“How far north can a guy git?”

MINNESOTANS at the TOP of the WORLD

DAVID CHRISTOPHER ARNOLD

General Squiers-class troop ship in North Star Bay off Thule, Greenland, Mount Dundas in the background
In the late 1940s, the United States adopted the simultaneous policies of containing the spread of Soviet ideology and deterring the Soviet Union from launching a military attack, enforced by placing U.S. nuclear weapons where they could strike virtually any part of the USSR. Bomber aircraft and weapons, flown over the North Pole, would be used as the first line of continental defense or in war. As part of this strategy, the U.S. military between 1947 and 1958 constructed a ring of air bases around the periphery of the Soviet Union. The network included installations in Greenland but also in the Caribbean, Iceland, Western and Southern Europe, North Africa, the Middle East, and Asia to serve as forward-staging sites or stopover points for aircraft armed with atomic weapons. Many of those bases no longer support that strategic purpose, having been abandoned long ago or returned to their host nations. But one significant part of that nuclear deterrent and strike ability remains—Thule Air Base in northwest Greenland.

A base in the eastern Arctic was imperative to implement the new strategy. In the summer of 1951 Operation Blue Jay, spearheaded by the U.S. Army Corps of Engineers, built that airfield, capable of supporting nuclear bombers, in less than 100 days while the U.S. was simultaneously at war in Korea and staring down the Soviets in Europe. Six thousand Minnesotans and other midwesterners, recruited by the Minnesota State Employment Service for a consortium of four construction companies, sailed north in a convoy of some 90 ships or flew in military cargo planes, not knowing where they were going until they got there.

Before the start of the Korean War, the U.S. Air Force, not surprisingly, supported President Harry S. Truman’s limited approach to responding to Soviet aggression. Secretary of the Air Force Thomas K. Finletter believed that Thule, Greenland, 750 miles north of the Arctic Circle—or someplace like it—could add “another advanced base to the ring of free world air bases, which exist as ‘strong points’ about the periphery of the Soviet Union, ready for use in either resisting aggression or retaliating on the offensive.” He later recalled, “It was of the highest importance to the United States to have a very powerful air power. . . . It seemed to me that the policy of the United States at that time should have . . . concentrated on efforts to prevent another great war from happening. In other words, peace should have been the number one project.” To keep the peace and contain the spread of communism, Finletter asked for a program of air-base construction at critical locations around the world.

Through its ambassador, the U.S. conveyed the scope of its proposed project at Thule to the Danish government (Greenland is part of the Kingdom of Denmark) on March 29, 1951, providing few details. Plans called for “a very considerable build-up” to develop a staging base for “bomber [air]craft with fighter support,” including a complement of about 900 people to prepare for “one B-47 operational wing.” Denmark’s Foreign Office representatives did not seem too concerned, asking only whether the U.S. would be using the deep-water port as part of a naval base, to which the U.S. replied that the port was only to support the airfield. There was no formal U.S.–Danish agreement defining the Thule Defense Area until June 8, 1951, when the Danish parliament approved it—just as the construction convoy set sail for the Arctic.

Dr. Arnold, associate professor of national security strategy at National War College, Washington, D.C., earned his PhD from Auburn University in the history of technology. The opinions expressed in this article are his own and do not reflect the view of the National War College, the Department of Defense, or the United States government.
The U.S. ambassador who signed the agreement was Minnesotan Helen “Eugenie” Moore Anderson, the first female American ambassador, appointed in October 1949. She was excited to be headed to a nation key for the new Western alliance and aligned to her anti-communist views. The U.S. press covered her tenure, referring to her on one occasion as “Denmark’s American sweetheart,” but she was much more than a beloved presence and diplomat. Anderson was very successful during her three years in Copenhagen, leading King Frederik to bestow upon her the Grand Cross of the Order of Dannebrog, which no woman had ever received, in recognition of her contributions to U.S.–Danish relations. After the two nations signed the agreement on the defense of Greenland, American newspapers praised the ambassador for her role in negotiations; the Minneapolis Tribune called it “a personal triumph for Mrs. Anderson’s tact and wisdom.” The pact has remained in force ever since.4

The scope of the project in 1951 was challenging. At a difficult time for the U.S. overseas, including a war on the Korean peninsula, the Army Corps of Engineers had to mobilize machines, equipment, and personnel with the right skills for Arctic construction. Typically, there is a three-month window for moving ships into the icy Arctic Ocean, nearly to the North Pole (in 1951 it proved to be shorter). The site had to be large enough to accommodate a 10,000-foot runway and airfield, support buildings, hangars, and barracks. It also had to be near the water to facilitate transportation of all construction materials. Finally, the weather had to be acceptable for approaching and landing aircraft. The Corps would need to provide its workers with water, heat, and power—all before the long, dark winter returned around Halloween. Lt. Gen. Lewis A. Pick, chief of the Army Corps of Engineers, was not certain he could get the project done, but that did not stop him from taking it on. He told the Air Force: “If you can give us $1,000,000 today, $15,000,000 on January 15, and the remainder of $50,000,000 on February 1, we will build a base and have it operational by November 1, 1951.” The Air Force general in charge of installations pledged to make the money available.8

Minnesota seemed like an obvious place to begin finding workers with cold-weather experience.6

The job required a variety of different contractors working together. Pick assigned the architecture-engineering company Metcalf and Eddy of Boston to begin outlining the tasks. The general later said, “Their technical proficiency and courage against great odds were prime factors in the success of the mission.” Experience, especially in cold-weather construction, would be critical. Pick met with Peter Kiewit of Omaha, whose company had built large dams and airfields; S. J. Groves of Minneapolis, one of the builders of the Pennsylvania and New Jersey turnpikes; and Joe Green of Illinois, an airfield-construction expert.5

Pick explained to them the enormity of the task, the risk to their companies’ reputations, and the likelihood they would not make an “exceptional profit if successful.” Reenacting this meeting later for an Army Corps of Engineers film about the job, he said, “Construction must be completed by the first of November. If that can be done, the construction industry and the Corps of Engineers will have broken the ice waste of the far north.” The general gave the construction moguls 20 minutes to decide. After four days of negotiations, the Corps had a signed contract for a $152 million base at the top of the world. The four major firms that joined forces as North Atlantic Constructors (NAC) for the Thule Air Base job were Peter Kiewit Sons, Condon Cunningham of Ohio, and the S. Groves and Sons and Al Johnson Construction companies, both headquartered in Minneapolis. The contractors took a fee of 0.0245%—$3.7 million ($33.4 million in 2015)—for, in Gen. Pick’s words, “the largest undertaking of its kind ever planned.”7

A project review in February 1951 revealed some requirements for the task: 100 oceangoing vessels, both U.S. Navy “gray hulls” and commercial merchants, to ferry 200,000 tons of materiel and equipment, much of it World War II surplus; 4,000 army technicians; and 6,000 construction workers. Pick had chosen the construction firms in part because they had cold-weather experience. Now those firms had to find 6,000 experienced men “willing to work at a remote job site under severe weather conditions . . . physically, psychologically and emotionally fit.” This project required “a recruiting and training program unique in the annals of the construction industry,” as the completion report put it.8
The U.S. Employment Service had helped the army determine that the Midwest had a large pool of construction labor. Minnesota seemed like an obvious place to begin finding workers with cold-weather experience. NAC set up a base of operations near Rosemount, a small town just south of the Twin Cities, and began recruiting and orientation. The Army Corps of Engineers’ office in St. Paul would represent the agency during the recruiting process. That office was also a center for permafrost research and not far from the army’s Snow, Ice, and Permafrost Research Establishment in Wilmette, Illinois. In addition, two of the NAC contractors were already headquartered in Minneapolis. And the eight buildings and 200 acres of land at the University of Minnesota’s research park in Rosemount, which had been the site of the army’s Gopher Ordnance Works during World War II, could be leased to serve as a recruiting and evaluation area. Recruiters would begin by prescreening applicants who could show proof of U.S. citizenship, had five years of construction experience, and were between 27 and 50 years old.9

The first job advertisement appeared in the Minneapolis Tribune on February 21, 1951, calling for construction engineers and superintendents who could “work outside the continental limits of the United States in a very cold climate” and promising “top salaries.” Interested men had to send a letter to a post office box in care of the newspaper, keeping everything very clandestine. Two weeks later another ad appeared, this time aimed at “Men 27–50” and promising “big-pay jobs” if applicants answered “Yes” to three questions: “Can you take cold weather? Ready for a long trip? Do you want quick or big money?” The company sponsoring the ad: North Atlantic Constructors. Additional newspaper ads by the Minnesota State Employment Service (MSES) brought in thousands of applicants to its 33 offices statewide. The men were “interviewed, tested and examined for physical fitness, emotional stability, and skill in their specific job,” according to Operation Blue Jay historian Lt. Col. James Ellis.10

MSES interviewed 25,000 men and hired 5,000 for an operation called only Blue Jay. Interviews explored each candidate’s work experience, assessed psychological and sociological factors, and included an intelligence test and a written test on the applicant’s trade. Candidates also took skills tests on the equipment they were going to use: for example, driving the type of bulldozer they said they could. Once in Greenland, sending underperforming men back to the U.S. would be a tremendous waste of resources. Each new hire “was briefed on everything, in fact, except the location of the job,” Gen. Pick later stated. But the pay was worth the uncertainty of signing up without knowing where one was going or how long he might be gone. One author later met some men at Thule who were earning $1,500–$2,000 per month ($14,000–$18,000 today), working 12-hour shifts seven days a week—84 hours, including 44 of overtime. These workers, not far removed from World War II and in the midst of the Korean War, “had a lively sense they were taking part in a great patriotic enterprise,” according to anthropologist Jean Malaurie, who was living with the Thule Inuit in 1951. The careful screening of applicants paid off: the Army Corps of Engineers reported that only ten percent of the civilian workforce was sent home for “incompetence rather than the 30 percent or more which was the average on other overseas jobs at the time.”11

Not everyone signed up out of patriotism; some just wanted the job. Bob Short was a Marine Corps veteran of World War II who had returned home to South Dakota. He moved to Minneapolis to attend trade school but ended up driving trucks across Minnesota. He and a friend saw the MSES newspaper ad and applied. After making it through the testing gauntlet, he was told that NAC would be in touch by postcard. The salary was “fantastic,” so he and his friend each signed a contract identifying a job, salary, and
the bank where their money would be sent when the job was done. But still, he recalled, “We didn’t have the foggiest idea what we were going to be doing.”

Workers underwent a two-week indoctrination and orientation course, including how to survive in subzero temperatures—still without learning where they were headed. Then, they began training on specific job-site procedures. For example, they repeatedly practiced assembling a building from prefabricated panels, as they would do on arrival. Constant safety training ultimately resulted in an accident rate “75 percent lower than the national average for stateside construction,” claimed the completion report.13

Meanwhile, in the total darkness of February 17, 1951, a team led by Col. Mort Solomon from the Army Corps of Engineers’ North East District office (New York) arrived at Thule’s gravel airstrip, built just after World War II. Sixteen men in all—from the Corps of Engineers, the Army Transportation Corps, and civilian architecture-engineering and construction firms—had come to do a site survey. With Col. Solomon were Maj. A. E. Miliken, the Air Force liaison; Jack Altig, Keith Wasson, Joe Green, and Charles Corignan from North Atlantic Constructors; and architect-engineers Andy Paton, Harrison P. Eddy, Jr., Clarence B. Litchfield, Peter Linstrom, and Charles F. Parker. Altig, who had just finished working on the huge Garrison Dam project in North Dakota, was to be designated Operation Blue Jay’s job-site manager. Wrote Ellis, the project historian, “By ‘weasel’ [an amphibious, tracked vehicle] and afoot, the scouts covered the area for a week, examining it as well as the severe weather, bitter cold and high wind allowed.” The sun peeks above the Thule horizon in mid-February for, at most, an hour of twilight per day before darkness returns for the other 23 hours. The ground was still frozen, and the wind whipped off the icecap. Describing their visit, U.S. Air Force Col. Bernt Balchen wrote: “The survey party arrive[d] at Thule and fortunately experience[d] possibly the worst weather to be expected in this region. Temperatures were down to 30 or 40 degrees below zero, and winds reached a velocity of 95 to 100 knots for several days. This extreme weather gave the engineers and architects actual experience in what can be expected in the Arctic.”

When June 6, 1951, arrived, the ships were finally ready to head north. They sailed from Norfolk, Virginia, Baltimore, and New York ports like an invasion fleet, with what Life magazine later called a “Normandy-on-ice determination.” Over $100 million in materiel and construction equipment and 3,000 personnel were loaded aboard 82 Liberty ships, transports, and landing craft. En route the convoy was joined by two ice-breakers carrying helicopters to scout for breaks in the ice. A long, cold voyage lay ahead.15

Many aboard did not know where they were headed until they left port. William Lagarde, helmsman on the G. W. Codrington, a seagoing tug, had been validated for “emergency service” in the summer of 1951 but only knew after leaving Baltimore that he was headed for the Belle Isle Straits off Newfoundland, Canada. “If anyone aboard knew our destination at that time I wasn’t one of them and I was on the wheel,” he later recalled. Codrington made seven knots while towing, 1,500 feet behind, two World War II surplus tank ferries called LSTs, cut down to the tank deck and intended to form the basis for the permanent pier at Thule. They rendezvoused with the command ship USS Monrovia and only then learned their final destination.16

Warren Brown, a World War II Navy veteran, was a doctor in civilian life when recalled to active duty in 1951 to support Blue Jay, although he did not know that when he headed to the East Coast from his home in California. He reported to New York to serve as medical officer aboard USNS General Stuart Heintzelman, a troop transport that had seen many trips across the Atlantic and Pacific oceans. They left New York bound for Norfolk, assuming they were headed to the Korean theater; the ship was degaussed along the way so its hull would not attract magnetic mines. But when they got to Norfolk, they loaded about 2,000 NAC workers, mostly young and middle-aged bulldozer and crane operators. Dr. Brown later recalled, “As we sailed out of Norfolk we spotted a Life photographer on the nearby shore taking pictures of us! He had a large truck with ‘LIFE Magazine’ emblazoned on it. [we were supposed to be on a secret mission].” When the ship passed the 20-mile shore limit, the commanding officer, Capt. Ben Bostleman, called the officers to his quarters to open his secret orders. The orders read to report to the southernmost tip of Greenland and wait to join a convoy. According to Dr. Brown, “The next three days were uneventful except we ran into fog and ship traffic off the Grand Banks and you could hear the ship horns bellowing—burr, brrrrrrp, buvwrvvrrp to keep the ships from running into each other—we had lookouts and radar but for safety they used the horn also.”

Despite the large size of the armada, not everyone sailed north with the convoy. Many workers stayed behind in Norfolk, awaiting air transportation to their final, still-unknown destination. When Bob Short showed up at the Norfolk shipyard, “the Navy told us the ships had already...
left.” They were to wait for transportation. Two weeks later he and 500 other NAC workers boarded planes. They flew first to Westover AFB in Massachusetts, then on to Goose Bay, Labrador; Bluie West-8 AFB at Sondrestrom, Greenland; and Thule. Short’s pilots had to try three times to get into Bluie West-8 because the weather was so bad. He finally found out where he was headed when the crew chief told him, “I don’t know where you guys are going but this plane is going to Thule.” When they arrived ahead of the fleet, which included the barracks ships, there were not enough tents to hold them all. Some men slept on the beach, in the total sunshine and 50-degree weather of an Arctic summer.18

The initial element of the shipping convoy arrived at Thule’s North Star Bay on July 9, after a month at sea. “Godalmighty!” said one construction worker, “How far north can a guy git, anyhow?” The commanding general of Operation Blue Jay, Maj. Gen. Harry Vaughan, sent back to Gen. Pick in Washington: “We arrived today with five vessels . . . the others are behind in two echelons and should arrive at three-day intervals. . . . The big job is ahead and the men are raring to go, what they may lack in experience, they will make up in their willingness to get the mission completed.” Lt. Bernard Kessler remembers the men experiencing “A great, collective sigh of relief. Generally, we were anxious to get to work and see how things would work. We had the theory down pat—the application would be the test.”19

Workers reportedly did pretty well on the beach for their 12-hour shifts. They were properly clothed and their jobs kept them active. They arrived fit, having been through a physical-training regimen before sailing north. Despite temperatures averaging in the upper 30s during the 24-hour daylight, they reportedly “experienced little discomfort from the cold.” Thule “beach wear” consisted of woolen underwear, utility trousers and shirt, woolen sweater, utility cap, woolen socks, and field shoes. A winter helmet, necessary on colder days, was uncomfortable; the army olive-drab field cap with earflaps was a good replacement in milder temperatures. The unusually dry terrain made it unnecessary to wear anything other than field shoes except when it rained; then the men used shoe covers. A winter face mask, part of the kit, was especially helpful when high winds swept across the beach, in part because it fit over protective eyewear. Standard welder’s
goggles were the best lenses for blowing sand, and plastic sunglasses could be used on sunny, still days. When the men did get cold, there were warm-up tents on the shore.20

Nevertheless, given the conditions and the isolation, morale remained a challenge. The pay was an important boost. For civilian construction workers, who had received four dollars a day (about $36 in 2015) before sailing north so they would not hire out elsewhere, the pay was worth the uncertainty about where they were going or how long they might be gone. Even janitors brought in over $225 ($2,000) per week. NAC workers were not getting paid, however, while they were at Thule. Even if they had, there was not much to spend money on. They received some army paper money—scrip—to buy shaving cream and other incidentals from ships’ and then beach stores. The NAC men would be paid when they got home—a sizable check to look forward to, minus $5.75 per day for room, board, and laundry.21

A total of 110 ships of all kinds—naval ships, cargo ships, tankers, and commercial tugs—reached Thule, the last arriving August 30. Over 44 days, Army Transportation Corps soldiers unloaded 148,919 tons of cargo, an average of 3,386 tons a day, with one day seeing 7,218 tons unloaded. At its peak, over 4,000 men were engaged in this operation. But it was not all smooth. During the planning and loading phases, coordination among Army, Air Force, and the civilian contractor was poor, causing constant changes and overlapping requirements. Heavy equipment ordered from industry was delayed. Cargo scheduled for shipment to Thule failed to show up at the departure port, throwing pre-departure stowage plans into disarray and requiring changes and substitutions. Many ships’ masters did not get their manifests until they arrived at Thule. As a result, ships were unloaded without precise knowledge of what was on which vessel. In addition, there was no staging area—supplies were taken directly to job sites and dumped around the shore. Another obstacle workers faced, after frequent changes in billets aboard the transports, was the complete lack of facilities ashore. But at least they were at Thule and could get to the task of building an air base on the frozen tundra.22

**Thule Today**

Construction continues at Thule today, as the original 1950s-era buildings are replaced with more modern structures. In 2001, for example, the Air Force provided money to the Army Corps of Engineers for a new medical facility. The old hospital was far too large and inefficient for the current, smaller base population of about 500 Americans and Danes. In 2002 construction materials were shipped to the base via the annual resupply operation, and Greenland Contractors, the base-operations contractor, tore down older buildings (instead of burning them, as was the old procedure) that stood where the new hospital would go. The result was a centrally located, single-story, 5,700-square-foot medical center capable of supporting the entire Thule population and that of surrounding districts as well. If you can get to Thule, the medical team will treat you with outpatient or inpatient care or surgical services using state-of-the-art equipment.*

The long-term plan to reduce costs of operations shrinks the footprint of the base, including consolidating facilities around a central population cluster and closing older, unused, or underused buildings.

For most buildings, prefabricated materials appealed to the army and contractors. They had looked at several commercially available types, needing to find ones that were not too flimsy for the Arctic winter or too flammable. One manufacturer, the Clements Panel Company of Danbury, Connecticut, was looking to market its product and sought out the army. Their innovation was a wood panel built around insulation, its outside face sheathed in aluminum. These “wonders of quick construction” were commonly used to build refrigerated spaces to keep the cold in—instead of out, as at Thule. The “Clements panels,” lightweight and prefabricated over standard jigs, were easily handled and provided an effective barrier to Arctic weather. They were cheap, compact, rugged, insulated, fire resistant, interchangeable, reversible, and adaptable for every structure, including barracks, warehouses, and administrative offices. In addition, the finished aluminum surface was a good water-vapor barrier and did not need to be painted, a vital advantage in an environment where high winds could sandblast paint off structures. (Unfortunately, a metal shortage meant the panels did not get a full covering, which led to moisture issues later.) In all, NAC procured, shipped, and installed two million Clements panels at Thule in 1951. Construction went so quickly that one worker commented, “When you come out to work in the morning you have to look around at the new buildings and figure out where you are.”

Outside work continued until the middle of October 1951, when it became too cold to be outdoors—temperatures were well below freezing. The sun rose and set for the last time on October 30, not to break the horizon again at Thule until mid-February 1952. Following a couple of weeks of twilight, the long winter’s night began. Nearly four million cubic yards of soil had been moved and another half-million-worth was already planned for 1952. The hangars, barracks, shops, power plants, roads, warehouses, and technical facilities were all on schedule, according to Gen. Pick. With lessons learned from the first journey north, planning, engineering, and other work was well underway for the next year’s sailing.

In mid-October, the Air Force accepted the asphalt-surfaced runway, which now had lighting (not necessary during the full daylight of the summer) and showed no flaws in construction. Planes regularly landed and took off, slowly ferrying workers back home on their base-hopping journey south. On October 22, eight planes left, carrying 30 men each; eventually just 500 of the original thousands remained to do maintenance and minor interior construction. Taxiways and parking aprons had been partially finished; two hangars were completed and scheduled for turnover to the Air Force on January 1, 1952. Workers had enclosed 79 barracks, 31 of them completely operational; 48 warehouses had heat and lights; and the bakery had opened. Some work planned for 1952 had even been accomplished, including sinking pilings for more aircraft hangars and preparing the sites for asphalt and concrete plants.

“We were anxious to . . . see how things would work. We had the theory down pat—the application would be the test.”

An amphibious truck, the DUKW, or “duck,” could easily carry two tons of cargo from a ship and then be driven up on shore for unloading.
Hule Air Base did not remain a secret for long. Even before the thousands of soldiers and civilian construction workers had finished returning to the Zone of the Interior, word about the new installation had leaked out. The Winona Republican Herald began by running a series of weekly articles, “With An Arctic Chaplain,” by Spring Grove minister Knute Lee, who stayed on at Thule as an employee of NAC. The first ad for the series, on October 25, did not mention the specific locale, citing “rigid security restrictions.” An announcement on October 29 revealed that Lee worked “in Greenland where this country is erecting a gigantic air base far above the Arctic Circle . . . along the top-of-the-world bomber route to and from Russia.” On October 30, the day before the series began, the newspaper declared, “The lid’s off! Most of the vital information . . . has been made public”; readers could enjoy the “exciting detail” about the “dramatic venture and about the Winona area men working on the project.” Lee’s articles over the next several months presented the challenges of the Arctic wind and weather and of ministering to men when pool tables stood right outside his office. In “Christmas in the North,” the chaplain described a depressing, lonely scene at Thule, where the sun had not come up for weeks and the special holiday meal was “minor compensation because practically all meals fall naturally into that category as it is.” He also mentioned the people who “employ artificial means to pick themselves up if they’re feeling too low . . . [desecrating] the holy days of Christmas by drinking themselves into chemical jubilation.”

Also in October, a tongue-in-cheek headline in a newspaper no less venerable than the New York Times announced that men had returned to Westover Field in Massachusetts “To Thaw Out Their Frozen Assets” after work on “a defense project known as Project Blue Jay.” (Thule was never named “because of security restrictions.”) Springfield, the host town for Westover Field, took on “a frontier town appearance with the return by airlift of workers.” The recent arrivals from the top of the world were easy to spot, too: they were “dressed in rough work clothes, lumber jackets, dungarees and army fatigues, and frequently [had] heavy beards.” The men received a $500 transportation allowance and two weeks’ wages when they landed; many men had rolls of $15,000, according to one Associated Press account. Cash registers near their hotel were “tinkling as the long-frozen assets” were thawed, putting a charge into the local economy. Police “reported one man hurt critically in a hotel brawl and a fellow construction worker held for assault,” perhaps settling old scores from up north. A photographer-artist at the Hotel Charles took “Bluejay souvenir photos” and made “Bluejay drawings” while barbers removed “heavy beards grown during the four months.” Some “unscrupulous persons” got the men drunk and sold “merchandise at highly inflated prices;” the AP added. But, like the many who have left the country in service to the nation, most of the men just felt good to be back on American soil.

In less than four months, thousands of civilian contract workers, many of them from Minnesota and other midwestern states, built an air base 700 miles inside the Arctic Circle in winter-like conditions during the summer of 1951. Thule is still an active U.S. Air Force installation today. Its runway is its lifeline to the world and a testament to the men who took a chance and sailed north. In Gen. Pick’s words, where “previously only a small Eskimo colony had been able to exist in the most primitive fashion . . . big-time construction was brought to the roof of the world.” Visiting the work-in-progress on September 11, 1951, Gen. Curtis LeMay, commander in chief of Strategic Air Command, pronounced that Thule would be “a base I can fight from.”

In October 1951, the Winona Republican Herald promoted its exclusive series “With An Arctic Chaplain” by Knute Lee, an employee of NAC stationed at Thule.
Notes

The author would like to acknowledge Minnesota History's anonymous reviewers and Minnesota State University–Moorhead graduate student Mark Murphy for their help.


6. Pick, “BLUE JAY,” 280, Washington Post, Aug. 4, 1996, B6 (Green obituary). Experience was not the only factor in Pick’s choices; personal relationships were also important, as they continued to be throughout the project. Green, for example, had worked as chief road engineer under Pick in Burma.


18. Short, telephone interview.


20. Combined Task Force 118, “Report of Operation ‘Bluejay’,” Nov. 26, 1951, IV–(C)–14–IV–(C)–15, U.S. Army History Institute. In -20°F weather in April 2008, the author went on a two-hour ride from Thule with a hunter from the village of Morissaq, about four hours by sled across the ice. For $50 he let me ride with him on the four-foot-thick ice of North Star Bay while he checked his seal traps and showed me his tools, including some very thick ice picks and a very high-powered rifle. Not long after we left the bay to head out into the fjord, my camera battery died from the cold. The dogs were fanned out in front of the sledge, each one individually tied to it to prevent them from all falling through a hole in the ice with the sledge right behind. I wore all my cold-weather gear, including face mask, put chemical heaters in my hands and boots, and was still cold.

21. Malaurie, Last Kings of Thule, 389; Huston, Outposts and Allies, 299; Bill Brinkley, “$1,500 A Month, No Place to Go,” Life, Sept. 22, 1952, 141; Short, telephone interview.


If you think you may need permission, here are some guidelines:

**Students and researchers**
- **You do not** need permission to quote or paraphrase portions of an article, as long as your work falls within the fair use provision of copyright law. Using information from an article to develop an argument is fair use. Quoting brief pieces of text in an unpublished paper or thesis is fair use. Even quoting in a work to be published can be fair use, depending on the amount quoted. Read about fair use here: [http://www.copyright.gov/fls/fl102.html](http://www.copyright.gov/fls/fl102.html)
- **You should**, however, always credit the article as a source for your work.

**Teachers**
- **You do not** need permission to incorporate parts of an article into a lesson.
- **You do** need permission to assign an article, either by downloading multiple copies or by sending students to the online pdf. There is a small per-copy use fee for assigned reading. [Contact us](#) for more information.

**About Illustrations**
- **Minnesota History** credits the sources for illustrations at the end of each article. **Minnesota History** itself does not hold copyright on images and therefore cannot grant permission to reproduce them.
- For information on using illustrations owned by the Minnesota Historical Society, see [MHS Library FAQ](#).