Airpower and Arctic Aviation Lessons Learned: General Hap Arnold's 1934 Flight to Alaska

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In 1911, after completing flight training at the Wright Flying School in Dayton Ohio, Lieutenant Henry "Hap" Arnold and his fellow Army officer Lieutenant Tommy "Dashing" Milling reported to College Park, Maryland, the home of the Army's first Signal Corps flight school. As the only two active-duty qualified Army pilots, they became the first flight instructors at their new unit. In the early days of aviation, by necessity, "every pilot was also a mechanic of sorts."[1] Thus, Arnold and Milling not only reassembled the aircraft sent by rail from Wright Field but performed the maintenance and troubleshooting to keep them operational and in the air. Arnold's military career would span these humble military aviation beginnings to fielding the world's most advanced Air Force by the end of World War II comprised of 80,000 aircraft, and over 2 million personnel.[2] Arnold's enthusiasm, vision and organizational skills helped guide and realize this transformation of airpower from a supporting function for infantry to an essential component of modern warfare. His leadership guided aircraft modernization and US mastery of strategic bombing and led to the era of US dominance in air superiority. The flight of 10 Martin B-10 bombers that he led to Alaska in 1934 represented an inflection point in US military aviation. It bolstered Arnold's "effervescent enthusiasm" and "burning faith in the future of airpower"[3] with important consequences for US airpower in the Arctic and for the wider role and mission of airpower and the Arctic in US military strategy.

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[1] Dik Alan Dako, *Hap Arnold and the Evolution of American Airpower* (Washington and London: Smithsonian Institution Press, 2000), 45.

[2] Bill Yenne, *Hap Arnold: The General Who Invented the US Air Force*, (Washington, D.C.: Regnery History, 2013), 2.

[3] Dako, 181.

This paper will consider how Arnold's approach to developing airpower as well as his leadership style shaped his views, and how the trajectory of his career buoyed his success in leading the 1934 flight. It will then delve into the preparations and execution of the flight to better understand the challenges and accomplishments of the mission. The paper will subsequently address the consequences of the flight both for the development of US airpower in the Arctic and for the broader evolution of US airpower strategy and the role and mission of the USAF. Examination of the flight itself offers important historic lessons learned for US air power employment in Arctic spaces.

As Arnold navigated himself through the air and over the hurdles of a nascent Army aviation capability, he internalized several key concepts. First, he recognized that the scaffolding of a successful aviation enterprise consisted of effective training and logistics. Without these in place, military aviation would be unable to meet warfighters' needs. He was a strong proponent of training and professional schools as the bedrock for developing competent aviators. He carefully cultivated and helped advance the most capable army aviators. Arnold's first-hand knowledge of how to effectively execute aviation logistics came from his experience as Executive Officer of the Air Division and Assistant Director of Military Aeronautics in World War I, responsible for training personnel and supplying, equipping and sustaining US World War I aviation assets.[4] In the early 1930s, Arnold served both as the commander of the Fairfield Air Depot near Dayton and Executive Officer of Air Corps Material Division at Wright Field. Thus, he held responsibility for supply and

maintenance of most US-based air assets as well as aircraft testing facilities.[5] Arnold's acumen in logistics served as a leavening agent in the rise of US aviation during World War II. General Twining, who served as Chairman of the Joint Chiefs of Staff observed that Arnold's hard work building air force logistics and organization contributed to, "the great success of the Air Forces in the war more than anybody else."[6]

Next, as he sought out like minded aviators, scientists and engineers, Arnold vigorously advocated for close collaboration. From the beginning of his aviation career, he "never neglected to talk to scientists and get their views on what could be done in the air." Through these early contacts, Arnold developed an unshakable belief in the essential connectivity between science, technology and airpower.[7] This would fuel the innovation essential to propel and maintain the US as the preeminent world air power. His World War I work included a secret project on unmanned flying bombs. After the war he wrote a study highlighting the importance of coordination between aviation designers and operators.[8] In 1923 Arnold would oversee the first ever inflight refueling testing.[9] Later, when serving as commander at March Field, he developed a close relationship with Dr Robert Millikan, CalTech's president and provided modified Curtiss B-2 bombers to assist with his cosmic ray research. He worked with the California Institute of Technology's Guggenheim

[5] Dako, 121.
[6] Nathan Twining, General, USAF (Ret), Oral Interview 3 November 1967. US Department of the Air Force Oral History Program. Clark Special Collections, US Air Force Academy McDermott Library.
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[7] Dako, 65.
[8] Dako, 87, 96-98.
[9] Dako, 107.

Aeronautical Lab on jet assisted takeoff (JATO) technology.[10] In 1941, Arnold brought back British blueprints for a jet engine and soon had enlisted both the Bell Aircraft Company and General Electric to produce the first jet-propelled aircraft for the US.[11] Arnold described this as "one of the most significant and engaging collaborations in the development of air power."[12]

Arnold adhered to the mantra that, experimental work done today brings, "dividends in security that no amount of money could buy."[13] In the aftermath of World War II, Arnold recognized the increasing significance of scientific collaboration to keep US aviation ahead of competitors. He set up a Scientific Advisory Group to look to future and increased interdependence between the Army Air Corps and the academic world. He was also a key facilitator of expanding the RAND Corporation to focus more holistically beyond just science and math to history, political science and economics.[14]

Additionally, Arnold's ability to surround himself with capable, innovative and forward leaning colleagues and subordinates, helped further both Arnold's goal of advancing air power capabilities as well as providing for the future development of a robust and independent US Air Force. Beginning with Arnold's deep friendship with the Wright brothers, he continued throughout his life to facilitate close association and support for fellow aviation pioneers and enthusiasts. Both Arnold and Brigadier General Billy Mitchell

[10] Dako, 107, 127, 153.
[11] Yenne p 85-86
[12] Dako, 154.
[13] Dako, 157.
[14] Dako, 197, 212.

identified Lieutenant General Jimmy Doolittle early in his career as someone "who would make a name for himself" in the air power world.[15] In 1942, Arnold knew that Jimmy Doolittle was the optimal choice to lead the audacious Doolittle's Raid on mainland Japan. Arnold had first met Doolittle in 1919 after witnessing him perform a stunt where he sat under the fuselage and between the wheels during landing.[16] Arnold's choice of Doolittle to lead the raid resulted a desperately needed success and morale boost after the shock of Japan's attack on Pearl Harbor. Furthermore, it showcased the power projection capabilities of airpower. Arnold was known for his willingness to give those he selected for a job a free hand, thus empowering them to accomplish the assigned mission.[17]

Arnold's advocacy extended to supporting airpower visionaries even when it risked his own career. His friendship with and admiration for Billy Mitchell landed him in hot water and resulted in an exile tour to Fort Riley Kansas,[18]yet Arnold's knowledge, skills as an air power leader and advocate, and his political savvy owes much to this relationship. In fact, after Mitchell's fall from grace, Arnold assumed this role of airpower strategy advocate and emphasized the strategic importance of Alaska.[19] He thus carried on Mitchell's legacy,

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[15] Yenne, 40.

[16] Dako,102.

[17] Ray A. Dunn, Oral Interview, 27 February 1970. Oral History Transcripts 748-774. File No 750. Clark Special Collections. USAFA McDermott Library, 9.

[18] Arnold testified at Billy Mitchell's 1925 court martial in Mitchell's defense and after being threatened by a court martial himself, he was given as assignment to Fort Riley, "the worst post in the army." See Dako, 113-114.

[19] Ray A. Dunn, Oral Interview. 27 February 1970. Oral History Transcripts 748-774. File No 750. Clark Special Collections. USAFA McDermott Library.

albeit in a slightly less confrontational manner. Arnold's ability to cultivate connections proved critical to airpower advancement.

Friends with General George Marshall since their days posted in the Philippines, Arnold brought Marshall into his circle of scientists. This paid dividends as Marshall became an air advocate as well. While serving as Army Chief of Staff in World War II, Marshall worked with Arnold to integrate and maximize the effects of air power in US war efforts.[20] The establishment of an independent US Air Force in 1947 owes much to Arnold's longstanding, long-suffering efforts to coherently and cohesively develop an air-minded infrastructure and network that yielded ever more capable air power. Such efforts would have a nexus in Arnold's first aviation assignment to training at the Wright Flying School in Dayton, Ohio.

When Arnold graduated from West Point in 1907 and discovered to his chagrin that he had been assigned as an infantry officer, his determined efforts to transfer to the cavalry came to nought. However, given the opportunity to join the Signal Corps new Aeronautical Division, he quickly embraced a lifelong love of aviation. Thrust into a world of seemingly limitless opportunities, young Army aviators set new aviation records, innovated and improved flying operations, established standards for training, and maintained the army's newest weapon system. Arnold himself quickly set an altitude record and subsequently broke his record two more times over a period of a year. He was awarded the first ever Mackay Trophy for the most outstanding flight of the year in which he flew from College

[20] Dako, 154.

Park Maryland to Fort Myer, Viriginia and located and identified a camouflaged army unit along the way.[21] Arnold instituted an army requirement for goggles after he had a translucent insect wing fixed itself to his eyeball during a flight. Arnold made the first ever airmail flight from Nassau to Garden City, New York.[22] He and his fellow aviator Lt Milling composed the first Dash 1[23], a bible of flight knowledge for military aviators. Aviation caught Hollywood's eye, and Arnold supplemented his limited army pay as the stunt man for early movies featuring aircraft sequences.[24] Arnold's interaction with Hollywood likely also taught him the importance of good PR and public support. Later in his career, he would effectively use spectacular air shows and his connections to draw both the public and Hollywood celebrities to marvel at the capabilities that airpower provided.

As Arnold's career through the Army advanced, so did the role and mission of what came to be known in 1926 as the US Army Air Corps. By 1931, Arnold commanded the First Air Wing at March Field, the West Coast base entrusted with the coastal air defense mission. At the same time, the US Army and the US Navy were both vying for the preeminent role in coastal defense. Arnold found himself both promoting the First Air Wing's combat mission and demonstrating the resiliency and flexibility that land based airpower provided. In the winter of 1932-33, his unit air dropped supplies to communities cut off by an unexpectedly severe winter storm.[25] Earlier, when in charge of all the Army's

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[21] Yenne, 22. Dako, 57.
[22] Dako, 49-50.
[23] The Dash 1 is an airplane technical manual with detailed information on all parts of the aircraft. See Dako, 50.
[24] Yenne, 22. Dako, 51.
[25] Dako, 127-129.

aircraft in the Western US, Arnold had directed his pilots to support the US Forest Service with fire spotting and mapping bug infested areas.[26] He also ingratiated himself with the new administration and especially the new director of the Civil Works Administration and later the Works Progress Administration, Harry Hopkins, by supplying and supporting 30+ Civilian Conservation Corps camps.[27]

In early 1934, when contract discrepancies arose, Franklin Roosevelt's Presidential administration cancelled the civilian contract to deliver airmail and gave the job temporarily to the Army Air Corps. Arnold found himself in charge of all airmail for the western US. Providing airmail service proved a disaster for Army Air Corps Commander Major General B.D. Foulois and a political football for the presidential administration. From February to June 1934, 66 crashes occurred with 12 pilot fatalities.[28] Aviator deaths brought into question both the president's judgement and the efficacy of the Army Air Corps. As Arnold wrote to his wife during this period, the problem centered on lack of experienced pilots and appropriate aircraft. In Arnold's mind, this underscored the need for greater investment in training, technology, development and production capabilities. He was pleased when he received the first of the newly acquired Martin B-10 bombers and described the "wonderful performance" of the new aircraft in a letter to his wife.[29] However,

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[26] Arnold's forest patrol teams served from Oregon to Southern California with fire spotting and mapping bug infested areas until 1925 when forest service took over with their own air service. The aviators provided excellent situation awareness. For example, near Red Bluff, California they detected more than 100 fires in a week and one crew out of March Field detected 5 fires in the span of 30 minutes. See Dako, 103.

[27] Dako, 127-129.

[28] Glen Roger Perras, *Stepping Stones To Nowhere*, (Vancouver: UBC Press, 2003), 23.

[29] Dako, 134.

the short-lived Air Corps airmail debacle ended shortly after the B-10 entered the inventory. Trying to salvage the Air Corps' reputation, Maj Gen Foulois and his deputy Lieutenant Colonel Westover conceived a new mission for the aircraft.[30]

This new mission would be a flight to and from the US Territory of Alaska. The B-10 was the most technologically advanced of the Air Corps aircraft and was the first all metal, low-wing, retractable gear monoplane in the US inventory.[31] It had an internal bomb bay and engine cowlings to reduce drag.[32] This mission utilizing the B-10 presented a myriad of potential benefits. For the Air Corps and the beleaguered presidential administration, it offered an excellent public relations opportunity that would catch the imagination of the public and demonstrate military and political competency. More practically, the mission would showcase power projection and the ability of the US to rapidly reinforce and defend its Arctic territory in a far-flung location. For the Army Air Corps and strategic bombing advocates such as Arnold, it underscored the efficacy of the Air Corps as both a defensive force for the homeland and a strike force against foreign enemies. Furthermore, the mission would test the evolving technology of aerial photography while providing mapping of Alaska and recommendations for future military basing there. Originally, Westover had planned to lead the flight but the ongoing churn in Washington demanded his presence. Arnold happily took over the planning and execution of the mission. He found, upon arrival,

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[30] Dave Kindy, "North To Alaska," *Aviation History* 33, no. 4 (October 1, 2023): 26–35. https://research.ebsco.com/linkprocessor/plink?id=89f0a103-41da-3361-8e47-ce900766b7a0, 29.

[31] Dako 135.

[32] Kindy, 30.

however, a lack of organization.[33] He would not, however, sacrifice safety and jeopardize the success of the flight and delayed the start from 10 July to 19 July. He then set about training and equipping the airmen and aircraft for the task ahead. He wrote to his wife saying, "I was holding the sack with regards to safety, hazard, success and risk. I in turn told them I would not say when I would start on the flight until the planes were ready."[34]

Arnold, in fact, was the ideal choice to lead the flight of 10 B-10s to Alaska. The success of the mission was paramount. Arnold's vast aviation experience, meticulous planning capability, careful selection of participants, excellent public relations skills, and clarity of purpose meant the mission was in good hands. A flight of this length with a relatively new aircraft required extensive planning and preparation. He had to seek a workaround when a longshoremen's strike prevented delivery of supplies. The Navy was not inclined to assist so the Army used a barge to deliver fuel to Seward, Alaska where it could be transported by rail to Anchorage and Fairbanks. Departure was also delayed by installation of new radios. These allowed Arnold and his men to become the first long distance flight to maintain ground radio contact for the entirety of the flight. Insisting that he preferred "mechanics to joy riders,"[35] Arnold altered the original mix of 20 officers to 10 enlisted men to 14 officers and 16 enlisted crewmen. This decision would keep the mission on track when the inevitable mishaps occurred. He also wisely included Major Malcolm Grow, a flight surgeon, in the mission. He wanted to ensure available medical help would

[33] Dunn, 23.
[34] Kindy, 30.
[35] Kindy, 31.

be present. Of the carefully selected crew members, many went on to become generals and Major Grow the first Surgeon General of the Air Force.[36] Arnold's advance team included Captain Ross Hoyt who had previously established a record solo flight from New York City to Nome and so was familiar with flying to and in Alaska.[37]

Another hurdle involved securing Canadian approval to transit their territory. Senior Canadian military leaders harbored suspicions. To Canadian Chief of the General Staff Major General McNaughton, US intervention in Canada was the greatest threat to Canadian sovereignty and a US military flight through Canada seemed a troubling precedent. Canadian political agreement to the transit almost unraveled when the *Washington Herald* asserted that the flight's purpose was to test the air route whereby the US would send aircraft to defend Alaska in wartime. The Canadians saw this as precedent to raise tensions and open the door to American violation of Canadian sovereignty in the future. Adroit and measured US diplomatic pressure did, however, yield Canadian political agreement for the mission to proceed.[38]

Despite top level Canadian military trepidation and political reticence, the Canadian public would welcome the B-10s and their crews with huge crowds and celebrations. After stopping at Wright Field in Ohio and Minneapolis, the crews were feted in Winnipeg, Manitoba, Regina, Saskatchewan, Edmonton, Alberta, Prince George, British Columbia, and Whitehorse, Yukon. The flight first encountered the Royal Canadian Mounted Police

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[36] Kindy 31-32.
[37] *The Army Alaskan Flight,* 673rd Air Base Wing History Office, JBER, Alaska, 4.
[38] Perras, 24-25.

(RCMP) in Regina and as described in the official report, "were greatly impressed with the splendid appearance and efficiency exercised by these mounted officers of law and order."[39] In one case, three RCMP officers controlled a crowd of 10,000 without even a small boy stepping out of line.[40] Canadian military personnel provided invaluable support to the flight as they transited Canada. Despite McNaughton's concerns, the RCAF's rank and file proved eager to assist the mission. Edmonton's American Consul's view was that Canadian servicemen were positively disposed towards the idea of "a symbol of identity between the interests of Canada and the United States in the matter of Alaskan defense."[41] Arnold and his men promoted these positive relations, meeting with Canadian political and military leaders as well as the public. Captain Ray Dunn who served as the adjutant for the flight, stated that they all, "got on fine with the Canadians." In fact, Arnold was so impressed with the Canadian stag dinners promoting esprit de corps that he brought the idea back and it became the origin of the now traditional USAF Dining Out.[42]

Relations with the Alaskans proved equally cordial and supportive. The mayor and citizens of Fairbanks greeted the flight with open arms when the aircraft arrived on 24 July after 33 hours and 15 minutes of flying time since leaving Bolling Field on the 19th.[43] Fairbanks provided the town post office for a HQ, ensured security and storage for the aircraft and the indefatigable local US Weather Bureau official, Mr. Howard Thompson,

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[39] *The Army Alaskan Flight,* 673rd Air Base Wing History Office, JBER, Alaska, 2.

[40] MS 33 Hap Arnold-The Murray Green Collection, Box 108, Clark Special Collections, USAFA McDermott Library.

[41] Perras, 26.

[42] Dunn, 26.

[43] *The Army Alaskan Flight,* 673rd Air Base Wing History Office, JBER, Alaska, 4.

would sleep on the floor of his office for the duration of the mission, in order to supply the most up to date weather reports.[44] Local aviators such as the famous Alaskan bush pilot Joe Crosson, would provide invaluable expertise on flying in Alaska. Arnold, in turn fostered local connections by naming each of the B-10s after Alaskan towns and landmarks.[45] In christening the "Juneau" Arnold, not wanting to dent the nose of the aircraft, uncorked the bottle of champagne and shared it with those gathered for the event.[46]

When bad weather precluded flying, Arnold and his aviators embraced the opportunities Alaska had to offer from hunting, fishing and fur shopping to visiting local gold mines and the University of Alaska's museum. Arnold described it as a fine museum and was particularly impressed with its mammoth and mastodon skulls. His fishing experience was particularly noteworthy as he told his wife "...we caught fish as fast as we cast our flies – I must have caught about 30." He also noted that, "never in my life have I seen such a variety of game."[47] Testifying to the popularity of the mission with the public, Arnold talk his wife, "The Alaskans entertained us in true Arctic style. They had a dance in our honor and the whole town turned out...people were there from all over Alaska."[48]As a

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[44] Flight Report, 673rd Air Base Wing History Office, JBER, Alaska, 4. "Army Fliers are Pleased with Visit," *Fairbanks Daily News Miner*, 16 Aug 1934. Crosson Family Papers, Box 2, Folder 42. Alaska and Polar Regions Collections and Archives, Rasmuson Library, University of Alaska Fairbanks.

[45] Letter to Joe Crosson from Lt Col Ralph Royce, US Air Corps Headquarters, Crosson Family Papers, Box 2, Folder 43. Alaska and Polar Regions Collections and Archives, Rasmusson Library, University of Alaska Fairbanks.

[46] MS 33 Hap Arnold-The Murray Green Collection, Box 108, Clark Special Collections, USAFA McDermott Library.

[47] Crosson Family Papers, Box 2, Folder 37, "Hap Arnold Survey for Cold Weather Base," Alaska and Polar Regions Collections and Archives, Rasmusson Library, University of Alaska Fairbanks. Letter from Hap Arnold to his wife, 1 August 1934, 5 August 1934 and 7 August 1934, SMS 322 Arnold, Henry H. Box 4, Series 2, Folder 7, correspondence, Clark Special Collections, USAFA McDermott Library.

[48] Letter from Hap Arnold to his wife, 29 July 1934, SMS 322 Arnold, Henry H. Box 4, Series 2, Folder 7, correspondence, Clark Special Collections, USAFA McDermott Library

key component of the mission was determining location for future bases, it was important to experience the operating environment.

Although the flight didn't experience an Alaskan winter, they did contend with the unique operating environment that existed. Days of inclement weather delayed their aerial photography mission. An initial plan for the flight to travel to Nome proved impossible when Captains Hoyt and Snavely found there were no runways suitable for B-10s between Nome and Fairbanks. Without any alternative runways, it was too risky. In fact, the smaller 0-38 aircraft used for the scouting mission to Nome nearly didn't make it back when bad weather complicated navigation and the pilots had to land at Unalakleet. Luckily a local roadhouse provided them accommodation and the gift of a sled dog puppy which they brought back to Fairbanks and the newly named "Nome" became a mascot of the flight.[49]

While the team waited for weather to improve between Fairbanks and Anchorage, they conducted flights and photography over Fairbanks, up to Fort Yukon and down to Valdez and Cordova. Such flights highlighted both the vast distances and lack of infrastructure available and the urgent need to construct both military and civilian airfields to support future deployments and defense. Arnold's flight also experienced firsthand the complication of logistics. Fuel and parts had to be transported by barge from the lower 48 to the port in Seward and then moved by train to Anchorage and Fairbanks. This became especially important when one of the B-10s went down in Cook Inlet, near Bootlegger Cove in Anchorage. The aircraft was departing on an aerial photographic mission when a fuel

[49] *The Army Alaskan Flight,* 673rd Air Base Wing History Office, JBER, Alaska, 4-5.

tank mishap brought it down in the water. After about 12 hours in the saltwater, the aircraft was floated using gas drums and wing tanks and then towed to and over the mudflats to begin the necessary repairs. Lieutenant Hez McClellan, one of the members of the flight, flew to Juneau and arranged for the necessary engines and spare parts to repair the damaged aircraft.[50] Fortunately, Arnold had insured he had skilled mechanics on the mission who were able to fully restore the aircraft, and it joined the rest of the flight departing to Juneau and back to Bolling Field.

Throughout the flight, Arnold and his men maximized the use of new technology and capabilities to mitigate risk and maximize their mission effectiveness. Arnold had delayed the flight to provide for the installation of new radios, and they became the first long range flight to remain in constant contact with the ground. The flight sent a radio message to the Governor-General of Canada when they crossed the border from Canada to the US and their arrival in Fairbanks was broadcast over a national-wide hook up by the Columbia Broadcasting System by relay from the Army Signal Corps Radio Station at Fairbanks to Seattle, Washington. Arnold also received and replied to a greeting from Alaska's Territorial Governor while enroute from Whitehorse, Yukon to Fairbanks.[51] The flight employed state of the art cameras to conduct their aerial photography mission. Over three days, they

[50] *The Army Alaskan Flight,* 673rd Air Base Wing History Office, JBER, Alaska, 5-6.

[51] Letter from Hap Arnold to his wife, 23 July 1934, SMS 322 Arnold, Henry H. Box 4, series 2, Folder 7, correspondence, Clark Special Collections, USAFA McDermott Library. *The Army Alaskan Flight,* 673rd Air Base Wing History Office, JBER, 4.

produced images of over 20,000 square feet of terrain between Fairbanks and Anchorage, a new record in aerial photography.[52]

When The flight departed Juneau on 17 August at 11:10am and reached Seattle, Washington at 4:50pm, it became the first mass non-stop flight from Alaska to the continental US flown entirely over water.[53] This demonstrated a capability to quickly move a tactical unit to Alaska but did anger the Navy who felt overwater flights should be their purview. However, a Navy flight sent around the same time as Arnold's flight took 28 days to reach Alaska from California and set back the Navy's ambitions to wrest the coastal defense mission from the US Army.[54] On 20 August, Arnold's flight arrived at the prearranged time of 10:30am at Bolling Field with all the men and aircraft he had left with on 19 July. On hand to greet the flight was an effusive crowd that included the Secretary of War, Assistant Secretary of War, General Foulois, and Lieutenant Colonel Westover. Military decorum briefly lapsed when one of the husky pups brought back by the crew got loose and ran excitedly into the crowd of dignitaries.[55] Unplanned puppy exuberance notwithstanding, the mission arrived to a joyful crowd and plenty of positive media attention. Arnold received a second Mackay Trophy and the Distinguished Flying Cross for his leadership.[56]

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[52] *The Army Alaskan Flight,* 673rd Air Base Wing History Office, JBER, Alaska, 6.
[53] *The Army Alaskan Flight,* 673rd Air Base Wing History Office, JBER, Alaska, 7.
[54] Perras, 23, 26.
[55] Kindy, 33-34.
[56] Kindy, 35.

Arnold's flight succeeded on many levels. For Alaskans, it provided a glimmer of hope after years of pleading from Alaskan Territorial leaders for the Federal Government to provide for the defense of Alaska. An editorial in the *Fairbanks Daily New Miner* highlighted Alaska's position as the northern part of the US-Pacific defense triangle and postulated that "the Alaskan Flight may be a test of the practicality of quick mobilization of air forces…to meet any war emergencies."[57] Arnold recognized the particular significance of airpower in Alaska during an interview with Anchorage's KFQD radio. He informed his listening audience that while he had found air-minded people throughout his travels, Alaska uniquely was, "a place where air transportation is taken as a matter of course."[58] Upon his return to Washington, Arnold compiled a report recommending construction of an airbase at Fairbanks to support tactical deployment to Alaska and provide a site for cold weather testing and training. Once cold weather capabilities improved, Arnold advocated for future bases at locations such as Anchorage and Juneau with robust air defense capabilities. He also personally briefed President Roosevelt and emphasized the strategic importance of Alaska. The topic of Alaska apparently fascinated FDR as Arnold wrote to his wife that the President had "asked about 100 questions about Alaska."[59]

Arnold's flight also restored the government, military and the public's confidence in the Air Corps. Buoyed by an adoring public, a pleased presidential administration and the bolstered confidence of Army leadership, Arnold's flight and subsequent

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[57] John Cloe, *Top Cover For America,* (Missoula, Montana: Air Force Association and Pictorial Histories Publishing Company, 1984), 16.

[58] Cloe, 16.

[59] Cloe, 19.

recommendations had an outsized effect on fact finding boards and passage of bills that would support construction of aviation infrastructure in Alaska. On 18 July 1934, the Baker Board, established by presidential order to study Air Corps adequacy and efficiency, released its recommendations which included establishing cold weather testing and training in Alaska. The War Department set up its own board to study strategic requirements for the Air Corps and developed a priority list of bases needed to support various war plans. The Wilcox National Defense Act of 1935 authorized site selection and construction of bases but provided no funding for Alaska. At the Air Corps Tactical School, officers completed a study entitled *Strategic Possibilities of Alaska, 1934-1935*. Pondering the future role of Alaska in US defense of the homeland, officers involved in the study concluded that the well-being of the US depended on the natural resources and strategic location of Alaska and that air power was critical to defend Alaska against adversaries. Construction of air bases, therefore, required immediate attention. As the funding battles progressed, a group of officers selected the specific site for a military airfield in Fairbanks and an Executive Order the following year set aside the land for military development.[60] Despite this momentum supporting immediate construction, funding required further hurdles be surmounted. Arnold's advocacy for Alaska's strategic importance would prove critical.

The indefatigable Alaskan representative to Congress, Anthony Dimond, had already initiated efforts at securing Congressional funding for Alaskan bases in 1934. Undeterred,

[60] Cloe, 21.

he continued to press the issue until 1939 when Congress finally approved $4 million to construct a cold weather testing facility in Alaska. Arnold played a key role in his success. By 1938, Arnold was chief of the Air Corps. Targeting Rep Joe Starnes of Alabama, a key opponent of a military field in Alaska, Arnold composed a carefully worded memorandum. Calling on his experience in the 1934 flight, he emphasized Alaska's role as a defense outpost for the US and the apex of the Panama-Hawaii-Alaska defense triangle. The War Department's Plan Orange, the defense of the Pacific against a Japanese attack, depended on the strength of this defense triangle. Alaskan bases would be key for patrolling the North Pacific and supporting planned Naval bases at Sitka, Kodiak and Dutch Harbor. With the advent of airpower and the ability demonstrated by Arnold's 1934 flight to project it over long distances, the Pacific Ocean did not provide a barrier to attack. Furthermore, the War Department's planning called for airfield outposts that US military forces could deploy to and rapidly reinforce.[61]

Finally, all these efforts came to fruition and construction of Ladd Field in Fairbanks commenced in 1939 with the runway completed in August 1940. Once finished, it contained more concrete than all the sidewalks and streets than currently in Alaska.[62] Work also began on a Navy base at Kodiak. Arnold had determined during the 1934 flight that Anchorage should host a major air base to serve as an operations hub and had recommended that the War Department secure funding. In 1940 testimony to Congress, General Marshall, relying on recommendations from the 1934 Alaska flight, advocated for

[61] Cloe, 11-12, 20-21.
[62] Cloe, 23.

$12,734,000 to establish Anchorage as the main base in Alaska.[63] After initial disappointment, the War Department received funding for Elmendorf Field when Congress passed supplemental funding in May 1940. A Red Scare that turned out to be based on false reporting of Russian intrusions[64] along with increasingly alarming news from the war in Europe, helped push Elmendorf's funding past the finish line. Construction began on 8 June 1940 on Elmendorf Field.[65] Alaska would finally have bases but would struggle throughout the war to acquire and maintain adequate aircraft. Alaska's defenses in World War II, would, in fact, depend upon deployment of Canadian aircraft squadrons, army personnel and naval assets to shore up US military assets.

In addition to jumpstarting airpower deployment in Alaska, Arnold's 1934 flight would have a wider significance beyond bases in Alaska. It would foreshadow a deepening defense relationship with Canada that would address the existential threats to North America starting in World War II and continuing to the present. It would prove, in the minds of the leading airpower advocates such as Arnold, that strategic bombing would be a cornerstone of future US military successes. President Roosevelt himself became an airpower advocate and in November 1938 asked the War Department to implement a plan for vastly increased production of 10,000 aircraft a year. Known as the Air Force Magna Carta, the President's directive reflected his assessment that war and US involvement was

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[63] Cloe, 23.

[64] During this time, Senator Schwellenback of Washington supported the funding citing reports of Russians constructing bases in Siberia and fortifying Little Diomede Island. He emphasized that Russia could have designs on Alaska. The reports, however, proved unfounded. See Cloe, 24.

[65] Ibid 24-25.

coming and his belief that, "air power would win it."[66] Appointed Chief of the Air Corps in Sept 1938, Arnold's trajectory following the 1934 flight ensured his essential role in developing and defining the mission of US military airpower. Arnold would be a key architect of the Allied Combined Bomber Offensive in Europe and in the role of US air power in the Pacific Theater.

Significantly, his mission to Alaska contributed to his view of the strategic importance of the Arctic. During World War II, he would dispatch newly commissioned and accomplished Arctic aviator Bernt Balchen to Greenland. Arnold's orders to Balchen stated, "No greater challenge to the pioneering spirit of Americans has ever been presented than the present vital necessity for the United States Army Air Forces to prepare themselves for operations in the Far North."[67] Looking ahead after World War II, Arnold identified the need for US aviation power projection in Arctic spaces to effectively defend the US. In a 1946 article in *National Geographic*, Arnold explained, "no longer can our northern approaches be considered as guarded by ice, snow and bad-weather barriers. Modern aircraft are becoming increasingly independent of such conditions…A surprise attack could readily come from across the roof of the world unless we were in possession of adequate airbases outflanking such a route of approach."[68]

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[66] *Henry H. Arnold Military Aviator*. Richard G. Davis Air Force History and Museums Program, 1997, US Government Document, 18-20.

[67] Chief of the Army Air Forces Major General H. H. Arnold Sept 12, 1941 Letter to Capt Bernt Balchen, Donor Box ARH-BAL, Clark Special Collections, USAFA McDermott Library.

[68] H.H. Arnold, "Air Power for Peace," The National Geographic Magazine, February 1946, 170.

Moreover, as the 1934 Alaska flight demonstrated, scientific and technological development, logistical and supply expertise, and trained and experienced personnel, were as essential as reliable and lethal aircraft and armaments. Arnold had internalized this early in his career and as he would say to the 1939 graduating class of the Air Corps Tactical School, "Unity of command is not alone sufficient. Unity of planning, unity of common item procurement and unity of doctrines are equally necessary." In the same address he emphasized the critical importance of, "planning for, and direction of technical research to ensure that the most modern weapons are being developed, tested and service tested in order to retain for the United States military equipment its present pre-eminent position."[69] Arnold's 1934 flight to Alaska thus had multifaceted consequences, provided lessons learned for operating in the Arctic, and provided further impetus to Arnold's efforts to promote a holistic approach that propelled the US to airpower dominance. These are important lessons to consider for both the pre-eminence and lethality of US airpower.

Author's Disclaimer: The views expressed in this Brief are those of the author and do not reflect the official policy or position of the U.S. Department of Defense or of the U.S. Government.

[69] Address of Major General H.H. Arnold, Chief of the Air Corps Before the Graduating Class of 1939, Air Corps Tactical School. Delivered May 11, 1939. USAFA Clark Special Collections SMS 322 Arnold, Henry H. Box 1, Clark Special Collections. USAFA McDermott Library.

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