The rest of us did likewise and the Eskimos thought it was great fun. We got them to wave their hats and hands while the movies were taken of them. They went down to hear some music, of which they seemed to be very fond and see the engine, and after giving them some food in a bag they departed for their camp on Button Point, where they had what appeared to be some tar paper shacks and some tents. There were five women at the camp and they looked through the glasses to have sealskin clothing on and appeared very picturesque and just like pictures of what an Eskimo looks like. There were also several children running around the camp and a few dogs.

The ship then circled around and came back opposite the camp when a small boat composed partly of wood and tin shaped like a small punt only pointed at one end, with runners on the bottom for pulling it over the ice like a sleigh, came out with Caron and one Eskimo who boarded, pulling the boat up and suspending it just above the ice from the bow. We then started on our way up the inlet through the iceflow and are going as far as we can and then will land Corporal Jakeman, Constable Anstead, Caron and the Eskimo who will then go to Ponds Inlet.

I could see the bottom in several places, which appeared to be white in spots as though great shells were strewn on it. The mountains look very beautiful and cast a perfect reflection in the clear water, which is only spoiled in places by the drifting ice. The sun is behind Bylot Island and is shining over it on to the ice covered mountains of Baffin Land, casting part of them in shadow and the other part in sunshine. It certainly is beautiful.

It is freezing out and the inlet has a thin sheet of newly formed ice on it, joining up the large cakes to one another.

It is now 12.00 midnight and we have gone as far as we can up the inlet, we have put out two ice anchors and are stopping. The ice ahead is now solid as far as we can see and Caron and the other three have departed pulling the boat behind them on its runners over the ice with provisions to last for five meals.

Saw several little auks and a lot of sea gulls, also some birds that look very much like sea gulls but are slightly larger. The Eskimos brought us back some loon's eggs, which are



about the size of a turkey egg only sharper at one end and are in colour like a robin's egg, being sky blue. We will see how they taste I guess, if they do not use them in the cooking.

I got two pictures of the whale boat approaching one of the three Eskimos, another two of myself with four Eskimos, one of the Eskimo Camp on Button Point, Bylot Island and one of Baffin land mountains.

### **C.G.S. "Arctic", Wednesday August 16, 1922**

See the daily journal for the main events of the day in connection with the movements of the ship and business of the expedition.

This morning and afternoon, two canoe loads of hunters and prospectors went ashore on Bylot Island, taking turns in the [Mounties'] canoe. They only saw a few birds ashore, a skeleton of a caribou or something of that nature, and after remaining on shore for some time roaming around one of the gorges or gulleys came aboard with a lot of flowers and mosses. They had some white and yellow flowers, black, brown and purple mosses some of which was in bloom, the blossoms being a light purple and very tiny; they also brought back some sort of light purple flowers with deeper purple veins in them being rather oval shaped and the mouth of the flower almost closed. Words cannot describe the prettiness of these flowers and mosses, which are so unlike the flowers found around home. I have some of them pressed but they might not keep. Sparks who is a scotchman by descent claims he saw some white heather.

I took a picture of the *Arctic* in the ice with the mountains of Baffin Land as a background at 9.00 p.m. and, right after taking this and some moving pictures, Valiquette and I started on a journey across the icepack, purposing to land on Bylot Island.

We took a plank with us on the Captain's suggestion to cross over patches of ice and cracks in the pack. I took my rifle and loaned Valiquette my revolver, as he does not know how to use a rifle (though he claims to know all about the use of one).

We proceeded slowly at first taking great care to use the plank to cross over patches of thin ice and any place in the pack we were not sure of. After proceeding in this manner for about one-half mile I got tired of it and started to run across these patches of ice in a sort of sliding fashion, dragging my feet as I went, some of them I slid across on my feet. The ice would crack under my feet and in some places give away, but I managed to get over before it would give completely away. Valiquette would not give up using the plank, being afraid and all the arguments I brought forth were of no avail, as he meant to play safety first I could plainly see. He delayed me as I had to stay with him. At last we came

to a large crack in the ice about 6 ft. wide and which stretched as far as the eye could see. I used the plank to go over and managed it O.K. although it sank a foot below the sea.

Valiquette got the wind up and would not come over, he started to walk around it and said he would not take a chance. I argued to no avail and he started off and I did likewise. After proceeding about 100 yards he stopped and seemed uncertain as to what to do looking very pitiful, so after soft scaping him over and petting him up I went back to where he was and held his dear little hand as he walked across the open stretch on the plank. He is about the poorest excuse for a man I have ever seen and not only is an old woman, but he has the nastiest disposition I think I have ever met with in any person, being as well selfish, self centred, very vain, arrogant and etc; but he is a Frenchman and I guess that accounts for some of it. Too damn bad I did not have a fellow with some pep here with me and I could do a lot more things, but I am rather handicapped as I have no person I like at all to go out with and we are not supposed to go alone.

I, on second thought, think it best to change my comparison as there are just as good Frenchmen as any other nationalities & certainly some fine ones on board.

There were a lot of seals and birds just off the edge of the pack and I took a couple shots at quite some distance at some of the seals but missed.

After some difficulty I managed to get Valiquette to cross over the ice patches without the plank and we made better progress, but at that he would slap down the dam plank every now and again at some spot he was a little bit leery of and I sure had some inward as well as outward laughs.

After about three hours steady travelling in this manner and not without some little thrills we came close to Bylot island and tried to get ashore in a valley or gorge ahead of us, but to no avail as the sea was open for over fifty feet off shore and the hills on every side of it where the ice touched at all too rocky and steep to work our way around. I stalked a seal just about this time on the ice but before I could get to within 125 yds of him he popped into a seal hole and was gone. We waited about 10 minutes at the entrance to the hold but he did not reappear so we proceeded. You have to be very careful as there are numerous seal holes in the ice only covered over with a thin sheet of ice and you will go clean through them into the sea if you step on the ice.

During our course to the mountains they appeared near at hand all the time but we certainly were some distance off them, I would say about 3 or 4 miles, the clear air being very deceiving.

Seeing that we could not land at the valley, we turned our steps towards the open sea along the coast of the island and landed with some difficulty at the foot of one of the hills, which seemed to rise sheer up to hundreds of feet right above us and was composed

of big boulders at the bottom, making way to almost solid but cracked rock further up and which appeared to be composed mostly of granite. I fired off my rifle and maybe the echoes did not ring out. I made my way with difficulty over large boulders for a little way along the island, trying to get another little, or what appeared to be little, valley further on towards the sea but finding it quite some piece off, getting late, and the icepack starting to leave the land, I decided I had best return, so taking a parting shot at some, which appeared to be black ducks or birds swimming in the water, I made my way back to find Valiquette with his plank stranded on a piece of ice I had come over without the aid of the plank and with only one hand, afraid to jump ashore. I helped him ashore and after taking two or three little stones we once more started back.

The ice near the shore was very rotten, much more so than farther out from it, and on account of the tide it had widened some of the spaces of open water and ice considerably, so that when I tried to run across the ice I went through to my knee, however, I did not let this scare me and the next thing I knew I slipped on one open stretch landed on the seat of my trousers and went through the ice, getting part of my back and legs wet as well as the part above mentioned through to the skin. Not letting this discourage me, I kept on without the use of the plank which Valiquette was using, right along until crossing one stretch of ice I went right through into the sea up to my waist in water, my rifle which I was carrying at the trail saving me from going completely through. I scrambled out by myself, Valiquette being in the rear and in all three cases merely looking on and not attempting to help me. This last dunking scared me a little bit and I used the plank for about one-half mile until we got on to stronger ice, when I once more crossed the patches of thin ice on foot. I got Valiquette to do likewise, but not before I would go ahead in each case and test them for him and as he only weighs 95 pounds it would be quite safe for him to pass over if I did not go through. He fancied he saw large tracks made by some animal of some description but could not show them to me when I asked him to do so. With all my wetting I was not a bit cold and before very long was almost dry again with the exception of my feet which were wet all the time.

We could only distinguish the masts of the ship from the shore against the cliffs of Baffin land. About half way between the shore and the ship the latter came into full view and the sun shining on the cliffs back of her made a sort of dazzling reflection like a mirror.

Without further mishap we arrived back on the ship about 2.30 a.m. on the 17th, making the return journey in about 2 hours and staying on the island about one-half hour.

Valiquette had a sea biscuit out on the ice and took it out of his pocket and ate it in front of me but did not even offer me a bite although I was desperately hungry. When we arrived back to the ship I took one out of my drawer that I had and broke it in two, offered half to him and he took it without a murmur and ate it. He then said "I wish the

steward was up as I am nearly starved and I would get something to eat," and all the time he had a full box of biscuits in his drawer and would not take one out for fear he would have to offer me one or part of one. He has not had a bath since leaving Quebec nor changed his clothes and most of the time he sleeps in them. He saves all the old tin cans and "Junks" as he calls it even to film spools.

I do not like to run a man down but I really got such a sick of him out on the ice that I think he deserves it. He is 23 years of age, being two years older than I am, and with all the blow and hot air he shoots of what he has done with that camera of his and the hazardous places he has gone and the hair raising stunts he claims he has performed, I think he is full of B.S. and have told him as much.

Kindly treat this confidentially.

**C.G.S. Arctic, Thursday, August 17, 1922.**

The day is rather dark with a couple of rain showers and the ice in consequence is somewhat soft, the thin ice over the pools on the pack, cracks and seal holes having mostly melted making it more dangerous for travelling on the ice and everybody are staying on board although early this morning quite a few were out hunting.

About 5.30 we discovered through our field glasses a couple of dog teams approaching. We watched them as they approached and quite some time before they arrived had made out who they were. They finally reached the ship about 7.30 p.m, and with the first dog team, which was composed of 8 dogs and a [Hudson's] Bay whaling boat (U-24) that was perched on top of the long wooden sleigh were returning Jakeman and Anstead. The other team was right behind and had also 8 dogs pulling a long flat bottomed boat with runners on the bottom. The entire party consisted of W. Caron, Sergeant Joy, Corporal Jakeman, Constable Anstead, Kaktoo and 5 other Eskimos under the supervision of Sergeant Joy and with the above mentioned equipment.

They stopped on our Port Bow having come from the direction of the Baffin Mountains, the ship being tied up to the ice pointing up the Inlet and having just finished a not very successful attempt to break up the ice by means of cutting large pieces off centreing at one point. During this operation we would charge the ice with our bow and turning it in a sort of a circle, repeating this manoeuvre over and over again and at times when opportunity offered also charging the ice with our stern. The Eskimo drivers made their dogs lie down by means of a sort of hissing sound and at the same time plying the whip up and down on the snow on each side of them backwards and forwards, gradually making their movements while doing so slower and slower as the whip would become slower in its course the dogs would gradually settle down to lie down finally as the whip

ceased. Chassi gave a demonstration of this a little later on, he having spent a few winters up here.

The sleigh was composed mostly of wood, having solid wooden runners capped with iron about 8 to 10 inches high and being made of hard lumber about 4 inches thick. Across the tops of the runners were bound [by] means of raw hide slabs of hard wood spaced about 6 inches apart holding the runners apart about 4 feet. The horns and part of the skull of a reindeer or some such animal is used for handles at the back and can be detached when not in use. The entire sleigh would be about 18 feet long.

The dogs have a harness made of leather I presume seal skin which is in the form of a strap about 2 inches wide rather thin and is brought around the neck, crossed on the breast pressing between the dogs fore-legs and again brought up and the ends fastened together on top of the back, there being also a belly strap. The leather thong by which the dog is attached to the main thong which pulls the sleigh is attached on top of the back to the harness: the thong of each dog merges into one and this one is attached to the end of the sled. The dogs are thus spread out in a fan like span at different distances from the sleigh. Each dog seems to know his place and does not appear to become tangled up and out of place very often although this of course happens now and again. It looks as if they did not bother to untangle then all the time as the main thong leading to the sleigh appears for about the space of 3 to 4 feet to be quite tangled up.

The dogs themselves look like half a dog and half wolf. They seem to behave pretty well on the whole, though they say if they are hungry and you fall down they will pounce on you and eat you. They are of numerous colours and vary somewhat in appearance and size; some being quite large while others are small. Some are pure black, some pure white, others black and white, brown and white, and some of a mixture of brown white and etc somewhat like a fox skin. They fight amongst themselves a lot and sure know how to snarl, yell, whine and show their teeth of which they have a good set. They however do not attempt to bite a man although they will nip at your legs sometimes and do not appear to take much notice of you at all except an occasional one or two which like to be petted, these latter being mostly very young ones. They have very long fur and appear to be itchy. They lie quite contented on the snow with their backs to the wind, tail curled up and their chins resting well out ahead of them on the snow, of course some sit up and the different teams seem to be quarrelling more often than one team amongst themselves.

The party then boarded by means of a ladder and everybody shook hands. The Eskimos are great fellows for shaking hands on meeting and leaving you. They were taken down below and fed, afterwards appearing on deck. We had one of them up teaching him how to skip and he had quite a lot of fun and did well. They seem to be able to pick up things quickly and imitate everything you show them. They watch your eyes closely for every

little move and seem to be very fond of playing, just like children. They mostly had their hair down to their shoulders and let their beards and moustaches grow which however are mostly scanty. Their hair is not so long as the women, who mostly braid their hair in two braids one on each side like the squaws.<sup>22</sup> They were dressed in high moccasins of seal skin, pants of the same material with the hair outside, and wore old sweaters and coats for undergarments, having a pull over seal skin coat to put on when cold. We were going around in overcoats and some of these fellows actually had nothing more than one light coat with nothing underneath it. Some had seal skin caps of their own manufacture while others wore old hats and caps. A couple had German prisoners of war coats on for undercoats, where they got them I do not know.

These five Eskimos are under Sergeant Joy's surveillance, having to accompany him wherever he goes, they being implicated in the murder of the white man out here last year. The one that shot the white man is a little larger than the rest [and looks] as though he had some white blood in him. With the exception of this man they are all very small like [Japanese people]. I understand that the white man deserved being shot as he robbed the Eskimos, threatened to knife and shoot them, and stole one fellow's wife. A bunch of about 15 or 20 got together and while two decoyed him out from the hut the big fellow shot him.

We weighed anchor about 11.30 p.m. and proceeded on our way out of the inlet, Sergeant Joy and his five Eskimos departing with 12 dogs, they having placed them in one team and put the two boats on the one sleigh. The Eskimos I noticed seemed to be very honest fellows and would not touch anything that was not given to them. They sure know how to eat and it is common to see them eat eight big hardtacks and a half bottle of jam.

### **C.G.S. "Arctic", Friday, August 18, 1922.**

Last night Mr. Lemieux the Second Mate asked me if I would like to pull an oar ashore to land Caron at Button Point and bring off Kaktoo's family. I expressed my willingness with pleasure and slept with my clothes on until 4.00 a.m. when he had one of the sailors call me. I got up immediately and went on deck to find the life boat in readiness within a few inches of the water. I quickly slid down a rope into it and we cast off pulling for Button Point. I steered the boat with a big sweep, Carson, Lemieux, Kaktoo and two sailors using the sweeps, but stood up facing the front of the boat and pushed the oar from them in what they call "fishermen's style".

It was a little over a mile to the shore but we made it in a short time. All the Eskimos were up including women and children and they all came to the boat to meet us and

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<sup>22</sup> *Editors' note:* A derogatory term for First Nations women.

shake our hand on arrival. There was no wharf, but we landed on a projecting shelf of rock beside two old whale boats used for that trade by the Eskimos and Caron, and leaving one sailor at the boat climbed a bank about 20 feet in height to where the Eskimos had their tents and Caron's hut.

The encampment consisted of one canvass tent, two tents made out of seal skin and put up something after the style of an Indian<sup>23</sup> wigwam or teepee, only not so high, Caron's tar paper hut which had a nice bed and was well got up and comfortable, a store house made of wood and tarpaper for storing furs, whale hide, blubber and etc. Just outside of this store house there were several huge barrels and steel tanks all of which were full of whale oil. He had a big boiling boiler made of brass in a section of the storehouse. The camp appeared to be very dirty with bones, feathers, remains of birds, pieces of raw flesh, parts of seals, parts of whale bones and general refuse scattered at random all over the camp, but which strangely did not let off very much odour, the worst smell being from the seal and whale industry that was carried on. No doubt this was due to the coldness and the fresh morning air.

There were two huskies at camp which we took back to the ship with us. There were about 5 women, one girl about 16 which is considered a woman and about 12 children as well as the five male Eskimos and Caron in this encampment. I liked the girl about 16 as she appeared to be cleaner than the rest of them as well as considerably younger. The women all wore seal skin moccasins, sealskin pants like the men, and a seal skin pull over loose jacket open at the top and fairly well down over the shoulders with a large cape at the back for carrying the babies, which one or two of them had in use. One woman I should judge was half white, but the rest were pure Eskimos.

The cape that they carry the baby in is open part way down the back next to the skin, allowing the baby next to the mother's skin. Around the edges of the women's clothing they had worked in a different coloured substance, green, red and etc which looked very pretty and I presume was coloured straw or grass, and their pull over coat comes much further down than that of the men. The women appeared to be far more clean and tidy than the men, but I guess this is due to their not having to skin seals and work in the whaling trade. They had their faces streaked with a sort of blue paint denoting that they were married and this girl of about 16 was married as she was also painted.

There was quite a [growth] of grass which was fairly green and somewhat coarser than that growing around home, mosses and something that resembled hay somewhat only the tops looked more like pussywillows on this point. The moss was of different colours, some brown and heather colour, back and etc. There were also growths somewhat like

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<sup>23</sup> *Editors' note:* Term in common use at the time for persons of First Nations descent.

grass only they grew from one root and spread out over the ground. A lot of mosses do likewise.

After some protest on the part of Kaktoo's wife regarding packing up house and moving, which was decided by the ship whistling very sharply, Kaktoo's family packed up house and worldly goods in less than ½ hour without any notice and, assisted by the camp in general, moved them down to the boat and we cast off leaving Caron behind. They did not have any chairs or furniture nor cooking equipment with the exception of a lamp, their entire outfit consisting of a couple of guns which the women can handle, the sealskin tent, poles for same, and the clothes that were on their back with some other odds and ends such as sewing outfit.

The women smoke pipes and chew tobacco and spit just like the men. They gossip amongst themselves and have a very hearty laugh; it is good to hear them laugh. Mrs. Kaktoo when cigars were passed around, took one and [calmly] smoked it: she had four children with her, all little gaffers, one only about 3 months old [and] the oldest being 11 years. All the little kids helped move the family. I pulled an oar back to the ship and we arrived there at 5.00 p.m. only being absent in all one hour. The Eskimo family is put up aft and appear to be quite satisfied.

We [then] weighed anchor and started on our way to Ellesmere. We have I think 6 dogs aboard and the [carpenter] is making two sleds. We passed through quite a large icepack and sighted some walrus but they made away before we came within shooting distance.

The mountains of Bylot Island are very pretty, being almost entirely covered by snow, ice and glaciers towards the northern end and the clouds are drifting around the peaks with the sun shining on it all making it a very beautiful scene. The valleys are mostly filled with huge glaciers some of them being down to the waters edge and others being inland a few miles. See daily journal for a description.

Evening out and it is rather foggy and cold a nice night to stay below. The sun sets now but it is still nearly as light out all night as it is in the daytime.

Shoot another large walrus  
12 or 14 feet long  
9 feet in circumference  
weight estimated at 2,000 lbs  
Second bear – shot big male  
Over 1,000 lbs



**C.G.S. "Arctic", Saturday, August 19, 1922.**

Shortly after breakfast we sighted two polar bears on the icepack and the Captain made for the nearest one which was lying on the ice stalking a seal. I understand four fellows with rifles fired at it killing it with about 8 shots. The other polar bear made away over the icepack which has been in view mostly all day. I need all this as I was just finishing my breakfast and did not get up on deck until the bear had been killed. A rope was paid out from the ship and Chassi and Vignault by means of a ladder and a plank made their way to where the bear was, attached the rope around his two hind legs and he was dragged to the ship with the [captain] where by means of overhead blocks he was pulled feet foremost on deck to be in due course skinned and cut up for consumption both by the members of the expedition and the Eskimo dogs on board.

The bear suspended by the hind legs with his nose touching the deck would be about 12 feet long and his body would measure easily 9 feet. It is estimated that he would weigh about 1,200 pounds and it is a male of considerable age. I took a picture of him though it was rather dull at the time.

It has been dull out all day and cold with occasional snow storms and at times these were quite heavy. There was quite a head wind and the ship had to be tacked several times to work its way through the channel between the ice pack.

The [steward], cook and a couple of others are drunk on some homebrew the cook had made some time ago and they are going around looking for fights.

I do not think there will be much chance of getting any furs, as the Captain grabs off every one he can lay his hands on and he is a cute old fellow and knows most of the Eskimos so it looks as though we will have to take a back seat. However, the only furs of any use up here are blue fox, polar bear and ermine, musk-ox and caribou the two latter of course not being found along the coast living more inland. The sealskins are of no use, neither are the narwhal or walrus.

It is now 11.05 p.m. and it is cold outside and a bit dull, the sea is getting up a little and the ship is rolling somewhat as my stomach tells me so. Land is in view on the port side and also on our starboard bow, I should say about 7 miles off. There are a lot of birds in sight, but the icepack has somewhat disappeared. We expect to sight Ellesmere some time tomorrow.

**C.G.S. Arctic, Sunday, August 20, 1922.**

Mr. Lemieux for a joke on Valiquette this morning wakened him up at 4.00 a.m. and told him to go on deck to take some pictures which he would have done had Lemieux not taken pity on him at the last minute and told him the time.

I slept in until dinner so missed what went on until that time. Just after dinner a large seal or oogjook was sighted on a pan of ice and he was shot in the head by two members of the expedition, the Doctor and Chassi, the latter I believe doing the trick when about 100 yards from the ship. We put out a rope from the ship and hauled him off the pan of ice by means of overhead blocks and pulleys. I took three pictures of the procedure. I would judge he was about 8 feet long being mostly gray in colour and would weigh about 800 pounds. He turned out to be a male and will be useful to make soles for moccasins and dog meat. I have taken some of his whiskers and two of his claws, however, I spoiled the claws trying to boil the flesh off them. He looks just like an ordinary seal but is a great deal larger and not quite the same colour. His skin is somewhat marked up with scars. He has about four teeth but they are flat and not very noticeable when you open his mouth. two being in the upper and two in the lower gums.

Just shortly after shooting this fellow we sighted another and got right up to him fired four shots at him but missed and he disappeared into the water.

There are millions of birds in view, sea gulls, dovekies of apparently two species, one having a long flabby bill which makes him appear as if he had a fish in his mouth something like a turkey gobblers but in all other respects the same as the others who have a bill somewhat like a duck, and other birds which are pure white in colour and look very pretty somewhat the shape of a sea gull.

We passed in between two huge hills or mountains being about 6 miles across, the southern being Smith Island and the southern part of Ellesmere Island. After passing in between these two points already named we found ourselves in a sort of large bay with the mountains of Ellesmere to the north and east of us. They are mostly covered with snow and ice and the valleys with glaciers some of which are quite large and very wide extending inland for a long way. The mountains and valleys to the north are devoid of snow to some extent where the sun plays on them and are what appears to be capped with sand which runs down in little rivulets, however on scaling one of them (which I did later on on the 21<sup>st</sup>) I found them to be broken small particles of brownish coloured rock. There are hundreds of seals swimming all around the harbour. The icepack is apparent around the shore and is quite solid ice right ahead of some distance off. On the icepack on our north or starboard side are dozens upon dozens of large seals and walrus sleeping on the ice. We have been passing large schools of them nearly all day, they swimming all around us and diving whenever they see us to reappear again and once more dive keeping this up. There certainly is a lot of animal life around here, much more than any one spot we have met with yet.

We saw several bear tracks and about 4.00 p.m. I discovered a huge bruin travelling on the ice ahead of us. We watched him for over an hour as he would jump from one piece

to another and lay down as if waiting for seals. I think he got one for he took a big jump and has laid down for about one half hour, then got up and rolled a bit and has again layed down. He is about two miles off and we have to use glasses to see him plainly. He strayed near the ship once but again went off so we are out of luck. Later on another one joined him and they walked around for a while together and away off to the left of them still another one was spotted so if we could only get out after them we would have some rare sport.

The Doctor and two Mounties went out and shot a huge walrus, which is very easy if you are any kind of a shot as they will not budge an inch from you and in fact will attack you I hear. The ship was moved and he was hoisted aboard. He would be about 12 or 14 feet long, over nine feet in circumference and would weigh I guess about 2,000 lbs. I pulled some of his whiskers out by means of a pair of pliers. We are going to keep him for dogmeat.

We picked up anchor this evening (ice anchor) [and] are going someplace. Will therefore miss the bears.

I had a snap taken of myself with Kaktoo's family on the forward deck, but it is rather dark so I do not know if it will turn out.

The little Eskimo baby was crying and I took a rattle I had, shook it in its [*sic*] face, and it opened its little eyes wide and stopped crying immediately. The mother seemed quite pleased as well as astounded and kept shaking the rattle to the little baby which is in the cape on her back and is dressed in little sealskin clothes made out of I presume young seals.<sup>24</sup>

### **Monday, August 21st, 1922.**

We landed in two boatloads at the head of Craig Harbour and everyone walked around the little valley exploring. I walked by myself and scaled the third mountain on the northwest side of the valley as well as a small glacier. It was very steep rocky and hard going. I returned afterwards to the boat and rowed back to the ship taking the bow oar.

We saw at least twenty old stone Eskimo tupeks on the northwest side of the valley, nothing remaining but the ruins which are mostly overgrown by moss. Saw rabbit signs, and a fox track, quite a few old bones, but nothing also of any importance.

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<sup>24</sup> W.H. Grant noted in his Diary with reference to 21 August to 1 September: "I am writing this on Friday, September 1st, 1922. As I have been so busy up until now from the 21st of August I was unable to keep my personal diary up to date, however, the Daily Journal copy of which is on this file covers mostly everything and I will merely add in little notes for the purpose of refreshing the memory should occasion arise to do so."

**Tuesday, August 22, 1922.**

Fine day the sun is shining brightly and it is fairly warm in the sun. Brown and I are traversing the shore making a map of the coastline of the valley. It is my job to trace this and give the bearings to Brown who is using his plane-table. We returned to the ship about 8.00 p.m.

We discovered some bear tracks not of very great age near the southeast side of the valley and on measuring one of them found it to be nine inches wide by fourteen inches in length.

Started the erection of the police buildings and the unloading of stores and lumber etc.

**Wednesday, August 23, 1922.**

Continued traversing the shore and carried our work right across the entire valley. Discovered the bear tracks on some ice on the extreme northeast side of the valley and could plainly see where the bear had taken a roll. We have no rifle with us during our work and if Mr. Bear comes along I have quite decided to make up the side of the mountain where I can throw stones at him, but Brown says he will trust to the flat beach. We finished our coast traverse today.

Work of unloading and putting up the police buildings is continuing. We are about 800 miles from north pole here and are in latitude about  $76^{\circ} 22' N$ .

The southeastern side of the valley is a bit higher than the opposite side and is quite flat right up to the foot of the mountains, the small stones of which it is composed being quite flat and rolled or pressed down in some manner just the same as a steam roller would do with little grooves running here and there. It would indeed make a splendid tennis court at almost any place. We have been running into little piles of stones here and there and sometimes these are in circles. Cannot make out what they are unless graves or remains of stone igloos.

Found a [bird's] nest in a little hollow in the ground which was filled with down at least two inches in depth and of a gray colour.

It turned very foggy out about noon and started to snow, is snowing and quite cold, making it miserable to work in. Returned to the boat around 7.00 or 8.00 p.m.

**Thursday, August 24, 1922.**

Working all day with Brown up the northwestern side of the valley and thence across it taking contours and levels which is a rotten job. Feeling very sick today, but have to keep pegging away as usual. Only had two hardtacks all day to eat as there is no [flour] handy

to make bread, it being stored away in the hold. Missed my breakfast worse luck. We had some hot coffee in a Stanley unbreakable thermos bottle which was extremely hot and very good. Returned to the boat about 8.00 p.m. Work continues on Police buildings and unloading.

### **Friday, August 25, 1922.**

Working with Brown doing the same work as yesterday with the exception that he took some shots on the sun for longitude, latitude and time. I assisted him by taking the time or timing him. I think the Doctor is going to stay all winter as he likes it here. Icepan floated by the ship with huge bear tracks on it after supper. Presume it must be the same one as we saw up the valley.

It is a nice day out all day with the sun shining brightly, I embodied my name and the year with white stones about the centre of the valley on a little mound. Police hut is coming along fine.

### **C.G.S. "Arctic", Saturday August 26, 1922.**

Very foggy today which cleared off about noon. Unloading and building proceeded. I went ashore with the Doctor and Valiquette in the canoe, arriving there we started to sort out cut and pile lumber which we carried on until near noon when we ate our lunch sent ashore by the launch. We only had one sandwich apiece and this only made us feel worse. In the afternoon I helped build the living hut and the storehouse, assisting MacGregor and the Bo'sn Leclerc.

Reilly [got] hurt. ... I was standing almost under the scaffold when it fell but managed to get clear.

### **C.G.S. "Arctic", Sunday August 27, 1922.**

I understand from MacGregor that Valiquette was of no earthly use in the canoe when they went after the walrus and he pleaded with him to take him (Valiquette) back to the ship and never mind the doctor. In other words he got the wind up the same as when he went out on the ice with me. Some daring moving picture operator!! I was in bed at the time of the hunt.

Day was lovely until noon when a breeze sprung up the sun got hidden behind some clouds and maybe it wasn't cold. I worked all day on the Storehouse and the Police Hut alternately, Bob the Bos'n and I working together most of the day.

We got a little more lunch at noon today and were not left hungry like the other day.

Craig Harbour was full of drifting ice by the time we were ready to leave for the ship and quite a swell was running, however the last boat in which I was in got through the ice with less difficulty than the one just before it but several of us got a bit wet from the spray coming in over the bows.

### **C.G.S. "Arctic", Monday August 28, 1922.**

Mr. Lemieux and Lee started for the shore to bring off the [carpenters] and three of the police who were not to stay just shortly after supper but could not get through the ice and had to come back. Later the tide turning and opening up the ice, Lee and Mr. Wilcox were taken ashore and those that had to return to the ship brought back. Weather had been rotten all day, snowing and foggy. I caught up on some of my work, that is clerical work today and wrote some letters, personal and official to be posted from Craig Harbour Post Office, the most northerly post office in the world.

### **Tuesday, August 29, 1922.**

Thank God the damn sparrows are now away from the ship and in consequence everything is peaceful and quiet, more like home and what it should be, and everyone is more sociable. There are the three Canadian Mounted Police left and I believe they have had more visitors in their quarters of the ship today than the whole [damn] bunch of blokes had all the time they were on the ship which was a great deal over a month.

I have worked at the typewriter mostly all day when I felt well enough, but at times the swell made me feel rotten.

### **Wednesday, August 30, 1922.**

Sailing down I presume some strait with the land on both sides of us at not a very great distance from the ship on either side.

There is always some ice of some description in sight and the only reason why I do not mention it is that it is a daily sight and one gets tired of repeating day after day, so much packed ice and so many Glaciers seen etc etc.

Party went ashore in Dundas Harbour to investigate, but I missed the boat so was out of luck. I however saw the land quite plainly from the ship and I guess did not miss much as nearly all the valleys are about the same excepting that some have more vegetation than others. The ship rolled badly when laying to and it sure got my goat, made me feel rotten though not exactly sick.

I understand Valiquette took a picture of one of the glaciers and he asked, "what will I call it in the scene book," so he was told by the Captain that it had no name and to call it Valiquette Glacier. I understand it was done to kid him as he is very vain. He

immediately swelled up like a [balloon], so I am told, and sure thought himself something. There was quite a bit of joking about it among the fellows on the ship.

**Thursday, August 31, 1922.**

Sailing down Navy Board [Strait] nearly all day until we came to solid ice nearly down to Eclipse Sound and had to about ship and retrace our steps and go around the two sides of Bylot Island thence to Ponds Inlet.

Nothing much of anything doing, playing cards, reading and typewriting to pass the time.

**C.G.S. Arctic, Friday, September 1, 1922.**

Today has been rather a nice day but rather cold. We have been passing Bylot Island all day and at times have been quite close to the land. The rocks and mountains are covered with snow as usual and from appearance it looks as if a lot of new snow has fallen. The vegetation down here appears to be more abundant and more green than further north and there is quite a considerable amount of grass which you do not see so much north of here.

About 9.30 a bear was sighted and we prepared to receive our visitor. He was swimming out at sea about two or three miles from land, having no doubt left one of the icebergs not far off was making for the shore. I, with the Doctor and the Captain, posted ourselves on the forecandle with our rifles while the remainder of the crowd stayed on the bridge with their cameras. I managed to make an attempt to get two pictures of him swimming ahead of the ship with my camera between shots. I fired two shots at him and feel pretty sure I hit him with one of them. The Doctor fired about six and the Captain two. After a short battle Mr. Bear was no more and was promptly secured by two men in a canoe and hoisted aboard, where I took a picture of him suspended over the deck. He was a young male bear and would be about the size of the first bear we shot off the Greenland coast, somewhere around 800 pounds and about 7 feet in length, being quite small compared with our second bear.

About 4.30 p.m. we sighted Button Point and off the Point lay [Captain] Munn's ship the *Albert*. I understand this ship was built in Queen Victoria's time to be used for a hospital ship, is 100 ft. long about 22 feet beam, 300 horse power engine and two masted, I should say about 500 tons. Caron with an Eskimo crew in a whale boat was engaged in loading the ship and he came off from the *Albert* to our ship with his crew and boat. There were about 12 Eskimos for a crew and after staying a few minutes and giving us some news ... he departed leaving three of our former Eskimo friends with an Eskimo boy to be used in helping us unload the police supplies and equipment.

We then proceeded up the inlet between Baffin Island and Bylot Island and it is now 11.00 p.m. and we are still going ahead slowly crashing into occasional pans of ice which come in our road. Expect to reach Ponds Inlet shortly.

I have tied with the Steward in rummy and we are now playing off our deciding game. We have great sport and pass the time away most pleasantly.

Have been eating bear steak and stew off & on for 2 or 3 weeks now.

### **Saturday, September 2, 1922.**

Last night we had the search light turned on the shore for awhile trying to locate the houses on the bank, south shore, where two lights were shining and we could hear [cries] in response to the ships whistle which was blowing now and again, however, the search light went out of order and we did not see very much. We are crashing through a lot of drift ice....

Had to turn back and retrace our course on account of the ice and anchored in Albert Harbour, which is a nice little snug place. This morning after Breakfast a party consisting of the Captain, Mr. Craig, Brown, Logan, Valiquette, the Doctor, Sergeant Joy, the Engineer of the launch and myself went ashore to explore a possible site for the police post. We landed on a nice sandy and gravel beach and proceeded to tour the beach, some of us, I among the number taking a pretty little gorge with a stream of water running down the centre and almost sheer rocky walls rising up hundreds of feet on either side for an exploration trip. There were all sorts of veins of different ore, which of course I could not identify, although some of the members of the party that were along picked the whole side of the cliff to pieces verbally identifying the different kinds of rock, ore and etc. and I believe none of them knew much about it at that. The gulch was certainly beautiful and about the prettiest spot I have struck up here yet. There were numerous little water falls and at their foot deep clear pools of water, splendid drinking water about four or five feet deep and very smooth. These falls and pools occurred about every 100 yards up the canyon. The rock itself seemed to run in veins which were intermingled with one another and of different colours, some green, red, brown, black, white, brick colour and etc. and certainly looked very pretty being more so when covered by the clear water and worn smooth. It looks as if there must have been some immense heat that had once come in contact with the rocks. Walking was rather difficult as sometimes we had to pick our way along almost [perpendicular] rocky walls, but it was worth it. We had not time to see all the ravine and had to return to the ship for dinner.

After dinner another party went out in the launch to do some surveying, Mr. Craig, Brown, Blair and the Doctor. I did not accompany them but with MacGregor took the canoe about two hours later and paddled over to the same spot we were at in the



morning and where the second party had landed. We had a long hard paddle, it being very windy and the sea or inlet having whitecapped waves of about three feet high, but we managed after some time of hard pulling and good canoemanship to land safely on the beach having paddled about three miles against wind, waves and tide. MacGregor had to paddle on his wrong side to accommodate me, but I would think he always paddled on that side he handled the paddle so well.

On landing we proceeded up the same gulch once more as Mac had not been in the party this morning. When a little way up we met the Doctor and Blair who said they had gone as far as they could up it. We kept on going and after about three-quarters of a mile or a mile of hard travelling, passing the little falls and pools above mentioned as well as a spot where the stream went underground for some distance, we came to a fall rather larger than the rest, and on mounting a rocky wall about eight or ten feet in height above where we stood, we came to a large almost perfectly round pool of water about 70 feet in diameter and walls of sheer rock rising up for hundreds of feet rising up on every side excepting the little cleft where we entered and one directly behind this were another fall about 20 feet in height fed this pool of water, no doubt from another pool of water higher up. Around one side of this pool was a shelf of rock which you could walk around. It certainly was a beautiful sight which words are inadequate to describe. The water was so clear you could see the bottom easily which at its deepest extremity must have been fully thirty feet, it would certainly make an admirable swimming pool if it had not been for the partly formed ice over the surface. We could not proceed further up the gulch very well without great difficulty and the risk of getting wet or breaking our necks so we returned part way and then made our way directly back over the hills to where we had beached the canoe, joined the motor boat party and in due course returned to the ship about 5.30 p.m. via motor boat towing our canoe behind which came in very handy by transporting the party and instruments from the beach out to the boat which was held in readiness about 40 feet off the beach.

They have been taking on ballast all day with the [ship's] boats using the Eskimos to do the work, we having about easily one dozen on board. They caught two young partridge among the rocks which are going to be cooked and fed to our patient Mr. Riley.

This evening the doctor is accompanying Sgt. Joy to the [Hudson's] Bay Post at Salmon River to give a sick Eskimo medical aid at that point. They are going in a launch to the *Albert* which has come up from Button Point and is in the harbour not far away and will accompany Capt. Munn in her up to the Post the latter having to get clearance papers for his cargo of whale oil, furs and etc. They left about 9.15 p.m.

Had great fun with the old cook tonight trying to kid him. He seems a nice old fellow. Sergeant Joy also seems to be a fine fellow. The Eskimos are all good workers and rather agreeable fellows.

We were talking to some of the natives and they say they have no furs, having already traded them in, so I guess we are out of luck. I will have to try and get a kayak if there are any here.

The [steward] and one of the waiters have been doing some laundry and ironing for two or three days now and they can have their job.

The Eskimos are wearing more furs this time than they did the time we were here [prior] to going to Ellesmere. It looks as if the short summer is coming to an end as the flowers are fading and the leaves dropping off the small willow shrubs, sort of like a vine, that grow here, also the moss is not now in bloom. There is much more vegetation here [than] at Ellesmere or further north but not nearly as much game which seems to be pretty scarce around here. I saw a couple of ravens today and that reminds me of one I saw at Ellesmere where a couple of other birds attacked it and had a great time for a little while. Sgt. Joy says they will follow the dog teams in the winter and will eat a fox out of a trap if you are not careful. I understand there are plenty of caribou inland from here about 100 miles which country is mostly flat and not like the coast which is very rugged.

### **C.G.S. "Arctic" Albert Harbour, Sunday, September 3rd, 1922.**

Today is a rather nice day but very cold in the wind. A party of surveyors went ashore in the morning and afternoon and climbed some of the mountains for the purpose of taking pictures.

We have a whole crowd of Eskimos on board helping us with the unloading of part of the police coal and the taking on of ballast. I assisted in unloading the coal from about 11.00 a.m. until 3.30 p.m. and found it a rather dirty job. The Eskimos are willing workers but are not quite as strong as, I would consider, the average white man and cannot withstand the same amount of work. It is rather queer to have them working with you and they seem to look to you to act. We are unloading the coal around a point in a little sort of declivity in the mountains and there are two white men buried there that had been with Captain Bernier at one time, crosses marking their graves. One was Frederick Brokenhausser who was on board the C.G.S. *Arctic* and died from heart disease after returning from a trip to Ponds Inlet in 1907 on account of hurrying when he heard the ships whistle. The other was Arthur Hascka, a German and moving picture man who froze to death March 23, 1915. He with another man left the ship with an Eskimo to take some moving pictures and when getting away some distance sent their guide back to the ship, a storm blowing up they got lost and separated, one made a tupek and came through alright but the other laid down behind a block of ice on the beach and was frozen. There is also a tombstone of another man by the name of Alex Elder, Mate on the H.B.M. ship *Hecla* who died in his 36th year on April 15, 1823. He is not buried here but somewhat about 700 miles from here. There was an ice anchor left

near the grave or on it and Captain Bernier requested an Eskimo to bring him that so that he could return it to London, but the Eskimo not understanding fully brought the tombstone instead and the Captain not knowing what to do with it left it in the cemetery.

A party came on board from the *Albert* which is laying at anchor near us consisting of Caron, Capt. John W. Murray, navigating officer of the *Albert* and a bunch of Eskimos with some women and children. Caron later took the launch and brought some more women and children from Ponds Inlet on board. They have been running all over the ship and we have amused them with a phonograph all afternoon also an [accordion]. I took several pictures of them and hope they will turn out O.K. Only one of them can speak English. The chief, Tom, and I had him in my room speaking Eskimo and English with him from a book for about one hour. He appears to be very intelligent and says that on account of all the Eskimos here being employed by some trader or other they have not time to make up any little things for trading with or have not any skins. I had this gentleman's esteemed presence at supper and he certainly knew how to handle himself and everything a great deal better [than] some white men I have run across. Lobster and nuts were new to him as well as pickles, and it was fun to see him dig in to everything.

Valiquet [*sic*] put down a sheet and showed the Eskimos pictures of themselves dancing & you should have seen how surprised they was when they recognized themselves.

The women were all dressed up in native dress with beads worked in all over their deer-skin clothes although some had on sealskins. They were a jolly lot, some big some small, fat and lean. The little girl I like from Button Point was aboard and I have had a dance with her later in the evening. The women seem to have padded shoulders and partly padded ankles, that is [their] dress is made in this fashion and some of their long pull over smocks are cut in swallow tail fashion while others come to a point and etc. There were a lot of kiddies of all ages excepting from 15 to 17 [there] being a shortage of this age just at this time, no reason given and they certainly looked cute in the different cuts of skin clothes.

Lime juice was served to them as well as hardtacks, the music was started consisting of an [accordion] and a violin and they started to dance a sort [of] square dance and some other dance. Later we mixed in with them and took a turn at it ourselves. Moving pictures were taken of the [night's] proceedings by the light of flares, it being rather dark at this time of the year. Later they all came down below and were fed. It was certainly some scene on deck and I should say that easily 150 Eskimos were on the ship. The crew were given a ration of rum.

The Doctor did not go to Ponds Inlet as originally intended and I do not know what plans are forthcoming just now.

The party returned to the *Albert* about 12.00 midnight in a launch from our ship and their two boats, the women and kids climbing over the side just the men. It is funny to see the women blow their noses with their fingers, chew tobacco and spit, smoke cigars, pipes, cigarettes, and walk out like a man. One custom I noticed, the mothers some times chew up the food for the children up to say four or five years of age in their mouth and the kid opens his mouth like a little kid and the mother blows into it. A kid was sick at his stomach and after having finished relieving himself the mother immediately licked off his face clean. They, I understand, give their children a bath with their tongue. Sgt. Joy says that some of them had their first bath and clean up today for a year for the purpose of coming on to the *Arctic*. They are excellent dancers and would pick up a modern dance in a very short time.

### **C.G.S. "Arctic," Albert Harbour, Monday, September 4, 1922.**

I stayed on the ship nearly all day and caught up with my typewriting, nearly everyone slept until late and it was rather quiet until after supper, though a couple went ashore.

After supper I went with the launch bound on board the *Bayeskimo*. We caught her as she was coming in the harbour and they threw us a rope, not stopping. Captain, Mr. Craig and a couple of others boarded her by means of a rope ladder over the side, stayed a few minutes, and then we cast off to proceed on [our] way to the village. The *Bayeskimo* is quite a large ship compared with the *Arctic*, she is made of steel and is run entirely by steam, using coal for fuel. She is just a new ship this year and is registered at London, it is her first trip and she is not properly fitted to combat the ice, but will be fixed up this winter.

After a short run we came to the village, [but] not before seeing a bunch of comatiks and dogs about a half mile out of town. All the natives, mostly women, came to meet us and gathered around us laughing and talking about the dance. We walked around the place and had a good look at it. There are two buildings put up by white men, one used as a work shop and living abode for Captain Munn's representative and the other I do not know what it is used for. There are about 16 tupeks made out of old bits of lumber, canvas, grass and moss which the Eskimos live in, sometimes two and three families living in one house. There are also several other abandoned tupeks which I presume became too dirty to live in and were just left. There appears to be no mode of sanitation, old bones, skins, parts of dogs, meat and everything lying around any place. The inside of one of the tupeks which I went into would be about 8 ft wide by 12 or 14 feet long and is composed of one room only. In one corner is a pile of skins where they sleep and all around the floor the provisions are scattered. [Their] stove consists of a sort of trough with one side higher than the other about 2 ft long, 1 ft wide and 1 ft high, composed now of tin but before tin was introduced into the country was made of rock. Melted or hot oil is put in this trough and then moss and rabbit droppings as well as other things

such as burned grass and this is burned, they regulating the fire by the amount of material added. It burns just like gas with a steady flame and must be excellent for cooking. The bed is raised about a foot off the ground consisting of earth. Of course the ice igloo would be a little different. I managed to get a sealskin [mat] and a crochet needle.

### **September 4, 1922.**

The Eskimos seemed to be a little dirtier than when they were on the ship the previous night. There were all sorts of dogs all around the place and some of them had puppies in one of the old abandoned tupeks. These were very cross and would tackle you in a minute. There were a lot of children and they certainly looked cute in their sealskin, caribou and deerskin clothing. There is one crazy Eskimo at the village and she sure looks fierce. Mr. John Joseph Henry Asku has succeeded Caron representing Capt. Munn and seems to be a nice fellow.

### **C.G.S. "Arctic" September 5, 1922. Tuesday.**

I went aboard the "Bayeskimo" with the boat and had a little look around the ship, stayed there visiting and came off after a couple of hours just before supper. I not staying with some of the others for supper. The crew consists mostly of Scotchmen but there are a few Englishmen on board and some Canadians. They appear to be very nice fellows. The living quarters are excellent and away ahead of ours.

After supper I went up the inlet in a boat launch with a party to look over the ice and once more stopped at Ponds Inlet village. Asku returned with this boat and he took me into his house, we had a little sociable glass and a little talk on different matters. He appears to be a very nice fellow, although an Englishman which proves that you can certainly never meet any set rule, but I put it down to the fact that he has seen a good bit of the world and was not an ignorant jackass like the rest of the [damn] sparrows we had on board and left at Ellesmere.

Coming back we picked up the [Sergeant's] comitik and brought it to the ship. It is decided we try and work our way up the inlet the first thing in the morning so no doubt we will see something new. I did not get a picture of the village, worse luck as I was in such a hurry to get into the boat that I forgot my camera, if you do not get there right on the dot they will not wait for you and I take no chances.

I would like to be staying here, especially with Asku as he has a nice bunch of natives and I think I would get to like them they seem so straightforward, not like the people in the white world who seem to be out only for themselves.

The *Bayeskimo* is right near us and is going up the inlet with us tomorrow. We got back to the ship rather early about 9.00 p.m. and after something to eat I turned in.

I forgot to mention that yesterday I think it was I had my monthly bath and very fortunate I was to get it as the next day the mate came around and told us to be very sparing on the water or else we would have to drink salt water.

**C.G.S. "Arctic", H.B. Post U24, Wednesday, September 6, 1922.**

We proceeded up the inlet through the loose ice early this morning as expected and found ourselves just off the [Hudson's] Bay Post U-24 founded last year in the 252'nd year of the H.B. Co, The *Bayeskimo* is right alongside of us and was unloading when we came up which would be about 10.00 a.m. We immediately got the launch out and a party went ashore, I among the number. We were given an introduction to the two white men, their names I do not remember, and we walked around the place looking it over.

The [Hudson's] Bay Company have three buildings, wooden one living, one a storehouse, and the other a powder house. They are all very neat and are painted green and white. There is a flag pole between and behind the storehouse and the living house with the [Hudson's] Bay flag flying from the peak. They also have two tents for storing provisions and other material temporarily.

The natives have about eight or ten tupeks, some wooden and others seal-skin lined up a little to each side of the H.B. Post the most of them being however on the one side. They have loads of dogs, young, old, big small and etc. They all seemed glad to see us and shook hands all around.

When walking around the town looking it over and trying to talk to some of the Eskimos I was set upon by about six or eight of these huge dogs and believe me for awhile I thought they would just put an end to me if they once started, I hardly came along and put them to rout before entering her tupek, however they came at me again and I getting tired of it picked up a basin and a stone and let them have it to good effort. My hands [smelled] of seal for a day after.

The tupeks and natives are the same as the other place and were wearing their sealskins. They appear to have two changes of clothes, one sort of for Sunday and the other for working, the difference being that one had the hair turned out while the other has it turned in. This is to be noted also in regard to the tupeks. The back portion used for sleeping has hair on it, while the front portion of it has no hair on it at all. The skin [without] hair is sort of transparent and lets in the light while the skin with the hair does not let the light penetrate, and when a curtain is dropped between the portions of the tupek they can sleep in darkness.

We returned to the ship for dinner where unloading had already commenced and after dinner came back on shore to do some surveying.

I helped Mr. Brown all day measuring out a base and working in the high water mark also the buildings, later climbing the hill and taking several photographs and built a cairn on the site.

The unloading progressed all day and also the police hut. The Eskimos assisted in the unloading and piling of lumber while the police directed them and assisted the carpenters lay the sills.

I gave two dolls to some Eskimo kids and you should have seen the fun. They had apparently never seen one before and were certainly tickled to death and kept comparing them all the way down the hill, which they had climbed to look at us. They however do not appear to be nearly as curious as white kids at home and went about throwing stones without bothering us.

About supper time the ship's whistle blew and everybody had to come aboard as we had to move the ship account of a big icepan moving in the inlet and we are afraid of being swept ashore. The "Bayeskimo" is moored alongside of us and we are at present taking some water from her. About 12.00 midnight I understand we will again try and get in near the post and will be ready to unload the rest of our stuff if the ice does not interfere with us.

I was so occupied all day that I was unable to get either a picture or any little souvenirs or furs from the Eskimos which several of the fellows did and I am afraid that they will be all cleaned out when I get a chance if I do get one which is altogether improbable.

#### **Thursday, September 7th, 1922.**

... I went ashore this morning with Sergeant Joy to help him out with his reports as we expect to pull out for good some time this evening as ice conditions are none too promising. I took dictation and work from him all morning and paddled myself out to the ship in the canoe for dinner finished all the work he had given me and paddled back to shore with my reports for him to sign. When he was through signing them I wandered around the village taking in the sights and visiting a couple of tupeks but finding that they all smelled something awful and that none of the natives had anything to trade, they having been almost entirely cleaned out the previous day by Valiquette ... and a few of the sailors I took in the scenery from the exterior.

I managed to get a picture of the [Hudson's] Bay buildings, some of the Eskimo women, some Eskimo children and a scene of the village. I had only the one roll with me or I would have been able to get a picture of an Eskimo paddling his kayak. There is only one

serviceable kayak at this station, the rest of them not having any sealskin covering, the frames being the only part left, these being made out of old barrel hoops and pieces of wood tied together with thongs. I presume before the Eskimos could procure wood they used bones. I got one Eskimo woman to make me a pair of sealskin boots which will come in very handy any time at home for camping or going sliding as they are water proof. I did not however get the deerskin stockings that should go inside them, but can get a pair made up at home which will be of a more [fragrant] odor.

One thing to be noted is the shortage of women here and the fact that one Eskimo is married here to a ten year old girl. The missionaries have been at work among some of them, it is quite apparent, and from my point of view I think they are doing more harm than good. I will not give my reasons here. The cook and Valiquette each got a dog, however, Valiquette had a fight with the Eskimo or rather fell out with him, who owned the dog and he had to give him back again. The cook still has his. These people would rather have clothes of any description than anything else and everybody has got rid of a lot of old clothes on this trip.

The Captain got all the narwhal horns available and gave one to Mr. Craig, Brown, the Doctor, [and] Maj. Logan, and the bearskin, the one we shot, to the Doctor so I guess the rest of us will be out of luck once more. It is to be noted also that the Eskimos are appearing wearing a lot of the [ship's] clothes that should have been issued to the sailors, but never were, I wonder why?

Moving pictures were taken of an Eskimo in his kayak, and a little Eskimo girl juggling three stones in one and two hands, and an old Eskimo woman chewing and softening some skin prior to sewing.

All the sills uprights and rafters for the living hut for the police are now up and they can now finish the hut themselves.

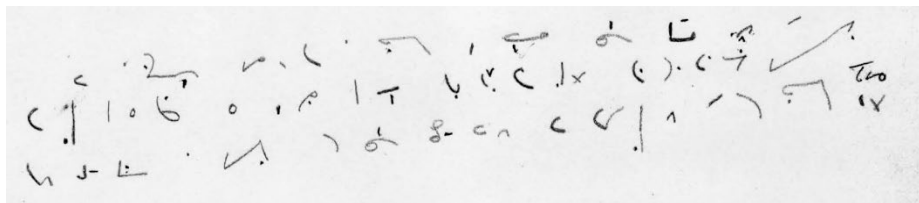
About 6.00 p.m. the boats all left for the ship, leaving the Sergeant and myself the only two remaining on shore. We started out for the ship through the drifting ice which was coming down pretty fast with the tide and dodging this made our way out to the ship in the canoe. The ship was moving ahead and we had a merry chase to catch her through the ice, which however, we managed to do and we got up the side while she was still moving hauled the canoe up after us just in time to miss being swept away by a huge piece of ice which at that time just came by the side of the ship. The rest of the boats were towed astern until opportunity offered to take them and their crews in board.

The Eskimo women seem to be very faithful and will work their heads off for a white man, making him boots and etc. I felt awfully sorry for one old woman in particular that Valiquette was trying to [exploit], she was so poor and lived in a tupek hardly big



enough to turn around in, the smallest one in the village by far. She didn't seem to have anything to call her own except a husband and the tupek.

The land in this vicinity is much more flat and low [than] that near the coast and appears to become more flat the farther inland you go.



I divided up all my extra toilet articles amongst the police [who] are staying here as I will be back in civilization this winter and will not need them. We said goodbye to Friel, MacGregor, McInnes, the Sergeant and [Hudson's] Bay men also the Eskimos who were staying behind about 9.00 p.m. and hoisted anchor making for Ponds Inlet to let off the remainder of the natives. We had to go through considerable drift ice and got stuck before very long, and had to wait for the ice to open up more to let us through. We blew the whistle when pulling out which started the dogs howling then no doubt the women shouting. I was rather sorry to leave this place as I found the natives so sociable and they would do anything for you and they are all honest.

There are not so many natives in this village as the one further down the inlet and I do not think as many young ones but I presume a lot of the [young] men and women from both villages are away inland hunting.

The trading companies certainly keep a sharp lookout on them and do not let them get away with very many skins. I do not think more than two fox skins were procured by the whole ship and not one bearskin that was of any use at all.

### **September 8, 1922.**

This morning we came opposite the other Eskimo village and let the remainder of the Eskimos off in their whale boat to go ashore and fetch the bearskin that we had given them to fix up. They returned to the ship with bagfuls of little things for trading, the most of which the captain grabbed off. Tom the chief gave me a present, a pair of slippers made by his wife, and wants me to bring him if I come up next year a couple of little crosses, he being a Christian. Mr. Askue came off also but I did not get a chance to talk to him.

I took a picture of the village from the ship but I do not think it will turn out much and anyway none of the people were stirring at the time.

I also took a picture of Tom and of the whale boat departing from the ship. Farewells were said and we once more turned our head towards the sea.

We had a hard time to get out of the inlet through the ice which had packed rather tightly, and I thought for awhile we would either get frozen in or have to wait until it opened up more, but we managed to get through finally and were well on our way out of the inlet when we turned in at night.

You can see a description of the way we got out of the ice in the daily journal. I have got so tired of writing about ice all the time that I do not think to mention it.

The [cook's] dog is rather lonesome today and is howling up in the forecandle all by himself. He is only a little pup and was taken away from a whole lot of little fellows like himself, but will be a whole lot better off in the long run if he minds himself, as the Eskimos do not believe in feeding their dogs, letting them go for eight days or so without a morsel to eat.

I had thought of bringing a dog with me but knowing that they represented a whole lot to the Eskimos I refrained from doing so, also on account of Irwin at home as there is no telling what the dog might turn out like when he grew up.

### **September 9, 1922.**

Land was almost out of sight this morning when we got up and before the day was out it had faded away into the distance. There is very little ice anywhere to be seen which is something unusual and quite a change from the ordinary.

The ship is rolling very badly and I do not feel any too good although I am not sick at my stomach. I do not think I was ever meant to be a sailor. However, the Doctor, Brown and Logan also Valiquette are in the same boat so I guess I should worry.

I stayed below and slept nearly all day as I did not feel like doing any work or going on deck, although sick and all I had a few games of rummy with the steward and trimmed him to a frazzle.

It is to be noted that up to date the Inspector (prior to leaving the ship at Ellesmere), the Commander of the Expedition, and the Doctor, since leaving Ellesmere, have cleaned up four one gallon jars of Brandy and at least of five cases of scotch as well as a quantity of wine. No wonder the Inspector and the Commander never appeared to be as sick as the general body and always seemed to be able to hum a little ditty down the hallway at midnight. However the Doctor did not get any benefit from this on the way up, he not becoming an active member until the Inspector was cut [out] of the running. Quite a few cases were carried down to Mr. Craig's room today, not doubt to meet a like fate.

I hear the Captain has got a lot of the [ship's] wine in his room as well as other booze that he intends to take home. I can now see why the rum was so watery when dished out to the crew and others. It sure is a great game alright, I only wish I could see my way clear to get in on it.

The steward managed it better than I did when the Inspector was aboard, but since his departure he has had to go dry.

Everybody is gradually getting rid of the fancy little moustaches, goutees and etc that they have cultivated up to date, but I will leave my little narcissis on to get their goat at home and especially Jim.

### **September 10, [1922].**

Nothing of note except that I trimmed the steward in our rubber game of rummy by 25 points. We will now start on another series of games and see who will come out on the top of the heap this time.

Valiquette has so much old Eskimo clothing in our room [that] it almost smells like an Eskimo tupek and when I tell him I am going to hang three walnuts over the door he gets very sore. He sure is a poor simp and everybody has certainly got his number on the ship.

Saw several large flocks of "hell divers" (auks) today, mostly flying I presume south. There are very few of them swimming around the ship like when we first came up north, they all appear to be on the wing.

Ship rolling quite a bit, but I feel much better and caught up my work. I sent a code message to be relayed by wireless from the *Bayeskimo* to the *Nascopi* and thence to some wireless station enroute to Ottawa.

We had some snow tonight and saw one iceberg, the only ice that we have seen all day. This is something unusual but I guess we will run into lots more before we finally get back to Quebec.

I have great fun kidding the second steward who is a little frenchman. I kid him about giving me a second piece of pie and he gets mad and brings me a whole half pie, which I sometimes manage to eat and that makes him all the sorer. I also kid the old cook, who is an old devil, and he gets his meat ax out after me. However I do not feel right and have not for some time, due no doubt to the inactivity, lack of exercise and the roll of the ship.

**C.G.S. Arctic, Monday September 11, 1922.**

There is not very much doing today and I have stayed down below most of the time except taking a walk for exercise now and again.

There is some ice in sight in the form of icebergs but it is very little compared with what we have been used to seeing.

We expect to call at Disko on our way down the Greenland coast, I think for water, but I doubt if any of us will be able to stretch our feet on the shore, however we will see.

I am heartily fed up with the inactivity on board and would certainly not like to become a sailor as I once thought I would. It would be nice to travel and see the different places but it is too long a stretch in between stops.

The crew and officers on the ship are doing a watch of four hours on and four hours off, which I can readily believe is no cinch.

Valiquette is getting unbearable and hardly any person will not talk to him of their own accord. I do not like him and can hardly speak to him civilly so purposely stay out of his road.

Well I guess this will be all for today as there is really nothing to talk about. The ship is still rolling a little but I am getting more used to it.

**[Tuesday], September 12, 1922.**

Today was rather a nice day and the sea calm all day but in the evening a swell got up and the ship started to roll a bit.

I assisted the crew all morning in throwing the stones for ballast down the hold to get some exercise and an appetite for dinner.

In the afternoon and evening I battled hard and long with the steward at rummy, beating him. To date I have licked him three games out of four and, considering he has been playing it for a good many years, I did not do too badly.

Valiquette got nasty over the typewriter and I told him where he got off at.

Blair got my message away O.K. and I attach a copy of it hereto.

Mountains of Disko and Greenland in sight once more, see daily journal. I do not think we will run into any more pack ice, worse luck for we might have got a couple more polar bears.

Everybody is now anxious for the trip to terminate as quickly as possible, as we nearly all did not mind the thought of wintering north, rather liking it, but not many of us like to be sailing on the briney with nothing definite in sight.

Mostly everybody that managed to get a narwhal horn is busy cleaning it up and the chief engineer's room is a regular workshop nearly every day.

### **Wednesday, September 13, 1922.**

I was wakened for breakfast this morning and asked if I wanted to go ashore, and you may be sure I was there with bells on. I hurriedly gobbled down a plate of porridge and went on deck to find the ship right in near land just outside of a sort of harbour and some Eskimos on deck, they having come over, one in a kayak and some others in a whale boat. I say Eskimos but I took them for white men as the majority of them were fairer than I was, some having blonde hair and blue eyes, but they were Eskimos and could not talk any other language not even Danish, but I presume that they were mostly of white blood. Of course there were some of the real Eskimos too, they being brown with brown slanting eyes and at that you could trace some white blood in some of them.

The launch got ready and a bunch of us climbed in consisting of all the government party except Reilly and Blair, Mr. Lemieux, Vignault, the Engineer of the Launch, and Peter in case we wanted an interpreter. We left the ship which started to move further out to sea when he has cast off, and we then made straight for a little harbour just around a projecting point almost straight ahead of us I think called God Havn. I managed to get a picture of the ship against an iceberg and think it should show up good. After quite a little run we entered this little bay which was not very wide, being at the widest point I should say one-half mile. Not long after entering it we observed some houses some way up and it was not any time before we were landing at a nice little wharf made of wood projecting into the bay. On the way up near the village we saw the remains of an old wooden ship on the right hand shore and I think it is the *Fox* or *Faught* and has been there for about 9 years.<sup>25</sup> No doubt the Eskimos have razed it to the waters edge for the lumber. The Governor of the place, Chief Scientist and his son, Assistant Scientist of some scientific post the Danes have here, met us on the wharf and what was our surprise to find that these men could talk perfect English with a slight accent. After getting permission to land we did so, setting up the movie camera and

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<sup>25</sup> *Editors' note:* Lady Franklin sold the wooden steam yacht *Fox*, built in 1855, to Danish owners after Captain McClintock completed their search mission for her husband in 1859. The ship worked the west coast of Greenland as a supply vessel for 55 years before it was abandoned and partially sank in Godhavn harbour in 1912. Aberdeen Built Ships, "Fox," <http://www.aberdeenships.com/single.asp?index=100119>.

taking a picture of the natives. Then commenced a long hunt for pictures which lasted nearly an hour.

The town itself is on the right and I presume south side of the harbour and is very pretty. It consists of wooden houses of no mean size and neat appearance, being nicely painted, and other tupeks made of wood with cut sods piled up on the outside (grass sods), a church with a graveyard, a school house, and several other wooden buildings. It is quite a fair sized place and is scattered out well over the rocks with a built up pathway running between the houses and is really nicely gotten up. Across the bay, which is only a couple of hundred feet wide at this point is some sort of whaling building I should think.

What struck us all by surprise was to see pretty blonds and brunettes and some auburn coloured girls strutting around in native attire and they could only speak Eskimo. They had a skin a great deal fairer than my own with rosy cheeks and lovely blue and hazel coloured eyes, really about a good six or seven of them you would swear had not a speck of Eskimo blood in them and if dressed up properly would certainly pass anywhere as pure white girls. Of course there were others of darker shades varying somewhat. Some being quite dark with brown eyes and others fairer showing that they no doubt had some white blood in them. These too were by no means ugly, but in fact some of them were pretty, having nice features. They dressed gorgeously I should say having long boots made of skin nicely finished and with a stripe up the front made of different coloured leathers sewn on in a sort of pattern, the boots coming up about one foot above the knee and were dyed some scarlet showing the girl was unmarried and some black showing she was a married lady. I did not notice any other colours of boots although one chap claims they also had green boots to denote that the mistress was of easy morals!!!!!! ????????.. Above the boots they had another sort of little affair nicely decorated with different coloured skin although only a few of them wore this garment. Then came a little pair of tightly fitting pants made of sealskin fringed around the bottoms and waist with red or black leather whichever the case was. The bottoms of the pants fitted inside the boots about half way down the leg and the front of them was worked with the different coloured leathers (like wampum) sewed in a sort of wide stripe up each leg and backed by a corresponding strip of red or black dyed leather about four or five inches wide. Next came a waist made of on the outside with gingham or some other cloth of European manufacture being in style like a pull over sweater, only more fluffy and having a nicely worked neck fitting up closely under the chin. Under this was a sort of cotton [camisole] which just sat on the shoulders like a small cape inside of the waist and it had a neck in most cases fringed with lace that just showed above the neck of the waist. A knitted hat, somewhat like the girls use in our country for skating and snowshoeing and made of different colours, completed their costume, they in most cases wearing their hair up under it. Really they looked nicely and I would not mind staying in place for some time.

I forgot to mention that inside the boots were a pair of stockings made out of some soft leather and these stockings were generally topped with fur or beadedwork which projected over the top of the boots fitting just over the top of the pants and would be about 6 inches wide. Also widows had a special distinguishing mark which consisted of doing their hair up in a broad band or ribbon with a projecting switch on top tied at the bottom, and looked for all the world like Maggie Jiggs.<sup>26</sup>

I had great fun taking pictures and would have tried my hand at some trading except that I had no money with me and this commodity was the only thing they would accept in exchange for their goods.

There were the old carcasses of two whales on shore and the dogs were playing amongst the remains which certainly did not look any too fascinating.

After giving the town the once over we started about 10.00 a.m. back to the ship, Mr. Craig and Mr. Neilson and Mr. [Porsild] Jnr proceeding ahead in their boat, we following in the launch which was much heavier and which we had to row on account of the engine refusing to go to work.

On the way we met several kayakers returning from the ship where they had been to trade and believe me they can travel in them. I thought these kayaks were a little smaller and much more neat than the kayaks met with up in Baffin Land and were certainly far better equipped. They would be about fifteen to eighteen feet long were not very wide and only about 6 inches out of the water being made entirely of sealskin. A big bladder was lightly secured on behind the cockpit from which a line ran to a harpoon which was fastened on in front along with a lance and rifle in a sealskin [sheath]. The harpoon line was coiled on a nice little rack in front of the cockpit made out of bone so that it would run out easily. The cockpit itself was just big enough for the paddler and the combing would only be about four inches high, however this was made up by a curtain which fitted around just under the armpits of the paddler and over the combing thereby obviating the chance of a wave swamping the kayak. The paddles themselves were very small and were edged with whale bone to keep them from chipping. One thing to be noted was that they wore reversible mitts, that is a mitt with two thumbs so that when one side would get wet they would simply turn it over to the other.

We arrived at the ship in time for dinner and to find that all the Eskimos aboard had been practically cleaned out of all tradeable articles by the crew so we were once more out of luck, however I managed to get a pair of baby coomings and a bone knife.

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<sup>26</sup> *Editors' note:* Maggie appeared in *Bringing Up Father*, an American comic strip by cartoonist George McManus that ran from 1913 to 2000. Allan Holtz, *American Newspaper Comics: An Encyclopedic Reference Guide* (Ann Arbor: University of Michigan Press, 2012).

After dinner our visitors departed and we once more resumed our course.

The men mostly wore a blue smock with a small hood at the back, the typical Danish dress with pants and coomings and generally a cap of European manufacture. The coomings were of slightly different pattern than those seen in Baffin Land.

#### **Thursday, September 14, 1922.**

The wind has been very strong all day today with the sea pretty rough, consequently the old ship has been tossing about quite considerably with the result that the fiddles or racks have appeared on the tables once more and one has to keep his soup plate poised in the air to ensure it from spilling all over his clothes. We have had several little breakages of crockery, [and] quite a number of bottles and loose articles here and there have suddenly taken a fancy to roam and one or two sauce bottles on the table not being emptied quickly enough by those hard at work stuffing themselves have strayed their contents all over the table with disastrous results to some of the said members of the stuffing party.

We carried three jibs, the squars'l, [foresail] and the [mizzen] all day up until 6.00 p.m. when one of the jibs had to be taken in and the mizzen reefed in order to make the ship steer more easily, heretofore the mizzen with the strong wind had been practically with the aid of the fairly large waves lifted the stern of the old tub out of the water allowing the propellor to race and rendering the rudder of little use.

I have not been seasick this trip but did not attempt to work at the typewriter as I would practically have to have held it on my lap which I had no desire to do.

It was quite a job putting the reef in the mizzen and all the crew and two of the waiters had to go on deck and at that it could not be performed without the aid of the steam winch so one can well imagine the force of wind that was on the sail.

I walked the deck for a couple of hours to get some exercise and barely escaped getting a dunking once or twice as a wave a little larger than the rest would come over to the side.

It is pitch dark out tonight and believe me the officers of ship sure have their work cut out to steer clear of the numerous icebergs that we encounter in these waters. We saw quite a few of them today.

#### **Friday, September 15, 1922.**

I did not sleep at all last night on account of the roll of the ship, I was not sick but I had to keep as it were keep working in my bunk and the result was I had no sleep.



About 5.00 a.m. two or three gasoline drums got loose on deck and maybe they did not make some noise rolling and bumping around until finally secured by some of the crew. I understand they had to further reduce some of the sail during the night.

Today is quite a bit darker [than] yesterday but the wind and sea have dropped a little bit, however the ship is still rolling and pitching quite a bit and I have to prop myself up with one leg to keep from tipping over while I write this. I have cleaned up my work practically [to date] today.

I took a couple pictures of the sea yesterday as a sort of experiment and moving pictures were also taken.

More sail was added today and we are clipping along at a pretty good rate, but I would just as soon be on land, as though I am not seasick if I try to hold my head still I get dizzy, the room sort of travelling all around me.

One of the little Eskimo pups is sick and his legs are paralysed but the other one is doing nicely to date and I go back and see him every day.

Mr. Reilly is doing better than he was and is now able to get around by the aid of a pair of crutches.

Everybody is anxious to get to Quebec and as far as I am concerned I wish we were there now. The sea is alright when you land at a new place about once per week or oftener but when you have to stay out of sight of land for a month at a time it is not so nice. The sails certainly make a lot of difference in the riding of the ship and whoever says a sailing ship will toss you about more than a steam ship does not know what they are talking about.

There was snow on deck when I went up this morning and it is now snowing out it being about 8.30.

### **Saturday, September 16, 1922.**

There is nothing of any consequence excepting that we have not seen only a few icebergs today rather an unusual thing seeing that we have had them constantly before our eyes for nearly two months.

The engineer says that as soon as he reaches Crane island, about thirty miles out from Quebec down the St. Lawrence River, where the salt water meets the fresh, he is going to put a line around himself throw himself over and let himself soak for two hours in the river. I told him I would take his picture before and after and that he would likely block the river up so that no boats could get out or in. He claims he has not changed his clothes or taken a bath since leaving Quebec nearly three months ago and that if he

stayed away five years he would not shave, cut his hair, wash or take a bath. He says this quite seriously too. He is a funny fellow but a pretty good head.

The nights are now getting longer and are so dark that the sailors put old bags over the skylights and portholes to enable them to see better. As a result we go to bed a bit earlier than we used to.

### **Sunday, September 17, 1922.**

It is a rather nice day out today, but we can see snow [squalls] ahead of us and over to starboard, the mate claiming they are Hudson Bay squalls. The ship is still rolling and has been for some time but I have now got used to it so do not mind it.

We had lobster salad, two kinds of cold meat, [coleslaw], buns, cookies, nuts and etc for supper tonight. We eat pretty fair on the ship, with the exception of getting salt pork and salt horse a little too often.

I went on deck at 10.55 p.m. and there was a little sprinkle of hail on the deck so I presume we had a little hail storm although I did not notice it, having been below.

I am still battling hard and fast with the steward at rummy the first and second engineers have caught the fever and are at it every night in their room.

Mr. Reilly is doing nicely, but I have never visited him as I do not think he would be at all interested with my company. He is quite an old man and the older members of the party go up and talk with him. I do not know if he thinks I should go and see him or if he is glad that I do not, but being in a [quandary] I am leaving it go at that.

### **Monday, September 18, 1922.**

Sparks claims that he can now hear Belle Isle working plainly and we are going to prepare a message to Ottawa to ask if we are allowed to tell the papers anything when we return.

There was a pretty good swell on nearly all day today, with a fair breeze, enough to keep all sails set. The boat rolled pretty fairly but we are all used to it.

There is no ice in sight and nothing but the sea and a few sea-gulls which we have not lost sight of as yet on the entire trip.

There was a pretty sunset tonight. It was not so beautiful as a sunset in the ice with the sea strewn with pieces of ice and bergs, but all the same was quite beautiful as the sun went right down as it were into the water, a big red ball of fire and for nearly three quarters of an hour lit up the horizon in all sorts of colours, tinging the clouds every hue which seemed to alter and move all the time. One thing to be noted here is that we have

not nearly so long a [twilight] as we had on going north, north of here among the pack ice off Greenland when at that time the sun would hover just below the horizon all night and latterly stating just above it nearly all night and commencing to rise again without at all setting.

I note somebody has hung his pair of komings or muk-luks out on deck. I presume to give them the air and see if he cannot kill the odour before returning to civilization.

### **C G S Arctic, Tuesday, September 19, 1922.**

As both typewriters are out of commission now (Sept 22<sup>nd</sup>) and there is only a little Cowna [*sic*] left I will have to use pen and ink.

Quite a gale of wind blew up this a.m., it being I would say about 35 to 45 mile per hour gale, and in consequence the sea rapidly got up making the old ship toss about so that it was only with difficulty that one could stand on deck without holding on to something. This, however, did not last much past noon when it died down somewhat, not before, however, it was necessary to reef all sails. The sea did not go down all day and towards evening another very strong breeze sprang up and therefore the old boat continued her fierce tossing and is still at it now it being midnight.

Valiquette did not eat any breakfast or dinner and the Doctor had to leave the table in the middle of his dinner and supper, excusing himself politely but all the sympathy he received was a general laugh. Several other members of the party I noticed only ate dessert so the Doc. was not the only one feeling uncertain. I have not felt as well as usual myself but have managed to eat although I did not attempt to work.

I had a walk on deck this afternoon and with the ship plunging and rolling I quite often felt as though I was going to take a flight into the air or for a dive in the sea. Several large waves came aboard and some of the crew up forward barely escaped a bad dunking.

We saw a few icebergs today and quite a few flocks of sea gulls so I presume we cannot be very far from some land, likely part of the coast of Labrador.<sup>27</sup>

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<sup>27</sup> *Editors' note:* A list of timing for ships' bells has been omitted. With respect to watches, Grant notes: "The watches are generally every four hours, except that from 4 to 6 and from 6 to 8 are what are called the day watch, and these are only two hour watches in order to reverse watch done by the crew so they will not be on the same watch all the time. They also trim sails and etc during these watches."

### **Wednesday, September 20, 1922**

Rather dirty out all day with a slight rain and the wind dead ahead which only made the ship roll and pitch worse on account of the wind filling the sails first on one side and then on the other.

I made up a report for Major Logan on aviation in the north and typed all day.

The Doc and Valiquette are both in bed all day today suffering from the throes of seasickness. Valiquette will not eat at all but the Doc makes an attempt to put something down. Old Neptune also has Mr Brown by the throat and they are having a tussle all day. On the evening the wind gets up and the sea with it, that is the sea gets heavier, and at midnight the ship is rolling around fiercely in the heavy sea and despite the care exercised many articles are falling here and there all over the floor, however, the roll is not as bad as that of a steamship for it is all to one side and back to the centre, the sails steadying her somewhat. Steamships when they first came out used to carry sails to steady them in a sea but I understand that practice has been abandoned. We cannot walk about without holding on to something or we would immediately find ourselves in a heap in one corner.

I was just up on deck ... and it is certainly a wild scene out and rather dirty, as the rain is beating on board steadily, the wind howling in the rigging and spray, and occasional seas coming over the side. The huge seas are striking broadside on the starboard side and we rise on one huge sea one second to find ourselves deep in the trough between two huge ones the next second with our port rail at times almost under water, we of course, shipping seas now and then. The lead I understand was cast but brings up nothing.

### **Friday, September 22, 1922**

It rolled so hard last night that it rolled the chef out of his bed and he came into the mess room forward to sleep on the settee, but he had no sooner settled himself there than the whole cushion on the settee rolled off, as it had with me, and he had to go back to his room and sleep on the floor. I tried the settee again myself but about three in the morning finding that I could not get to sleep, as it was hard work to keep on the couch, I also had to resort to the floor underneath the table until morning. Several others I believe had to do likewise and nearly everyone got little sleep in having to work hard to keep in bed. The photograph of the first mate's fiancé was tossed from the table alongside of his berth right into his face, and you should hear him describe it in his broken English.

We have heard by wireless quite frequently all about the trouble with Turkey, and that there is a chance of there being another war.<sup>28</sup>

Today was rather nice, the sun shining brightly with a fairly strong breeze and a very heavy swell which rolled the ship around as usual. Towards evening the wind got a little stronger and it commenced to rain.

We are now 12.00 p.m. in the [straits] of Belle Isle and it is as dark as pitch out with a fine sleet or rain. We have taken in all sail but the foresail and two jibs. The ship is much [steadier] in the straits but if the wind keeps up as soon as we reach the gulf we will be once more tossed about.

Valiquette got up tonight after supper for the first time in three days, so after all we will not have the pleasure of carrying our "brave movie man" ashore. We expect to see him hit the bunk again as soon as it gets rough once more, which it very likely will. The doctor feels much better today and did pretty well at meals. Mr Brown has been absent from meals as usual and he got stranded up in the chart room with Mr Reilly today on account of the smell below. He started to come down to dinner but as soon as he got one whiff of the air below he immediately retraced his steps and is lying up on the spare couch in the chart room. It was comical to see him a little later on come cautiously down the companion way with a big red bandana in his hand and, immediately [when] he got to the bottom of the stairs, clap this over his nose and mouth and made a mad rush for his room, I presume to get something and once more retire to his retreat in the chart room.

I found my typewriter and all my stationery and books under the dining room table this morning when I got up despite the fact that I had firmly lashed them last night. Mr. Brown also has all his books spilled out into the hallway from his room and there were papers cards and articles of every description all over the ship this morning.

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### **Saturday, September 23, 1922**

The rain cleared up last night and we found on rising that we were sailing up the Strait of Belle Isle.

We passed HMS *Raleigh* stranded on the rocks off Point Amour on the north shore of the strait and on our starboard side. There was another warship anchored in the bay

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<sup>28</sup> *Editors' note:* A reference to the Chanak crisis, a war scare in September 1922 between the United Kingdom and the Government of the Grand National Assembly in Turkey. On the Canadian response, see C.P. Stacey, *Canada and the Age of Conflict: Volume 2: 1921-1948, The Mackenzie King Era* (Toronto: University of Toronto Press, 1981).

nearby, presumably HMS *Constance*, and the *Calcutta* had just left ahead of us for Quebec.

It is nice and calm out today and everybody is up and doing and taking in the fresh air and sun shine on deck. It is certainly a rest after all the rolling about we have had lately.

The engine was stopped for repairs today and we proceeded under sail alone but made very little headway. For further information see daily journal. There was nothing of any import today except that the Captain stood treat and served out some rum. I had cramps all day and the doctor gave me some brandy and plus an issue of rum and a good drink of scotch in the evening. I would not own the King as my uncle. In the evening we played some music and the steward, cook and one of the waiters and myself played stud poker for nuts; it proving to be one of the best evenings spent on board.

**[Sunday], September 24, 1922.**

The wind and sea got up last night and we wakened up to find ourselves in the gulf with a strong wind blowing about forty miles per hour and a heavy sea, both wind and sea increasing all the time. Everything is on the move down below, and every now and again there is a crash as some article falls down with the roll, this no doubt being made worse on account of our coming over to the starboard tack just after dinner and as we were nearly always in any sea on the port tack. The says that his store room in the forecabin is all one level, that is, all the boxes and etc are on the floor instead of being [piled] up.

A few minutes after tacking the ship at noon, the gaff of the foresail broke off short near the end away from the mast and the sail had to be lowered, the gaff taken off the mast and the sail off both the boom and the gaff as well as the mast and this in a forty or fifty mile gale [with] a very heavy sea was a very difficult and dangerous task. All hands were called on deck and most of the government party volunteered to assist. It is useless to try to describe each operation as it took place as that would take hours, but after two or three hours heavy and dangerous work, by means of blocks and pulleys, ropes and good brawn and muscle, the job was completed and a trysail bent on in place of the foresail which was nearly as long an operation as taking the foresail and gaff off. When it is considered that the gaff is over one foot in diameter and about thirty feet long and this was broken right clean in twain it will give a person an idea of the strength of the wind and sea.

During the operations I assisted in whatever manner I could, even to getting up on the boom, which is about fifteen or twenty feet from the deck, and clinging on with my knees and feet [and] did the best I could. Seas and spray were coming on board all the time, and before the task was finished I and quite a few others were wet right through and through. I got several pictures of the operations and hope they will turn out good.

The captain and I had one very exciting little episode when a huge block about twice the size of our heads got loose and started swinging dangerously around the deck suspended from aloft. The captain grabbed it and tried to hang on but it was carrying him off his feet and I seeing that he was liable to be carried overboard grabbed the captain and then ensued a struggle between the two of us and the block. We were eventually both swung off our feet after having been led a merry dance around the deck, and had the captain not let go we would both have landed in the sea, however, we landed in a heap on top of the foresail which was partly off the mast and up against the gasoline drums lashed to the rail with [the] captain on top. Neither of us were hurt and the block having swung out to starboard came back to the bridge and was immediately secured by the bos'n and two sailors.

The mainsail and mizzen were then both reefed and we are now forging slowly ahead in a very heavy sea.

Tonight the captain issued rum, Mr. Craig and I assisting him and [it] surely was a scream to see everyone trying to keep their feet, bending the opposite way to that the ship rolled. Mr Craig nearly spilled the whole pot full of hot rum over me when the ship rolled violently and he came speeding across the room into my arms. After this little comedy I went below and, lo and behold, the steward had swung himself a hammock in the forward mess room. He tried to get into it and the old cook, who was pretty well lit, attempted to beat him to it with the result that he (the cook) got in one side and with the roll of the ship promptly fell out of the other on to the settee about four or five feet below, breaking one of his teeth. It surely was funny.

The ship rolled so badly that I had to once more take to the floor underneath the table to sleep, as did others in their rooms. At supper the first mate who never touches booze had taken some rum and feeling rather funny said he would take Valiquette out of bed, where he had gone right after arising this morning on finding the ship rolling and had stayed there all day, and make him eat some supper. I said to him I would stump him to do it and, lo and behold, as soon as he was through supper he made a dive for Valiquette's bunk and pulled him, mattress and all, out on the floor and brought him kicking to the table. He (the mate) was giggling all the time in his funny little way and he stayed over him and made him eat and on leaving told him he would come back for him and carry him to bed.

Valiquette was scared stiff and kept on eating and stayed up until nearly bed time. Everyone had a good laugh and I think were glad to see him pulled out.

We passed several steamers today but most of them were so far away we could not identify them.

**Monday, September 25, 1922.**

It is rather dirty out today, raining and the sun shining at intervals. The wind is from the northwest and fairly strong with a medium sea running on the starboard bow, thus we are not making very good time. (Daily journal is wrong when it says we have made considerable mileage.)

The carpenter is splicing the gaff today and has it nearly finished so I presume there will be another job to put it up and take the trysail down very likely tomorrow.

The ship is not rolling so much and in consequence, the dead have risen once more, Valiquette is out of bed. The doctor, Brown and Reilly are also in prominence today.

We passed a steamer on the horizon to starboard about 11.00 a.m. only her funnels and masts being visible.

I steer the ship all afternoon in a 60 mph wind, with sails set, while the captain enlists the crew in putting the gaff + sail back in place. I never sailed anything before in my life.

**Tuesday, September 26, 1922.**

This morning the wind is blowing from the northwest and is quite strong with a heavy sea. At noon the wind had increased to about fifty-four miles per hour and is still getting stronger, the sea also is much heavier. Right after dinner the watch on deck commenced to put the spliced gaff in place by means of blocks and ropes etc., taking down the trysail in preparation to bending on the foresail once more. The captain sent for me and asked me to take the wheel which I did and I steered the ship without aid in a gale blowing easily most of the time sixty miles per hour [with] a corresponding sea all afternoon while the captain two mates and crew bent on the foresail, which was completed at 6.00 p.m. and rum was served out. Both watches were on deck from 4.00 p.m. to 6.00 pm and got pretty wet with the spray and seas. I found it very hard work to keep the ship in the wind but managed it pretty well, only letting one or two small seas over the bow and these were mostly spray.

The whole afternoon's work was extremely dangerous and if it was not for the fact that all the men are pretty good sailors there might have been some broken limbs.

We sighted one steamer on the horizon today but could not identify her.

We have tacked ship two or three times and are making very little headway in the strong head wind and sea which I think is the strongest we have had so far. During [my spell] at the wheel we passed through a hail storm, and the hail came down quite thickly and it was very dark for a while. I several times felt rather queer at the [wheel] all alone but stuck it out and later gained some confidence.



We have had the usual crashes of falling articles below and the fiddles are still on the table having been on for some considerable time now. I think the proper name is racks.

This evening it is dark out and the wind does not seem to be abating at all, several seas have come over the side and [they] jar the ship considerably.

Valiquette is in bed most of the time as usual when there is a roll on.

There are quite a number of little yellow birds on board who have no doubt been blown from the land which is about twenty-five miles off but invisible as yet and are seeking shelter. One of them died and the rest seem to either have hidden away or have flown off again when they got rested.

I wish we would make a little progress as it is very monotonous on the ship with nothing to do, all day to do it in, and not getting any place. We are getting very short of water.

### **Wednesday, September 27, 1922.**

Today is rather a nice day with the sun shining and quite a strong breeze blowing.

We sighted a big passenger liner today about 11.00 a.m. on the starboard side, I think it was the *Empress of Scotland* or *Britain* or a similar ship, making [for] Quebec and she speedily left us behind.

The wind swung around to almost dead ahead and we have been tacking ship every three or four hours working our way up between Anticosti and the north shore.

Mr. Craig came out in his [pajamas] for midnight lunch and there was quite a jam in the pantry for a little while.

This is written on Major Logan's portable underwood which is a very nice little machine and away ahead of the Corona.

Bad snow storm + had to anchor ship to ice overnight.

The Captain sent for me to take the helm each time when tacking the ship.

### **Thursday, September 28, 1922.**

Today broke with the sun shining brightly and a fairly strong head wind so that it was necessary for us to continue tacking ship every now and again. Both Anticosti and the north shore are in sight today. We are making on an average of about fifteen miles on each tack or at least one tack in each direction.

About 3.30 in the afternoon the captain sent the mate down for me and I handled the helm while tacking the ship, liberating the captain to go out and direct trimming the sails and etc. [The] ship still has quite a roll and Valiquette is still a little the worse for it.

At 5.00 p.m. I again took the wheel for tacking ship.

Light houses in sight this evening on the north shore and it is nice and warm out, which is something out of the general run of things so far and rather nice by way of a change.

### **Friday, September 29, 1922.**

Wakened up this morning to find ourselves out of sight of land, but shortly after dinner land came in sight on the horizon like a mist and before dark was plainly discernible.

The captain says he was within one-quarter of a mile of land last night in a heavy head sea and called for an engine to make his way off it, but the engine was not available and he had a hard time with the sails alone to hold his own for some time.

This evening is rather misty out but nice and warm, and the sea is very calm with only a slight swell running. There has been a gently head wind all day but not hardly enough to fill the sails, which were up nevertheless all day.

Quite a few light houses in sight all day and the light was plainly discernible at night as it flashed on and off.

Blair has been reporting by wireless to the various stations as we proceed up the river and gulf.

### **Saturday, September 30, 1922.**

Today broke nice and calm with the sun shining and a fair breeze, the first we have had for quite some [considerable time] and we made good time across the gulf.

Mr. Craig, Major Logan, Mr. Brown, the doctor, Valiquette and myself all got dressed up in [sailors'] uniforms and had our pictures taken, also movies and we had quite a bit of fun.

The pilot boarded us about half past three in the afternoon just off Father Point and he brought some Quebec and Montreal papers with him which were eagerly grabbed by everyone. It was foggy out and the fog horn on shore at Father Point was sounding its deep sonorous blasts or tones across the water at regular intervals and it certainly is a far carrying horn and sounds somewhat like a pipe organ with a croak on the end of it. We are creeping along up the river and hope to reach Quebec some time next Monday.

I broke my camera on the very last picture I had left, worse luck, and yet I ought to be thankful I did not do it sooner.

Everybody is commencing to pack up and I am getting the books, records and trade goods checked over and ready for packing.

Had a game of stud poker in the engineer's room with the steward tonight.

We were forced to anchor after midnight on account of the fast tide as the ship is too slow to make any headway in it.

Actually for a time, while the engine was going full out, the ship was going backward with the tide, which we could tell by watching the shore.



W.H. Grant with Pangee in front of tupek at Craig Harbour, 1922

## 4

### Herbert Patrick Lee, “Policing the Top of the World”

Excerpts from *Policing the Top of the World* (London: John Lane the Bodley Head Ltd., 1928), 1-36.



HOW does it feel to be living on top of the world—literally clinging to the slopes of the globe as they sweep upwards towards the Pole? How does it feel to live in the world’s most isolated settlement, one of half a dozen human beings in a million square miles of wilderness, and one of the three white men constituting the most northern post of the Royal Canadian Mounted Police? Little did I dream that winter’s day in 1920, when I stood with upraised hand before the veteran superintendent in the barracks at Winnipeg, that before many months had elapsed I should be one of those men, charged with the duty of “policing the top of the world,” and stationed at Craig Harbour, Ellesmere Land, less than eight hundred miles from the North Pole.

The Force, changed in name from the Royal North-West Mounted Police to the Royal Canadian Mounted Police when given the task of enforcing Federal law throughout the entire Dominion of Canada in 1919, drew many of us after the war who were too restless to settle down to the humdrum civilian life of offices and stores. But even in the Mounted Police it seemed that with the passing of the old days in the West there was little chance of getting the taste of adventure we hoped to find in the outfit which, in its day, had probably seen more of it than any other body of men in the world.

It certainly felt and *looked* fine to swagger about in the brilliant uniform of civilization; the scarlet tunic, the polished riding boots, the beautifully-cut riding breeches with their two-inch yellow stripe, the jingling spurs and broad-brimmed stetson hat. And it was rather thrilling to take part in riding exhibitions and similar stunts for the benefit of an admiring public, and still more exhilarating to thunder up Parliament Hill at Ottawa, mounted on a perfectly appointed chestnut mare as escort to Lord Byng of Vimy, Governor-General of Canada. But it was not the real thing for which the majority of us had joined the Force; and, when the opportunity came for service of a different kind, we welcomed it with open arms.

When the Canadian Government decided to enforce its jurisdiction over the vast lands lying to the north of the Arctic Circle, it very naturally turned that duty over to the force which had already done such splendid work in the North-West Territories—the Mounted Police. The expense of establishing posts in the Polar regions would be heavy, and the posts were to be few in number, and consist of only three men each. The first expedition, charged with the task of building posts on Ellesmere Land, Baffin Land and North Devon Island, was to sail north from Quebec in July, 1922. Chances of being included among the nine men of the party were extremely remote. To command the northern party, Commissioner Cortlandt Starnes selected Inspector C. E. Wilcox, an officer of twenty years' service in the Mounted Police and a veteran of the North-West. From the host of applications to be included in the party Inspector Wilcox chose Corporals Jakeman and McInnes, and Constables Fairman, Fielder, Anstead, Must, Friel, McGregor and myself.

None of us knew exactly where we were going, or could visualize what lay before us on the new frontier of the North. We simply knew that we were going farther beyond the Arctic Circle than the Mounted Police had ever penetrated before, into a mysterious land where few men had ever trod. And we knew too, that it meant being cut off from civilization for at least two years, far from home and everything we held dear. But the chance for adventure was one we had never dreamed of and every man of that little party considered himself more than lucky.

With the exception of Herschel Island, the Mounted Police maintained no posts in the Arctic north of the Canadian mainland. And even on the mainland itself, posts were few enough north of the "Circle." Herschel Island, since moved to Aklavik, was the headquarters of the Police in the Western Arctic. On the eastern side of the great wilderness of the North-West Territories the Police maintained posts on the shores of Hudson Bay, at Port Nelson and Chesterfield Inlet. The new posts were to be built on the

great Arctic islands lying to the northward of the mainland, some of them inhabited by Eskimos; others, like Ellesmere and North Devon, great stretches of Polar country devoid of human beings.

Ellesmere Land! The name was almost unknown in Headquarters at Ottawa. No one knew anything about it, except that it stretched somewhere north-west of Greenland, and far to the north of Baffin Island. I shall never forget the feeling when I gazed at the map and ran my eye north from Labrador to Baffin Land, thence three hundred miles farther north to Ellesmere, reaching from the 76th degree of latitude to within four hundred miles of the Pole itself. So that was where we were bound for—Ellesmere Land, three hundred miles farther north than any settlement of Eskimos in Canada, and five hundred miles nearer the Pole than Point Barrow, Alaska!

The days of preparation sped by and soon we stood in the sleepy French-Canadian city of Quebec, gazing down at the sturdy, rather clumsy-looking craft, which was to carry us north to Ellesmere. Her name was the “Arctic” and she looked the part. Squat, broad of beam and of tremendous strength, she had been built originally for a South Pole expedition, and had made many journeys to the Arctic regions as a Government patrol ship. All I can remember of those last few days in Quebec is that it was unbearably hot, and that into those last few hours we tried to cram all the joys of civilization. At last the riggers had finished and the “Arctic” was ready. The stores were aboard and in addition to her own supplies for eighteen months in case she became imprisoned in the ice, the ship carried coal, lumber and provisions for the three new posts of the Mounted Police.

Captain Joseph Bernier, the veteran Canadian explorer and commander of the “Arctic,” was as happy as a boy to feel the old vessel beneath his feet again, and many a member of his former crews was among the hardy-looking gang of sailors housed forward. It was a great relief when sailing day came and we slid off down the river, looking insignificant enough beside the great ocean liners in the Quebec harbour, but feeling ten times more important. It had been terribly hot ashore, and now the “Arctic’s” decks were heaven after the blazing city streets. For the first two nights we slept on deck, as the ship slipped down the river, happy to be really on our way after the worry and excitement of the past two weeks. The uniforms of civilization were soon discarded, and we wore the oldest clothes possible, as we lay at ease on the hatchways, smoking and talking of what lay before us. Down below the cabins were rather stuffy. There were no portholes through the “Arctic’s” twenty-four inch oak sides, and her great copper-studded beams sounded the keynote of strength before comfort.

The wooded Quebec shores with their red-roofed cottages and their tall church spires looked so peaceful in the warm sunshine of those days in mid-July, and there was no sound but the steady thud of the propeller and the creak of the booms as the sails swung over in the breeze. Life was ideal and we looked forward with pleasant anticipation to the month’s cruise north to Ellesmere Land.

“You boys won’t feel like sleeping on deck in a day or two,” Captain Bernier had told us, and we soon found out that he was right.

Off Anticosti the change came. Stiff breezes sprang up and the ship rolled badly, driving all below except the watches. To add to our discomfort, water from the leaking hatchways flooded the forward cabin where we had our quarters and a terrible stench of decaying cod-fish pervaded the whole ship. The fresh food brought from Quebec was soon at an end and before we reached the Newfoundland coast real sea fare, salt pork and hash, had made its appearance on the mess table. The voyage was begun in earnest.

For two days the "Arctic" rolled and tossed, bucking head winds as she fought her way towards the Straits of Belle Isle. But the fickle weather changed again on July 24th, and we came on deck to find her close to the Quebec shore, feeling her way through the straits. It was here, soon after reaching Point Amour, that we saw our first iceberg, glistening in the sun as it floated majestically down with the current to become a menace to the shipping of the Gulf in foggy weather. From the crow's-nest we could see quite a large number of bergs, either drifting southwards or aground on the Labrador coast.

We cleared the straits the following day and for several days the weather was ideal. A week later the snow-clad peaks of Greenland showed up ahead, and from the Captain we learned that we were off Julianhaab, a Danish settlement in south Greenland[.]

For the whole day the "Arctic" sailed along the Greenland coast, affording a splendid opportunity to see the rugged grandeur of the giant glaciers pouring down from the great mantle of eternal ice, thousands of feet thick, which spread across the vast interior. Although we passed several Danish settlements, we could not see into the long fiords on the shores of which the majority of them were built.

On the 30th of July the ship crossed the "line" and grog was served with dinner to celebrate the event. We felt that now we were really in the Arctic at last, steaming still farther into the mystic land of romance and adventure north of the famous 66th parallel of latitude. So far there had been little difficulty with the ice. Bergs were numerous, ranging from pinacles, towering hundreds of feet in the air, to long masses of heavy Polar ice, blue with age. The ice masses were of every shade of blue and green, and looked surprisingly beautiful in the summer sunshine. Long before we crossed the Circle it had been light all night, and now came our first glimpse of the Midnight Sun off Upernavik. Only those who have seen the magnificent spectacle of the sun shining above the northern horizon at midnight can appreciate the splendour of the sight. The wind had dropped and the blue Arctic sea was like a millpond. There was not a sound but the steady thud of the ship's propeller and the ripple of the water as the "Arctic" thrust her iron-clad bow still farther northwards. The sun lay above the Greenland ice-cap, its broad rays slanting down the glaciers to the berg-dotted sea, painting a never-to-be-forgotten picture of gorgeous colour and wild beauty.

Next day we had our first meeting with the "pack," that great mass of field ice which every year floats down from the Polar Sea to the north Atlantic, forming the greatest danger to Arctic navigators. We saw the pack at daybreak lying to the west and apparently blocking Baffin Bay for a hundred miles and more. Progress westwards to Baffin Land seemed impossible.

The great ice mass was part of the yearly southward drift, commenced when the ice-bound bays, channels and sounds to the north of the American continent break up each summer. The main drift splits into two branches, one reaching the Pacific by way of the Behring Straits and the other drifts down to the Atlantic and by way of Jones, Smith and Lancaster Sounds into Baffin Bay. Thus each year thousand of square miles of heavy ice, of tremendous weight and thickness, choke the sea between Baffin Land and Greenland, leaving few navigable channels. It was now up to the Captain to find one of these.

The pack reaches the middle of Baffin Bay about the end of July or the beginning of August, where, driven by wind and tide, it piles up on either the Greenland coast or on the shoals of Baffin Land. Luck, as well as experience and skill, plays a great part in a successful passage of the pack. Woe to the vessel caught by a sudden change of wind bringing down millions of tons of ice to grind and crush her to pieces. Once north of the summer pack the ship is safe in what navigators call the "north water" – the more or less open sea between the pack to the south and the solid ice of the Polar Ocean.

As we were short of water, the Captain ran the ship straight for the pack and, to our surprise, anchored to a large floe. Examination of the water in the great pools on top of the ice showed it to be fresh. Pumps were rigged and in twelve hours the tanks were full.

It was while pumping on the floe that we experienced our first contact with Arctic life. A big white bear came ambling nonchalantly towards the ship, undaunted by the smoke and smell of human beings. There was no doubt that he would have come aboard if he had been permitted. A word from the Captain withdrew the pumping crews back to the ship and then, when the Arctic visitor stopped to sniff the air a short fifty yards from the vessel, he was met with a volley of shots and killed.

All night the "Arctic" lay at her ice anchors, waiting for a favourable opportunity to resume the grind northwards. The sky was beautiful and the rays of the midnight sun shining on the multi-coloured crystals of the moving pack made a scene difficult to leave. "Bear meat for breakfast" the diary reads, and good it was, too, after days of salt pork and canned food; rather tough – for our friend of yesterday was far from being a youngster – but much better eating than we had expected.

The ship got under way early and steadily fought her passage through the grinding floes. The Captain was now on deck most of the time and spent hour after hour in the crow's-nest, directing the ship through the maze of lanes which stretched for endless miles north and west. The Greenland coast, lost in the fog two days before, was now a short twenty miles away on the starboard bow. Towards evening the "Arctic" drove her way into Melville Bay, the terror of northern navigators and the graveyard of many a fine vessel. At six o'clock the ship stopped, completely hemmed in by ice and unable to move another inch. To us greenhorns the situation was far from enviable and only confidence in Captain Bernier and the stout oak walls of the "Arctic" prevented us from feeling that further progress was impossible.



The scene that night was unforgettable and one I have never seen equalled. The sun shone brilliantly all night in a cloudless sky, flashing a multitude of colours from the Greenland glaciers sweeping majestically down to ice-bound Melville Bay. Around the ship lay dozens of fantastic bergs, towering up into the blue like the spires of magnificent cathedrals. In all that picture of Polar beauty there was no sign of living thing but the frost-covered bulk of the "Arctic" sending up a thin wisp of smoke from the stack standing tall and black against the sky. It was an effort to leave the deck and go below.

The fight with the ice recommenced the following day. For hours the Captain tried lead after lead without success. Towards evening he discovered a new passage to the west and slowly, very slowly, the stout ship forged in the direction of Baffin Land, 400 miles away. All night the ship echoed to the sound of ice driving against her steel-shod prow. Time and again she would stop, as if for breath. Then she would shake herself and drive again, cracking the giant cakes as though they were biscuits. Now and again a floe would strike the ship amidships, staggering her and shaking her sturdy frame like a reed. Each time the gallant vessel renewed the attack against the pack which sought to crush her. Twelve hours of crashing, backing, butting and worming through the ice, and when we came on deck next morning she was sailing along gaily in open water. We were through!

\* \* \*

THE days following the struggle with the pack were ideally cool during the day and not too cold at night. It had snowed during the passage up the Greenland coast, but now good weather promised for several days. A "blink" to the south-west showed where the great pack had passed and a black "water" sky to the north told the Captain that there was little to fear from ice for some time.

Three days later the cry of "Baffin Land" came from the crow's-nest. Tumbling up from breakfast we saw the snow-clad mountains dead ahead about sixty miles away. Every one was excited. It was now the 15th of August and we had not set foot ashore since the 18th of July. Boats were overhauled and supplies for the post to be built at Pond's Inlet were brought on deck, so that not a single hour of the precious time should be lost when the ship reached land. Towards afternoon we clustered on the forecastle head and watched the "Arctic" forge slowly through the loose ice towards the deep cleft in the mountains which marked the entrance to the old whaler's rendezvous of Pond's Inlet.

For many years the Eskimo villages clustered about the Inlet had been the meeting-place for the whaling ships combing Baffin Bay and the unexplored waters still farther north. The natives had seen comparatively few white men, and their tribe was the most northern of all tribes living north of the American continent. Between Pond's Inlet and the Pole stretched a vast frozen wilderness devoid of a single human being.

Captain Bernier had spent several winters at Pond's Inlet while exploring for the Canadian Government with the "Arctic" and was known to practically every native in north Baffin Land. Previous to 1906 little trading had been carried on. Bernier himself sailed north in 1912 with the schooner "Minnie Maud," lured by reports of gold in the

Pond's Inlet region. The gold discoveries turned out to be a myth, but Bernier remained and built a trading post which he later sold to the Arctic Gold Exploration Company.

The latter company operated the Pond's Inlet post without opposition for several years, until in 1917 a lone trader, named Robert S. Janes, came up from Newfoundland and established a small post at Patricia River, a few miles from Pond's Inlet. Janes had been an officer on the "Arctic" during one of Bernier's cruises to the northern seas and had seen the possibilities for reaping a fortune in furs in Baffin Land. He obtained some financial backing in St. John's and chartered a schooner to carry him and his supplies to the Arctic.

Janes planned to stay two years in the north, get as many furs as he could, and then go out to civilization on the ship which would be sent up from Newfoundland for him. But his backers at home were unable to send a ship and Janes was stranded in Baffin Land with a fortune in fur but no way of getting back to civilization. After waiting another year in vain for his ship Janes tried to make his way south by sled. Before he had gone 300 miles of the long 1800 mile trip Janes was murdered; how or by whom no one knew.

In the meantime the intrepid Hudson's Bay Company pushed farther north and bought the posts of the Arctic Gold Exploration Company in Baffin Land. When the rumours of Janes's death reached Ottawa[,] the Commissioner of the Mounted Police sent Sergeant Alfred H. Joy, an Arctic veteran of fine reputation, north to investigate the fate of the murdered trader. The Hudson's Bay Company were sending a ship north to take over the newly acquired post at Pond's Inlet and Joy went north on the "Bayeskimo."

The instructions given Joy were typical of the Mounted Police. Time or distance meant nothing. All that was certain was that Robert S. Janes had been killed. His slayers must be found and punished if it took Joy five years. That had been a year before. By now the new Hudson's Bay post would be finished and perhaps Joy would meet us at Pond's Inlet; if not, there was a chance that we would learn something of the man who had sailed north twelve months before to search a million square miles of barren wilderness for the slayers of Janes.

"A boat!" came the cry of the look-out in the crow's-nest and all eyes were focused on the whale-boat working its way slowly through the ice pans in the direction of the ship. Through the glasses we could make out what appeared to be six occupants of the boat, all with long black hair reaching down to their shoulders, and looking for all the world like big shaggy dogs, toiling at the oars.

A seventh man, apparently white but clad in native dress, stood at the tiller and directed the Eskimos with shouts in the guttural native tongue. They seemed to us – fresh from the south – like inhabitants of another world. In a few minutes they were alongside, joyously answering the greeting shouted by the Captain from the bridge. The white man stood up in the stern, excitedly exchanging salutations with Bernier. He was Wilfred Caron, the Captain's nephew and a native of Quebec. He had been a trader for the Arctic Gold Exploration Company and was now bound "outside" after many years in Baffin Land.

It was our first meeting with the Eskimos and we clustered about the gangway as the natives, headed by Caron, clambered aboard, leaving one of the number to steer the whaleboat now fastened astern. Caron, of course, interested us the most. He looked the picture of health, clad in his heavy sealskins and native boots. He wore two sweaters under a fox-trimmed sealskin coat and a mackinaw cap set back jauntily on his fair curly head. His blue eyes, set in a red shining face, twinkled merrily.

A veritable barrage of French-Canadian patois passed between the Captain and his nephew, after which Bernier tossed the trader a box of cigarettes.

"Wilfred says he hasn't had a cigarette for three months," the Captain explained. "And the H.B.C. fellows finished theirs last spring."

It must have been a wonderful feeling for Caron to come aboard the "Arctic"—a feeling which we were to experience ourselves in after years. To converse with one's fellow men from the great world of civilization; to get mail and to become human again after a year of loneliness and desolate isolation. Only those who have experienced the latter can hope to realize the thrill of the former. Caron had one letter – from his mother in Quebec – and we stood back while he walked to the rail to read it.

On the bridge a few minutes later the Captain, Commander Craig and Inspector Wilcox plied the new-comer with questions about the ice and conditions in Pond's Inlet, while the ship steamed slowly towards the land. Of Joy we learned that his mission had been successful. He had helped the new Hudson's Bay traders build their post and then, late in the winter, had made a 250 mile sled trip to Cape Crawford, on the shore of Lancaster Sound. There he found the body of Janes, cached under a pile of rocks on the barren shore where the murderers had hidden it more than a year before. At Arctic Bay, many days journey farther on, he had found Eskimos who knew all about the death of the trader. And there he arrested three men chiefly responsible for the death of the white man and brought them back with him to Pond's Inlet.

The Eskimos of Caron's party could speak no English, but plainly signified their appreciation of gifts of cigarettes and tobacco, and their great happiness at seeing the ship. On the Captain's instructions they were taken below and given a hearty meal—the invariable custom when the "Arctic" put into any northern port. It was laughable to see the quantity of food they could stow away and the relish with which they devoured "hard tack." They wore a mixture of civilized clothing and native sealskins; boots and breeches made of sealskin, dirty white shirts and tattered jackets given them by the traders, through which their brown skins showed. Five of them wore Scotch bonnets, much the worse for wear, obtained – Captain Bernier explained – from the whalers years before and handed down from father to son. One little fellow wore the battered semblance of a Mounted Police forage cap which we recognized at once as a gift from Sergeant Joy. No doubt it was its new owner's most prized possession.

Pond's Inlet, we learned, was full of heavy winter ice through which it would be impossible for the ship to batter her way for many days yet. The Captain determined to

test the "Arctic's" mettle, however, and, instead of anchoring at Button Point at the entrance to the inlet, steamed up between the [canyon]-like walls of gaunt rock which towered on either side. Passing near Button Point we saw a small Eskimo encampment which Bernier explained was Caron's summer whale hunting station. On the beach we could see a number of women and children waving to us as the "Arctic" passed. Behind them, clustered on the hill-side, were a few rough shacks and sealskin tents. The Eskimos had killed a big whale a few days before and were busy boiling down the blubber to fill the steel drums in which the oil would be shipped to civilization.

For half an hour we steamed between the gigantic walls of the inlet which hemmed us in like the jaws of some huge nut-cracker. Farther up, the inlet narrowed to about a mile in width. Baffin Land, to the south, looked grim and forbidding, a mass of rock and ice, devoid of any sign of life. Bylot Island to the north looked slightly more hospitable, and along its shore ran a bench of mossy land through which numerous rivulets ran down to the sea from the melting glaciers above. Two miles farther up the inlet, heavy winter ice barred the way to the native village and the ship lay at her ice anchors for the night.

At midnight a party, consisting of Mr. Caron, Corporal Jakeman and Constable Anstead, left the ship for the village of Pond's Inlet to bring Sergeant Joy aboard the "Arctic." They took with them a small flat-bottomed boat to use crossing the open water leads and one of the Eskimos named Kakto, a fine fellow whom we were to know well in later months. We gathered on deck in the beautiful glow of the midnight sun to watch them go. Jakeman and Anstead had no sealskin boots and were forced to wear heavy cowhide riding boots, totally unsuitable for such a journey.

The ice was breaking up rapidly and swinging down with the current towards the open sea. We had barely shouted a final farewell from the ship when big Jakeman plunged into an open lead and had to be hauled out by the others, an incident which brought roars of laughter from the "Arctic." He did not come back, however, and soon the little party were but a group of black dots under the towering walls of the Baffin Land shore.

For those of us left on the ship it was a night of beauty and romance. The sun shone with all its glory on Baffin Land, tinting the snow-clad peaks a delicate shade of rose. Unable to resist the temptation Fielder and I left the ship and tried to reach the Bylot Island shore. But numerous water holes and wide leads compelled us reluctantly to turn back. We thought what a fine picture the "Arctic" made, lying hemmed in the ice between the mighty cliffs on each side of the channel and casting long black shadows with her tall spars on the blue-green ice of the inlet.

Next morning the ship steamed forward in the direction of Eclipse Sound, passing the masses of loose ice which had drifted down during the night. At noon heavy ice halted her again, and repeated assaults with her steel-shod bow on the big floes made scarcely an impression. In the afternoon several parties left the ship to explore Bylot Island, crossing the open leads with canoes intended for the use of the Police posts. Narwhal and walrus appeared plentiful in the water holes and several of the former were shot by a party from the "Arctic's" engine-room.

Later the Captain tried again to crush the ship forward, but with little success, and was making a final assault when two dog-teams were seen making their way across the broken summer ice from the Baffin Land coast. An hour later the first team arrived, bringing Sergeant Joy and a party of Eskimos from Pond's Inlet village. A few minutes later the second team came up at a rapid pace, driven by Kakto, and bringing Caron, Corporal Jakeman and Anstead.

Joy looked brown and fit after his year at Pond's Inlet and at once went aboard to report to Inspector Wilcox and Commander Craig. The rest of us crowded about the newly-arrived Eskimos and their dogs, plying Anstead and "Jake" with questions about Pond's Inlet. The dogs interested us immensely. They were fine big fellows, long haired and of motley colour, very different from the "husky" of the timber country to the south, and, in spite of hostile looks exchanged between the teams, lay quietly on the ice while the Eskimos went below for a hot meal.

Joy's report to the leaders of the expedition resulted in a decision to attempt to reach Ellesmere Land and build a post there before the end of August, by which time the Captain hoped Pond's Inlet would be clear of ice. In the meantime Joy was to return to the Hudson's Bay post at the native village and prepare for the return of the ship.

Regarding the murder of Janes, we learned that the Eskimos concerned with the tragedy were anxious to atone for the killing and at the same time present their side of the story to the authorities. The Eskimo who actually shot the trader accompanied Sergeant Joy from Pond's Inlet under what would technically be termed "open" arrest. His name was Nookudla and he was a fine broad-shouldered fellow, taller and more powerful than the others. His black eyes twinkled merrily and he seemed little like a desperate character. Two other natives, Arteetah and Oorooreungnak, were jointly charged with Nookudla and were under arrest at the village. The reports of Joy's work in Baffin Land were to be carried south on the "Arctic" and in 1923 a court was to be sent up from civilization to try the accused men at Pond's Inlet.

Once the decision had been made temporarily to abandon the project of building a post at Pond's Inlet not a minute of the precious time was lost. The sun had dropped behind a tall peak of Bylot Island when Joy and his Eskimos left the ship and turned their dogs back towards Baffin Land. One dog team and the native Kakto we had kept on board to take north with us to Ellesmere. It was cold for the time of the year, and a wind which suddenly sprang up from the east made the night raw and bitter. As soon as the dog teams were ready the ship's ice anchors were hauled in and amid cheers and cries of "Taboteah" from the Eskimos on the floe we pulled slowly away. It seemed to us – fresh from the world of the south – almost a crime to sail away and leave Joy there all alone. We did not think that soon, all too soon, we should be standing as Joy was now, watching the "Arctic" steam away, leaving us alone in this frozen desolate land. For a long while we watched the teams speed towards Baffin Land and then the ship's bow swung seawards and we went below.

WHEN morning broke we found the ship sailing gaily along the east coast of Bylot Island, skirting detached portions of the pack in her steady run northwards. The summer sun shone gloriously in a cloudless sky and we lounged on deck and watched the glacier-strewn coast, now and then taking a pot shot at numerous harbour seals which poked their black heads up curiously near the ship. Wandering aft to the sail locker, we found that our numbers had increased during the night and that now we had on board Kakto, his wife, Oo-lar-loo, and their four children: Amer-oilee, a winsome girl of fourteen; Pangy-pagukto, a fine little fellow of eight; Bunny, only seeing her fifth summer, and Kownoon, just peeping out of her mother's hood.

Kakto had formerly worked for Captain Bernier on the explorer's previous visits to Pond's Inlet. Recently he had been employed by Caron as a kind of native overseer. He was a splendid type of Eskimo and we soon grew fond of him. He was always willing to do everything he could for the *kabluna*,<sup>29</sup> cheerful and very fond of his family. He could speak a little English and had consented to come north to serve one year as guide to the new post of the Mounted Police on Ellesmere Land.

Another bear was shot by a party on deck as the ship nosed her way through the floes of Lancaster Sound, and bear steak again made a welcome change from the usual salt pork and hash. Kakto hung the skin to dry in the rigging and fed the refuse to the dogs lashed forward. Night found us far across Lancaster Sound with no heavy ice in sight. A stiff breeze was driving us northwards at a steady 7-knot clip and before we went below the southern coast of North Devon Island showed up above the sunlit northern horizon.

"Ellesmere Land " came the cry from the crow's-nest three days after leaving Pond's Inlet, and we came tumbling up from breakfast to find the ship steaming through Lady Anne Strait between Coburg Island and North Devon. Ice-covered Devon lay on the port bow; on the starboard lay Coburg, a huge mass of ice and rock on which it seemed that no living thing could exist. Ellesmere Land lay dead ahead and seemed to us, eagerly scanning the little-known land which was to be our home for two long years, one gigantic glacier which dropped its broad mouth into the sea near Cape Tennyson. It was something of a shock, even after seeing barren but somewhat hospitable-looking Baffin Land, and we smiled ruefully when Inspector Wilcox, talking with Leo Lemieux, the burly second officer on the bridge, greeted our appearance with a wave of his hand towards the frozen shore of Ellesmere and told us briefly:

"Your future home, boys."

For some minutes we could do nothing but stand and gaze in silence at the mighty granite cliffs which marked the coastline of this great island stretching 400 miles north

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<sup>29</sup> Editor's note: "Kabluna" or "Kabloona" is an anglicization of the Inuktitut term *qallunaaq*, which refers to people who are not of Inuit descent. This category generally includes missionaries, teachers, police, government personnel, and their spouses or companions. Rene Gadacz, "Kabloona," *Canadian Encyclopedia*, <https://www.thecanadianencyclopedia.ca/en/article/kabloona>.

towards the Pole. Looking at the solid ice-cap which seemed to cover the whole interior we wondered if there could be a single spot in all its 76,000 square miles which could grow a blade of grass or be fit for human habitation. Of living creature there was absolutely no sign.

"It ain't no peach orchard exactly," remarked "Bram Johnson" McGregor, one of the wags of the Police party.

"No," returned the Inspector grimly. "I'm afraid the banana crop this year will be somewhat of a failure."

The laughs which followed both sallies were as rueful as the smiles.

For several hours the ship steamed north-west, passing through the straits and turning westwards along Jones Sound. Glacier after glacier slipped by on the Ellesmere Land shore while the coast of North Devon showed nothing but a row of giant ice rivers pouring clown to the sea. In vain we scanned the Ellesmere shore for a spot which might serve as a site for the post. Contrasting wonderfully with the grim appearance of frozen Ellesmere, the waters of the Sound were alive with wild life. Gulls by the thousand flew screeching overhead; ducks and geese dived and swam in the calm blue water. Walrus were plentiful and several schools of seals passed close to the ship, diving and rising in unison like so many dolphins. The whole scene was a vivid illustration of the abundance of bird and animal life in the summer Arctic.

The pack lay jammed on the North Devon coast as far as eye could see, leaving an open channel along which we passed westwards. It had been decided in Ottawa that the Ellesmere Land post should be built near Fram Fiord on the southern coast of Ellesmere, mainly because Sverdrup, the Norwegian explorer who mapped the southern and western coasts of Ellesmere Land, had wintered there in 1900-1 and had reported it suitable for winter quarters. Since Sverdrup's visit no other white man had set foot on southern Ellesmere. The maps were inaccurate and there were stretches of the coastline as yet unsurveyed.

At noon the ship reached Smith Island, a rocky islet five miles in circumference lying six miles off the coast. The channel was uncharted and the "Arctic" edged in carefully, feeling her way with the lead. Once through the channel a huge bay opened west of the island, apparently still covered with winter ice at least ten feet thick. An hour later the ship halted at the edge of this barrier, unable to make the slightest impression on the ice mass. Fram Fiord lay thirty miles away across the frozen bay and it was evident that we could never reach it this summer. From the crow's-nest the lookout could see heavy ice packed for a hundred miles along the southern coast of Ellesmere through which no ship could be driven.

The channel between Smith Island and the mainland was covered with moving floes drifting out to Jones Sound with the tide. On a dozen or more of the smaller pans walrus lay grunting sleepily in the evening sunlight. In all, there must have been more than a hundred walrus blowing vociferously in the waters of the bay and trumpeting blatantly

from the shadow of Smith Island. It seemed too good a chance to miss. We should need dog meat as soon as we landed and Kakto would need all the blubber we could get to keep his igloo warm all the winter. Launching one of the canoes Fielder and I persuaded Dr. Livingstone to accompany us and, armed with .303 Lee-Enfield rifles and Colt's .45 revolvers, we set out to bag a walrus. There is no truer saying than "ignorance is bliss" unless it is the proverb which claims Divine protection for fools and drunkards. In this case we were undoubtedly the fools.

The police canoes were heavy freight affairs, capable of carrying 1500 pounds, but never intended for such an arduous sport as walrus hunting. Nevertheless we sallied gaily forth, little knowing that, even for a well-armed party equipped with a stout whale-boat, walrus hunting is perhaps the most dangerous and thrilling sport on earth.

We paddled away from the ship's side and were soon among the big floes. Walrus lay all around us and we picked out two big fellows on a pan about a mile from the ship. We paddled to an adjoining pan and climbed to a hummock on which we rested our rifles. Fielder and I fired together and it seemed that we had missed, for the two big brutes looked up, bellowed their anger and dived for safety. It was disappointing, but there were plenty more chances and we paddled towards another herd farther among the floes. Crossing the spot where the walrus had dived, the bow of the canoe struck one of the bodies floating in the water. It was indeed luck. We grabbed the big animal by the tusks and calmly started to lash it to the stern of the canoe. Soon we found that we were not the only ones to discover the dead body of the big bull. The female walrus, infuriated at the loss of her mate, roared her anger a short distance from the canoe, lashing the water with her huge flippers as she dived and swam in circles about us.

The situation did not look particularly healthy. Every minute it seemed that she would charge the canoe and smash it to pieces. Still, we were as yet much too green to feel thoroughly afraid and, ignorant of the real danger, started to haul the body of the big bull back to the ship. The walrus must have weighed over a ton and the moving ice hampered us badly. While Fielder and I strained at the paddles Dr. Livingstone sat in the stern with a revolver in one hand and a knife in the other, ready to cut the towline or ward off an attack from the rear. We often laughed later to think how foolish it must have seemed to Kakto. One sudden lurch underneath would have upset the canoe and left us floundering in the icy water. It would have taken us all night to reach the ship, but the officer of the watch saw our plight and steamed the "Arctic" towards us through the pans. A block and tackle was used to haul the prize on deck and on measuring the beast we found it to be ten feet in circumference. As it happened it was the only walrus secured that autumn and came in very handy later on for dog feed.

We stayed on deck late that night, watching the sun pour down the great glaciers stretching far into the unknown interior of Ellesmere. Walrus trumpeting echoed about us all night. One large herd of seventeen big walrus lay on a small floe, looking like so many huge brownish-green grubs. A giant bull with tusks at least thirty inches long guarded the herd. The ship passed within a biscuit toss of the floe as we steamed back to



the ice anchorage at the edge of the pack; but the walrus displayed little interest in us. It was more than likely that the "Arctic" was the first ship they had ever seen and they contented themselves with merely grunting, and continued rolling and pushing each other with their tusks. Now and then one would look up sleepily and flop back on his companions. It seemed a crime to shoot them and we left them unmolested.

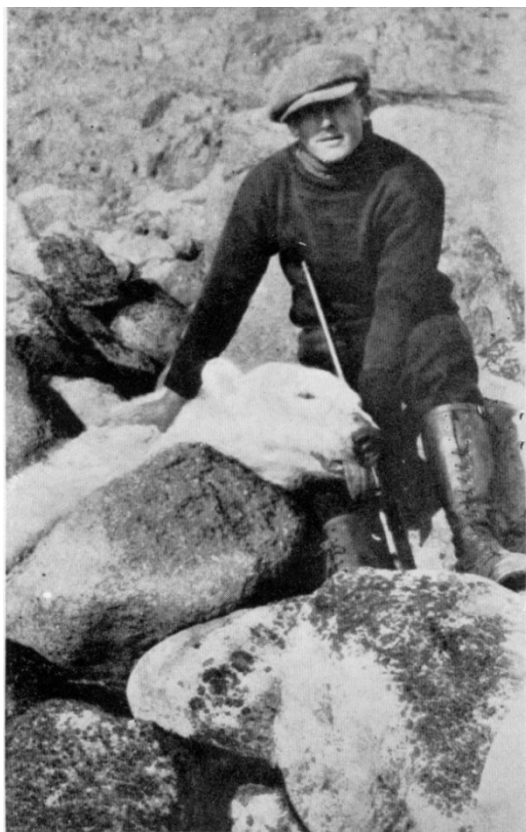
Early next morning the ship steamed back through the channel and for several hours sailed along the Ellesmere Land coast vainly searching for a spot to build the post. After charting a new island found near Cape Tennyson we returned to the channel between Smith Island and the shore, and again anchored for the night. Opposite Smith Island there was a small cove, terminating in a small valley which sloped up to the cliffs. It was desolate and barren, even in the bright sunlight of the Arctic summer day, and no sign of life showed on the patches of grass and caribou moss which covered the lower slopes. But it was the only place we could find and it was to be our home. The valley was about a mile in length and half a mile broad, terminating in a steep glacier which blocked the way inland. On either side towering cliffs gave fine shelter, but were equally impassable. The ship dropped anchor half a mile off shore and the unloading of coal, lumber and supplies commenced. For six days we toiled without a let-up. The ship could not stay long. It was now the 21st of August and already the ice masses pouring down the Sound from the west menaced the ship. It was a relief to get the 125 tons of sacked coal ashore. Then, while a party headed by the ship's carpenter worked erecting the buildings, the rest of us toiled frantically to load the boats and get the supplies ashore. Everything depended on speed. We snatched our meals when we could get them and often turned in at three in the morning too weary to wash our coal-grimed faces. But the work went rapidly ahead. Each day the buildings of the new detachment took more shape, and by the morning of the sixth day the last boat-load of stores was landed. The "Arctic's" crew worked heroically. Not one of them could have slept more than four hours a night throughout that hectic week. The Captain anxiously eyed the weather and the great pack which hovered threateningly on the western horizon. Late on the 28th of August the line of floes crept down on the ship and forced the Captain to raise anchor and keep the vessel moving to evade being crushed. Mr. Lemieux, the second officer, tried to get ashore with the ship's motorboat about five o'clock, but was driven back by the ice.

It was a cold, bitter night and the mist rising from the bay obscured the midnight sun and cast an eerie gloom over the harbour. The warm glow thrown up by the "Arctic's" hatchway never looked more homelike as we stood with fur caps over our ears and pea-jackets drawn up about our necks. The rest of the men were ashore, working until the last moment. At midnight Inspector Wilcox and I stepped into the waiting whale-boat and bade our friends of the "Arctic" good-bye.

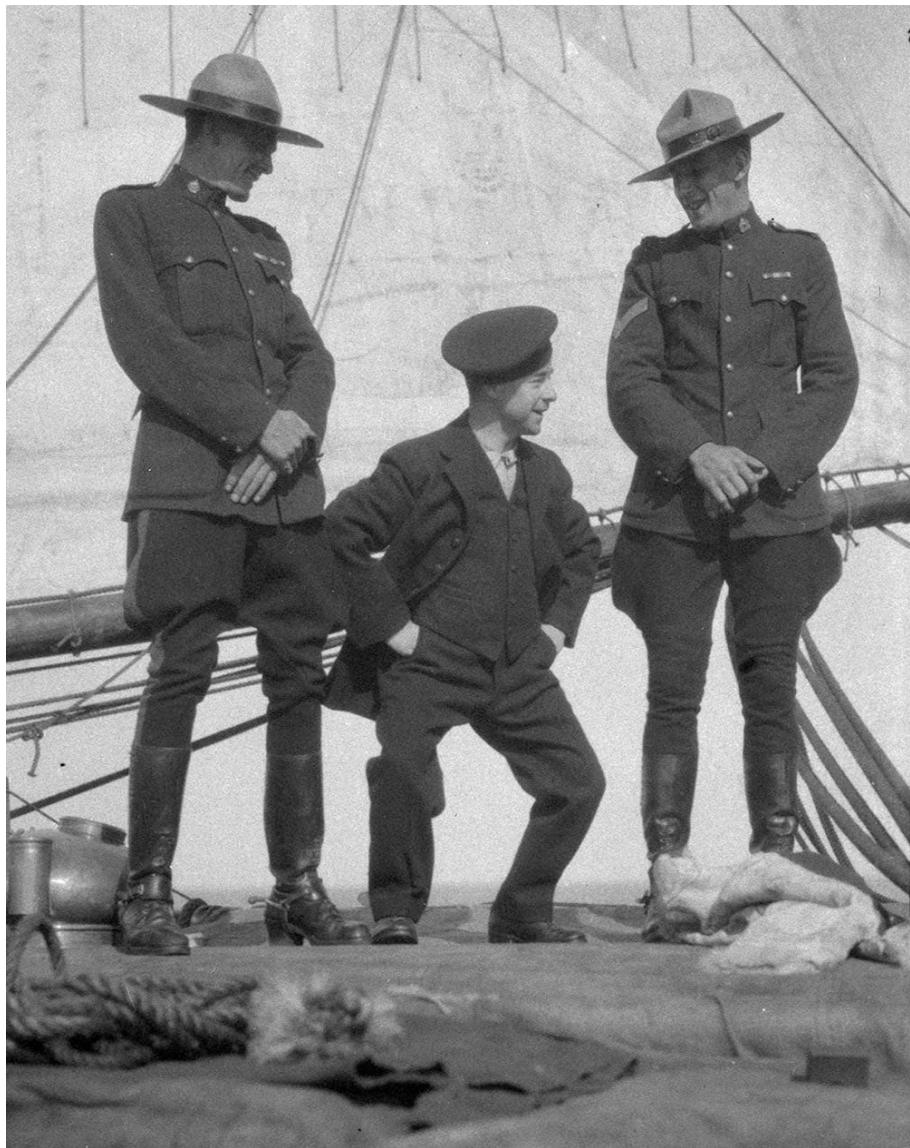
"Take care of yourselves. We'll see you next year" shouted Captain Bernier from the bridge.

The roar of the whale-boat's engine echoed across the bay and we were off. For some minutes the Inspector and I stood watching the staunch old ship which had been our home

for so long as she swung with the tide, impatient to be off on her journey south. We waved a last farewell to the group of heavily coated figures lining the “Arctic’s”, rail and resolutely turned towards the land. Before the boat’s bow scraped the sand the carpenter and the three men of the Police who were going down to Pond’s Inlet—Corporal McInnes, Constables Friel and McGregor were waiting. Not a moment was lost. Leo Lemieux, the big second officer, came himself to wish us “Good luck and a good winter.” It was after one o’clock when, across the top of an iceberg which lay between us and the waiting ship we saw the “Arctic” halt to pick up her whale-boat and then, with a single parting blast of her siren, turn her bows towards the open sea. The last link between us and civilization had been snapped. What would happen before the old vessel came back again no one knew. We felt as the old Puritan colonists of America must have felt when the vessel which brought them to the New World sailed back again across the Atlantic. But we were too tired to think a great deal. We did not stop to consider that when morning came we would be alone—a little party of seven men, the sole inhabitants excepting a single Eskimo family of a million square miles of Arctic wilderness.



H.P. Lee with polar bear shot on King Edward VII point at Craig Harbour, August 1923.



"The long and the short of it" – Tilder, DuBois, and Jakeman on CGS *Arctic*, 1922.

## 5

## Finley McInnes, “First Trip to the Arctic”

Transcript of an audiotape, recorded circa 1979

Shelagh Grant Papers, School for the Study of Canada, Trent University

I am Finley McInnes, my regimental number was 8608. I'm 84 years old and that don't improve the voice any. My eyes are not very good, I can't read or write now, they're beyond glasses and so the following is more or less from memory. So don't mind if I don't bring in many details, because that way runs far afield and it would take too long to tape.

Well, I have nothing to do and didn't know what to amuse myself with so I thought, well, I'll make a recording of “the days before yesterday,” so I might be able to get into “The Days Before Yesterday Club.” This recording is my first year in the High Arctic and so I will just start from there.

Canada owned the Arctic islands north of the mainland and they never thought any other country would dispute their claim, because at that time there was nothing much on the islands, as far as anyone knew. But after the war, the rumours started, oh around 1921, I think it was. A speaker in the House of Commons claimed that the U. S. had published a map showing the islands north of America, and they claimed that there were islands that were not occupied and that any country could take them. They were more or less “no-mans-lands.” Well then there was a rumour that someone in Denmark, with the permission of the Danish Government, was coming up to occupy the northern tip of Ellesmere land.

Also, Canadian-born Stefansson had taken the Island of Wrangel before the war and tried to occupy it.<sup>30</sup> I think he had an idea that it might make a naval base or something for Canada. Well, although Stefansson didn't have any official reason, I think he had little word or help in taking this island, but later on the Russians/Soviets had taken it back. That was brought up in the House and so the Speaker (?) claimed that at present there wasn't much on the island, but he didn't want to see any other Government get it because in future times they might regret losing the island.

So the only thing Canada could do, they didn't know actually how you could claim land and they thought the best thing was to establish personnel, the police, one thing or another, to bring law and order into the country. And so in the House of Commons, there was discussion on how [if] Canada claimed Wrangel Island which is north of Russia, could they have the nerve to prevent a Danish expedition from coming up and taking over the

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<sup>30</sup> *Editors' note:* Wrangel Island. On this ordeal, see Richard J. Diubaldo, “Wrangling over Wrangel Island,” *Canadian Historical Review* 48, no. 3 (1967): 201-226.

[northern] parts of Ellesmere land. The northern end of Ellesmere is between Greenland and the North Pole, and so that decided them quickly to get an expedition to go north.

At this time I was with the police and stationed at Fort Macleod, Alberta, and so the police asked for volunteers and I was lucky to be chosen as one of the members that were going up. The other members were picked here and there across Canada. I think there was about nine.

So the time come for me to leave Fort Macleod, I was up getting a requisition for the ticket to go to Ottawa and the team wagon was putting my trunk to take down to the station, when a wire came in cancelling the expedition. It appeared that the Captain they had chosen for the expedition had died. I've forgotten his name, it seems to me something like Kellen,<sup>31</sup> and they got word that Denmark had cancelled their expedition for some reason, I forget what. So there wasn't so much of a hurry and it was postponed until the next year.

In the summer of 1922, I left Fort MacLeod to go east to Ottawa, where I joined the other members of the Force going north. Well, we were there a few days and down at headquarters we couldn't get any other information. Nobody seemed to know what it was all about. All we could get was that we hadn't to take anything, just the clothes we stood up in. Everything was provided in the stores for each detachment, and even tobacco.

Well I smoked (this is an odd thing) and when I was in the west, I smoked Bull Durham and wheat straw papers. The wheat straw papers are kind of hard to make a cigarette out of if you're not used to them. There's no mucilage on the paper and Bull Durham is a fine cut that takes a little while before you get on to it. So I thought I'd take my own brand of tobacco, because I'd gone all over Ottawa – every place I could think of – for this Bull Durham and wheat straw papers and I couldn't find any place I could get it. Well I'd done the same when I'd got down to Quebec just before leaving, and went all over the city looking for this tobacco and cigarette paper and nothing doing.

Well when we got up there at Pond's Inlet<sup>32</sup> and they started to open the stores, I found that they had shipped enough wheat straw papers for two or three years for everybody, and also that it was Bull Durham tobacco. Well I didn't know then, but I found out afterwards that the other chaps had got the same thing, and they really blamed me for it. They claimed that I was the one who ordered this, but I didn't have anything to do with it. For years afterwards, the members would send me packages of these wheat straw papers just to remind me. I think what must have happened is that some merchant in the East there, had this stock, either in his store or in his warehouse, and he couldn't get rid of it and he got an opportunity to pawn it off to the Government when they were getting their stores. I'm not sure about that, but I pretty sure that something like that happened.

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<sup>31</sup> *Transcriber's note:* The name was Pickels.

<sup>32</sup> *Transcriber's note:* Pond Inlet was formerly called Pond's Inlet.

To get back to my arrival in Quebec City, I saw the *Arctic* ship for the first time. She was tied up at the wharf below the Chateau Frontenac and all you could see was her mast. Her decks were covered with cargo and stores and everything else, like bags of coal, mile high, piled way up. I learned the following later (of course I'm not a seaman). I'll give the description of the *Arctic*.

The *Arctic* was built in [Keil,] Germany and she was named the *Gauss* due to her egg-shaped bow. Her timbers were about two to three feet thick, heavy timbers, made to stand the ice, and the shape, in advance of getting crushed by the ice, would lift the ship upwards. Well Captain Bernier purchased it for the Canadian Government, I think the price was a bargain price, about \$75,000. She had already made a trip to the Antarctic and one of the members on the Antarctic expedition was Dr. Cook,<sup>33</sup> who later became Peary's<sup>34</sup> rival when he went to discover the North Pole.

When the *Gauss* was built, I think you would call her a three masted barquentine. Well after the Canadian Government brought her over, they trimmed her down yard lines, one thing or another. I think you would call it a schooner with top sails on the forward mast. I don't know the reasons, possibly it didn't require a larger crew or something. The *Arctic*'s beams were something like 37 feet and her length was something like 165 feet long. She had an auxiliary engine. When she was built it was rated about 275 horse power, but by the time we went the engines were badly worn. She was fired by coal as were the boilers, but everything was in bad shape.

As the *Arctic* had made a number of trips to the Arctic by this time, the Government had no further use for it, so she was put on the lower St. Lawrence as a light ship, that is a beacon for the aid of navigation, and she was there for nine years before they gave her a rough overhaul and put her into service again. The trouble was that she had a bit of a leak and a bit of water in the bilges. When we were down below on warm nights, you couldn't sleep because of the smell. The smell come from, oh maybe, dead rats and rotten vegetables and other debris in the bilges rolling around. We used to go on deck if the weather permitted and sleep on deck.

Around the latter part of July, after numerous attempts to get the *Arctic* underway, the engines would break down and something would go wrong with the boiler, and the cables from the rudder to the wheel (which was up in the wheel house) would break, and one thing and another. So it took a number of days before we were able to pull out. We no sooner got out, oh maybe half an hour, when the engines conked out again. So we anchored out in the stream.

To give a run down of the personnel, Captain Bernier was pulled out of retirement and given the title of Sailing Master. Mr. John Craig, he was the top Commander as Captain Bernier would have his hands full looking after the ship and one thing and another. They were each given a coonskin coat as donation from the Government. The

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<sup>33</sup> *Editors' note:* Frederick Cook.

<sup>34</sup> *Editors' note:* Robert E. Peary.

idea was that they were for the Captain or Mr. Craig to go up to the crow's nest for observation purposes. But I doubt whether they were ever used, because often I've seen the Captain being hoisted up to the crow's nest. The boatswain and he'd get up there when we were running the ice and he'd be yelling down directions to the helmsman where there were possible leads through the ice. So I don't think the coats were ever used on the trip.

Well the hardest worked man was the Chief Engineer, I've kind of forgotten his name, it was a French name.<sup>35</sup> Well then there was a Mr. Brown, he was a surveyor and he was supposed to be an assistant to Mr. Craig for topographical surveys, and we had Mr. Logan – he represented the Canadian Air Force. His duty was to make observations on the possibility of flying in the far north. And then there was Dr. [Livingstone], he was the ship's doctor. The first and second mates, Mr. Lemieux and Mr. Laurent, were both qualified sailing masters. And there was the boatswain, I think Tasse was his name,<sup>36</sup> and the ship's carpenter. The rest I think were just a skeleton crew, I've forgotten their names but they were all good men.

Once we got underway, it was a happy ship, and lucky. Before we got out of the mouth of the St. Lawrence River, we had to work hard to straighten the deck's cargo to keep it from going overboard in the lee swells. The police boys were all a happy family and we enjoyed the adventure. Through the night we would have to be called to hoist sails and take in sails, or one thing and another, as there was no available seamen other than the helmsman. Lucky we got past Belle Isle at the mouth of the St. Lawrence River, the ship was turning north up towards the Labrador Coast.

The radio was just coming out then, but they didn't call it radio; they called it "wireless." The ship was equipped with this wireless and keyed with the old spark coil. You stood on the deck and if you knew Morse Code, you were able to read the message. But after about two hundred miles, before we reached the Arctic Circle, we lost all connections with the outside world.

When we got up to about the Arctic Circle, the ship changed course to the westward and made over towards the Greenland coast to avoid the floe ice which was known to be coming down. Numerous icebergs were spotted and it was quite an interesting trip. We went into Godhavn in Greenland and, while there, we purchased a few dogs – I think about two teams, about 24 dogs – from Greenland. I'd like to say that we had one of these teams at Pond's Inlet and we also had a team of Baffin land dogs. Well the Greenland dogs were faster, but they had to be fed every night. If they weren't fed every night, they were no good the next day. Well the Baffin land dogs, they didn't need to be fed except every two or three days and they were ready to go. Also the Greenland dogs, when ever they went over a bear track, they ignored it just if it was a sleigh track or something; they never

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<sup>35</sup> *Editors' note:* Albert Thériault.

<sup>36</sup> *Editors' note:* Adjutor Leclerc.

bothered with it. But the Baffin land dogs, you had an awful time to hold them from chasing after this bear, and I'm just giving this as a sideline.

But anyway, we left Godhavn and started north again, and finally arrived at the entrance of Pond's Inlet. Many's a day we were stuck in the ice and the drinking water was not very good. I don't know if it is known to many people, but the sea ice is salty and in a year or two, the salt settles down through the ice. When the sun is up in the summer time, it melts the surface ice and large pools of water are formed and it is quite drinkable as fresh water. Well when the water runs low, the ship would be tied up to the ice and this water, fresh water would be pumped into the ship with a hose and pump. But the water tanks of the ship were really bad. I think they were dirty and in time they were pretty brackish (I think with a little bit of salt left in them that wasn't properly cleaned out).

Our meals on the ship were mostly salt pork and salt beef, and a little bit of canned goods but not very much. There was also a little bit of seal meat and anything like that was used on the ship, and bear meat. There were lots of bears on the ice. It wasn't too bad. I've heard it said by others that little fish are eaten by big fish, and those fish eat other bigger fish, and the seal eats them and the polar bear eats the seals. So they're pretty rancid tasting. But I didn't find that, it wasn't too bad.

So anyways many days were lost in the ice. The navigation in those days in sailing ships was more mathematical as they didn't have the proper time, and they would take the heights of the sun and if they didn't know the location. Then there was fog, mast-high, where you couldn't see the horizon. To do the location like that, they used an artificial horizon, mercury or something like that. But you couldn't use that. The sun would be drifting around not far off the horizon and it would circle around. At times it was quite puzzling, ie. to know whether it was 2:00 am or 2:00 pm. The compass was still a magnetic needle and pointed to the south all the time. So at that time, it was like the skipper was coasting; they knew the land and they knew a farm from hearing a barking dog or some noise or something. But they'd have an idea where they were.

Also, when they threw the lead for sounding, there would be a little tallow on the end of it, and would show what the bottom was like, like stones or sand, and so on. Most of the navigation was done like that. So the Skipper had quite a time. There were times when we didn't know where we were, how far from the land, and the speed and slowness, and one thing and another. The chart would show us that, but you didn't know how far you had travelled, so that it was very difficult to keep tabs where the ship's position was. Since then all the sophisticated aids to navigation have come into being: like radar and gyroscope compasses and so on.

But anyways, finally we landed at the entrance to Pond's Inlet. The inlet was frozen over and the *Arctic* was bumping it, trying to break a way in, but she was doing nothing. So three of us took the canoe and went ashore. As soon as we hit the beach with the canoe, I noticed a bird flying out. I didn't know it then, but afterwards I learned that it was a Ptarmigan, and I thought this can't be a bad country after all. There was a little bit of life in it anyways.



At about this time, the ship was underway and she was blowing her whistle for us to return, so we hurried and took the canoe back to the ship. Of course we were a little green those days and when we come along side the bow, the ship was steaming slowly ahead. When the canoe would touch the side of the ship, the canoe had a tendency of rolling up on it and upsetting it. Well we had quite a time until we found out by keeping the canoe away from the side of the ship and allowing the chaps aboard to throw us ropes and pull us aboard was the way to go.

And so the ship moved on up north after that and we got up to Craig Harbour on Ellesmere land. We certainly had to work there because all hands that could be spared were needed on the ship to unload cargo and build the detachment.

Well I had one of the boats that was going to be left at the detachment. It was designed as a sailboat, with a centreboard, I guess you know where the centerboard's plank is, a big iron plate went down in this facing. The top of the centerboard box, we didn't know it then, but it was lower than the gunnels of the boat. So I was standing on this and they loaded me up with a big load of coal and they started putting lumber on and covered up the boat and the coal. So the first thing I knew, I was floating off on this loose lumber. What had happened was the water come up through this centerboard and the boat sunk and went to the bottom at least on the sides anyway. Lucky I was a piece away, when all at once the boat shot up. It had gone down and evidently it had turned over and the coal all was dumped out, and then the empty boat popped up on the surface. Well that was it and we learnt a little bit then.

Well when taking the supplies ashore, they were towing me on the ship's motorboat on a long tow rope and there was a lot of ice around. Of course when they would weave amongst the ice I had no control over the boat with the lumber on it. I had a oar to act as a rudder but you couldn't handle the darn thing and a number of times they pulled me up on top some floe ice.

But anyway we worked hard getting the detachment up. ... There was supposed to be three detachments built that year, but then it was realized that there wasn't the time to build three and one was supposed to be a headquarters for Inspector Wilcox to live in. Well there was no communication in those days, so a headquarters detachment was useless; so it was decided to build just the one at Craig Harbour. Well, that's the way we got the detachment locations to live

The *Arctic* was in a hurry so we had to pull out and when I went the ice was coming in. I was going back to the motor boat and the ice block was between the motorboats and the ship so we were stuck there until they got a cable from the ship and winched us over the ice and we got aboard. Then the ship departed after a bit of trouble in the ice, to go down to Pond's Inlet to build the detachment down the

While I think of it, I'd like to mention the following. On the way up north and we'd crossed the Arctic Circle. It used to be a custom, when a ship crossed the Arctic Circle, that they had a toast. So Captain Bernier followed this custom and invited us all together

to have this toast. So he brought out a case of either sherry or port, I'm not sure, wine and poured a bit in each glass for this toast. Well after a bit of a speech we started to drink and toast, I can't remember what the toast was. Well the first fellow nearly choked and the captain nearly choked right afterwards. After investigating it, it was found that the wine bottle was filled with cold tea. It was found out that the cook and the steward were in cahoots. This wine was for "medicinal purposes" and what they had done, they had got a hold of it and drank the case of wine and filled the empty bottles up with cold tea. But at the time the captain came to the rescue and went and got a bottle from his personal store, and poured us each a double portion of good old Jamaica Rum. So it wasn't too bad then.

Well, we finally got back to Pond's Inlet and by this time the inlet had been cleared of ice. The Skipper was in an awful hurry; he didn't want to stay any longer, there was a bit of ice still running. So the mate, he come to off load the ship at Pond and moved the stores and cargo on the beach. There was three of us left there and the ship pulled out early in the morning. So we were then finding the tents (and were given a number of tents), and safe guarding the stores that were all piled up.

Constable MacGregor was sleeping with me in one tent one night, when the dogs broke in. He got up to chase the dogs out of the tent and there was an old Eskimo lady went to help him. So I could hear them chasing the dogs out and one thing and another, and every now and again the old lady would say "tobawc" and Mac would say "I'll give you some tobacco tomorrow." And the woman would say "tobawc" and Mac would say "my dear woman, see you in the morning and I'll give you some tobacco." This went on for at least ten or fifteen minutes and the old lady would now and again say "tobawc" and Mac would ream off this again and again. Of course we didn't know anything about the Eskimo and Eskimo language. What we found out afterwards, what the old lady was saying "are you finished and was that finished" and MacGregor thought she was asking for tobacco all the time. Tobawc meant "finished" and Mac persisted that he was going to give her this tobacco in the morning.

But anyway, we worked hard. We finally got the house built and sure built it tight. There was no insulation in that day, just tar paper. We'd put that tar paper on the walls and overlapped it on the floor and on the ceiling and put tar paper on the ceiling. The window frames, we corked them with oakum so is when we were finished that house it was airtight.

Well we had the kitchen stove which was a big iron range, I think it was a can stove or something like that. It wasn't an ordinary kitchen range; it was a big heavy thing and we had one of those old stoves you used to call a station heater. It had a flared top and a pot belly with a top over the thing. We put one of them stoves up. Well we tried to fire it and we couldn't breathe in the house along with the kitchen range going. So we had left a little trap door at one end of the house, in the event we had to go up in this so called attic. So I had a brain wave and I put another door in the other end of the house with the idea that this would circulate the air and I put a kind of shutter up there, the kind you could open and close. Well we didn't notice that, but this caused an accumulation of frost up at the

top of the attic. When we did find it out the rafters were covered with ice, and when it come on towards Spring, the roof warmed with the sun, and it started melting. One night when MacGregor was in bed, this tar paper must have broke. It gathered a big pool of water on this ceiling and it broke and come down on him: drenched him in the bed and everything else.

Well that was a lesson. From then on and we kept those trap doors closed and put ventilation in the gable of the house on both ends so the cold air could go through there. I had thought of that in Inuvik, when we first moved over to Inuvik.<sup>37</sup> We had that problem with frost gathering up there but we learned our lesson quite a long time ago about it.

In the confusion, when we left Craig Harbour and the ship was in such a hurry to pull out, there were a number of articles that were left at Craig Harbour and amongst them was the putty for our windowpanes. We had the sashes with small panes, and the glass was packed in a box with some straw so when we came to put in the windowpanes we found that we had no putty. So we had a large can of white lead, and to make it a little stiffer, I mixed it with flour and it made a good putty and served [its] purpose very well.

But what I wanted to mention was that a year or so later, I found out that the whalers usually put double paned glass in their windows when they built a house or shed from the shore, and that prevented the frost from gathering on the windows. I used the idea in the south at different times. The double panes kept the window free from frost, whilst the other panes would be covered over with the heavy frost. Well for years the manufacturers never thought of that and then in later years, they found out, or must have found out, so they started manufacturing double paned windows. What I was pointing out was that the old whalers must have had the idea long before it was known [in the south] and it worked pretty good with us.

I had mentioned before that the Captain and Mr. Craig were issued with a coonskin coat to go to the crow's nest. Well, when we got around to finishing our house, we started on the stores, opening one thing and another, and we come across our own northern clothing. Well, there was two suits, an inner and outer suit, and the trousers went right down to the ankle with a strap on them. But there was no foot gear, except common like moccasins. Well, this angora goat skin, the inner one had a softer fur and the outer one was long haired and dark. So we tried them on and you couldn't walk with them. You couldn't go anyplace outside with them: you fell down [and] you had an awful time getting back on your feet again. I remember it made me think of old Robinson Crusoe, when he made his goat skin clothing but his trousers were only knee-length, and he also had an

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<sup>37</sup> *Editors' note:* In 1940, the federal government hired MacInnes to supervise Reindeer Station in the Mackenzie Delta, and he later worked for the Liquor Board in Aklavik and Inuvik. University of Alberta Archives, "McInnes, Finley," <https://discoverarchives.library.ualberta.ca/index.php/mcinnnes-finley>.

umbrella made out of goat skin to keep the sun off. Well this goatskin clothing we had was to prevent the cold, and all we lacked was the umbrella. We never did wear it.

We were very lucky that the Eskimos there had enough caribou skins to make us a parka and knee-length trousers and caribou boots. As far as the cold was concerned, it didn't trouble us at all. We wore heavy trousers and a mackinaw shirt and a heavy parka over that, and a pair of caribou, short-length trousers so that we never suffered with any cold. We were kept busy at getting established and one thing and another, and this helped keep us warm as well.

I'd like to say in leaving Ottawa, I was appointed Justice of the Peace and Coroner and Game Warden and also Post Master. We had all of the facilities of a post office: stamps and one thing and another, but the only trouble with that was that when the ship come in, the personnel on the ship always wanted to send mail – they never had any money – and we had to supply the postage stamps ourselves for them.

Another thing was we had three prisoners there and they were well treated. We gave them rations, weekly rations. The only stipulation was that while they were free to go hunting, and one thing and another, they couldn't take their families to any other part to move. And of course they liked tobacco, so I had to supply them with tobacco at my expense because in those days the government didn't make any allowance for luxuries.

But another thing, you couldn't find a better bunch of people than the old Eskimos that [were] there. They were honest, and one thing and another. They didn't have any liquor and they didn't have anything to make liquor so we weren't in any trouble there. I can't give much detail on this, it would take too long to go off on one thing and another, but we learnt a lot and, in years past, we were still learning. There was quite a number of incidents we had of this.

When the ship left us, the orders were to gather up all the Eskimos besides the three prisoners we had, and the other Eskimos they were down Igloolik way. They couldn't get the Igloolik Eskimos [until] next summer, when we were going to hold a court over this Newfoundlander [Janes], it was thought, for the Eskimo [prisoners].

So before March, I think it was, we were prepared for going down to Igloolik to get these witnesses. The route we had chosen was across land down to Fury and Hecla Strait to find the Eskimos down there. Well there was no one at Pond's that knew the route much but the Eskimo Nookudlah [Nuqallaq] who shot Janes. He was a good traveller and I took him for a dog driver and Constable MacGregor had the other team. So we started; the days were dark [and] we couldn't travel very far in one day.

After out a few days, we passed an Eskimo village. The next day, I think it was, we were held up by a storm and you couldn't travel. In the evening, the storm died down and this Nookudlah, the dog driver, called to me in the igloo and said he saw some Ptarmigan and he wanted to know if he could take the .22 rifle and shoot some. I was sitting in the igloo and I yelled at him "sure." Well, in about 15 minutes, he come back with a bullet in his hand - in the fleshy part of his hand. So I bandaged it up – I didn't have much with

me – and put some iodine on it. It wasn't a bad wound. Well some of the Eskimos wanted to tell me something. I think they thought that Nookudlah had shot himself in the hand to prevent this trip, but I don't know. The way it was done, it was doubtful whether he had done it on purpose.

MacGregor took him back to this Eskimo village that we passed and to get another dog driver. He got an Eskimo by the way of Sinnikah and he was a wonderful fellow; you couldn't wish for a better man. At night ... he gave me a musk-ox roll, as hard as a sheet of plywood and with long hair, but most the wool had gone from it though. It was an old one. Well at night, when we built the igloo, I used to beat the caribou skins and this musk-ox rug to get the snow out of them, and pass it down into the igloo for bedding. Every night that musk-ox roll was my job. I beat the darn thing out and tried to fold it up and set it down and it would just fly open again. You couldn't get the darned thing through the door which was low and small.

Anyway, we went down to Fury and Hecla Straits and found the Eskimos. Sinnikah, the chap who had given me the musk-ox roll, he came to me and asked me if I would mind if he gave it to some old lady down there he knew. I was so glad to get rid of it, because there was no [other] way I could get rid of it without offending him. So anyways, I got rid of the roll.

Well then MacGregor, for some reason, every night he'd get plugged into the igloo and the door would be sealed up with snow. Then Mac, just as we were getting to bed, would go outside to relieve himself and I used to rib him about this as to why we couldn't use the old igloo when we abandoned it in the morning. But Mac couldn't get around to that for some thing or another.

As it happened we got down to Fury and Hecla Straits. We were not lost, but for fifteen days, we couldn't find any Eskimos and we wandered around down there: up one shore and down another, because no one knew where they were. So one night, it was storming and blowing hard and Mac as usual had to get out, so he went to the side of the igloo. The dogs were pretty hungry at this time; they hadn't been fed for a long time. So some of them rushed to where Mac was, when they saw the door open and Mac outside, and the other remaining dogs didn't know what was up and they rushed too. They caught Mac in the door of the igloo trying to get in and they jammed him there. It was a freshly built igloo – it hadn't set – so Mac heaved at the dogs and the darned igloo caved in and fell in on top of us. Well, the dogs got in there and what a fight we had with them – not ferocious or anything like that – but they were looking for food. Wind and snow was blowing in on us, but anyway we got them out of there. They were happy days.

And finally we met an old Eskimo and his wife travelling with their dog team. I didn't realize it then, but he was pretty frightened and could hardly talk. Anyways, he told us the other Eskimos were on a certain fjord. So we left him and went over to this fjord. We were travelling up the fjord when we met another Eskimo coming down the opposite way, and he told us we had passed the Eskimo village, that they were camped out on the ice. It is

very difficult to see; this was one of those overcast days and we were a distance away when we passed.

So we turned around and went back. When we got close to the village, we saw them all running and they were singing. They grouped all together and were singing so we stopped out on the ice, oh a couple hundred yards I guess or so, and waited. Well after they finished singing, they filed out in single file, and as they passed they gave three solemn shakes of the hand. Even the little baby in the mother's hood, you had to shake hands with. There were no words said.

After that they all passed, then they started talking and laughing and told us how glad they were to see us. That they wanted to get this thing over, that's the shooting of Janes. I would like to say that the whole thing was pretty weird. On the trip down, the Eskimos who were with us were always remarking the Eskimos were frightened and they didn't know how the people, that is the Igloodik people, would take to us. And of course we were pretty green. We didn't know the Eskimo in those days. It was the first year in the country, so we didn't know what to expect.

After arriving at this village, I noticed that the Natives travelling with a dog team usually had a shovel, with a white cloth to make a flag on the back of their sled. They told me that they were Christians, although they were still practising a lot of the old Shaman stuff. The whole set up was kind of odd.

Well anyway, we stayed there. We were out of dog feed at this time and the dogs were in poor shape, but [the] Igloodik Eskimos had all kinds of walrus meat in cache. So we stayed there for some days; I've forgotten for how long – more than a week anyways – and our dogs got back into shape again. They hadn't any dogs down there, so we arranged with different families that had to come up [to Pond Inlet], that they would use all the dogs we could [spare] so that they would be able to travel. Then we started for home.

Well, there was one day after we hit land again, that I was walking ahead of the dog drivers. I was quite a piece ahead and I looked behind. They had stopped and there was a man quite a distance behind me. I couldn't understand, so I gradually slowed my walk to see what this was all about. He got up pretty close, but without him noticing, I was sort of keeping an eye on this man. Finally he got walking right behind me, and then right beside me, and in a quiet voice he told me that I was going the wrong way. It was kind of an odd thing; he could have hollered or something at me. Well, what I found out why he didn't holler or yell was because he didn't want to lift his voice to a white person, lest he might offend me or something like that. I didn't know if he was coming up to get ahead or something.

So we had to turn around and walk back to the dog team which was possibly nearly a mile back. The Eskimo who was driving MacGregor's dogs, his name was Eetoogattoo [Uuttukuttuk]. Well Eetoogattoo picked up a walrus head and with the tusks on it (the skull and the tusks) and he wanted to take it back to Pond's Inlet. Why I don't know. There was no reason for it at all. He could have taken the tusks off the skull and just carried

the tusks, but he took the whole works which was kind of an awkward thing to carry on a dog sled -- not the weight so much, but tying it on. Well MacGregor was always [wanted] to lose this, but he couldn't very well do it. So finally we lost it -- it dropped off the sleigh someplace on the land. So Mac was kidding Eetoogattoo that God didn't love him because he lost the walrus head. Well some days after we arrived back in Pond's Inlet, an Eskimo arrived following our old trail and picked up the walrus head and brought it to Eetoogattoo. So then Eetoogattoo was telling MacGregor how much God loved him since he took the walrus tusk to him.

I would like to mention that the Eskimo children during the summer time, when the weather permitted, they played outside and had a good time. When they got tired they just went and fell down amongst the rocks and slept. You couldn't find better children than the Eskimo children in those times and they didn't have the luxury of the curfew siren -- they didn't need it. So I was thinking in Inuvik here,<sup>38</sup> the children should try and get off the streets.

This ends my first year in the Eastern Arctic.



Hudson's Bay Company post at Pond Inlet, Baffin Island, 1922.

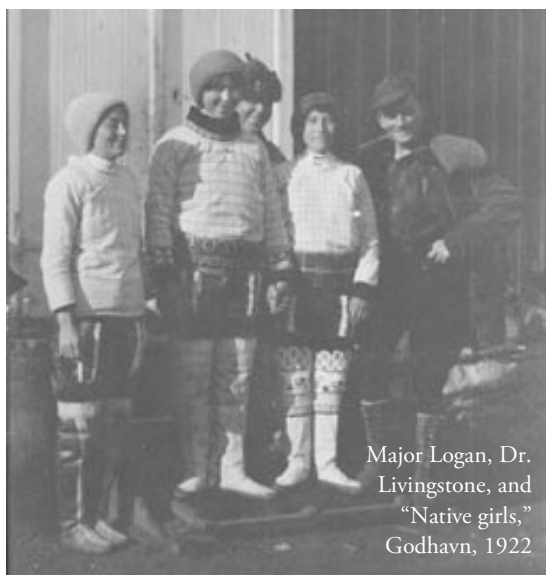
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<sup>38</sup> *Editors' note:* McInnes lived in Inuvik, Northwest Territories, in the late 1970s.

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**R.A. Logan, Report of Investigations on Aviation in  
the Arctic Archipelago, 1922**

Report of Investigations  
on  
AVIATION IN THE ARCTIC ARCHIPELAGO  
carried out during the summer of  
1922  
by  
R.A. Logan,  
Squadron Leader,  
Canadian Air Force



Major Logan, Dr.  
Livingstone, and  
“Native girls,”  
Godhavn, 1922



## AVIATION AND NORTHERN CANADA

Canada, extending as it does from midway between the equator and the North Pole to the Pole itself, a distance of three thousand miles north and south, includes within its boundaries hundreds of thousands of square miles of land and water which have never been examined by civilized men. In such a wide spread territory it is possible that untold wealth may be lying dormant awaiting only discovery and development to make this one of the most prosperous countries in the world, but before we can have development we must first find out what we have to develop. Only the southern fringe of Canada has been even partly developed up to the present time, but each year finds the frontier carried a little farther north all along the line from the Atlantic to the Pacific.

Not only the development of the country increases, but the rate of increase keeps steadily expanding and it becomes necessary for the employment of new methods in various ways to increase our knowledge of the natural resources of the country to make that information available to those who desire it and to give assistance to the men who will attempt to carry out the important work of development and conservation of whatever resources are found in the country. One of the important of these changes which have taken place within the past few years is the employment of aircraft and wireless, or perhaps these should be included under one head aviation — for these two sciences work hand in hand.

Just as the horse replaced the ox and the motorcar replaced the horse as the chief factor of transportation in towns and country, so in time will aircraft and wireless replace the canoe and dog-train as the chief means of travel and communication over large areas of Canada which today can only be reached with great difficulty with ordinary methods of travel.

But before the operation of aircraft can be utilized to greatest advantage a certain amount of research and experimental work must be done in investigating the conditions under which the air- craft will be required to operate, and in endeavouring to determine the best types of aircraft to use and the most efficient ways to apply their use to widen the scope of mankind in the hitherto practically untouched areas of Canada.

Practical flying in Canada is peculiar from nearly all other countries in the world, in that it may be divided into four distinct classes, each of which has many phases peculiar to itself.

The first division may be taken to include flying which can be carried on all the year round even if there are seasonal difficulties to contend with. This includes flying such as is carried out on the Pacific coast and Camp Borden, Ontario, and to a limited extent on the Atlantic coast. This class of flying is found in many countries of the world.

The second division is more peculiar to Canada, although it is probably applicable to flying in Eastern Europe. This includes flying operations which are possible during not more than half of the year but during the flying season meet with ordinary conditions similar to those to be found where flying is carried out during the whole year. At present flying operations of this class are being carried out during the summer season in Quebec,

Ontario, Manitoba and Alberta, performing work for various Departments, but chiefly engaged in forest fire patrols and aerial photography.

The third class includes flying in what may be called the sub-Arctic zone. The sub-Arctic zone may be taken to include the greater part of the mainland of Canada which lies north of the 60th parallel of latitude on the west side of Hudson Bay, and north of the 55th parallel on the east of Hudson Bay, the chief characteristics of this zone being the cold weather to contend with, the very short season of open water on rivers and lakes (with corresponding long season of ice and snow), and the use of river routes for transportation into and through the territory. Flying would probably be done by machines which would be equipped with skis or pontoons, according to the season. This class of flying has so far received very little attention anywhere in the world.

The fourth class may be termed Arctic flying, and the Canadian zone of this class includes all of the islands lying between the mainland of Canada and the Pole, together with the peninsulas of Melville and Boothia. This class of flying will be similar in many ways to that of the sub-Arctic zone, but there will be more ice and snow and very little, if any, use for seaplanes or flying boats, except those operated from ships. No flying of this class has been carried out up to the present time, but it is expected that a certain amount will be attempted by the Amundsen Arctic Expedition during the summer of 1923.

Canada is therefore one of the most important Dominions of the British Empire, in that such a variety of flying conditions are found within its boundaries, and the development of Arctic and sub-Arctic flying is of the greatest importance, not to Canada alone, but to the British Empire as a whole.

Much has been said of the possibilities of future hordes of Slavs overrunning Europe and the great use of aircraft which would be certain in such an event. Aircraft operated from Arctic or sub-Arctic bases which would swoop down and leave trails of destruction throughout the rest of the world, but from the very nature of their bases of operation they would be almost inaccessible to aircraft of countries to which "cold weather" flying was un-familiar, and it is generally agreed that the best method of defence from aircraft is to destroy the enemy's aircraft before it leaves its own borders.

Whether war with such a country as Russia would ever come or not, should not affect the determination to develop flying in the Canadian Arctic and sub-Arctic regions because Canada, if it considers itself worthy to be called a Nation, should have enough pride and spirit to take at least ordinary precautions and be prepared to defend itself in any emergency.

Canada proved during the Great War that her men in the Royal Air Force were equal to any in the world, and it now remains for her to show the rest of the world that she can defend herself, and the whole British Empire if necessary, from all comers from the cold countries in the north of Asia – or Europe – by having men trained and proper material and information available through actual, practice within her own boundaries.

Important as this question is, Canada cannot afford at the present time to carry on expensive investigation and research work unless some immediate benefit is to be obtained, and it is probable that the best policy will be to encourage flying which will materially assist many civil operations, and at the same time a knowledge of aircraft operation in cold climates for defence purposes will automatically be gained.

There are doubtless many useful ways in which aircraft can be employed in the Arctic and sub-Arctic regions, but when it is considered that so little information is available for anyone desiring to operate commercial flying in those districts, it is not to be expected that rapid development will take place through commercial firms. The majority of uses for aircraft at the present time would be in connection with the various Government Departments and Branches, and therefore it is only reasonable to expect that the first flying in the country should be done by the Government. As flying increases and becomes applicable to commercial work, then the Government will be in a position to offer advice and render assistance to commercial aviation firms, but the pioneer work must be done by the Government.

All of the Arctic and the greater part of the sub-Arctic flying zones of Canada are in the Northwest Territories, and in order for the Federal Government and the Government of the Northwest Territories to become acquainted with the conditions under which flying could be carried out and used to advantage, it was decided in 1922 to send a representative of the Canadian Air Board to the Arctic zone to endeavour to obtain as much information as possible regarding flying conditions there, and from investigations made actually in the country concerned to submit suggestions which might be of assistance in determining the types of aircraft suitable for use and methods for their employment in various ways in the Northern Archipelago.

## THE NORTHERN ARCHIPELAGO

The Northern Archipelago comprises all of the Arctic Islands lying to the north of the main-land of the American continent, with one combined area of some six hundred thousand square miles, equal in area to one-fifth of the remainder of the Dominion of Canada, and form part of the British possessions in North America which were transferred to the Dominion by Order in Council of the Imperial Government on the 1st September 1880, and in 1903-4, 1906-7, 1908-9 and 1910-11 the Canadian Government despatched expeditions to winter in the northern waters of Hudson Bay and the Arctic Archipelago to take formal possession by raising the British and Canadian flags and by depositing copies of the proclamation in cairns erected at various points. During the summer of 1922 an expedition was sent North on the Canadian Government Steamer "*Arctic*" to establish Mounted Police Posts and thereby confirm possession by occupation of several of the islands in the eastern frontier of the Archipelago. This expedition, in addition to establishing the Mounted Police Posts, carried a representative of the Canadian Air Board for the purpose of investigating the conditions affecting the operation of aircraft in the Arctic regions.

Owing to the limited time available, and the necessity of establishing the Mounted Police Posts according to previous arrangements, very little time was available for actual investigations of any particular place for any length of time over a few days.

Northern Archipelago consists of a large number of islands which have, for convenience, been divided into four natural groups as follows:—

Group No. 1 - The islands situated in the northern parts of the Hudson Bay and Hudson Strait. The chief islands in this group are Southampton, Mansfield, Nottingham, Salisbury, Charles, Coats and Akpatok while many of the smaller islands are still unnamed on the charts.

Group No 2 - includes the islands lying between Hudson Bay and Hudson Strait on the south and Lancaster Sound on the north, the western boundary of the group being Prince Regent Inlet and the Gulf of Boothia. There are two large islands in this group, Baffin and Bylot, while the remainder are generally small and are fairly close to these two large islands.

Group No. 3 - This group includes the islands lying west of Prince Regent Inlet and south of Lancaster Sound, Barrow Strait and Melville Sound. These islands are almost inaccessible by ship from the east as they lie to the west and south of the usually ice-covered waters of Lancaster Sound - the only channel by which they may be reached from the eastward. The western islands of the group can be reached by passing through the Arctic Ocean from Berring [*sic*] Strait along the east, or by descending the Mackenzie and Copper Mine Rivers. They comprise the islands of Banks, Victoria, Prince of Wales, North Somerset and King William.

Group No. 4 - This group consists of the islands north of Lancaster Sound and Melville Sound. The chief islands are Ellesmere and North Devon, Cornwallis, Bathurst, Melville, Prince Patrick, Axel Heiberg, Ellef Ringnes, King Christian and North Cornwall. Of these, Ellesmere Island is by far the largest.

During the summer of 1922 parts of only two groups were visited, namely the north end of Baffin Land and Bylot Island in the second group, and Ellesmere Island and North Devon Island in the fourth group, and it is intended in this memorandum to deal only with the parts of the country actually observed, although it is probable that similar conditions will be found in at least a large number of the other islands of the Archipelago.

Baffin Land has generally been supposed to have an area of approximately 211,000 square miles, but according to the preliminary reports of the explorer, Mr. Donald MacMillan, who spent the winter of 1921-22 exploring the hitherto uncharted part of the central western boundary of Baffin Land, the area of the island is very much less than has been previously supposed. It is certain that it has a length of about one thousand English statute miles, with the greatest width being five hundred miles. It was until recently called Cockburn Land, although it had been named Baffins Island or Baffin Land by Admiral W.E. Parry in 1821, out of respect to the memory of that able and enterprising navigator.

The eastern coast of Baffin Island is generally high and rocky, and has never been accurately surveyed and charted. The land rises quickly from the sea, often in precipitous cliffs to an elevation of one thousand feet or more, after which, the upward slope is more gentle as the land rises towards the interior table-land. The general elevation of the table-land to the north of Cumberland Gulf ranges from fifteen hundred to five thousand feet, with occasional hills rising above that perhaps one or two thousand feet higher. Inland to the south of Pond's Inlet the general elevation of the mountainous part does not appear to exceed two thousand feet, and to the westward along Fox Channel it is considerably lower.

A large part of the coastline of Baffin Land has been surveyed only by an approximate location of the chief headlands. This may be said of practically all of the islands in the greater part of the Archipelago. The charts have been generally compiled from notes and records of explorers who were endeavouring to find a passage to Asia, and who had no interest whatever in the interior of the country, and long as they found that a bay was closed and not an opening which might lead to the "Northwest Passage," they took no further interest in it but kept onward toward the west looking for open water.

The other mariners who contributed to the charting of the coast were either whalers, who were also searching for open water, or explorers who were either endeavouring to reach the Pole or find some trace of it John Franklin's ill-fated expedition. Very little time could be spared at any one place owing to the short season of open water and the desire to cover as much distance as possible. In the winter when ships were "frozen in the harbours there was little chance for extensive explorations at any distances from the ships towards the interior of the country, because of the difficulty of travel over the snow and because of the darkness.

The chief reason for lack of exploration of the interior of the country is that the Eskimos have a great aversion to travelling anywhere excepting on the ice along the sea-coast. They may make short excursions across portages to fresh water lakes, or during the summer they may make trips thirty or forty miles inland in search of caribou, but only in cases of necessity and they return to the coast as soon as possible. The Eskimo depends on the animal life of the sea for his food and fuel, and therefore, especially in the wintertime, will seldom travel far from this source of supply. Even when short journeys have been made into the interior of the country by white men, it has always been done in a season of the year when the ground was covered with snow in order that they could utilize dogs for transportation of their clothing and supplies. This does not, of course, include short distances such as five or ten miles inland on the small valleys near the coast.

On looking at a chart of any of the Arctic Islands, it will be noted that, while the headlands are shown definitely on the map, the bays and inlets are shown as being only approximately located. Even the headlands may be several miles in error in position by latitude and longitude. There are several reasons for this, one being that they were more or less sketched in by ships travelling along the coast, with points here and there established by astronomical observations, but even these latter points were often in error owing to the

errors of the ships chromometers, as it was impossible to keep accurate time on voyages lasting several years, although this difficulty at the present time is overcome by using wireless time signals.

On the majority of expeditions to this region a certain route, or definite schedule of duties to be accomplished during the season, was laid down, and naturally the sailing master was always anxious to have as little delay as possible, and as he had the final word as to whether the ship could wait or proceed to the next port of call, he would very often consider the movement of the ship of more importance than the exploration of the coast or the interior; consequently during the season of the year best suited for interior exploration the explorers remained on board the ships travelling from place to place exploring the country from the deck by aid of field glasses, with an occasional visit ashore for a few hours, and comparatively little territory was covered other than the regular routes of the whalers or the routes possibly taken by parties searching for Sir John Franklin, where open water was all that was looked for. Very little investigation was made of the natural resources of the country.

It would appear that in the summertime practically all of the small bays and lowland near the coast have considerable areas of bare ground, at least partly covered with vegetation, but the extent of this ground free from snow can only be determined by photographs from the air during the summer season of the year. The interior of the country in some places may consist of mountain ranges or high table-lands covered with snow, but there is no reason to believe that the whole of the interior is of this nature, in fact there are many indications that the interior of the country may be much more free of snow than is generally supposed. The western interior of the northern half of Baffin Island is described by the Eskimos as a rough plain, probably less than one thousand feet in elevation, diversified by rolling hills with numerous lakes in the valleys between. This country is well covered with Arctic vegetation which provides food for large herds of barren ground caribou. There are two large lakes in the lower country of the southwestern part of the island, called Nettilling and Amadjuak; both are upwards of one hundred miles in length and the lowlands surrounding them are the favourite feeding grounds for large bands of barren ground caribou. Large numbers of natives from the various parts of the coast resort to the shores of these lakes annually to slaughter large numbers of these animals for food and for their skins, which are used for winter clothing and bedding. These lakes are reached by ascending rivers and making short portages.

Bylot Island lies to the northeast of Baffin, being separated from the latter by Ponds and Navy Board Inlets, and Eclipse Sound. It is roughly circular in outline, with a diameter of nearly ninety miles. In physical character it closely resembles the northeastern part of Baffin. The general elevation of the interior ranges from two thousand to three thousand feet, and the coastal highlands are covered with an ice-cap which extends ten or fifteen miles inland, although the interior, according to the Eskimos, is free of snow during the summer.

North Devon Island lies to the north of Baffin and Bylot Islands, being separated from them by Lancaster Sound. The Island is about two hundred and twenty miles long, east and west, and averages seventy-five miles across. The eastern third of the Island is composed of crystalline rocks and rises to an irregular ice-capped table-land some three thousand feet in altitude. The western part of the Island is formed of limestone and is a flat table-land cut by deep narrow fiords that extend inland many miles from the coast. The general elevation of the table-land in the eastern part is nearly two thousand feet, but this decreases in the west so that on the west side the cliffs are below one thousand feet along the western side of the island where there is a good growth of Arctic plants on which large numbers of musk-oxen feed, together with some barren ground caribou and Arctic hares. Walrus and white bears are also plentiful among the ice of Wellington Channel, which separates North Devon from the islands lying to the west. It is unpopulated, although indications have been found in several places of ancient Eskimo habitations. It is probable that Eskimos from Baffin Land cross Lancaster Sound to hunt on North Devon Island, but it is not believed to be regular practice for them to do. There are several extensive plains of land which are free of snow close to the sea-coast. This also may be said of several islands which are along the eastern coast.

A large area of the northeastern part of North Devon Island was observed from an altitude of about three thousand feet on the ice-cap of Ellesmere Island southeast of Fram Fiord, in the latter part of August 1922, and as far as could be seen to the south the interior consisted of slightly rolling table-land covered with perpetual snow, broken by several gorges a mile or two wide, which ran southerly for probably ten or fifteen miles. Towards the west, however, the land appeared to become gradually lower and there appeared to be a large area free of snow. The distance from the point of observation was from thirty to sixty miles, but with exceptionally clear visibility.

Ellesmere Island is only second in size to Baffin Island and is remarkable for its north end extending to beyond the 83rd parallel of northern latitude, or to within five hundred miles of the North Pole. Its length from north to south covers nearly seven degrees of latitude, or approximately five hundred miles. Its greatest breadth across the northern part exceeds two hundred miles. Its outline on the west side is quite irregular, being indented by large bays. The island is separated from Northern Greenland by Smith Sound and Kennedy and Robeson Channels. The general elevation of the eastern half of the island is high, probably exceeds two thousand, five hundred feet. In the northern part the United States mountains are upwards of four thousand feet high, with isolated peaks probably reaching to five thousand feet. It has been remarked by several explorers that, contrary to their expectations, the northern part of Ellesmere Island is not covered with a continuous ice-cap but instead there are extensive plains or table-lands comparatively free of snow, especially in the summer. These plains, like the extensive plains on the western side of the island, are covered with Arctic vegetation, and musk-oxen, barren ground caribou, foxes and Arctic hares are found there in large numbers, along with geese, ducks and other aquatic birds. This island has been crossed from east to west about the central part, and has been explored on the west by the Norwegian explorer, Sverdrup.

Only the southeastern point of this island was observed this season, and as far as could be ascertained the southeastern quarter of the island is covered with perpetual snow excepting the more prominent headlands and the larger valleys, although many indications were found of ancient Eskimo habitations, and several horns of caribou were found, indicating that these small areas of bare ground are not absolutely isolated by the ice-cap from the feeding grounds of these animals, and that, though uninhabited now, were at one time quite thickly settled with Eskimos. It may be noted here that the best book of reference on the western part of Ellesmere Island is "*New Land*" by Captain Otto Sverdrup, 1904, being a narrative of his four years' work in that region.

There are several islands to the west which have been very seldom visited, but which, from all reports, are much better suited for human habitation than some of the Canadian islands which are at the present time inhabited by Eskimos [Inuit]. The apparent reason, however, for these islands being uninhabited at the present time is that the Eskimos [Inuit] prefer to live within reach of the whalers or traders, but no doubt would live on these islands were regular trading posts established. The islands to the westward of North Devon, namely Bathurst and Melville Islands, are suitable for the development of the reindeer and musk-ox industry owing to the large areas of Arctic vegetation and the comparatively favourable climate, and in addition have every indication of extensive mineral resources. These islands were not visited in 1922 but it is recommended that further investigations be carried out to include the natural resources of these islands, and the possibilities of aircraft being in the development.

There are wide-spread indications of coal in nearly all of the islands inside the Arctic Circle. Considerable coal has been mined for local use at Ponds Inlet. Coal was found by Commander Nares at Lady Franklin Bay on Ellesmere Island in a seam two hundred and fifty yards long and twenty-five feet thick. He reported the coal to appear to be an excellent fuel, containing less than three per cent of water. No doubt coal can be found in many other places if searched for, and although the general impression seems to be that this is coal of very poor quality, the explorers in their reports do not seem to hear this out, but indicate rather that the coal is of sufficiently good quality in many places to be used for all ordinary purposes. Oil-shale has been noted at several places and analysis of specimens obtained by Captain Bernier in 1910 from Bathurst Island shows one hundred and forty gallons of oil per ton of shale. This might indicate the possibilities of obtaining oil in this country, or at least sufficient to be used locally for aircraft and motor transport purposes.

During this season a peculiar sand was found on the shore of Dundas Harbour, of which a sample was brought back, and this has been described as being very like the famous ruby sands of Nome, and is a probable indication of gold. This has not yet been analyzed. It is considered advisable that this district be investigated by properly trained men in the near future. There are indications of copper in several places, although not many were noted this season. A peculiar discoloration of a rocky hillside was noted near the southeasterly point of Ellesmere Island. This discolored rock was of a bright green color and appeared to be stained from water running out of a crevice in the hillside. This was noticeable for a



mile from the hill and may or may not be an indication of copper. In such an unexplored country it is impossible to foretell what mineral resources may be found when properly searched for.

Only the high hills of the interior have been observed and the interior of the islands may be entirely different from the immediate vicinity of the seacoast. It is possible that, as in practically all other countries, the weather conditions, and consequently the general vegetation, and so forth, are different fifty miles inland from those existing near the seacoast. Several theories are put forth in favour of a more moderate climate in the interior during the season of sunshine, especially in the western part of the Northern Archipelago.

The eastern side of Baffin Land, North Devon and Ellesmere Islands consists of fairly high table-lands, in both cases covered with perpetual ice and snow. The prevailing easterly winds blow over the open water in Davis Strait and become laden with moisture, which is condensed upon reaching the cold mountains and forms clouds and snow, so that by the time the air has reached fifty miles inland the most of the vapour has been condensed and consequently there is less snow and fewer clouds than would appear from a view of the first few miles from the shore.

In addition to there being a lighter snow-fall in the interior, the general appearance of the country is that the land is lower as one goes west, and includes many fairly low plains covered with vegetation supporting herds of musk-oxen and caribou.

Owing to the comparatively light snowfall, and the drifting caused by the winds, it is probable that many of these plains become clear of snow quite early in the spring, and it is also quite probable that the surface air, at least, becomes quite warm, if not hot, during the summer months when the sun is shining for twenty-four hours per day, for when there is no night to cool the ground the sunlight, even if it is not powerful, is continual, and radiation from the ground must warm the air to a great extent and produce much Arctic vegetation. One thing in favour of this theory is that herds of caribou or musk-ox appear to find plenty of food in the interior during the winter, while during the summer they very frequently feed over the smaller scattered plains or bare ground near the coast. By means of aerial photography the extent of the plains or ground free of snow could be ascertained, and by transporting geologists and prospectors, and persons interested in the musk-ox and caribou industry, much of the hitherto unknown natural resources of the islands would be discovered.

Coal seams and indications of coal have been found at many places, and it is likely that with proper investigation extensive fields of good quality coal will be found, which, even if it is not profitable to ship to the south, will be sufficient for fuel in developing the other minerals known to exist, many of which only indications have been seen.

It is possible that the fishing industry could be developed in many places, particularly the salmon in several of the rivers of Baffin Land. If Government Eskimo Agencies, similar to those operated by the Danish Government in Greenland, are ever established in the

northern islands, it will be more satisfactory to use aeroplanes for inter- communication between these than to use any other existing means of travel.

There are several Hudson's Bay trading posts on the south and eastern coasts of Baffin Land, while several are being established each year. The most northerly one is at Salmon River, Pond's Inlet, about latitude  $73^{\circ}43'$  north, and was established in 1921. There are also several trading posts belonging to free traders. One of these trading posts is operated by the Arctic Gold Exploration company ten miles east of the Hudson's Bay Company's post at Salmon River.

Another Company operating several small trading posts on the east coast of Baffin Land is known as the Sabellum Trading Company, Limited, with headquarters [in London], England. This Company has been operating in Canadian territory since 1911. Its main station is at Kivito. This is approximately latitude  $68^{\circ}$  north, and longitude  $65^{\circ}$  west. Another station is located at Cyrus Field Bay, with a branch station at Frobisher Bay. Both the latter are managed by one man and the stations are located on the peninsula between Cumberland Gulf and Frobisher Bay. A small station is also located at the peninsula north of Cumberland Gulf and is known locally as Kanaker's Inlet. Another small station was opened in 1920 at Gape Hater and it was intended to open another station at Igloolik in 1921, but it is not known whether the station was established, or not. The vessel owned by the Company in 1921 was the "*Vera*," a sailing vessel with auxiliary power, commanded by Captain John Pearson. This ship generally left England in the latter part of June and returned in November, calling at the head stations, but the branch stations are supplied by sledge parties from the head stations. This Company claims to supply the wants of, and trade with, approximately one thousand Eskimos [Inuit], but it is probable that this number has been lessened since 1921 by the establishment of several Hudson's Bay Company's posts.

The following list shows various trading posts along the coast of Baffin Land;-

Lake Harbour, midway along the north shore of Hudson Strait, is operated by the Hudson's Bay Company and maintains a staff of four or five men. West of this are the following stations:-

Stiniak, near the entrance of Markham Bay, and Amadjuak, at the mouth of the outlet of Amadjuak Lake, both operated by the Hudson's Bay Company, with one man in charge of each.

Cape Dorset is the most westerly Hudson's Bay Company's post on Baffin Land, and two men are attached to this post. There are several Hudson's Bay Company's posts on both the east and west shore of Hudson Bay, including one on Coats Island.

The following posts operated by the Hudson's Bay Company, are on the north shore of Ungava, this being the southern shore of Hudson Strait:—

Cape Wolstenholme there are two white men at this post.

Stupart Bay, almost due south of Stiniak also maintains two men.

Another post at Payne River is managed by one white man.

Stations with one man each are operated at Whale River and George River, while larger stations, with several men at each, are operated at Port Burwell and at Fort Chimo.

Proceeding easterly and northerly from Lake Harbour along the coast of Baffin Land, the following stations will be found: —

Waddell Bay, operated by the Hudson's Bay Company.

Forbisher, a branch station of the Sabellum Trading Company.

Nugumiut Station, operated by the Sabellum Trading company

Netchilik in the Cumberland Guld, operated by the Hudson's Bay Company.

Kanaker's Inlet Sabekum Trading Company

Kivitoo, main station for the Sabellum Trading Company

Cape Kater, operated by Sabellum

Pond's Inlet station, two miles west of Albert Harbour, in the entrance of Eclipse Sound, is the main station for the Arctic Gold Exploration Company, and several branch stations in the vicinity are operated from this station. "Pond's Inlet," or more properly Salmon River, about eight miles west of the last described post, is operated by the Hudson's Bay Company.

The above information has been obtained as far as possible from information given by officials of the different Companies, but it is possibly not absolutely up-to-date, although it is the latest information which could be obtained.

Information was also obtained from the natives of Pond's Inlet that trading posts were operated during the past winter, at least, at Igloolik and Admiralty Inlet by the trader, [Knud] Rasmussen, who told the Eskimos [Inuit] that he also intended establishing a station at Pond's Inlet in the near future.

FROM	TO	DISTANCE
Dundas Harbour	Pond's Inlet	160 miles
	Craig Harbour	120 miles
	Smith Sound	325 miles
Craig Harbour	Smith Sound	200 miles
	Pond's Inlet	260 miles
Pond's Inlet	Smith Sound	430 miles
	Cape Kater	350 miles
	Kivitoo	450 miles
	Igloodik	230 miles
	Netchilik	530 miles
Kivitoo	Cape Kater	110 miles
	Netchilik	170 miles
Netchilik	Lake Harbour	225 miles
	Amadjauk	200 miles
Lake Harbour	Amadjauk	120 miles
Amadjauk	Cape Dorset	120 miles
Lake Harbour	Port Burwell	250 miles
	Fort Chimo	330 miles
	Stupart Bay	120 miles
	Wolstenholme	240 miles

## AIRCRAFT USES

There are many uses for aircraft in the Arctic Archipelago in assisting the exploration and investigation of the extent of the natural resources of the territory. Topographical and Geological surveyors may be transported to otherwise inaccessible places, and to many other places where their season of operation may be greatly extended by the reduction of time required for travelling.

The extent of grazing grounds capable of supporting animal life, such as musk-oxen, caribou or reindeer, may be found, as well as the number and locations of existing herds and breeding grounds of these animals. The latter will become necessary before much headway can be made in the industry of raising musk-oxen or reindeer for commercial purposes. This industry will receive a great deal of attention in the near future, especially if a mineral or oil strike were ever made in the Arctic Islands, or even in the sub-Arctic, and the time to investigate this is immediately.

Now is the time to find out what the possibilities of the country are before the big demand arises. The more the country is examined the greater will appear the natural resources and commercial possibilities, and automatically the methods of development will appear. When the reindeer or musk-ox industry is in operation it is probable that the greater part

of the “herding” and range patrols will be done by aeroplanes, especially in keeping wild caribou herds away from the “tame” herds.

It is certain that aircraft can be of great assistance in connection with Mounted Police work, and as this will call for long cross-country flights it will be imperative to have a certain amount of preliminary experimental work done before machines are sent out hundreds of miles from their nearest bases.

As it is practically certain that the future headquarters of the Royal Canadian Mounted Police will require the services of aircraft, it will be necessary for the former to be near an aeroplane base, and, while there are several places known to be favourable for the location of a Mounted Police Headquarters, none of those so far investigated are very favourable for a permanent aeroplane base, and it would be advisable to make a reconnaissance to locate the best place possible for combined headquarters for Mounted Police and Air Force and base of operations for Topographical and Geological surveyors.

In many ways the Arctic is an ideal country for “lighter-than-air” craft — airships.

The sunlight is practically constant during a long season of the year, and this is one of the greatest factors in the operation of any type of airship owing to the effect of sunlight on the expansion and contraction of the gas in the balloons. It is also of great assistance in navigation.

One great advantage of airships over aeroplanes is that an airship is self-supporting independent of the engine, for as the aeroplane depends on the engine for support it is forced to come down as soon as the engine stops or loses its minimum speed. An airship can remain in the air for much longer periods than an aeroplane on the same power, and can carry a fairly heavy load, but some of the disadvantages of airships are the bulky buildings required to house them and the number of men required to handle them in making landings, unless mooring masts are used. Owing to its bulk an airship is greatly affected by high winds, especially when near the ground, but it is possible that in such northern latitudes the high winds may be only at comparatively low altitudes, and an airship might be able, by ascending a few thousand feet, to ride out what would be a fairly strong gale on the surface.

During the summer of 1922 several peculiar wind conditions were observed which would seem to indicate that the strong winds so often referred to by Arctic explorers are in many cases very local in character and do not reach very high altitudes. Winds thirty to forty miles per hour were experienced at the entrance of Pond’s Inlet for several days in succession, while during the same period fifteen miles inland the air was dead calm.

Although airships may not be used locally in this district for many years to come, it is practically certain that before many years long- distance airship routes from Western Europe to Japan will be located over the Arctic Archipelago, for the reason that it is much shorter by making great circle sailing between two countries so far apart. By travelling in a direct line between Paris and Japan the direct line would pass well within the Arctic

Circle and the distance would be at least three thousand miles less than by travelling on the present-day route.

Another inducement for airships to travel over this Polar territory is that by flying in the continuous daylight of the summer less trouble would be experienced with the expansion and contraction of the gas owing to the varying degrees of sunlight, as well as the general advantages to navigation obtained from travelling in continual daylight over a greater part of the journey.

If information is obtained by the Canadian Government it is possible that this will be of international value, and may, moreover, assist in having international air bases located on Canadian territory, which will aid in the general development of the country.

One of the first demands for the use of aeroplanes will be in connection with Mounted Police work, for patrols and all long cross-country journeys. If it is generally known that aeroplanes are in use by the Mounted Police the moral effect of this on law breakers, whether Eskimo [Inuit] or white, is such that it will be one of the greatest aids in the prevention of crime, and trespassing on the parts of ships of traders or foreign Governments. During the season of 1923 alone much time could be saved by the use of aircraft in connection with the murder trials at various points, by transporting legal and police authorities and witnesses.

Survey parties will save much time in being transported from place to place by aeroplane, for by using large machines capable of carrying several passengers and their baggage, whole parties, with several weeks' supplies, could be moved three hundred miles in less than four hours, while travelling by dog-train at least two weeks hard work would be required to cover the same distance. Supplies could be cached, by air, at many places and the full summer season could be spent on interior surveys and explorations.

The surveys could be greatly helped by using aerial photography, especially along the coastline. Oblique photographs covering large tracts will give, not only the topography, but, if taken for a few weeks over the same areas, would show the changes in general appearances due to the seasons, which would be of general scientific interest, and if taken over the water would aid in navigation and in obtaining a practical knowledge of the ice movements, upon which navigation depends so much.

When regular navigation is established through Hudson Strait it will be necessary to have one or more detachments of aircraft to watch the ice and report positions to the ships. This may be done by wireless and photography. Regular ice patrols will become necessary adjunct to navigation through this Strait. Photographs of the ice and open water for miles ahead of the ship may be taken, developed, printed and dropped on the ships in the vicinity every day.

Ships will not require to waste time trying to get into harbours which are not clear of ice, and advantage will be taken to call at open ports first, while through traffic will be able to follow the open water, and once the relation between weather conditions, tide and general

ice movements is determined, and forecasts compiled by utilizing aircraft and wireless, navigation through the Hudson Strait will lose much of its hardship and danger.

In connection with the ice patrols, wireless ice condition reports will be broadcasted, and for any extensive navigation they will soon be considered as necessary as the wireless weather reports are today in the more southern parts of the continent where they are sent out every few hours.

The only practical way of observing on the daily movements of ice over large areas is by the aid of aircraft and aerial photography.

Meteorological reports should be sent south by wireless every few hours to aid in weather forecasting in the more inhabited parts of the world, and while this may not require the actual use of aircraft, it will require the use of the wireless stations operated in conjunction with aircraft.

## ICE CONDITIONS

As far as could be ascertained from observations during the short season spent on the expedition of 1922, and from verbal and written reports of men who have spent many years in the Northern Archipelago, there should be several months during the summer when it is certain that aeroplanes could be operated, and the indications are that it is probable that operations could be carried on successfully for several additional months.

All of the waters within a few miles of the shore on the east side, and practically all of the inland waters of the Archipelago, are frozen solid during at least seven months of the year, and in the bays and small inlets the ice forms about the end of September and remains until about the 1<sup>st</sup> August, as a rule, although some bays may be cleared by the action of wind and tide earlier than this, and some places may not clear at all if the weather during the summer is fairly calm.

The ice forms each winter to a depth of probably twenty feet in many places, and is rotted to a certain extent during the summer by the action of the sun and is finally broken by the action of tides and wind and washed out of the straits and channels by the currents which flow towards the south and east.

In a season when there is much wind and heavy seas from the east the ice is broken in the larger channels about the middle of June, or possibly earlier, and the smaller bays and straits clear about the end of July.

The end of the season for regular ice travel along the shore is about the middle of July, and ice travel commences again about the middle of October.

When the sea is fairly calm in the spring and summer the ice takes much longer to break up and drift clear, because the wind has a great effect on the drift of the ice, as well as has the tide and currents.

The tide at both Pond's Inlet and Craig Harbour is about nine feet between ordinary high and low water. Large pans of ice drift into shallow or rocky waters at high tide, and when the tide goes out are left high on the rocks, and consequently are broken by their own weight into smaller pieces. This nearly always happens to the edge of the ice near to the shore.

When the ice first moves it is in large pieces, sometimes several miles in length or breadth, but it gradually breaks up into smaller pieces. The larger pieces in many cases would make excellent landing places for aeroplanes if it were desired to land upon them. As far as could be observed this year the ice was still strong and smooth enough for this up to the 8<sup>th</sup> September in several places, but especially at Salmon River. In the sheltered bays where the ice had not cleared by that date, the new ice would prevent any further weakening of the old ice, so it would appear that many places in ordinary years will be available for suitable landing places.

The snow on the ice-cap of North Devon and Ellesmere Islands would make excellent landing ground, at least in the summer. The condition of this snow was investigated on the Ellesmere ice-cap at an altitude of about three thousand feet above sea level. The surface was swept smooth by the wind and covered with a fairly heavy crust in most places, but on some hillsides the snow would not support a person walking, but in no case did one sink below the ankles. This would be quite satisfactory for landing aeroplanes equipped with skis. The surface of this ice-cap is slightly rolling, with wide expanses of level or almost level areas.

The top surface of the larger glaciers in the valley, while being in general appearances fairly level in places, are actually of a much rougher surface than the snow fields of the table-land owing to the cracks and crevices caused by the seaward movement of the glaciers.

Several glaciers were observed which would serve as emergency landing grounds, and probably many more would be discovered, but in practically every case where the glacier does not reach to the water's edge there is a wide strip of level gravel beach between the foot of the glacier and the end of the bay. This gravel sometimes is covered with vegetation, but in many cases will probably be found to be bare. These beaches will serve as the best landing grounds for aircraft equipped with wheels.

By using aeroplanes equipped with inter- changeable skis and wheels, landings could be made practically anywhere in these islands excepting the most mountainous parts.

It was found that when several hundred feet above the surface of the glaciers in the valleys it was possible to detect any small ridge or elevation in the surface of the ice or snow, owing to the shadow cast by the sun, for in this latitude the sun's altitude is always so low that very long shadows are cast, even of very small objects, on otherwise comparatively smooth surfaces,

The surface of the sea ice will also be visible so long as the sunlight is strong enough to cast a shadow. There are many places where ridges of broken ice are formed by the winds



and tide breaking up the edges of the ice on large areas of partly open water before the whole surface is frozen over. This sometimes results in ridges, several miles in length, of broken ice cakes piled many feet high, making landing of aircraft impossible. These ridges or rough areas can be avoided under ordinary circumstances, for, while it is necessary to have smooth ice to land on, the actual area required is not so very large, and when the sun is shining strong enough to cast a shadow it will be fairly easy to pick out the areas of smooth ice from the ridges or rough ice. One of the great difficulties in travelling by dog-train in this country is that when such ridges of rough ice are met they have to be crossed over, and sometimes it takes many hours to travel one mile. All this could be avoided in travelling by aircraft.

It was noticed that the surface of the ice late in the season consisted of long narrow pools of fresh water or slush, with ridges of dry, hard ice between them. The hard ice is white, while the soft slush or water is dark color. The hard -white strips are generally several hundred yards in length and ten to fifty yards in width. These alternate strips of dry white ice lie parallel to the direction of the prevailing winds. Actual practice will soon give the necessary experience to enable the pilot to judge the exact surface conditions of the snow and ice underneath him, but as a general rule small pans or small areas should be avoided when there is a choice, for the larger the field the more likelihood of it being free of rough ice.

## CLIMATIC CONDITIONS

The observations of weather conditions during the summer of 1922 were very limited owing to the fact that the ship was moving from place to place generally many miles out to sea, where the weather conditions were quite different from what would be found either by remaining at one place on the coast or by travelling inland.

Large areas of open water tend to keep a more constant temperature than would be found were there nothing but ground, snow or ice, as the water prevents extremes of temperature, and in the northern part of Baffin Land, at least, the temperature seldom goes as low as it does in some of the southern districts of Canada, such as Northern Ontario, Manitoba and Northern Alberta, where thousands of people are living and carrying out farming operations.

In the winter there are from all accounts many high winds which blow much of the snow from the level plains and when the sun begins shining in the spring the remainder of the snow soon melts and the bare ground acts as a reservoir of heat received from the sun.

The sun at Pond's Inlet is not visible from about the 9<sup>th</sup> November to the 3<sup>rd</sup> February. During this time the only light is from the stars or the moon, and travelling at any time when there is no moonlight is very difficult and dangerous owing to the darkness. For several weeks after the sun sets in November, and the same period before it rises, the sky is partly lightened at noon similar to the ordinary dawn, but the bright stars are visible throughout the whole twenty- four hours. The period of total darkness when there is

practically no light whatever from the sun is approximately two months, and during this time it is like continual midnight in the more settled parts of Canada.

The moonlight is said to be much stronger than in southern latitudes, but this is partly due to the reflection from the ice and snow, and partly because the eyes are not accustomed to the bright rays from the sun.

When the sun is first visible it is seen only for a few minutes at noon, but the length of this period increases steadily as the sun seems to get higher in the sky each day until it appears to travel around the whole horizon without setting. It does not get very high at noon, but the lowest it gets is at midnight. It continues to revolve in a spiral, gradually approaching the zenith and getting farther away from the horizon until about June 21<sup>st</sup> it begins to gradually spiral back to the horizon until it finally touches it at midnight, and then continuing in its southerly spiral the periods when it is visible become shorter each day until it is seen only a few minutes at noon for a few days and then sinks out of sight about the 9<sup>th</sup> November.

During the period of continuous day-light flying could be carried on for the full twenty-four hours as far as visibility would be concerned, and for a large part of the year the darkness is not sufficient to prevent flying, at least several hours per day, although it is probable that there may be several months when the temperature will be too low to permit flying, but whether flying can be carried on in temperatures much below zero on the ground remains to be determined only by actual experience.

Apparently the coldest season of the year is in February and March, especially after the sun has commenced to shine. The weather during the winter of 1921-22 and the following summer, according to the reports of the white men who were living at Salmon River and Pond's Inlet, was not very severe, and there were no gales or strong winds, and from May to the time the C.G.S. "*Arctic*" departed, September 8<sup>th</sup> there were practically no windy days and the sun was shining most of the time.

There was and always is wind close to the open sea, especially when the country near the sea is covered with ice or snow. This is caused by the difference in temperature between the air over the open water and that over the ice and snow.

Salmon River, being twenty miles or more inland from the open sea, although it is on the edge of a channel or sound, has an entirely different climate from that of the eastern coast of the island, even twenty miles away. The Sound remained frozen until September in 1922, and Salmon River was beyond the range of the local sea breezes and in addition had immediately to the south at least one hundred square miles of bare, rolling plains to radiate the heat received from the sun's rays, with the result that the sky in that vicinity was fairly clear of clouds all summer.

It would appear that flying would be possible from probably the let of May to the end of September, although this is perhaps a shorter season than may be found by actual experience. Until July 15<sup>th</sup> it will be possible to land almost anywhere on the ice if skis are

used, and after that date there will be many places on the ice and also many places on the surface of the ground where an aeroplane could land.

In Baffin Land there are many lakes in the interior, the ice on which could serve as landing places, or later on in the season the surface of the water could be utilized for flying seaplanes, although this season would be very short.

The fogs noticed in the summer of 1922 were all very low and were very local. The prevailing type of cloud was cirrus, but very thin and forming very little obstruction to the rays of the sun. Layers of strato-nimbus clouds were observed a few times near the coast at an altitude of about two to three thousand feet, and were seldom over one thousand feet thick. The visibility at all times was good except for one very noticeable peculiarity — fog clouds formed by the air from the open sea striking the cold hills. Low fog is frequent at certain times of the year along the outer edge of the stationary ice.

When even a slight breeze was blowing off the water a fog cloud would be formed for perhaps one-half mile in breadth all along the seaward edge of the hills or table-lands at various heights, but generally about fifteen hundred to twenty-five hundred feet above the sea level. The density and extent of this fog bank depended on the temperature and strength of the wind. With certain condition the fog settled low, but seldom was very thick vertically. When the sun is shining in the valleys or farther inland, snow may be falling from the fog cloud along the high ground near the sea. This fog cloud is very local and the position of the clouds in relation to the open water would give a very good indication of the direction of the wind.

## AIRCRAFT AND ACCESSORIES

The foregoing notes on weather conditions are some of the reasons why an aerodrome should be as far inland as possible from any large body of open water, on low bare ground where the air may receive as much heat from the sun as possible. It should be as much as possible sheltered from the north by high ground, but lower the ground towards the south, the better, as this will give longer periods of daylight.

Great care should be taken in the careful location of any aircraft base, and no location should be chosen within fifteen miles of the open sea, because if such a location is chosen it is certain that great difficulties will be experienced with fog and with winds. The more open or bare ground in the vicinity, the better, as this will tend to keep a clearer atmosphere and it will also offer more chances of game, which will be required for food. If motor transport could be utilized for transporting supplies over the ice it is probable that the best place for an air station would be at the head of some deep inlet with country free of high ground, and from what has been seen of the country it is believed that at the head of every inlet there is a certain area of low or fairly level ground.

The general type of aircraft recommended from the information gained in the short season of 1922 is an aeroplane equipped with skis, which may be changed for wheels when, or if desired. The ideal landing gear would be a combination which might be made somewhat

similar to the landing gear of an “amphivian”<sup>39</sup> [*sic*] so that skis or wheels could be interchanged at will. The aero plane is desired in preference to the flying boat because the season of open water is very limited, and the open water is generally at some distance from the shore, separated from it by ice, and the numerous pieces of black or rotten ice would always be dangerous to the thin hull of a boat or pontoon. A seaplane convertible to a land machine might be of some advantage in flying over the fresh water lakes in the late summer, but an “amphivian” would not be an advantage as the greater part of the flying season would call for landing on skis.

There are several reasons why an “amphivian” type of aircraft should not be chosen for work inside the Arctic Circle, although there are times and places where either a flying boat or aeroplane could be used. The great danger in using a seaplane or flying boat is caused by large numbers of small pieces of ice which are practically invisible and would, if struck by the aircraft, very badly damage the hull or pontoon. Owing to the temperature of the water being so near the freezing point much ice would form at times on the hull or that part of the aircraft coming in contact with the water.

It would also be difficult for the aircraft to approach close to the shore in the majority of cases, as there is quite often a ridge of ice at the water’s edge. Ice cakes drifted by the wind and tide would make it impossible to leave an aircraft moored in the open water for any length of time. In landing an “amphivian” on the ice there would always be danger of particles of ice puncturing the hull, and the weight and general shape of the hull would be against its use for landing on ice or gravel.

The only way a seaplane could be used to advantage would be a small type of seaplane kept on board a ship and lowered overboard as required, and flown from the surface of the water close to the ship and used for scouting purposes only. By its means a much greater knowledge of the ice conditions ahead of the ship could be ascertained, and very little difficulty would be experienced in connection with the formation of ice on the pontoons, because after each flight the ice could be removed by the application of steam or hot water. A seaplane might be used at times in the fresh water lakes in certain districts, because there it would be possible to pull the seaplane out of the water when not landing or taking off, as the majority of the fresh water lakes, although small, have very sloping shores. It would be useless to use seaplanes or flying boats for general work, using the surface of salt water.

Any patrols or flights more than twenty miles from the base should be carried out with two machines flying together. This is of the greatest importance in cross-country patrols in such a country, and no mistaken ideas of economy should be allowed to interfere with this most important principle. When it is considered that the means of travel on the ground are so limited and difficult, it may be understood how necessary it is to have two machines always within sight of each other, so that should one have trouble and be forced

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<sup>39</sup> *Editor’s note:* The report consistently uses the term “amphivian,” implying an amphibious aircraft that can take off and land on both land and water. I have left the word as it appears in the original.

to descend, the other may either lend assistance or may return to the base for whatever is needed to make repairs. The cargo which is absolutely imperative to be carried on all cross-country flights includes light but sufficient sleeping robes for each member of the crew or passengers, one week's rations, a small silk tent, a small gasoline or kerosene stove for cooking and heating purposes, a rifle with three hundred rounds of ammunition, two snow-knives, an ice chisel, black snow goggles and four light ice anchors and ice mooring wire cables. These articles should be as much a part of the equipment as the revolution indicator or pressure gages on the pilot's dash-board.

One Eskimo [Inuk] should always be carried on one of the two machines, as an Eskimo [Inuk] can find food and direction where a white man would be lost, starved or frozen to death.

As one of the chief uses for aircraft will be transportation, the machines will have to be capable of carrying several passengers and their baggage, in addition to the crew and the standard cargo, which may be considered part of the dead weight of the machine itself.

Flights of at least three hundred miles will be required, but possibly double this distance will be more satisfactory. In all long distance flights at least a twenty percent margin of safety must be allowed in calculating the fuel consumption.

It is considered that the best general type of aircraft would be a tractor aeroplane, carrying at least one thousand pounds of passengers or freight and using an air-cooled radial engine. It would probably be an advantage in many ways to use a single engine, although if a double engine machine such as Vickers Vimy were used it might be possible to taxi many miles on the ice with one engine, using an out-rigger ice rudder should one engine fail. Another advantage in using a twin engine machine is that there is a much better opportunity for taking oblique photographs straight ahead, as in a flying boat. One of the greatest uses for aircraft will be aerial photography in surveying the coast and interior of the islands, and to do this successfully it will require a clear field of vision ahead.

This may be obtained in the single aero-plane only by using a pusher type, and at the present time not many of these are in use, although hundreds of a suitable type must be available in England, namely the F.E. 2D, or F.E. 2B.

It is believed that an F.E. 2D two-seater pusher would make an ideal machine for photographic work in the North if it were equipped with skis. If the type of engine used previously in that machine were unsatisfactory, a proper engine could probably be installed with a few alterations, but at any rate the general type of the F.E. is the most suitable single engine machine for photographic work with an oblique camera, and it is certain that a great amount of this work will be necessary.

If gasoline and oil were cached at various points along the coast by a larger type aeroplane, the pusher could operate for long distances from its base with a much smaller fuel consumption than a twin engine machine.

With the exception of the need of a clear field of vision straight ahead, it is probable that the best type of machine for the first work in the Arctic will be a large capacity single engine tractor, such as the Bristol ten-seater or the D.H.34, but if it were not for the increased trouble of using two engines in such a cold climate, where transportation of fuel is such a large item of consideration, it is probable that the best all-round machine would be a Vickers Vimy or some very similar machine.

The whole question of the success or failure of flying operations in the Arctic regions depends on two things — the proper choice of machine most suitable for the work and a careful choice of the right type of personnel. Either one alone will, if neglected, mean almost certain failure. In the case of aircraft it is not sufficient to assume that because one type of machine has proved satisfactory in some other part of the world it will be satisfactory in the North. Due consideration must be taken of the work which aircraft will be required to perform and the conditions under which this will be carried out, and the greatest care must be taken in deciding on the type which is most likely to be the most efficient for that peculiar class of work under those unusual conditions.

### **Aero Engines**

It is believed that either water-cooled engines using an anti-freeze mixture in the radiator and properly installed in a closed compartment in such a manner that the amount of cooling air may be regulated, or an air-cooled engine, the cooling air of which is similarly controlled, could be used in the summer and possibly in part of the winter, but the best engine for winter use is probably a radial air-cooled engine with some means of controlling the temperature by regulating the amount of air striking the outside of the cylinders by means of shutters and deflectors. This can only be found by actual experience in the air. The general type of engine required is one that may be powerful without excessive consumption of fuel, compact and easy to overhaul, and the fewer cylinders and small working parts, the better. Small pieces of metal are apt to be affected by the excessive cold air which is to be expected during the winter time. It must be possible to start at low temperatures and must be such that if a landing is made away from the base it will not be subject to freezing up solid immediately and becoming impossible to start, and, above all, it must be of proven reliability in the air under normal flying conditions.

If a water-cooled engine is used it should be of the simplest possible design, with as few cylinders and small parts as possible. It is not known what the effect of such a range of temperatures will have on the small metal parts of the engine, but it is positively known that the fewer parts the better. An engine such as the German Mercedes, or the engine used in the American built thinker, J.L. 6, is recommended for trial.

It would be advisable to take several types of aero engines and have them installed on starting benches at the base and carry out a series of experiments in starting them and running them for short periods throughout the different seasons of the year.

While at the bases aeroplanes must be stored under cover, but small hangars should be used and should be located in sheltered places to offer as little resistance to the high winds which are reported to blow in the winter.

Provision should be made for them to be heated by coal stoves and they should be kept free of cracks to prevent snow or cold winds drifting through. The site must be carefully chosen and they must be very carefully erected. Snow walls shaped with a slanting edge from a very wide base would act as a protection from the wind by deflecting the air upwards, if properly made.

If sufficient loose rocks are available a protecting wall several feet from the wall of the hangar should be built of rocks, and the space between the two walls, if filled with snow, will act as a protection from the force of the wind and from the cold. Any buildings should be surrounded in this manner by a wide dead air space. This space may be filled with loose snow or roofed over, for just the air alone will act as an insulation from the colder air outside.

When it is necessary to leave an aero-plane in the open over night or for any period on the ice, it is necessary to anchor it in such a manner that the wind may not blow it over. Probably the best way to moor an aeroplane to the ice will be by cutting mooring rings in the ice and securing it to these rings by small strong cables. The method to employ in cutting this ring in the ice is to use an ice chisel or knife and scoop out two parallel troughs in the ice about four inches apart and about six inches or more in depth. Then a small hole or tunnel is cut from one trough to the other as deep down in the ice as possible. The mooring line is then passed through this hole and it is surprising the strain which may be put on it without it breaking away from the ice. Four such moorings would probably hold a machine in quite a gale of wind.

## Stores

The stores should not all be placed in one building but should be divided into several different lots under separate roofs sufficiently far apart to prevent fire spreading from one to the other. The gasoline should be stored at a considerable distance from the other stores or buildings, in cylinders, and moved to the hangar in small quantities as required. The greatest care must be taken to prevent fire, especially in the food and clothing supplies, and every precaution must be taken to prevent destruction of aircraft or buildings by wind.

A large number of two-gallon petrol tins of the type used in England for transporting gasoline and oil should be included in the stores, as these will be necessary to use in carrying fuel in the air to be cached at various places.

## Motor Transport

It is believed that motor transport of certain kinds could be used to great advantage, in certain seasons of the year at least.

the two types most suitable are Ford cars for ordinary light transport, and small caterpillar tractors for towing heavy freight on sleds over the ice. The light cars should be equipped with long skis under the body projecting six or eight feet fore and aft to prevent the car capsizing should one or two wheels sink into a crack. A Ford could be used on the ground as well as on the ice. These cars were successfully operated on the ice of Lesser Slave Lake before the War and it is certain that they could be used during several months of the year in place of dogs for the work required on an Air Force base. For moving heavy freight such as engines, gasoline, oil, spares, etc., and especially in hauling coal from the mines, small caterpillar or Ford tractors could be used, and in fact will be a necessity. By making runners for the cars and some method of grip for the rear wheels, it will probably be possible to travel over deep snow, as well as ice, provided it is not too loosely packed. Some type of portable bridge may be required to cross narrow cracks in the ice.

If motor transport can be operated it will be possible to save much time in the unloading of ships in places by allowing the ship to moor to the ice and unloading direct onto it instead of trying to unload at some particular point on the shore. The freight may then be moved after the ship has proceeded to its next port of call, or stores may be landed at a convenient point and transported farther inland when the solid ice has formed later in the season. In this connection it is highly recommended that immediate steps be taken to obtain all possible information regarding the operation of motor transport in the North Russian expedition during the War, and also information from the American Government regarding the operation of motor transport in Alaska at the present time.

## **Buildings**

It will be necessary to take material from the south for all buildings because there is no wood in the Northern Archipelago. Buildings should be carefully designed and the timbers and lumber cut to proper sizes before being shipped from the south. They should be of simple design and if possible made up in sections so that they may be easily and quickly put together by men who are not necessarily expert carpenters. The greatest care must be taken in the proper inspection of all lumber or building material before it is placed on the ship, because poor material may mean life or death in the Arctic region.

Buildings should be low and must be built with double walls in order to provide a dead air space for insulation from the cold. Both inner and outer walls must be lined with some wind proof material, such as thick tar-paper or roofing material. It is important that this dead air space be built over the roof as well as the walls of the building. This does not apply to buildings used for store-rooms only, but for living quarters. Two walls may be sufficient, but if a third wall were built it would give a much greater insulation effect as there would then be two dead air spaces between the cold outer air and the inside of the building. These dead air spaces should be at least eight inches apart. When sufficient snow has fallen to form blocks, a snow wall should be built all around the buildings at a distance of about six or eight feet. This may or may not be filled in with loose snow. Snow should be piled over the roof because that is the part from which most of the heat is disbursed into the outer air.



It is important that a small room be built outside the entrance to the living quarters to be used as a store-room for all outer garments, which should then be always removed and left there upon entering the building. This will prevent the snow from being melted by the warm air and then being frozen again and making the garments damp and stiff. This will also prevent much of the heat being lost every time the door is opened. There should be two stoves, one which may be used for cooking and the other for heating alone. If it is possible to obtain coal, and it is believed that in many places coal will be available, cooking stoves designed for coal fuel should be used, but if coal has to be imported by ship the cooking should be done with kerosene oil stoves, and base burner type of coal stoves used for heating purposes.

The hangar for the aeroplane should be as small as possible, built in sheltered places and heated by coal stoves. In cases of excessive snowfall care will have to be taken that the weight of the snow does not break down the roof. Rock or snow walls should be built around the hangar and other buildings to prevent destruction from the winds. This will also tend to make life more comfortable in the buildings as it will be a protection from the cold winds. All buildings should be carefully designed, and for an ordinary base would have to include hangar, two store-rooms and living quarters for officers and men. The photographic workshop, navigation and meteorological offices and probably the wireless room could probably be under one roof, although if much wire- less work is to be carried out it would probably be advisable to have a separate building for wireless operating rooms and workshops, etc.

Much extra material of all descriptions should be included in the shipment in order that if any parts were lost or damaged, or used for any other purposes, there would still be a sufficient extra supply to draw on. All buildings will require artificial lighting in the winter, and this can best be done by using kerosene oil, although gasoline gives a better light, but gasoline is too dangerous to be used when it is considered that loss of living quarters by fire would mean almost certain death, or at least great hardships. Therefore, every precaution should be taken to prevent fires, and though kerosene may not give a very bright light it is fairly safe, and during about eight months of the year very little artificial light would be required. An electric lighting plant should be installed at any large base, using coal for fuel if more economical than gasoline. Provision should be made for plenty of paint for all the buildings as this will be a great protection to the material, as well as aiding in the appearance of the station. If only one or two machines are to be used it might be advisable for the first season or two to use tent hangars, one tent to each machine.

## TRANSPORTATION

The present method of transportation to the islands of the Northern Archipelago, or that part north of Hudson Strait, is to travel by ship from Halifax or Quebec, generally the latter, starting out about the middle of July and proceeding through the Strait of Belle Isle to the southwest coast of Greenland. The coast of Greenland is then followed to approximately latitude 74° or the south end of Melville Bay, then the ship may either proceed northwesterly to Ellesmere Island, or southwesterly to Baffin Land or Lancaster

Sound. The reason for travelling northerly along the western coast of Greenland is that there is a northerly current flowing all along the west coast of Greenland, while along the east coast of Baffin Land and Labrador there is a southerly current which fills the waters there with thousands of icebergs and large areas of ice-flow, which make it in many places impossible for a ship to navigate for months at a time. There is also more fog along the eastern coast of the Canadian territory.

At the usual point of crossing Baffin say, roughly latitude 74°, there is generally open water between the drift ice, which is commonly known as the middle pack, and the more northerly ice which has not yet started to travel south with the current. In many places it is always necessary for a ship to work its way through fields of ice. These ice fields may extend for thirty or forty miles and may consist of large pans of ice sometimes several square miles in area, but more often a few hundred square yards, and anywhere from six to twenty feet thick. These pieces of ice are continually grinding together and separating by the force of the winds and waves, and a ship must be built to withstand heavy pressure on all sides if it is to be used in attempting to pass through narrow leads of open water to the ice-pack. Even from the tallest mast of a ship it is impossible to see more than a few miles ahead, and the only way of finding out whether open water extends in the proper direction is to keep on following the open water as far as possible, and much time is thus lost in following up false leads. A ship may travel for twenty or thirty miles in the right direction only to find solid ice ahead and then have to return and go through the same performance with possibly the same results time after time.

Were it possible to ascend several thousand feet it is probable that the proper leads of open water could be determined in a very few minutes and the course of the ship laid out accordingly, so that very little time would be lost. It has been noted that although very rough sea may be found in the open water, after entering the ice-pack for a few miles there is practically no noticeable wave movement, although the action of the sea tends to keep the cakes of ice moving in their relation to each other, and sometimes in a few hours cracks and leads of open water appear where previously it looked like solid ice. It is by taking advantage of these movements that ships at the present time work their way from point to point through the ice-pack, but it is believed with aerial observation there would be little necessity of actually entering the ice-pack, and that in this way even large ships of ordinary strength would be able to reach many of the harbours of North Baffin Land, North Devon and Ellesmere Islands. It is not likely that these ships would be able to dock close to the shore such as is the custom at the present time, but this is a mere detail considering the difficulty of getting cargoes into the region at all at the present time.

These waters have been navigated for many generations by whalers and Arctic explorers, first by heavily built sailing ships and later combined sail and steam, and it is only within the last two or three years that any ships have been used employing steam only as their motive power. The whalers have practically ceased operations, partly because whales are becoming very scarce but chiefly because the price of whalebone and whale oil has decreased to such an extent that whaling operations can no longer be profitable carried

out. The whaling ships were generally from Scotland and the New England States. The ships at the present time visiting the islands sail from Quebec or Halifax and make one trip per year, while the whalers and past exploring expeditions generally spent one or two winters frozen in in some harbour.

During the summer of 1922 three ships visited Pond's Inlet - the "*Arctic*," the ship of the Canadian Government expedition, the Hudson's Bay Company's Steamer "*Bayeskimo*" and a small ship belonging to the Arctic Gold Exploration Company, which outfitted at Halifax and after leaving Pond's Inlet sailed for Scotland. It was a small two-masted sloop with an auxiliary internal combustion engine. The largest and most modern ship was the Hudson's Bay Company's Steamer "*Bayeskimo*." This was an up-to-date steel ship with special reinforcements placed in certain places after the ship had been built as it was not originally designed for Arctic waters. It had no real difficulty in passing through the navigable ice fields and had a great advantage over the "*Arctic*" by having double the latter's speed. It is not probable that it will be possible to use the Hudson's Bay Company's boats for transportation of Government material to the North, so that for the present time the only boat that can be considered for transporting aircraft supplies will be the "*Arctic*," but it is certain that if any extensive aircraft operations are to be carried out in this country it will be important to have a proper ship, because the supplies for an air station alone, if of any size, would be all the "*Arctic*" could handle at the present time, and even at that she will require better engines. If a new ship is obtained by the Canadian Government it would be advisable to take into consideration the necessity of providing proper deck arrangements for a small seaplane to be carried and used for scouting purposes. It is also recommended that steam alone be used and that sails are not bothered with at all. If a ship is properly equipped with engines it is only a waste of time and energy bothering with sails. It is most important to have all supplies and all items of the cargo properly packed with as little bulk as possible.

It is certain that the methods of Arctic transportation will have to be completely revolutionized before any great headway can be made in Arctic navigation. Small slow ships will have to be discarded and speedy, large, up-to-date steel steamers will have to take their place in travelling from civilization to at least the central parts in the Arctic islands. It will probably be advisable to have one or two chief centres where these larger ships could discharge their cargo, and then these supplies could be distributed from place to place by a ship such as the "*Arctic*," which would remain in the North all the time. It might be possible in this way to make at least two trips per year, or by utilizing the harbour of Godhavn on Disko Island it might be possible to ship material there early in the spring and then move it from that point to the Canadian territory during the open season, and in this way perhaps three or four shiploads could be landed in Canadian territory in one summer by one ship.

The "*Arctic*" is too small and too slow a ship to use between Quebec and Pond's Inlet if it is to supply air stations in addition to its regular work, but it would be a good type of ship to use in the various local waters of the Archipelago as it could be used as a supply ship for

several months of the year, and especially if it can be found possible to transport supplies from the ship to the shore over the ice by motor transport, much time may be saved and many stations may be supplied each season.

It will probably be found necessary to either blast or saw a channel or dock in the edge of the solid ice in order that the ship may unload the supplies direct from the deck to where they may be loaded onto the motor transport.

It is possible that Dundas Harbour on North Devon Island would be a suitable harbour for a centre of distribution as it is on Lancaster Sound and is one of the first harbours in the North to become clear of ice, and although the harbour has not been fully charted, some soundings were taken in 1922 which would indicate that the harbour would be suitable for fairly large ships, and the inner basin is deep and well sheltered. If it were possible for the "*Arctic*" to winter here it would be possible to commence distributing supplies to the various posts possibly long before a ship could come in from the south. It is quite likely that coal could be mined locally on some of the islands during the winter and used on the ship during the summer, so that no fuel for the supply ship would have to be brought up from the south. The ship's crew could get out the coal during the winter. The "*Arctic*" is built for wintering in the northern regions and would make an ideal supply ship.

The ship necessary to fly between Quebec and the Archipelago should be much larger and must have more power and speed, but by using aircrafts for location of open water it should not have to be especially heavily reinforced. It might be possible to use a captive balloon for observation purposes, as a small balloon could be sent up to about two thousand feet and towed along by the ship, but it might be found more trouble than it was worth, although it would be far better than nothing at all. The small seaplane scout, it is believed, would give much better results and would give less trouble to operate.

It might be noted here that for Arctic navigation on the open sea or straits the ship should be supplied with a bubble-sextant to be used in times of low fog when the sun may be visible but the horizon too indistinct to be used. During the summer of 1922 there were many occasions when for several days at a time it was impossible to read altitudes of the sun with an ordinary sextant, although the sun itself was visible. Experiments were carried out with an ordinary hand level clinometer and very good results were obtained in both latitude and longitude observations, but much more accurate work could be done with a proper bubble-sextant such as is used on airships.

Another thing which is imperative is that any up-to-date ship must carry is the gyroscope compass, which gives true bearings. The ordinary magnetic compass is very inaccurate because the needle not only acts very sluggishly owing to the proximity of the magnetic Pole, but the amount of magnetic variation changes every few miles and is continually changing year by year, so that no accurate charts are available showing the amount of variation to be used in the dead-reckoning calculations for the ship's position. The existing charts are very inaccurate and very incomplete, so that taking it all round navigation in the

Arctic waters is very different from navigating in the open seas where most of the marine traffic is carried on at the present time. There are many places in the Arctic Archipelago where the compass needle points, not north, but west, and even southwest and south. This is because the North Magnetic Pole is not coincident with the North Geographical Pole. The former is approximately located about latitude 70° 20' north, longitude 96° west.

It would be advisable at the present time to prepare plans of organization of Government ship transport to the Northern Archipelago in the event of the necessity of rapid development of the mineral resources of the country in the future, and some experiments with aircraft co-operation should be made as soon as possible.

## PERSONNEL

If aircraft is operated in the North by the Government it is probable that all the personnel will be supplied by the Canadian Air Force, which will probably develop its own policy regarding the choosing of personnel and of regulations connected therewith, but there are several points which might probably be just as well considered in a general way. All men detailed for Arctic work should be healthy and strong, neither too young nor too old. They should be volunteers and men whose previous experience has fitted them in some manner for life under such conditions. No man should be sent North unless he has previously demonstrated to the satisfaction of the officer in charge of the expedition that he is qualified physically, mentally and temperamentally for the work he will be required to do. The success or failure depends on the type of individual, and the greatest care must be taken in choosing men of the proper character, as well as those having the proper technical qualifications.

The officer in charge must have had at least one year's previous experience in somewhat similar conditions before being placed in charge of a detachment. Pilots and mechanics should, in addition to their ordinary qualifications, have as many other technical qualifications as possible in order that the number of persons actually required to carry out the various phases of the work will be as low as possible. Everyone will be called upon to do a certain amount of manual labour. This is an absolute necessity in order to keep physically fit.

There will be considerable coal mining to do in the wintertime as it is not likely that the Eskimos [Inuit] will be of very great assistance as workmen, although their services should be utilized as much as possible, but two good white men will do more in a week than half a dozen of the best Eskimos [Inuit]. It is recommended that the Air Force personnel be retained in the North for at least two years and that fifty per cent of new personnel be taken in each year. This is in order that a man may have one year's training with men who have had some experience in the North. It is also recommended that all mechanics be given double the ordinary rates for their rank, or it might be advisable to have no distinction in pay of the ranks but make it a flat rate of six dollars per day. The reason that these men should receive extra pay is that they will be called upon to perform, not only the duties in connection with their regular trade classification, but all technical and manual

work which may be required around a station. It will be necessary for them to work at all hours of the day and night during certain seasons of the year. They will have to contend with living conditions and put up with far greater hardships than men at the ordinary stations farther south, as they will be isolated from their friends and relatives for two years and will have very little recreation or fellowship with other white men. In addition to this they will be out of touch with their trades in the Air Force for this length of time and consequently when they return they will be more or less out of date as far as their trades are concerned. All these points should be taken into consideration and should be pointed out to the men before they are asked to volunteer for this work.

It is believed that, provided there are proper inducements, the right type of men will volunteer, but it is certain that there will be many of the wrong type of men who will volunteer, but it would be worse than useless to send up unknown or untried men, as they cannot be replaced for at least another year and would do more harm than anything else could do. It would be better to have two real good men at six dollars a day than to have six average poor mechanics at two or three dollars per day. Each man of the detachment must be more or less a jack-of-all-trades but, above all, he must be a willing worker and take an interest in his work and in all the work of the detachment.

It is considered that there should be a definite number of machines at each base, for instance four machines should be an average establishment for an ordinary base. This would permit two machines being kept on active service all the time. It must be borne in mind that two machines must always fly together and two extra machines should always be on the base; thus there would be two machines on active service and two in reserve. There should be two active pilots and one reserve pilot to each base of four machines, and it is imperative that there must be this reserve pilot. There should be two mechanics to each machine, but these men will also act in various capacities, as will the pilots. There must be at least two photographers and two wireless operators at each station. There should be a doctor. It is probable that the doctor could also carry out medical duties for the whole station, that is, supply medical treatment if required to the Eskimos [Inuit] in the neighbourhood and the trading or Mounted Police Posts.

It is imperative that all men take daily exercise to keep in good physical condition, and one of the inducements to take exercise in the open air is to permit a certain amount of trapping to be carried on during the winter and the men should be allowed to retain any furs which they may catch. This will not take up a great deal of time but will ensure them taking a certain amount of exercise in the open air every day, and give them something to be interested in, in addition to their work.

The pilots, in addition to being expert pilots, must have a thorough knowledge of Arctic navigation, because without a knowledge of navigation it is almost impossible to travel anywhere in this region unless guided by Eskimos [Inuit]. They must be thoroughly acquainted with their engine and with their machine, so that they may perform running repairs if required. They must be willing to perform any duties whatsoever which may become necessary. They should have a practical knowledge of photography and wireless

and must be of the type of man who has a high sense of responsibility, and must take a great interest in the development of aviation inside the Arctic Circle.

The general qualifications of the other ranks have already been dealt with. Each member of a detachment must realize that he has the opportunity of materially assisting in the advancement of not only his own particular trade, but the whole of the science of aviation in practically a new part of the world.

## NAVIGATION, WIRELESS AND PHOTOGRAPHY

It would be foolhardy to attempt to fly or travel in any manner for any great distance in this northern country without knowledge of navigation and the means of applying that knowledge. Each aero-plane should carry a sextant or a small transit, and an accurate watch, together with the necessary tables for working astronomical observations. In a land where there are no maps it is impossible to follow landmarks alone over great distances, and all travel has to be carried out just the same as is done on a ship at sea. An accurate record is kept of distances travelled and the directions, so that it is possible to calculate points on the journey in their relation to the starting point.

Navigation in the Arctic Archipelago becomes more difficult and complicated in some ways owing to the peculiar geographical position in relation to the true North Pole and the North Magnetic Pole. Positions on the earth's surface are generally located by latitude and longitude. The latitude is the distance in angular measurement that the point is north or south of the Equator, the Equator being an imaginary line drawn round the earth's surface midway between the North and the South Pole, thus if a point is said to have latitude  $80^{\circ}$  north, only the distance from the Equator or Pole is known and the point may lie anywhere on the small circle of the earth  $80^{\circ}$  north of the Equator and parallel to it. It is therefore necessary to have another system of imaginary lines drawn at right angles to the Equator. These lines pass through the North and the South Pole, cutting the Equator at right angles, and are called meridians of longitude. If a point is said to be in longitude  $75^{\circ}$  west, it is meant that it lies anywhere in the meridian which is  $75^{\circ}$  west of the initial meridian, or the meridian which is taken as the starting point. This has been accepted internationally as the meridian passing through the Royal Observatory at Greenwich, England. A point  $75^{\circ}$  west longitude might be anywhere between the North and the South Pole on the 75th meridian, but if its latitude is also given there is only one point where the meridian and parallel of latitude bearing those numbers given would intersect, and the point is therefore accurately located. If two points are thus located, even if the intervening country is unknown, the distance and direction between them can be determined by calculation.

To determine the latitude and longitude of these points two methods are employed, one, called the dead-reckoning method, is to determine the points by calculation of the courses and distances connecting them, but the more accurate method is by taking observations of celestial bodies in relation to their distance from the horizon or from each other. Latitude is found by measuring the greatest distance that a celestial object attains from the

horizon, and is generally found from the sun at noon, although it may be found equally well from the maximum altitude of a star.

Longitude is found by determining the local time from the sun or from a star by measuring the altitude of the celestial object chosen several hours before or after it is at its maximum altitude. The time thus obtained is compared with the accurate time of the meridian at Greenwich and the difference between the two gives the difference of longitude in time between the point of observation and Greenwich.

By using a sextant and taking readings on the altitude of the sun, positions on the earth's surface are located to within a mile of their absolute latitude and longitude independent of what the magnetic variation may be, or independent of any courses connecting the points. The observation for longitude will also give, with a little extra calculation, the true geographical bearing of the celestial object, and if a magnetic bearing is taken at the same time with the magnetic compass, the difference between the true bearing and the magnetic bearing, which is commonly known as magnetic variation, may be found and may be applied to the correction of any courses travelled or required to be travelled.

On ships at sea the usual method employed in measuring altitudes of the sun is to measure the angle between it and the sea horizon, but when the horizon is obscured by ice or by land it becomes necessary to employ what is known as the artificial horizon. The artificial horizon is simply a mirror placed perfectly horizontally and the angle is measured between the true image and the inverted image shown on the horizontal mirror. In order to get a truly level surface it is found best to use a small trough of mercury, shielded from the wind by a specially designed glass cover. Several other reflecting surfaces are used besides mercury but generally this is most convenient and reliable. It will be necessary for aircraft to always carry an artificial horizon, as well as the other instruments already referred to.

It has already been stated that the compass is a very unreliable instrument in the Northern Archipelago because many of the islands lie to the north of the North Magnetic Pole, and it is probable that in many places the compass needle will point straight south. During the summer of 1922 the greatest variation noticed was about  $110^{\circ}$ , so that the compass there was pointing approximately southwest. By using a gyroscope compass much of the difficulty of direction finding will be overcome.

It will be very important for the navigator on the aeroplane to keep an accurate record of all courses and distances flown. It will also be necessary in connection with the surveys of the outlines of the islands and probably of the interior, to land fairly frequently and take astronomical observations for the accurate determination of positions of prominent objects on the earth's surface. Many observations will have to be taken to determine the magnetic variation throughout the whole territory in order that ships not equipped with gyroscope compasses can navigate with safety. All existing charts will have to be revised as far as magnetic variation is concerned.



It is recommended that one method which might be employed on the preliminary survey of sea-coast and bare ground in the interior would be to determine the geographical position of prominent objects twenty to thirty miles apart by astronomical observations, and have the intervening country located by aerial photographs, and if wide angle oblique aerial photographs are taken at right angles to the line of flight a great deal of territory could thus be explored.

In connection with air navigation it will be necessary to have a fairly complete meteorological station at each base. One of the most important things is a pilot balloon outfit. This consists in the instruments required to fill a small rubber balloon with hydrogen at a certain pressure, which is then set free in the air and ascends at a uniform rate of five hundred and twenty-five feet per minute, and is followed by a special type of transit theodolite and readings of altitude and direction are taken every sixty seconds, which would, when worked out on a special instrument, give the velocity and direction of the wind at various altitudes.

It may not be generally known that air currents at different altitudes have different velocities and direction, and while the wind on the surface may be south, the wind at an altitude of a mile may be due north and perhaps double the velocity, while at a height of two miles the wind may be blowing only one half the velocity and from the west. There is a great relation between the barometric pressure, the temperature and the air currents at various heights, and although the science of forecasting upper air currents is still in its infancy, sufficient is known to materially assist in air navigation.

It is often possible to gain much time by taking advantage of the knowledge of the winds at various heights, as a round trip journey between two points may sometimes be made with a favourable wind in both directions by flying at two different heights. Each base will require to be equipped with recording instruments such as [an] anemometer, which is an instrument for recording the velocity and direction of the surface wind, a barograph for automatically recording the height of the barometer, and a thermograph for recording the temperature. These instruments can be operated by the Air Force personnel without necessity of a meteorological officer being specially employed on the station. When a proper network of wireless stations is connected up with the outside world, regular weather reports and ice reports will be sent south or to the ships for purposes of aiding in the forecasting of weather conditions. On each aircraft base there should be a wireless station installed which would be able to keep up wireless telegraphic communication between other bases as well as with the aircraft. When the complete network of wireless stations is established it will be possible to relay messages from Ottawa through to the most outlying stations, but the most important use will probably be intercommunication between the various Government stations or the settlements throughout the Northern Archipelago. These wireless stations would be operated by the Royal Canadian Corps of Signals as this Corps handles all wireless communication in co-operation with the Canadian Air Force.

It is desirable that wireless telephone sets be installed on each aeroplane, which will permit intercommunication between planes while in the air, and will also permit communication with the bases up to certain limits.

The reception of wireless time signals is necessary for navigation and surveying, and small receiving sets suitable for this type of reception can be carried anywhere a person can travel. Even if standard wireless stations are not established in the North, it is highly recommended that all Government stations there be supplied immediately with small type wireless receiving sets suitable for the reception of time signals and daily news bulletins, and that some of the personnel of each such station be instructed in the Morse code as used by wireless stations. Such a receiving set could be made for less than fifty dollars and could be operated for one year for less than thirty dollars, as the only expense would be dry cells. The aerial for such a wireless set would give very little trouble to erect as it need not be very high.

A wireless receiving set was carried during the summer of 1922 and daily time signals and world news bulletins were received throughout all parts of the voyage. The receiving apparatus consisted of a simple tuning circuit using one vacuum tube detector with no additional amplification, and the aerial used was fan type and made of insulated bell wire, the span at the top being twenty-five feet and the height about twenty-five feet. With this, loud signals were received from stations in Europe and in the United States, and when the ship's aerial was used still louder signals were received. The climatic conditions appeared to be very favourable for the reception of wireless signals and the mountainous country seemed to have very little effect on these incoming signals. It is probably that during the wintertime the atmospheric conditions would be even better and it is believed that throughout this whole territory wireless telephony could be carried out over much greater ranges than farther south.

The chief press despatches which would be received in the Northern Archipelago each day would be as follows: From 6.30 to 7 a.m. and p.m. world's news in English from Berlin; three times daily for approximately one-half hour periods news in English from Leaffield, England; and from 10 to 10.30 p.m. the American Navy press from the Naval Station at Annapolis, U.S.A. Time signals for scientific purposes may be received from the following places:-

FROM	AT
Berlin, Germany	7 a.m. and 7 p.m.
Honolulu	7 p.m.
Annapolis, U.S.A.	Noon and 10 p.m.
Balboa, Panama	1 p.m. and 5 a.m.
San Diego, Cal.	3 p.m.
Bordeaux, France	3 p.m.
Lyons, France	3 a.m.

These stations send time signals for five minutes previous to the hours designated, and with an accuracy of a few one hundredths of a second.

It is believed that it would be possible for arrangements to be made for any Government employees who are intended to be sent North to receive instruction in wireless reception from the Royal Canadian Corps of Signals. While there is practically no limit to the distance from which wireless signals can be received from high-powered stations, the transmitting sets which would likely be used for aircraft co-operation would probably not have a greater range than three or four hundred miles, although of course much greater distances can be covered by more extensive and larger transmitting stations.<sup>40</sup>

One of the chief uses for aircraft will be in connection with aerial photography, for by means of photography wide areas of the country can be explored at leisure and all the records are kept for future reference. When a country is explored without the aid of photography, ninety per cent of it is overlooked because the eye cannot permanently record what it sees, and especially in a cold country it is not convenient always for the explorer to write down everything that he sees, and other new views tend to obliterate much from his memory. But with a camera, once the photograph is taken it may be enlarged and the details searched out at leisure. Large areas will be covered and will be of the greatest importance in connection with the making of maps and charts, especially if used in conjunction with astronomical observations taken at prominent points along the surface of the island.

There are two kinds of photographs used in aircraft. One is known as the vertical photograph and the other as the oblique. The vertical photograph is taken by a camera which is hung in the machine so that the plate or film is horizontal or parallel to the plane of the horizon. These photographs are generally taken in such a manner that a series of the prints may be connected and form a continuous photograph of fairly long stripe of ground. This is theoretically a map of the country flown over, but owing to inaccuracies caused by the axis of the camera not being truly vertical and by the aircraft not always being at a constant height, certain corrections have to be made in order to reduce this to one uniform scale. Only a narrow strip of the territory immediately under the aircraft is photographed, although by using lenses with a wider field of vision this may be increased to a considerable extent, and of course the higher the machine is flown the greater will be the area photographed.

The other style of aerial photograph is known as the oblique. This is taken with a camera which is free to move in any direction and the photograph is taken with the axis of the camera pointing about 20° below the horizon. A large area is thus covered but it is not possible to reduce this to scale without considerable calculation, but it is invaluable for getting a general idea of the topography of the country at some distance from the line of

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<sup>40</sup> *Editors' note:* The original report included a "map of a suggested network of wireless stations to connect up with Ottawa by relays."

flight of the aircraft. These photographs may be taken either with a camera fixed to the machine or with a camera free to move round and operated by some person on the aircraft.

By taking photographs of the same area with a few seconds interval it is possible to get a stereoscopic effect and when viewed through a stereoscope contours may easily be seen. Aerial photographs should be taken as frequently as possible over the same areas and every time a flight is made photographs should be taken to show the changes in the appearance of the surface flown over, especially to show the areas of bare ground and the ice movements. The development of many of these photographs should be done at the base, but large films which are intended to be used for surveying purposes should be sent to Ottawa for development. Each base will require a small photographic laboratory for local work. Experiments should also be carried out using a moving picture camera in the air for recording ice flows and open water.

During the summer of 1922 several dozen photographs were taken with a small aerial camera and the results obtained would indicate that the visibility is favourable for aerial photography but much more experimental work is advisable as it is believed that one difficulty to contend with will be the glare from the snowfields, or the ice, making it difficult to record smaller details of the white surfaces. This will probably be overcome by experimenting with various light filters or shades, but it will be necessary to use a filter which, while being strong enough to absorb the glare from the snow, will not be strong enough to obscure the details of the surface of the bare ground. It is important that all aerial cameras employed on this work be fitted with a diaphragm which will make it possible to obtain the exact focal centre of the photograph.

## FUEL, FOOD AND CLOTHING

One of the most important questions in any station in the North will be the supply of fuel, but it is believed that by a proper choice of location and by a proper investigation of the fuel supplies of the country it will be possible to find plenty of local coal. It is well known that there is a large supply of coal available at Salmon River, Pond's Inlet, although it is believed that this coal area, or a certain part of it, has been leased or granted to the Arctic Gold Exploration Company. There are many other places where coal seams have been noted and it is probable that many more coal fields can be found, so that if a local coal supply can be found available one of the greatest difficulties of work in the North will be overcome. Coal could be mined during the winter and freighted out sometime during the year, probably by utilizing motor transport.

There is a type of heather or moss which grows wherever there is bare ground, and has very good burning qualities. This is used to a great extent by the Eskimos [Inuit] as they burn it by itself and also use it as a wick for their seal-oil lamps. It is believed that this can be pressed into bricks while damp and would make a very good hot fire when dried, although it would probably burn up very quickly. If coal is sent north from the south it should be carried in sacks, Gasoline and oil for aircraft should be transported north in

casks or cylinders, but it should be transported in the air in two-gallon tins similar to the tins used for that purpose in England.

For any extensive aircraft operation a large amount of gasoline and lubrication oil will be required and it would be a great advantage to have some source of local supply.

Indications of such a supply have been found on Bathurst Island, where analysis shows oil shales yielding one hundred and forty gallons of oil to one ton of shale. This might sometime be developed and in time would supply ail the fuel required for aircraft and motor transport in the worth, even if no better oil producing areas were discovered. It is recommended that oil stoves be used for cooking purposes unless there is a plentiful local supply of coal. Gasoline lamps are not recommended owing to the danger of fire through careless handling, not so much of the lamp as of the gasoline. Where sufficient fuel is available it would be much more convenient in every way to have a local electric lighting plant installed, which would be suitable for the illumination of all of the buildings on the station, and by using a small steam plant and utilizing local coal it might be possible to keep this running all the time required, for, while it will be required almost twenty-four hours a day for perhaps four or five months of the year, the remainder of the year it will not be required at all.

The food supplies should include much vegetable matter and substances containing much fat and sugar. Very little salt pork or salt beef should be used. Concentrated foods will be required to be carried on all journeys in the machines. Throughout the greater part of the year it will be necessary to melt snow or ice for water, but during the summer season there are many streams of fresh water as well as many pools of fresh water on the surface of the ice.

It should be possible to obtain supplies of fresh meat of various kinds, such as caribou, bear and seal. It will also be possible to get large supplies of salmon if attention is paid to procure them during the proper season, and quantities of them could either be salted down, dried or frozen. Frozen fish could be stored in local icehouses or, if transported and stored near the perpetual ice, there would be no difficulty in keeping them in good condition indefinitely. It is probable that other kinds of fish could be obtained at various parts of the islands.

It will be found necessary to carry extra stores of food, clothing and various small articles, such as tools, ornaments, etc., for the purpose of trade with the Eskimos. Any purchases, or payment for any work performed by the Eskimos, would be paid with this material, as at the present time ordinary currency is of no value for trading purposes.

### **Clothing**

The clothing worn by all aircraft personnel should be as much as possible similar in every way to that worn by the natives of the islands, with such improvements as may be found advisable. The best material for all clothing is either caribou skin or seal skin tanned with

the fur on, and while woolen clothes are satisfactory to a certain extent, it is generally agreed that skin clothing, for at least the outer garments, is much to be preferred.

The usual clothing worn in the North, by the natives [Inuit] at least, consists of two suits of fur garments, the inner one worn with the fur inside and the outer one worn with the fur outside. The foot covering universally worn is made of seal skin sewn in such a manner that the boots, or kamiks as they are called, are absolutely water-proof. They reach almost to the knees and are made large enough to permit several pairs of socks being worn. These socks generally are made of seal skin with the fur inside. If woolen socks are worn care must be taken that the socks are not all the same size. The outer ones must be a larger size than the inner, otherwise there will be a tendency to cramp the foot and stop circulation, and cold feet will be the result. The seal-skin boots are absolutely necessary and are worn by all persons at all times. The sewing on them is very carefully done and all repairs to the boots are made by the Eskimo [Inuit] women. It will therefore be necessary to employ at least one Eskimo woman [Inuk] at each base for the purpose of looking after the repairs of boots and other skin garments. The soles of these kamiks are made from the large bearded seal locally known as the oogjook, and will stand a great deal of rough wear on the ice, but of course will not stand very much travelling over bare ground. Knee-length rubber boots should be supplied and it would be advisable to take a sufficient number of ordinary heavy boots for wear when travelling in the interior or working around the coal mines. They should be large enough to permit a sufficient number of heavy socks being worn. During the wintertime it will be necessary to wear kamiks all the time.

The outer jacket is generally made of caribou skin, although it is also made of seal skin. This is a large pullover coat with hood which may be pulled up over the head, the edges of which should protrude several inches in front of the face. This projecting part of the hood acts as a protection from the extreme cold air during the winter as it acts as a dead air space and the cold air directly in front is partly warmed by the breath. The leather or skin garments have the valuable property of keeping the wind from penetrating and are therefore much warmer than any garments of wool. Garments worn in the open air during the wintertime should not be brought into a warm room but should be taken off outside and have the snow shaken off, and left in the cold air but away from the reach of the dogs. It will be found that when garments are brought into a warm room the fine particles of snow in the fur soon melt and make the garment damp and they are then frozen stiff when taken into the cold air again. The mitts worn should be roomy and of two pieces. The inner mitts should be of wool and separate from the outer covering of smoked, tanned leather. Each person should be supplied with at least two sets of all garments, especially mittens and socks, and care should be taken that garments worn during the day are taken off and dried in the evening. Clean dry garments are essential for warmth.

## **Recreation**

All persons on an aircraft station in the Arctic would necessarily be away from all ordinary amusements or recreations and it would be very necessary to provide means whereby it would be possible for them to have various other interests besides their everyday work.

This will be a great assistance in keeping up their spirits and they will give better service and take greater interest in their work if they have some other things to think about. Guns and ammunition should be provided. Books and games should be provided, as well as gramophones or other musical instruments. A small wireless receiving set to obtain news of the world would be of great interest if a regular wireless station were not included in the general equipment. It is recommended that each base be supplied with a complete library of books of former Arctic expeditions, as these are of the greatest help in showing how other people overcame difficulties such as they themselves will probably be meeting from time to time. This would also be of historical and geographical interest. It is also recommended that a complete *Encyclopedia Britannica* be included in the library of each base. Text books on various subjects connected with such a base should be included for reference purposes. Books on the Eskimo and dictionaries or grammar of the language, if available, should also be supplied.

## ESKIMOS

It will be necessary for the personnel of an air station in the North to learn the language of the natives of the country - the Eskimos [Inuit]. The country is not very thickly inhabited but the various tribes of Eskimos [Inuit] scattered throughout the country speak practically the same language. It is true that there are various local dialects, but these are only slight changes made in the general language which is spoken from Greenland to Alaska. There are quite a few Eskimos [Inuit] who speak a little English, but it is generally very poor English, just as the so-called "Eskimo" that a few white men speak is really very poor Eskimo [Inuktitut]. The Eskimo language [Inuktitut] itself is really a wonderful language, with innumerable forms and rules of grammar, etc., but it is not always used properly by many of the more ignorant natives.

The language has been standardized in Greenland and has been reduced to writing, using the ordinary Roman letters with two or three additional letters to designate the peculiar sounds not covered in the English alphabet. On the Canadian aide, however, the system of writing is known as the "syllabic," and this system, whereby syllables are designated by certain characters, with the vowel changes shown by the relative position of the character, was originally invented by the Rev. Mr. Evans, Missionary to the Cree Indians in Manitoba, and was later expanded and adapted to the Eskimo tongue by other Missionaries. Several religious books have been translated and written in this syllabic system and have been distributed throughout practically all of the tribes. This system of writing is very quickly learned as it is really very simple, and is understood by practically all of the Eskimos [Inuit], more especially the woman. Nearly all Eskimos [Inuit] are able to write in this manner. The greatest help in standardizing a language is by having it reduced to writing, and as the written language is then used throughout a large territory gradually the local dialects will change to conform with the general character of the written language. It would probably be a great advantage in many ways to make use of the books and literature printed in the various parts of Greenland. It may not be generally known that the natives of Greenland have at least two monthly newspapers printed in Greenland

in the Eskimo language. If the Canadian Eskimos [Inuit] could be educated to make use of this literature it would be of great assistance in their general education.

It will be found advisable to employ Eskimos [Inuit] for work around the air station in various ways, but especially in connection with hunting for food and clothing. When employing an Eskimo [Inuk] it is always necessary to include his wife and family, because one Eskimo man [Inuk] alone is of very little use. An Eskimo [Inuk] and his wife always work together, and to engage an Eskimo [Inuk] without his wife would mean that he would have no one to look after his clothes, and consequently it would be impossible to get very much work out of him. The Eskimos [Inuit] do not require very much pay, but what they want most of all is a little food and clothing, but the greatest care must be taken for square dealing between Air Force personnel and all Eskimos [Inuit].

It will be found advisable to carry an Eskimo [Inuk] in at least one of the two aeroplanes on every long trip. This Eskimo [Inuk] will assist as a guide, but his chief duties will be to look after the welfare of the party when on the ground or ice, as an Eskimo [Inuk] will find game where a white man would starve to death, and he can find his way over the country where a white man would probably be lost or would become frozen to death. If no Eskimos [Inuit] are living at the place where it is decided to make an aircraft base, it is highly recommended that several families be induced to settle there.

There are no Eskimo [Inuit] settlements or trading posts north of Baffin Land in Canadian territory, but it is believed that many other places could be profitably established if Eskimos [Inuit] were transported and colonies established where game is plentiful. Should this be done it is highly recommended that any new colonies of Eskimos [Inuit] be legally placed "out-of-bounds" to all persons excepting those having direct authority from the Canadian Government, and that trading posts (operated similar to dry canteens in the Army) and the education of the Eskimos [Inuit] be under the complete control and supervision of the Government, similar to the Danish colony of Greenland.

The greatest care would have to be taken in choosing the proper personnel to act as "practical life Missionaries" rather than religious Missionaries among these people, and it will be found that the Eskimos [Inuit] would in a few years, if free from the contaminating influences of the ordinary run of traders and sailors, become an asset and a source of revenue to Canada.

This has been amply demonstrated in Greenland where, while religious education has been by no means neglected, it has been realized that it is of greater importance to first of all apply common sense, matter-of-fact practical instructions on the main principles of ordinary everyday life and to teach the natives of the country by theory and practice how to be more healthy, comfortable and prosperous during their earthly life, and that the only way to do this is to permit only persons who have no self interest in the country to associate with the natives, and for these persons to live what they teach.



No matter how hard missionaries throughout the world — and especially Canada — have labored and tried to help the natives, their work has always been undermined and ninety per cent of the results strived for have been made impossible by the contamination and living example of the irreligious white men who followed the Missionaries - white men, who needed Missionaries far more than did the natives in the first place.

It would be a great benefit to all concerned if the whole of the Northern Archipelago were made a Government Reserve for the preservation and development of Eskimos [Inuit], reindeer and musk-ox, but especially for the Eskimos [Inuit]. No trading companies should be permitted to operate within the Reserve under any circumstances, and the sooner the traders are excluded the better, for it is believed that the chief reason they are establishing many posts each year in these islands is in order that they can claim greater compensation when the Government eventually takes over their trading rights in the country.

If the Canadian Government established such a Reserve the organization should be such that the persons who act as instructors to the natives in their everyday life be qualified as scientists or practical men in various lines, in order that much of the work of exploration and development of the country could be done by them, aided by the Eskimos [Inuit]. In addition to the practical instruction to the Eskimos [Inuit], explorations, etc., could be done in the summer season, and the trading, teaching, etc., could be carried on by practically the same men during the winter months.

If Canadians could see the difference between the natives of the Canadian Islands and those of Greenland, where such a Government Reserve is in operation, there would be no hesitation in deciding what should be done.

If properly organized and managed, such a Reserve would in a few years not only become self-supporting, but would be a great financial asset to Canada, and one of the chief factors in the development of the Reserve would be the use of aircraft for communication between stations, aids to travel, navigation and exploration, and the many uses described elsewhere in this Report.

## **CRAIG HARBOUR**

It was originally intended to establish a Mounted Police Post at Fram Fiord on the southeastern part of Ellesmere Island, but when the neighbourhood of the entrance of the Fiord was reached it was found that for several miles in all directions from the entrance there were extensive fields of unbroken ice, and after waiting several days in hopes that this ice would be broken up sufficient to permit the passage of the ship, it was decided to make no further delays in attempting to enter the Fiord, but to find some other place which would serve as a temporary location for the Police Post.

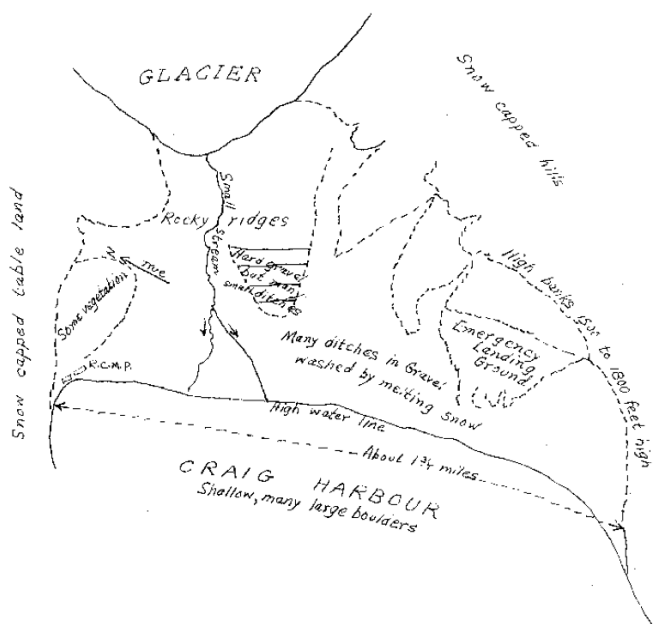
For various reasons the location chosen was a small shallow harbour northeast of Smith Island, and the supplies for the Mounted Police were landed and buildings erected at approximately latitude 76° 12' north, and 81° west longitude. The harbour or bay ran

about a mile and a half to two miles inland with an average width of about two miles. At the end of the bay there is a valley left, by retreating glaciers, composed of gravel and rocks with patches here and there of Arctic vegetation, such as moss, small shrubs and various kinds of small grass and flowers. There are fairly steep cliffs on both sides of the harbour and valley. The bay appears to be an inlet running into a table-land which has a fairly level top at an altitude of about two thousand feet. There is perpetual snow on the top of this table-land, although it is not very deep in places and many rocks show up, especially near the top of the cliffs. The widest part is not over two miles wide. It gradually rises towards the north and runs back about a mile and a half from the water's edge, where it terminates in a glacier. This glacier does not appear to be moving either forward or backward, although it is probable that there is a gradual movement downward, but this is counter-balanced by the amount which it melts each year.

An ascent was made up the face of the glacier to the perpetual ice-cap about eight miles inland from the foot. The slope of the glacier is very gradual and if necessary it would be possible for light loads to be drawn up it on sleds. It is also possible to ascend the cliffs at several points. From the foot of the glacier several streams of water run down through the terraced gravel beaches to the bay. The general surface of the western half of the valley is

fairly rocky and broken by channels which have been furrowed out in the gravel by the streams from the glacier in the spring. There is considerable vegetation here where the soil is fine enough to sustain it. The eastern half is more level, especially on the terraces running parallel to the water's edge. There is not so much vegetation on this side, although there is considerable close to the foot of the cliffs and near the edge of the bay. The finest gravel is nearer the water and the farther back from the water's edge the rougher the quality of the gravel and the larger the rocks. All of the valley was free of

Rough Sketch of Topography  
of Vicinity of  
CRAIG HARBOUR, ELLESMERE LAND  
Latitude  $76^{\circ} 10'$ , Longitude  $81^{\circ} W.$  approx.



snow during the time "Arctic" the remained in that vicinity. This was during the last week in August.

Twenty rock rings of ancient Eskimo [Inuit] habitations were discovered on the western side of the valley and a considerable number, but not counted, were found on the eastern side on a small grassy bench fairly close to the shore. The Mounted Police buildings were erected close to the water's edge on the western side of the valley, but the best place for an emergency landing ground for an aeroplane would be on the eastern side, although it is probable that an aeroplane could be landed almost anywhere on the gravel beach along the front of the valley. A rough survey was made of the most favourable looking terrace and it was found to be roughly six hundred yards in length and about two hundred yards wide, with fairly smooth surface. It is not, however, recommended to be used as anything other than an emergency landing ground as all conditions there are unfavourable for the operation of aircraft.

The harbour is too shallow to permit ships to come nearer than one and a half or two miles from the valley, and all cargo would have to be transported in small launches, and even this is very difficult owing to the numerous boulders in the shallow waters of the bay, and owing to the drift of the tide and currents in that vicinity the bay is nearly always partly filled with floating cakes of ice, and with winds blowing the ice into the bay navigation becomes not only difficult but dangerous. The landing ground in this valley being so low beneath the surrounding walls of the valley, it could probably be difficult for an aeroplane to get out owing to the probable downward currents of air in nearly all positions of the wind. The harbour apparently breaks up quite early and the ice would be rough because of the shallow water and the range of tides. The tide measured at this harbour showed a range of about nine and a half feet between high and low water, and at each low tide large cakes of ice were stranded high and dry on the rocks. This would be certain to create a very rough surface on the ice in the winter, and would therefore be almost impossible for use for landing aircraft. It would be possible to land almost anywhere on the snow-capped table-lands or on the top of the glaciers, but it would be rather difficult climbing up and down to the buildings in the valley.

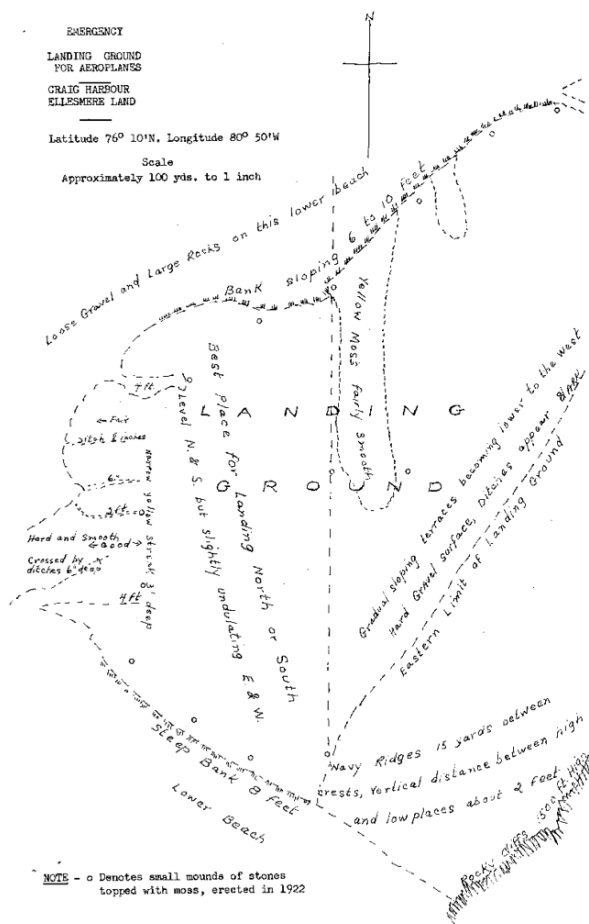
It is recommended that no attempt be made to establish an aircraft station at Craig Harbour, but that investigations be carried on farther west as there is every reason to believe that the conditions in some of the Fram Fiords farther west would be very favourable for aircraft operation. It was noted during the season that there were extensive areas of open water far to the west of Fiord and valleys of bare ground were seen all along the coast as far as could be seen from an altitude of about three thousand feet slightly southeast of the entrance of Fram Fiord. One of the reasons for choosing Craig Harbour as a landing place for the ship this season was that as it is at the entrance of Jones sound it would be fairly accessible each season. Supplies could be landed there and later moved to points farther west if required. It is recommended, therefore, that if any aircraft work is to be carried on in the southern part of Ellesmere Island this harbour be disregarded entirely

and that steps be taken to locate a more favourable base farther west, or at least find a place where supplies could be landed and taken in over the ice to some bay or inlet as far as possible from the open waters of the sound.

It is believed that the farther the air station is from the open water the better, and therefore it would be preferable to have it placed as far inland as possible in a fiord which may not necessarily be accessible by ships, for it would probably be found that a ship can unload a cargo onto the ice of the inlet or at some point from which the supplies may be reshipped by ice transport to the point where they are required. One of the reasons for choosing Fram Fiord is that the reports from Captain Sverdrup, who discovered it and explored it in 1899,

indicate that there was a great deal of vegetation there and many indications of game, although he observed none during his short stay in that vicinity. According to his reports there was a large area of bare ground in the vicinity of the fiord, and this would probably indicate the possibility of suitable location for an aircraft base, although if it were possible to proceed regularly each year as far west as Musk-Ox Fiord on the southwestern part of Ellesmere Island, it is probable that a much more favourable location could be found where there would be more bare ground and more possibilities for game.

All reports would indicate that there are many more winds and gales in Smith Sound than in any other part of the islands, and if an aircraft station were placed on Ellesmere Island somewhere in the vicinity of Cape Sabine, each greater difficulty would be found in connection with flying than at points farther south. It would appear that the valley or break between the mountainous country of Greenland and Ellesmere Island acts as a natural channel for winds blowing from the polar Sea towards Baffin Bay, or vice versa. The prevailing winds appear to blow down the channel from north to south. The natural



route of aircraft from Cape Sabine to the other islands of the Archipelago would be to cross Ellesmere Island to the western coast and then proceed southerly along the low ground on the east side of Norwegian Bay. It is probable that if a base for aircraft were required somewhere in the vicinity of Smith Sound this would have to be established well inland in one of the numerous fiords west of Buchanan Bay, and would probably not be accessible by ship.

## DUNDAS HARBOUR

The second harbour visited was Dundas Harbour on North Devon Island, approximately north latitude  $74^{\circ} 32'$ , longitude  $82^{\circ} 32'$  west. This appears to be a very good harbour, well sheltered from the open waters of Lancaster Sound and apparently one of the first harbours of the North to become clear of ice. There are several rocks near the entrance of the harbour, but once inside in the inner basin there is a well sheltered harbour large enough to accommodate many very large ships. The water appears to be fairly deep right up to the edge of the land on the eastern side and there are good facilities for erecting buildings and using this harbour as a distributing centre where large ships from the south could discharge their cargoes, which could later be reshipped by smaller ships to the various parts of the islands. The best place for landing supplies would be on the eastern side inside the harbor about one-half mile or a little more, but the area of level ground would probably not be suitable for an air-craft landing ground, although it is possible that an aeroplane might make a landing there if certain areas were cleared of loose boulders.

The most likely place for an aeroplane landing ground would be at the head of the inlet about two miles north from the entrance of the harbour. The ground here was not actually investigated at a closer range than a mile, but it appeared to consist of a valley about a mile wide and a mile or two deep, with a fairly level plain of gravel or soil free of snow, and there were many indications of vegetation and musk-ox and caribou. The sides of this inlet and valley were probably not over one thousand feet high and appeared to be of horizontal bands of alternately hard and soft rock much cut by the action of wind and water. There appeared to be much bare ground on the valley and hillsides towards the north and west, and the north-westerly end of the various branches of the valley could not be seen.

It is probable that this would make a fairly favourable base in many ways, but it remains to be seen whether a point so close to such a large body of water as Lancaster Sound would be sufficiently free of fog and winds to permit the extensive use of aircraft throughout all ordinary seasons of the year.

A peculiar formation of rock was noted near the western entrance of this harbour, and a sand beach was noted near it which seemed to resemble the ruby sands from which gold is washed on the beach at Nome, Alaska. This sand is very heavy and appears to contain myriads of small particles of either ruby or garnet, as well as some kind of iron particles, and it is possible that further investigation might be profitably carried out.

It is quite probable that the most favourable place as far as central location is concerned would be somewhere at the western end of Lancaster Sound, probably at Cornwallis Island, although the indications are that somewhere on Bathurst Island or Melville Island would be more favourable as far as climatic conditions are concerned. It is certain that if all conditions were favourable for an aircraft base to be established somewhere in the vicinity of Cornwallis Island, this would be very central for operations throughout the whole of the Northern Archipelago, and it is believed that a ship would have more chances of reaching a harbour or the western end of Lancaster Sound than it would have of reaching many of the harbours on other parts of the islands, as it is believed that Lancaster Sound is one of the first channels to become broken up in the spring.

It is probable that a fairly good location could be found in Admiralty Inlet in North Baffin Land, but the most suitable place which was investigated during this season was in the neighbourhood of Salmon River in Eclipse Sound, or more commonly known as Pond's Inlet, between Bylot Island and Baffin Land. At this point a Hudson's Bay Trading Post was established during the summer of 1921, and about ten miles farther east at Pond's Inlet settlement a Trading Post was established by Captain Bernier ten or twelve years ago and operated by him for several years, but it is now operated by the Arctic Gold Exploration Company.

## POND'S INLET

The Hudson's Bay Company's most northerly Post was established in the summer of 1921 on a small point about one and a half miles east of the mouth of Salmon River on the south shore of Eclipse Sound. This point is about fifteen miles from the entrance of Pond's Inlet. Pond's Inlet is really the part of the channel which lies east of the narrowest point between Bylot Island and the north end of Baffin Land. This narrowest part of the channel is about three miles in width, and westerly from this point the channel widens out to an average width of about fifteen miles, but with many deep bays or inlets running southerly from it, very few of which have been accurately charted.

The settlement formerly known as Pond's Inlet is about ten miles east of the Hudson's Bay Company's Post and consists merely of a few Eskimo habitations and a few small houses and store-houses owned and occupied by the Arctic Gold Exploration Company. This settlement is at the extreme easterly edge of a large area of bare ground and lies at the westerly side of a high range of hills or mountains covered with perpetual snow, which appear to run in a southerly direction far down the eastern side of the island. This area of bare ground appears to extend westerly for probably sixty miles or more and southerly for at least ten miles, where there are a certain number of hills, but it is possible that to the south of these hills there may be considerable more ground which is free from snow in the summertime. The bare ground consists of rolling plains varying in height from one hundred to one thousand feet, and is dotted with small ponds and lakes and cut by numerous ravines and many large streams of running water during the season when the snow is melting, the largest of these streams being Salmon River.

Salmon River is a small stream about fifty feet wide, flowing northerly and emptying into the south-eastern part of Eclipse Sound. The adjacent country consists of a series of hills and plateaus which rise from a few feet to one hundred feet along the coast and reach a height of five or six hundred feet, six or seven miles inland. These hills consist of yellow and red stone covered in many places with a whitish clay of a few feet thickness. Plains and hills dotted with numerous lakes and ponds, and cut by numerous ravines, gullies and small streams extend east and west along the coast from the mouth of the river and inland probably eight or ten miles. In the summer time the plains and low hills are covered with moss, turf, coarse grass, stunted herbage and heather. In the months of June, July and August innumerable bright colored flowers, green, white, red, yellow, purple and mauve, besprinkle and liven the landscape. The birds arrive in June and include many species.

The river has been traced inland for about twenty miles and is fed by numerous side streams, and has its origin near a large glacier almost due south of Pond's Inlet village. The bed of the river consists of a series of rapids and falls, filled with boulders and gravel banks. There are several lakes connected with this river and lying about eight or ten miles inland, although there are large numbers of small lakes at various points all over the plain, from which smaller streams run down to the river. To the south of this plain there are mountains but there appear to be several gaps in them and it is probable that the bare ground runs much farther inland than the presence of these mountains would indicate. There is much coal- float in the river and about four miles from the mouth coal is mined by the Arctic Gold Exploration Company for local use at the trading post. The spring salmon run from the lake to the sea from June 15th to July 5th. They apparently become very fat during the summer and during the month of August they ascend the river to spawn. The fish are reported to ascend and descend the river in greatest numbers when the moon is full. The salmon are reported to be very fat in the fall and run from twenty to thirty inches in length and very in weight from three to twenty pounds.

There appears to be a fairly abundant vegetation of Arctic mosses, grasses and heather, etc., and apparently the plains to the south and west would support large numbers of caribou or musk-ox, but no have musk-ox been killed here for many years and the caribou seem to have been killed off and are very seldom found not without proceeding twenty or thirty miles inland from the seacoast. This place has been inhabited by Eskimos [Inuit] for a great many years and it is probable that since the use of firearms, especially rifles, has become common with the Eskimos [Inuit] the local herds or caribou have been killed off or driven farther inland.

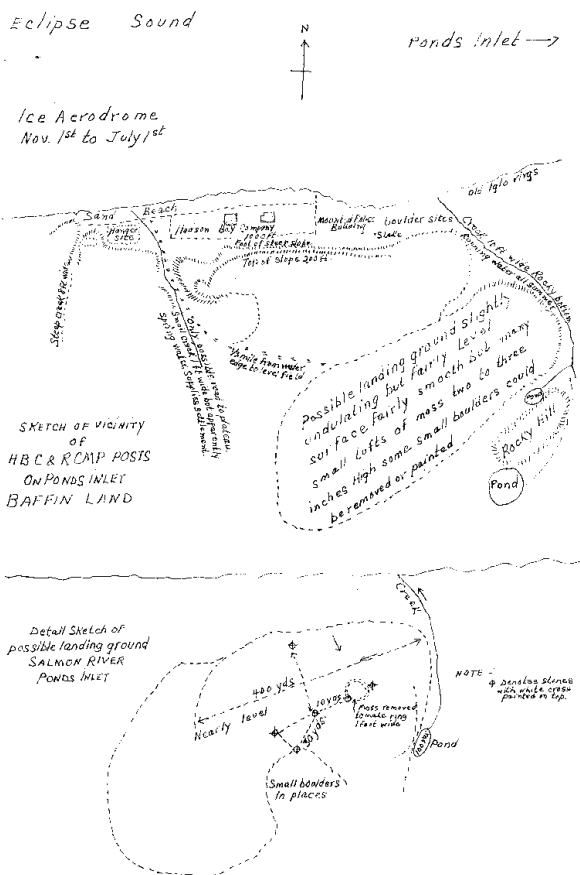
The bare ground, and the distance that this plain lies from the open waters of Baffin Bay apparently have a beneficial effect as far as the local weather is concerned, because it was observed, during the past year at least, that, even while fog banks could be noted at the Narrows and at Pond's Inlet settlement, it was very seldom that there was any stormy weather in the vicinity of the Hudson's Bay Trading Post at Salmon River. The Hudson's Bay Company's buildings were erected in the summer of 1921 and the Royal Canadian Mounted Police buildings were erected in 1922 only a few hundred yards east of the

former. Apparently one reason that this location was chosen by the Hudson's Bay Company was that although there is lower ground near the mouth of the river, the best location was granted by the Government to Captain Bernier and transferred by him to the Arctic Gold Exploration Company, and any sites which might have been favourable for building purposes were bordered by such shallow water that it was impossible to get a ship nearer than half a mile from shore. As it is, the ships cannot get nearer than a quarter mile from the Hudson's Bay Company's buildings.

The buildings have been placed on a strip of land about half a mile long and about one hundred yards wide, and averaging about ten feet above sea level

along the front, gradually sloping back to the foot of a steep hill or rather sloping moss-covered bank which rises abruptly about two hundred feet to the edge of the slightly rolling table-land. At each end of this strip of fairly level ground there is a creek bed about ten feet wide, down which streams of fresh water rush during the summer season, but which of course are frozen very early in the autumn, but from which a plentiful supply of water or fresh water ice could be obtained throughout the year.

There is room for probably two or three more buildings only on this strip of ground, without encroaching on the lots staked out by the Hudson's Bay Company and the Mounted Police for their own use. There is also only one gulch or pass up the steep hillside which has a sufficient gradual slope to permit supplies to be freighted up to the more level plains of the table-land south of the settlement. It was decided that in the event of the Government desiring to use this gulch for a route it might save a lot of trouble by having it reserved before the land claimed by the Hudson's Bay Company is surveyed. It was





thought advisable to stick up two stakes bearing the notice that this gulch, with certain other approaches from the water's edge, would be liable to reservation by the Government for military or aviation purposes, and small wooden posts bearing the following notices were placed at points which are shown on the accompanying sketch.

One post was placed beside the boulder marked and used by Mr. L. O. Brown, D.L.S. as the eastern end of his base line in the survey of the settlement. This stake bore the following inscription written with a lead pencil: -

"From the line bearing  $340^{\circ}$  true from this point to the intersection of the shore, thence easterly along the shore thirty chains, or 1980 feet, the land inland to a depth of one mile is liable to reservation for military and aviation purposes."

September 6, 1922

(SGD.) R.A. Logan

S/Ldr. C.A.F., &

Dominion Land Surveyor

The letters "M.R." were cut into the wood with a knife.

Another stake was placed one thousand feet distant from the first stake on the base line as laid out by Mr. Brown, D.L.S., the bearing of this base line being approximately  $315^{\circ}$  true and should be considered as the back line of the lots of the Hudson's Bay Company and the Mounted Police. The stake was placed in the centre of a pile of stones and had the letters "M.R." carved on one side, and the following inscription written with a lead pencil on the other side:-

"All land for distance of 1320 feet westerly along the shore from the line with a true bearing of  $105^{\circ}$ , from and passing through this point, and inland to a distance of one-half mile, is liable to reservation for military and aviation purposes."

(S.D.G.) R. A. Logan,

Squadron Leader, Canadian Air Force,

and Dominion Land Surveyor.

Since these stakes were planted it has been decided that it would be more advisable to simply reserve all the land within half a mile radius of the Hudson's Bay Company's Post, with the exception of the ground contained in the area bounded by the straight line joining these two stakes and the lines joining each stake with the nearest point of the shore. It is practically certain that a better location can be found a few miles farther west, but it will be just as well to reserve this area until such time as a better location has been found,

While no instructions from Ottawa had been given for any such monuments to be placed here, they were placed by a duly qualified Dominion Land Surveyor, and if it is desired to use them to designate the boundaries of a Government Reserve, such can be done without irregularity.

There is a small area of comparatively level ground about one-quarter mile back of the Hudson's Bay Company's buildings, which could be used as a landing ground for aeroplanes during the season of the year when it would be free from snow, but it would require a little work done to it in removing loose boulders before it could be used for landing in all directions. Time was not available for this to be accurately surveyed, but a rough topographical survey was made of it, shown on the accompanying sketch, and a number of rocks were painted white in such a manner that they would appear to be parts of an equilateral triangle, with the sides about thirty yards in length. The length of runway on this level area would be probably three hundred yards in most directions, with very good approaches.

While the best location for an air station observed during the season of 1922 was at Salmon River, it is almost certain that better locations in the vicinity of Eclipse Sound can be found with more investigation. Some of the disadvantages of the Salmon River locality would be the melting of the ice in the summer, caused by the warmer fresh water from the river, and because the station would be located on the side of the Sound where there is a strong current caused by the tides. If the station were located on a sheltered bay or inlet in deep water, it is probable that the ice would remain much longer in the summer than it would on the open edge of the Sound where there are tidal currents. It is probable that suitable locations could be found either in Oliver or Arctic Sounds or Milne Inlet, or farther west in Admiralty Sound.

## SUGGESTIONS

One of the first questions to arise is "What is all this going to cost?" That cannot be definitely answered until it is known what types and numbers of machines are required. The chief items will be the initial cost of aeroplanes and aero engines, motor transport, hangars and other buildings, fuel and oil, spare parts, scientific equipment for wireless, meteorology, photography and navigation, salaries, clothing and food supplies and transportation, and of these the chief items will be the initial cost of aeroplanes and engines and transportation, but it is impossible at this date to give estimates of what any of them may be a few years hence. Aeroplane prices vary greatly according to the type and numbers ordered, and the cost of transportation will depend a lot upon the Government owned ships which may be used.

If estimates were submitted based on prevailing prices at the present time, it is probable that they would be greatly different from what would be required in two years or even one year from now, but it is considered advisable to suggest that the cost Department of the Air Board be asked to supply information regarding the initial cost of equipment at prevailing rates for one air station, to include the following: -

Four aeroplanes, single engine, four to ten-seaters, various types.

Four aeroplanes, double engine, four to ten-seaters various types.

(Four machines only required, of whatever type chosen). Two small scout machines, single or double seaters.

One small caterpillar traction engine.

Two Fordson tractors. One Ford one-ton truck.

Gasoline and oil required for one year

Scientific equipment; buildings for living quarters and hangars to house four aeroplanes.

Food, fuel and clothing supplies for ten men for one year.

Estimates should include not only cost, but also bulk and weight for transportation purposes. The salaries of officers will in all probability be determined by the Department of National Defence, but it is recommended that officers be paid their regular Air Force pay and allowances according to rank, plus an additional sum of \$100 per month for work in the Arctic Archipelago. Salaries of mechanics should be \$6 per day or \$2190 per year, with all expenses paid.

It is probable that the minimum cost of each station for the first year will be about \$200,000, although that can only be a rough estimate of what the actual cost will be. As this will be Air Force material the expenses will in all probability be borne by the [Canadian] Air Force, or if it is deemed advisable an arrangement may be made whereby the Department of the Interior would share a part of the expenses in return for service rendered.

But before any bases for aircraft operation are established, at least one season should be spent in investigating different places in order to find the most suitable location, because much of the success of any operation will depend on the local conditions of the place where the station is established. Such a place cannot be chosen in a day.

The territory in the vicinity of the proposed location must be examined for miles around, especially during the summer season, and for this reason it is strongly recommended that immediate steps be taken to send properly trained Air Force officers to investigate possible locations whenever there is an opportunity to do so. It would be necessary for them to remain at the Posts during the winter and to explore the country and investigate local conditions in their relation to aircraft operations.

One officer should be sent to each locality where there may be a possible desire to establish aircraft stations in the future. He could live with the Mounted Police and accompany them on many patrols, or he could live at the Trading Posts and use this as his base of operations.

If there were time it might be advisable to have each man investigate more than one locality, this is to say, he would spend one season in one vicinity, then be moved by the supply ship to another point where he would spend another year carrying on further investigations. In this way possibly better comparisons of localities could be made where the investigations were carried out by the same man.

The men chosen for this work need not be supplied with aeroplanes, (unless very small ones can be supplied) but they should be picked men who could be placed in charge of

stations when these were established, and their one or two years' experience in living in the country would be of great value to them when they have to take charge of men who have not had that experience.

There are at least three places at present to which such investigating officers should be sent: Pond's Inlet, South Ellesmere Island, and Lake Harbour on the south coast of Baffin Land. The officer detailed for duty at the latter Post should investigate the neighbourhood of other Trading Posts along the south coast of Baffin Land as far as possible. The examination of this district is important in connection with the air stations required in connection with the co-operation of aircraft with marine navigation through the Hudson Strait, which may perhaps not be required for a few years but which is certain to be developed in the near future.

As soon as a Police Post is established anywhere in the islands west of Lancaster Sound an experienced Air Force officer should be detailed there to investigate flying and relative conditions in that neighbourhood.

Although more territory could be covered in one year by several Air Force officers being sent to various places without being equipped with aeroplanes, it would be much better if they were able to carry on investigations by utilising aircraft in many ways, for there are many investigations which would be greatly aided or extended by the use of aircraft, although much information of scientific interest would be gained without their use.

When it is considered that this region is so little known, the actual flying conditions so little investigated and the whole country apparently so inaccessible at the present time, it would not appear advisable to attempt to send a detachment of aircraft there and expect to have regular extensive flights undertaken without previous preliminary investigations being carried out, and as much information as possible being obtained on the actual conditions as they exist, not only on the ground, but in the air.

A few thousand dollars spent in preliminary work might result in the saving of many thousands of dollars when regular air operations are inaugurated, for instance, if machines or engines were sent North and then found unserviceable owing to the peculiar conditions existing there, much time and money would be wasted, whereas if the peculiar conditions and their actual effects on aircraft material were properly investigated first, only the material most likely to be serviceable would be taken.

In addition to the experimental and research work carried on, investigation should also be made regarding the best place or places to make the more permanent air bases.

If a small detachment of the Air Force were sent to the north end of Baffin Land in the summer of 1923, to remain through the following year, much information could be gained regarding the many subjects connected with the operation of aircraft in the Arctic regions. Not only could local investigations be carried out regarding surface conditions of air, ice and ground, but by flying every possible day throughout the year, carrying recording instruments on the aeroplane, a fair idea could be obtained of the probable number of days

on which flying might be carried out, and the knowledge gained regarding the temperature of the upper air, as well as the direction and velocity of the upper air currents, would be of great assistance in determining the best methods to be employed in more extensive operations when long cross-country flights are required.

A meteorological station would be operated and special attention would be paid to the investigation of the air currents and temperatures at various altitudes.

Experiments could be carried out in connection with various heating arrangements for containers of recording instruments which are run by clock-work, as there is always a great deal of difficulty experienced in getting these instruments to work reliably at low temperatures. This applies specially to tide [gauges] which have to be left out in the open air. It is believed that some very valuable information could be obtained by carrying out experiments with double snow huts heated by oil lamps or small gas lamps such as are used on light buoys.

It might be noted in this connection that the best system for placing tide [gauges] would be to have small snow huts or igloos built on the ice in some inlet where it is reasonably certain that there will be no sideways movement of the ice during the winter season. A hole would be drilled through the ice in the centre of the igloo and a tube or pipe filled with coal oil would be left in this hole, and the tide [gauges] would be installed in such a manner that a line running down through the pipe to a small anchor on the bed of the sea would record the rise and fall of the ice as it is moved up or down by the tide. It is probable that favourable locations could be found for this in a great many places where the ice would remain firm from the middle of October to the middle of June, or possibly even later in the summer season.

It also might be noted that the most favourable locality for tide readings would be in some inlet where there is as little tidal current as possible and where the ice might remain throughout the greater part of the year. This also is the most favourable locality for the location of an ice aerodrome, and in this respect a locality suitable for and ice aerodrome would also be very suitable for taking tide readings, and on an experimental station it would at least be possible to determine one or two favourable localities for the readings, and also the best methods to employ in keeping the instruments at a temperature sufficiently warm to ensure their steady operation.

Experiments would be carried out with both air-cooled and water-cooled engines, and with various devices of landing gear and landing places, and experiments could also be carried out regarding the use of motor transport.

It is considered that owing to the limited space available on the Steamer "*Arctic*" it would not be possible to carry more than two very small type aeroplanes next season, but if two machines of a type similar to the "*Baby Avro*" were taken a start could be made, and if a larger detachment were required the first year's work with the smaller machines would be

sufficient to decide on the type of the larger machines, and especially the proper general type of aero engines to be used.

It is not considered that very much work, other than experimental or research work, would be possible for the first season, but it is probable that the vicinity of the experimental station would be photographed from the air, and probably short cross-country flights would be undertaken sufficient to obtain a little idea of the interior of the islands, of which nothing beyond the shorelines is known at the present time.

By carrying out daily pilot balloon observations of the upper air currents throughout at least one year, a fair idea could be obtained of the relative conditions of the air currents at different latitudes, and by making daily ascents with an aeroplane carrying a recording thermometer the temperature of the air at various altitudes would be obtained, and would form, in conjunction with barometer readings, local radiation, ice location and other conditions, a ground-work for calculation of general weather conditions and weather forecasting, not only for aircraft navigation, but for marine navigation and for general information.

Owing to the great relation between the meteorological conditions in the Arctic and the ensuing weather in the United States and Canada, it will be a matter of only a few years before both countries will demand daily information by wireless of what the meteorological conditions are, and once a start is made in this direction for such a proposed experimental station, other Departments will demand an extension of this service in supplying information.

Much experimental work would also be carried out in aerial photography if photographs were taken every day upon which a machine was flown, as it is considered that owing to the peculiar light conditions and glare of ice and snow it may be found necessary to make some slight changes in methods or materials, in order to obtain the best results. There is a greater contrast between ice and land than is usually found in aerial photographs taken in southern latitudes, and owing to the sameness of the surface of the ground and the absence of trees it will require a clear-cut negative to show the type of surface - whether grass, moss or barren.

A small wireless receiving set would be taken, and by this means an idea of the atmospherical [*sic*] conditions affecting wireless reception would be obtained throughout the whole year.

It will be imperative for the air operations personnel to be able to communicate with the natives of the country in which they may be working, and during one year's sojourn amongst the Eskimos [Inuit] a sufficient knowledge should be gained to be of great assistance to those members of the Air Force or other Government Departments who come after.

On scientific expeditions of the past it has apparently been usual to send a so-called specialist in each subject to be investigated, so that to obtain the information covering the

subjects referred to above it would perhaps be thought necessary to send one each of the following:- Aeroplane Pilot, Aero Engine Engineer, Meteorologist, Photographer, Wireless Operator and Navigator, but it is considered inadvisable to send two men where one man will serve, because the smaller the party the better.

There are several Air Force officers available, each of whom, with a little intensive training during the coming winter, could carry out all the duties necessary in the different subjects.

Two officers working together would be sufficient, but to give them more time to carry on these different occupations it would be advisable to have two aeroplane mechanics to look after the care and maintenance of the aircraft, and the ordinary work to be done around such a station; thus the total personnel of the station would be four.

It is believed that the initial cost and maintenance for one year of such an experimental station as suggested would be in the neighbourhood of \$60, 000, but it is believed that if the Department of the Interior were to ask the Department of National Defence to establish such an experimental station in the near future, the total expenses of the operation would be carried by the latter Department because the work to be done would be of value not only to the Department of the Interior, but of the greatest value to the Canadian Air Force and to the general development of aircraft in Northern Canada.

It is important, however, to take into consideration the necessity of an early commencement of preparations should it be desired to have the station established during the summer of 1923, because in order to obtain the material required from various sources it will be necessary for these orders to be placed by the Equipment Branch of the Air Force not later than January 1, 1923.

It would also be necessary for all ranks who were being sent to the North to be given special courses in all subjects connected with the work which they may be called to do, and in order to give the Air Force the opportunity to make the proper preparations for the coming season no time should be lost in deciding whether or not aircraft is desired to be taken North next summer.

Should it be found impossible to send aircraft to the Northern Archipelago during the season of 1923, it is strongly recommended that two or more officers be sent to different points to remain during the following winter and to carry out investigations of flying conditions. They should be equipped with meteorological and other scientific instruments, and could be sent either on the Government ships or on the Hudson's Bay Company's supply ships. Two points especially should be investigated, Pond's Inlet and Lake Harbour, both on Baffin Land.

It is hoped that it may be seen fit to establish an experimental station at Pond's Inlet during the season of 1923, for even if it were twenty years before an urgent demand arose for extensive operations in the Arctic Archipelago, the information gained on such an experimental station as suggested would be of the highest value in determining the proper organization and equipment to be used, and in acquainting a certain number of officers

and men with the conditions to be expected and some of the difficulties to be overcome on a smaller scale, whereas if there were a sudden emergency requiring aircraft to be operated on a fairly large scale, such as certainly would arise in the event of a big mineral or oil strike, and there had been no such preliminary investigation of actual flying conditions, much time and money would in all probability be lost in trying to carry on service operations under practically unknown conditions, but the value of this information is not confined merely with the operation of aircraft, but will be of great value to everyone connected with the future exploration, survey or development of the Northern or Arctic regions of Canada.



Logan conducting a site survey, 1922 Eastern Arctic Patrol



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## About the Editors

**P. (Paul) Whitney Lackenbauer** is Canada Research Chair (Tier 1) in the Study of the Canadian North and a Professor in the School for the Study of Canada at Trent University, Ontario, Canada. He also serves as network lead of the North American and Arctic Defence and Security Network (NAADSNS) and is Honorary Lieutenant Colonel of 1<sup>st</sup> Canadian Ranger Patrol Group. He has (co-)written or (co-) edited more than fifty books and more than one hundred academic articles and book chapters. His recent books include *The Joint Arctic Weather Stations: Science and Sovereignty in the High Arctic, 1946-72* (co-authored, 2022); *The Canadian Armed Forces' Eyes, Ears, and Voice in Remote Regions: Selected Writings on the Canadian Rangers* (2022); *Lines in the Snow: Thoughts on the Past and Future of Northern Canadian Policy Issues* (co-edited, 2021); *On Thin Ice? Perspectives on Arctic Security* (co-edited 2021); and *Breaking Through? Understanding Sovereignty and Security in the Circumpolar Arctic* (co-edited, 2021). He is co-editor of the Documents on Canadian Arctic Sovereignty and Security (DCASS) series, to which he has contributed fifteen volumes.



**Grace Chapnik** holds an Honours Bachelor of Arts in History, which she received at Trent University in 2022. She has received numerous undergraduate History awards, including the Alan Wilson Prize (the Trent University Department of History's highest honour). Her recent publications include an academic article entitled "Tainted Love: Gendering Illicit Sex in Early Modern Europe." She is currently working as a research assistant with Dr. Lackenbauer on various projects related to the history of the Canadian North.



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# Canada's First Eastern Arctic Patrol, 1922

Compiled and Introduced by  
P. Whitney Lackenbauer and Grace Chapnik



To assert sovereignty over Canada's northern territories, the federal government initiated an annual patrol to the eastern Arctic to establish and maintain police posts. The first patrol in 1922, led by civil servant J.D. Craig with master mariner Captain Joseph-Elzéar Bernier at the helm of CGS *Arctic*, carried Royal Canadian Mounted Police constables and various technical staff into the Arctic Archipelago. The firsthand accounts in this volume offer poignant insights into the expedition, narrating what happened from various perspectives as well as revealing the values, ideas, and goals of these men in their own words.

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