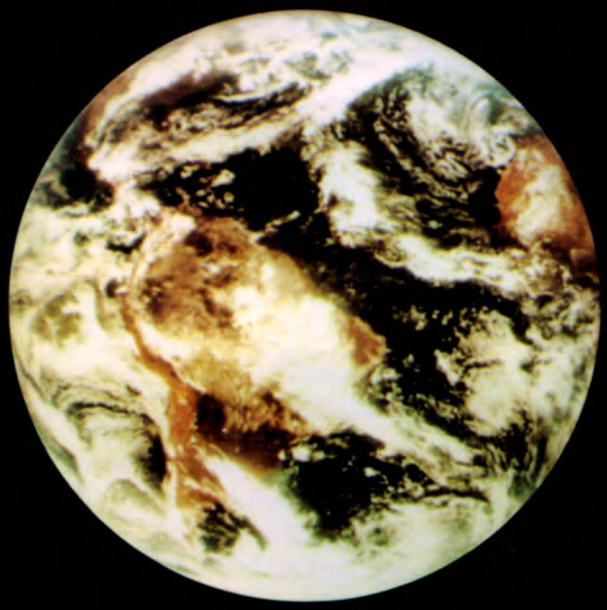

# WORLD IN PERIL

## The Origin, Mission & Scientific Findings of the 46th/72nd Reconnaissance Squadron


By Ken White

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**World in Peril**
**The Origin, Mission & Scientific Findings**
**of the 46th/72nd Reconnaissance Squadron**

Also released as:
**World in Peril**
**The Story Behind the Discovery**
**of Imminent Global Change**



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Cover Design:

The first photograph of
the entire earth from space.
*Courtesy of Maynard White*

Oil painting of the "Kee Bird"
*by Ken White*

This book is dedicated
to the aviation pioneers
of the 46th/72nd Recon Squadron
and their charming wives.

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# Acknowledgements

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And finally, I am particularly indebted to my father, Maynard E. White, without whose encouragement and memory for details much of this story would have been lost to history.

**Major Maynard E. White**
**Commander, 46th/72nd Recon Squadron**
**and "Project Nanook"**
**3 June 1946 - 12 August 1948**

"It is with the greatest professional respect and the highest personal regard that I salute the officers and men of this extraordinary organization for their outstanding work. Without exception, all members of the 46th/72nd Squadron may well take pride in the accomplishments of the unit, and in the part that each member played in writing a new and important chapter in the annals of aviation history."

# Author's Introduction

Throughout my life I've heard my father tell stories about the 46th/72nd Recon Squadron which took place on the Alaskan frontier where I was born in the late 1940's. To me, there was something almost legendary about these exploits, from carrying out reconnaissance missions over the unknown Arctic, to finding three magnetic north poles, to the hunts for ten-foot-tall Kodiak bears. I have always felt that these accounts should be put in writing, but it wasn't until my own retirement from the Air Force that the opportunity presented itself.

This story is entirely true. The occurrences actually happened; nothing is invented. All of the people are real and as of this writing most are still living. Although the described events actually took place, very few people know or have known the true details of the unit's mission, notwithstanding the sensational press releases of the era.

My filial relationship with Colonel Maynard E. White (Retired) has been a distinct advantage in the writing of this book, since not only have we had time to work together, but because he was the commander of the unit and privy to information about the unit mission that was given to few others. The story of "Project Nanook" is unabashedly written from his perspective for that reason.

After his return from the Arctic, my father received numerous requests from the Smithsonian Institution for information pertaining to the unit's pioneering work in Alaska to help them complete their historical record of this amazing era; however, because of its classified nature, he could not divulge what he knew at that time.

Because of this security shroud, information on this unit has not been readily available, and few aviation or history books make accurate mention of the 46th or 72nd Recon Squadron. Even official Air Force history sources usually draw a blank when trying to uncover the true mission and significance of this extraordinary unit. Were it not for the mandatory 40-year declassification of the unit records and the subsequent organization of the reunion effort, sufficient resources would not have surfaced to make this book possible.

We only began to communicate with many former squadron members in 1988, the year the squadron records were declassified, and soon thereafter individual stories and documentation began to emerge. The volume of corroborative information increased significantly after the unit's first reunion in 1989. Since then, many unit members have contributed immeasurably in terms of narrative reminiscences, anecdotes, and photographs.

In researching this book, we discovered that despite all the unit's achievements, history seems to have passed the unit by. Little does the world know that it was the 46th/72nd Recon Squadron that developed the grid system of navigation which opened up the arctic skies to world aviation - an achievement recently cited as one of the ten greatest accomplishments of the United States within the last fifty years. Few are aware that this very development made the Strategic Air Command bomber fleet a global deterrent force, thus able to keep the peace throughout the forty-five years of the Cold War. Fewer still are aware of the scientific contributions of the 46th/72nd Squadron which have given

us foresight into future geological events that will reshape our planet and have a profound impact on our global society.

It is the purpose of this historical anthology to put these achievements into perspective, in order that future generations may know about the 46th/72nd Reconnaissance Squadron and the story behind the discovery of imminent global change.

The squadron members have every right to be proud of their unit's accomplishments, just as their countrymen can now finally recognize the unit's various contributions after so many years of secrecy. Their story deserves to be told; and though this book is merely a dim reflection of what actually took place on that cold arctic base in 1946-48, it is an attempt to make a long-overdue record of these events, for both those who are curious about a hitherto unknown chapter of history, and those who are interested in why our planet is a world in peril.

Ken White

# Overview

Today it seems axiomatic that irresolution of national will and lack of military preparedness somehow seem to invite aggression in this world, and that our national security has always been directly proportionate to our military strength and deterrent capability. This lesson, however, was not well-known fifty years ago, in the mid-1940s, when the Cold War began.

Prior to American involvement in World War II, the United States had one of the smallest military forces of any of the major powers. This was consistent with the often-pervasive "isolationist" thinking. When World War II started in Europe, the entire United States military had a mere 200,000 personnel; the Army Air Corps consisted of only 27,000 officers and men, only 1,500 airplanes, and a mere 13 Boeing B-17 heavy bombers. There were, however, a few visionaries among our armed services who anticipated the need for a strong defense, but as a whole, the nation did not recognize this need until its rude awakening with the Pearl Harbor attack of December 7, 1941. It was only then that the buildup began in earnest.[1]

During World War II, the United States military reached its maximum active duty strength of about ten million personnel, of which 2,400,000 belonged to the Army Air Forces, divided among 243 combat groups flying 80,000 aircraft. When Germany capitulated on May 8th, 1945, there was considerable speculation about whether or not the majority of our combat units would then be shifted to the Pacific Theater. Our military units were brought from Europe back to the United States as fast as possible, with priority given to those units that had been in combat the longest.[2]

On September 2nd, 1945, the war in the Pacific ended, stopping any further preparations to move our fighting forces from Europe to the Pacific. Demobilization of American forces, which had begun with the defeat of Germany, had reached its peak by mid-1946. By June 1947, Air Force personnel strength was down to 303,000 officers and men, and they could man no more than 38 combat groups, of which only 11 groups were considered operationally effective.[3]

It was about this time that the USSR, our former ally, was becoming an adversary. At first only a few foresighted military and political officials voiced their concerns about the growing Soviet threat and the lackluster American response. Usually, these prudent watchmen were referred to as "saber rattlers" and alarmists by those who did not want to "awaken the Russian bear" or upset the illusory postwar peace. The Soviets were under no such illusions.

At the end of the war, the United States had 2,132 Boeing B-29 Superfortresses, the most formidable heavy bomber ever produced up until that time, but they were being "mothballed" for long-term storage almost as fast as they were being returned to the States. The B-29 was a remarkable bomber design, admired by the Soviets more than we realized.

Through our intelligence sources, it was discovered that the Soviets were producing copies of the B-29 in increasing numbers as the standard long-range heavy bomber of the Soviet Air Forces, which were fully operational and deployed in strength by 1947.[5] It was clear that the Soviets had a delivery

system, but how soon would they have the bomb? America's response to this emerging threat would determine the fate of the world. Our nation's first move was to organize and deploy "Project Nanook".

# Foreword

Speech by Winston Spencer Churchill at Westminster College
March 5th, 1946

"A shadow has fallen upon the scenes so lately lighted by the Allied victory. Nobody knows what Soviet Russia and its Communist international organization intends to do in the immediate future, or what are the limits, if any, to their expansive and proselytizing tendencies...

"From Stettin in the Baltic to Trieste in the Adriatic, an iron curtain has descended across the Continent. Behind that line lie all the capitals of the ancient states of central and eastern Europe. Warsaw, Berlin, Prague, Vienna, Budapest, Belgrade, Bucharest and Sofia, all these famous cities and the populations around them lie in the Soviet sphere and all are subject in one form or another, not only to Soviet influence but to a very high and increasing measure of control from Moscow...

"The Communist parties, which were small in all these eastern states of Europe, have been raised to pre-eminence and power far beyond their numbers and are seeking everywhere to obtain totalitarian control. Police governments are prevailing in nearly every case, and so far, except in Czechoslovakia, there is no true democracy. Turkey and Persia are both profoundly alarmed and disturbed at the claims which are made upon them and at the pressure being exerted by the Moscow government. An attempt is being made by the Russians in Berlin to build up a quasi-Communist party in their zone of occupied Germany by showing special favors to groups of Left-Wing German leaders. At the end of the fighting last June, the American and British armies withdrew westward, in accordance with an earlier agreement, to a depth at some points 150 miles on a front of nearly 400 miles to allow the Russians to occupy this vast expanse of territory which the western democracies had conquered...

"Whatever conclusions may be drawn from these facts - and facts they are - this is certainly not the liberated Europe we fought to build up. Nor is it one which contains the essentials of permanent peace...

"...In a great number of countries, far from the Russian frontiers and throughout the world, Communist fifth columns are established and work in complete unity and absolute obedience to the directions they receive from the Communist center. Except in the British Commonwealth and in the United States, where Communism is in its infancy, the Communist parties or fifth columns constitute a growing challenge and peril to Christian civilization. These are somber facts for any one to have to recite on the morrow of a victory gained by so much splendid comradeship in arms and in the cause of freedom and democracy, and we should be most unwise not to face them squarely while time remains...

"It is because I am so sure that our fortunes are in our own hands and that we hold the power to save the future, that I feel the duty to speak out now that I have an occasion to do so. I do not believe that Soviet Russia desires war. What they desire is the fruits of war and the indefinite expansion of their power and doctrines... Our difficulties and dangers will not be removed by closing our eyes to them. They will not be removed by mere waiting to see what happens; nor will they be relieved by a policy of appeasement... From what I have seen of our Russian friends and allies during the war, I am convinced that there is nothing they admire so much as strength, and there is nothing for which they have less respect than for military weakness..."

# PART ONE

## The Origin, Mission, and Scientific Findings of the 46th/72nd Recon Squadron

# Chapter 1

## Origin of "Project Nanook"

***Washington Post: (April 20, 1946) - "Russian Control of Hungary Complete, Experts Say", (April 21) - "Red Demands Still Hold Up Peace Treaties", "Soviets May Not Quit Azerbaijan", "Truman Urged to Act on U. S. Reorganization", (April 22) - "Army Discharges Since May 12, 1945 Reach 7 Million", "Demobilization Makes Air Transport Command Ground 130 Planes", (April 24) - "Army to Begin Demoting Majors, Captains on Sept. 1".***

The stage was set for the Cold War even before World War II was over. At the Yalta conference in February of 1945, Josef Stalin, Winston Churchill and Franklin Roosevelt agreed on two major decisions that would cause unavoidable tensions and confrontations between the free and communist worlds. The forces of democratic influence were represented through the acceptance of the "Declaration on Liberated Europe", which called for Allied installment in the occupied countries of "interim governmental authorities broadly representative of all democratic elements in the population" and also requiring "the earliest possible establishment through free elections of governments responsive to the will of the people."[1] This concept has been the free world's theme ever since, but it was not without opposition.

In sharp contrast to the aims of that declaration was that same conference's concurrent agreement to effectually cede much of eastern and central Europe to the absolute control of the totalitarian Soviet Communist government, and to put Berlin into a singularly precarious situation. At this one conference the preliminary groundwork was laid for both Soviet communism's postwar ideological expansionism and its direct counterpart, the free world's moral imperative to make freedom available to all peoples. The ensuing struggle between these concepts would underlie a world conflict in politics and socioeconomics that would last nearly fifty years.

But in 1946, the term "Cold War" hadn't even been invented yet. Few people, with the notable exceptions of Winston Churchill, George Patton, and a handful of politicians and generals had even thought much about the threat of Soviet expansionism. National defense in peacetime had never been a great preoccupation of the American populace, and this was especially true when World War II was no longer news and peoples' thoughts had turned to more personal pursuits.

America's initial response to the world's "expectancies" was to shrink from them. The postwar spirit was summarized in the newly-coined word, "demob", meaning demobilization, and was used to emblazon headlines in the "Stars and Stripes" such as: "PENTAGON PROMISES DEMOB SPEED-UP", and "GIs PROTEST LAG IN DEMOB PROGRAM." The convoys bringing troops home were even larger than those that had deployed troops overseas during the height of the war effort. The ink was no sooner dry on the Japanese surrender document than 5 million men, almost half our wartime troop strength, were released from active duty. Our forces in Europe were being

reduced from 2.8 million to 400,000 as quickly as they could be transported home. Total occupation forces (mostly in Japan) amounted to a mere 15% of our wartime strength.[2]

Incredible amounts of surplus military equipment were unloaded on whatever markets would take them. Nothing overseas was spared except jeeps for our occupation forces. Trucks, tracked vehicles, cranes, earth-moving equipment and ambulances were sold at bargain prices. Thousands of aircraft that could not be sold to commercial airlines or to private interests were demolished *en masse*.[3]

Speedy as the demobilization process was, it was not fast enough for the overseas GI. John Sharnik, in his book, *Inside the Cold War*, explains that"some politicians rode the wave of public sentiment. 'Bring the boys home!' was a popular position that few elected officials dared to oppose openly." Senator James Wadsworth of New York felt that the underlying force behind demobilization was that "every mother wanted her boy home." After surveying the Russian-occupied zones of Europe immediately after the war ended, Senator Claude D. Pepper of Florida recalled that he "incurred the wrath of some of the GIs" by saying that he didn't think we ought to release the men as rapidly as we were doing, that he thought we'd have to pay for it later on.[4]

All it took were overseas "points" to become eligible for discharge, and everyone who had the points seemed to want out. What started as a military expediency became one of the most disorderly demobilizations imaginable. After a while, there weren't enough personnel left on some stations to justify the base's operation, so remnants of units were transferred to other bases to consolidate remaining forces. Thus, within one year after the war, the granting of military discharges on request and the rapid postwar demobilization had left our fighting units depleted, our military establishment in disarray, and our nation ill-prepared for events to come.

The major flaw in our force reduction policy became alarmingly apparent only when we began awakening to the fact that the Soviets had no intentions of demobilizing their forces, and they had the largest military force the world had ever known. Even if our military intelligence staffs were not yet familiar with the eccentricities of Soviet politico-military doctrine, they could at least recognize an imbalance of power.

Had our government and military officials been more knowledgable about Soviet military thinking, the alarm would have been sounded much sooner. Soviet military doctrine, as expounded by Vladimir Lenin, encompassed the logic that "the existence of the Soviet Republic side by side with imperialist states for a long time is unthinkable. One or the other must triumph in the end. And before that end [ensues], a series of frightful collisions between the Soviet Republic and the [capitalist] states will be inevitable".[5] Therefore, to the prudent observer, not only was it clear that Soviet expansionism had been "preordained," but that only an undefended United States stood between the Soviets and their goal of "inevitable" communist world domination.

Pentagon planners were charged with the responsibility of countering this threat with the limited resources and personnel available. A foremost consideration was that if any attack by the Soviets against the United States were to come, it would undoubtedly have to be by air, over the polar cap and through Alaska, the shortest route between potential adversaries. It was also recognized that we knew very little about flying in the polar regions. Arctic flights had always been hazardous at best

due to limited knowledge and lack of navigational aids. In addition, there was great concern about the possible existence of unknown land masses in the polar cap on which the Russians might already have established forward operating bases, possibly even as close as 100 miles offshore from Alaska. We simply didn't know.

It was for these reasons that our armed forces were reorganized, and that the Strategic Air Command was established in March of 1946 by General "Hap" Arnold's successor as Army Air Forces Commander, General Carl A. Spaatz. This new command had its choice of bombers and other aircraft within the inventory, and manning requirements were met with the most experienced Army Air Forces personnel available. The first commander of SAC, General George Kenney; his deputy, Major General St. Clair Streett; and his chief of staff, Brigadier General Frederic Smith were immediately tasked to first assess the Soviet threat, and subsequently develop a strategic deterrent capability.

In order to do this, SAC had to first organize an aviation unit and deploy it rapidly to our northernmost base, Ladd Field, Fairbanks, Alaska, to begin developing an accurate system of navigation for flying over the polar cap using existing equipment. For security reasons, the overall mission, code-named "Project Nanook", would remain classified "Top Secret" and under the direct command of SAC Headquarters, Washington D. C. It was these circumstances that provided the basis for the formation of the 46th Reconnaissance Squadron (Very Long Range) Photographic, which thus became Strategic Air Command's first operational unit assigned SAC's first operational mission.

# Chapter 2

## Finding a Commander

***Washington Post: (April 26, 1946) - "Eisenhower Warns U. S. to Keep Strong Till Peace is Assured", "Reds Reject U. S. Protest on Manchuria", "Army to Tighten Discipline Abroad, Europe Almost Clear of Units to Return Home", (April 27) - "Eisenhower Stresses Value of Air Power - Global Conflict Foreseen".***

At the end of the war when the military was rapidly demobilizing, there was no data automation, satellite telecommunications or computers to massage data relative to personnel and equipment. All records were maintained manually and filed by hand and the 1946 state-of-the-art in personnel accounting was the morning report, stating who in the unit was available for duty, who was on leave, sick or unaccounted for. This report was sent to the next higher echelon daily, either by mail or telegraph. Accordingly, all record keeping was laborious and usually after the fact; oftentimes long after the fact.

Most all activities involving temporary duty and travel were implemented by Verbal Orders of the Commanding Officer (VOCO), and Change In Plans Are Proper (CIPAP) instructions. The reason for this was to accommodate deviations from plans, since personnel starting out on temporary duty seldom knew where they might end up or when they might get back. Upon return, however, they could tell the adjutant where they had been, how they traveled, where they stayed, and when they got back; and the adjutant would publish a set of orders confirming the TDY, VOCO and CIPAP dates along with the appropriate finance codes and the official reason for the trip. Then the adjutant would again record the person on the morning report as present for duty.

One could then take a copy of that special order to the finance clerk who would type a voucher that could be taken to the finance officer, who would grant a reimbursement of $2.00 per day to cover lodging and meals. Needless to say, one did not stay at the Hilton or eat at Antoine's while on TDY, at least not on government money.

This manual type of personnel management was not without its share of confusion and lengthy delays. Within this administrative framework, somewhere between Army Air Force Headquarters and the 449th Bomb Group to which the 46th Recon was assigned (but as of yet without its complement of personnel or aircraft), someone decided that the officer who would command the 46th would need to have extensive background in mapping and reconnaissance, and considerable experience in the B-29 aircraft. The question left facing SAC and its Fifteenth Air Force was how to go about finding such a person with two specific and needed qualifications instead of just one Military Occupational Specialty (MOS) when the reporting system listed each individual by their primary MOS only. This became a significant problem when so many personnel were getting out of the service.

colonel said he was Dick Montgomery and asked the major to accompany him up to his office. When they arrived, the major was asked what experience he had in aerial mapping and reconnaissance.

The major stated that upon graduating from pilot training in September 1941, he was assigned to the 2nd Photo Mapping Squadron at Gray Field, Ft. Lewis, Washington. About a month after the war started, he was one of twelve officers sent to Lowry Field at Denver, Colorado to attend the first photo pilot class. Upon graduation, he returned to 2nd Photo Squadron at Felts Field, Spokane, Washington, and took an F-2 photo aircraft and crew to Canada to aerial photo-map the terrain for the building of the AlCan Highway.

Upon completion of that task, he returned to the 2nd Photo Squadron to take an A-20 to Anchorage, Alaska to do some tandem T-3-A photo work in the Anchorage area. From Anchorage, he was sent to Umnak Island in the Aleutians to be the Photographic Officer for the Alaskan Defense Command. From there he returned to the 2nd Photo Squadron to take 24 Lockheed Hudson A-29 photo planes to map the jungles of the interior of South America, looking for rubber trees. After several months in the Amazon jungle, he was flown back to the States on a stretcher with appendicitis, ending up in the hospital at Ft. George Wright in Spokane, Washington.

On the day he was returned to flying status, he departed for India and China with the 3rd Photo Mapping Squadron to map the "Hump" and Burma in preparation for the B-29s going into China. In March of 1944, when the job was completed, he returned to the States.

Colonel Montgomery then asked if Major White had ever flown a B-29. He answered that within two months after returning from China, he was a B-29 instructor pilot at Fairmont Field, Nebraska, where he was in charge of Training Section III, and where he spent the rest of the war training crews to fly the B-29 for deployment to the Marianas. He added that he had in excess of 2500 instructor pilot and first pilot hours in the B-29.

Colonel Montgomery was clearly satisfied with the major's qualifications. The colonel finally asked if Major White was current in the B-25. He said he was. The colonel then told the major to go back to his quarters, pack his bags and leave immediately for Colorado Springs to report to the Fifteenth Air Force Headquarters commanding general, Major General Charles F. Born, who wanted to talk with the major yet that afternoon, as soon as he could get there. The colonel said he would go to base operations and set up an aircraft and crew that would be ready to depart for Colorado Springs within the hour.

When he got back to base operations, Major White learned that his crew on the B-25 were Captain John J. LeGrand, 2nd Lt. J. B. Reed, Staff Sergeant Raymon W. Flora and Private Joe A. Warren. They flew to Peterson Field where a staff car was waiting to take Major White to the Fifteenth Air Force Headquarters building, where he was immediately ushered into General Born's office. General Born got up from his chair, walked around the end of his desk and shook hands with Major White, asking how the major had gotten to Colorado Springs. He told him that he had flown a B-25 in from Grand Island. Gen. Born then asked if the aircraft and crew were still at Peterson Field. He said yes. The general then said, "Major, here is what I want you to do. Go out and get in my staff car, which is waiting at the front door to take you back to Peterson, and get into your airplane and fly into Bolling Field tonight, and report to the chief of staff at Strategic Air Command Headquarters

there at Bolling Field at 0800 hours tomorrow morning. General Freddie Smith and General Bill Streett will be there waiting to meet with you." Major White and crew took off with an estimated time of arrival (ETA) at Bolling Field, Washington D. C., at around midnight on 3 June 1946.

They landed at Bolling Field and got a few hours sleep. The first thing the following morning, Major White reported in at SAC Headquarters to the Chief of Staff's office. There he was told that the meeting was held up pending a call from the Pentagon, but that it shouldn't take more than an hour or two. It took much longer than that. The expected call came about 48 hours later. It was months later before Major White learned that the delay had been caused by an investigation to verify his security clearance. The briefing turned out to be extensive and involved many personnel from numerous agencies.

# Chapter 3

## The Briefing

*Washington Post: (May 4, 1946) - "Fear of War Weakening U. S., Johns Hopkins Head Declares", (May 10) - "Reds Balk Peace Talks Plan", (May 29) - "U. S. Can't Lag In Research For War".*

In the intelligence portion of the briefing at Strategic Air Command Headquarters it was pointed out that our government had considerable information on the European situation as it pertained to the Russians and their future plans for that area, but information on Siberia and Alaska was quite a different picture. Our apparent total lack of intelligence information on Soviet plans, intentions and activities in eastern Siberia was of great concern to the intelligence community, our government and our military. The matter was of such great concern that the military felt an urgent need to do something immediately. It was also apparent that there were diverse opinions within our intelligence staffs, government and military as to how to best approach this problem. The most logical and rapid solution to the problem of assessing the Soviet threat was obviously through Army Air Forces reconnaissance. It was then revealed that since its inception on 21 March 1946, this task had already been assigned the highest priority in Strategic Air Command.

To supply the needed information about the Arctic, SAC had formed the 46th Reconnaissance Squadron and assigned it several mission objectives, to include: developing an accurate system of navigation for flying over the polar cap using existing equipment, assessing the extent of the Soviet threat in the Arctic, surveying and mapping the Arctic, making comprehensive weather studies, conducting polar terrestrial magnetism studies, testing the endurance and efficiency of men and equipment under the stress of extreme arctic conditions, and later, when the new skills were mastered, training SAC bombardment units in polar navigation and arctic operations. All other directives addressed during the subsequent briefing were in support of these objectives.

Before the Soviet threat could be assessed, it had to be determined how to fly over the polar cap and know precisely where one was at all times. Most of the people in the briefing felt that this might be the only insurmountable problem we faced. The only suggestion anyone had was to use Loran (Long range radar navigation stations), although there was only one station in use that might be reachable from the polar cap, and one station by itself was practically useless. The briefers felt there was little hope that another Loran station could be set up and maintained in light of the urgency of the task before them. It was apparent that the concern about ascertaining the Soviet threat in the Arctic was bordering on panic and that time was of the essence. Not only was there great concern that there might be land in the polar cap on which the Russians might have already established forward operating bases, but concerns were made known that the Soviets might even have operating bases in the Canadian Archipelago. The briefing staff was convinced that the Soviets already had the ability to navigate and operate over the polar cap.

It was mentioned that coordination with the Canadian government was under way and the Canadians had already agreed to furnish a contingent of aviators to Ladd Field to fly with the 46th each time a 46th airplane overflew the Canadian Archipelago. The Canadians also felt that the portion of the polar cap bordered by straight lines from the western and eastern shores of Canada to the North Geographic Pole belonged to Canada. A point was made that all coordination with the Canadians would be made at diplomatic levels between our two governments, and not discussed at squadron level.

The subject of security took on elaborate proportions at that time as it pertained to the 46th's mission and operations at Fairbanks. Shortly after the 46th would be arriving in Alaska, the unit could expect numerous Criminal Investigation Division (CID) personnel to be assigned to the 46th, who would live on base in the 46th squadron barracks. Various U. S. government intelligence agencies were becoming increasingly active in the Fairbanks area. The commanding officer of the 46th would neither be in the chain of command nor privy to the details of the security force activities at either Fairbanks or in the 46th.

It was also discussed that the then-planned aircraft modification program would not meet the updated deployment schedule. It had been decided to select the latest model, low-airframe-time B-29F aircraft that were available in the inventory, making sure that they had all tech order modifications completed. They had also decided that eighteen B-29s would be required. The aircraft modification program called for all aircraft to be stripped of all turrets and guns, and all surplus equipment from the bomb bays removed to make the aircraft as light as possible. Afterwards, they were to be fitted with single metal fuel tanks fabricated to fit into each bomb bay with a one-inch clearance on all sides, bottom, and at the top, which was formed to fit around the crew tunnel. Only two of the eighteen aircraft being modified were nearing completion at briefing time. Their tail numbers were 521848 and 521859.

There was also concern about the camera modification in the back compartment of the first two aircraft, and Major White was instructed that immediately following the briefing, he would proceed to the depot at Tinker Field at Oklahoma City (OCAMA) enroute back to Grand Island to inspect the modifications to see if they were acceptable for aerial mapping. If not, he was to call General Smith who would arrange for Major White's recommendations to be adopted.

Major White agreed that it might be appropriate to have the remaining sixteen aircraft modified like the first two, but there were several other modifications which he felt were more important than many of those that had been briefed. He felt he needed Curtiss Electric reversible propellers installed on all aircraft to replace the hydraulic Hamilton Standard props. This would increase the safety of operations on the short Ladd Field runway during aborted takeoffs and during landings in wet or icy conditions. He felt that all of the gauges on the instrument panels should be changed from vacuum to electric for reliability reasons in temperatures below zero degrees Fahrenheit. He felt the existing astrodome should be removed and replaced with one at least twice the diameter, because the navigators didn't have sufficient space in the current one to do accurate celestial navigation. The new astrodome would also have to be heated. He didn't feel the insulation and crew compartment heating were adequate for long duration missions in the Arctic. This was especially true in the aft compartment where the cameras were located. He also felt that optically clear thermopane windows

would have to be installed through which the Trimetrogon camera would take photographs. The tails and wing tips of all eighteen aircraft should be painted bright red in case of a forced landing, particularly if on the polar cap. Each plane must have a radar scope camera that would take a large quantity of quality scope pictures without changing film during the flight. The camera must allow the radar operator to observe the picture on the radar scope while the scope camera was recording the picture. The radar camera would also have to be heated. All aircraft should be winterized before departing the States for Ladd Field. Major White wanted to have arctic ground engine heaters with at least twice the heating capacity of the standard Herman-Nelson cold weather engine heaters and at least two for each engine. He also questioned the windshield heating capability to keep the nose windows free from frost and ice at all times during ground operation and while airborne.

A plan of action for the aircraft modification program at the Oklahoma City depot was developed as follows:

**MODIFICATIONS IN ORDER OF IMPORTANCE**

1. Install fuel injection aircraft engines.
2. Install Trimetrogon cameras in B-29s.
3. Install optically clear thermopane windows for the Trimetrogon camera installations.
4. Install Curtiss Electric reversible propellers.
5. Install all electric gauges on instrument panels.
6. Install radar scope camera with large film capacity.
7. Add additional insulation and heating throughout the cabin and especially in the camera areas.
8. Install larger astrodome at navigator's position.
9. Paint the entire tail and wing tips bright red.
10. Install two bladder-type fuel tanks in both bomb bays of each aircraft.
11. Finish stripping turrets and guns from all aircraft that have already been started.
12. Expedite the installation of the first ten modifications listed above.
13. The aircraft will be picked up at the depot by crews from the 46th as soon as the aircraft are ready.

14. With the above ten modifications in place, those aircraft will be redesignated as F-13s.

15. If there is a need for more aircraft with the large single metal tank in each bomb bay, aircraft stripped of turrets and guns will be recycled back through the depot first.

All parties agreed on the above fifteen items and measures were immediately taken to begin implementing the new modification program.

An augmented Table of Organization and Equipment (TO&E) was developed by SAC Headquarters, who arranged for it to be shipped to and through the Seattle port to Ladd Field, Fairbanks, Alaska.

The next item discussed during the briefing was the question of Technical Representatives. Major White felt he needed Tech Reps for the airframe and all major components of the aircraft to be assigned with the 46th at Fairbanks until military maintenance officers and senior NCOs felt confident of their own abilities to troubleshoot and repair all problems normally encountered.

It was also suggested by Major White that the 46th would need to have an augmented reconnaissance technical squadron assigned or attached.

The briefing also included a discussion of the numbers of officers and men that would be required to support unit operations involving eighteen B-29 aircraft. For comparative statistics, it was determined that the personnel requirements would be twice that of two normal B-29 squadrons in a place like Salina, Kansas during winter operations. The estimated figures indicated that the unit would need approximately 250 officers and 1000 enlisted men. This was not to be construed as a manning ceiling, but as a general guideline of manning requirements. If the 46th commander felt that more people were needed, he would work with SAC's Deputy Chief of Staff for Personnel, Col. Frederick J. Sutterlin.

The movement of personnel to Alaska presented a minor problem. Wartime regulations were still in effect which required that all personnel being shipped outside the continental limits of the United States (OCLUS) for a permanent change of station (PCS) must be given 30 days leave just prior to departure. SAC Headquarters felt that the movement of the 46th Recon to Ladd Field, Alaska on "Project Nanook" was so urgent that there was no way their departure could be delayed by 30 days. So, the decision was made to move the unit to Ladd Field on 180 days temporary duty (TDY), and then change their orders to PCS at the end of the 180 day period. If this change of orders from TDY to PCS created a hardship on any personnel, the matter would be handled on an individual basis, and those affected would in all probability be shipped back to the "lower 48" if circumstances warranted.

To expedite the move of the 46th from Grand Island to Fairbanks, SAC and Army Air Forces Headquarters decided to place under the operational control of the commander of the 46th four C-54 transport aircraft complete with crews. After the move to Alaska was completed, the C-54s were to remain under the operational control of the 46th's commander at Fairbanks to assist him in fulfilling the unit mission.

It was also discussed that all flights of the 46th's aircraft departing on operational missions would maintain radio silence at all times during their missions so as not to advertise their presence in the Arctic. In case of an emergency, the aircraft commander would decide what action would be taken in the interests of crew safety regarding the breaking of radio silence.

If a crew was to make a forced landing on the polar cap, on land or in Soviet territory, the aircraft commander would decide what action to take, whether to stay with the downed aircraft or attempt to walk to safety.

Survival training for the aircrews would have to be conducted in and by the 46th in Alaska as there were no such programs or courses of instruction in being within the military at that time. Army Air Forces Headquarters researched this problem and learned that there was a Captain Harrold Strong, of Eskimo extraction, who was assigned to Cold Weather Test at Wright Field. Major White asked if Captain Strong could be assigned to the 46th to help set up the unit's survival program, and it was agreed that the captain would be assigned to the 46th when it arrived at Fairbanks.

Air/sea rescue in Alaska had a very limited capability and possessed no aircraft with sufficient range to be of assistance to the 46th in the event of a crash landing on the polar cap. It was discussed that it would have to be the responsibility of the 46th to conduct its own search efforts and keep SAC advised of progress being made. SAC would, in turn, keep Army Air Forces Headquarters informed, who would assist in the rescue operations. There seemed to be no solution to picking up crews downed on the polar cap. Someone suggested that in such a case, a PBY Catalina amphibian could be landed on the ice and snow of the polar cap to pick up downed crews. It was discussed at some length and in light of the fact that there didn't appear to be any better ideas, SAC decided that two PBYs would be assigned with crews to the 46th when it arrived at Ladd Field.

Strategic Air Command Headquarters had decided that it would maintain direct operational control of the 46th Recon. Army Air Forces Headquarters would notify the Alaskan Theater of Operations and the Alaskan Air Command of this fact and request that the Ladd Field base commander be notified also. The Alaskan Theater was to provide support to the 46th to help assure the success of the 46th's mission. SAC requested that the commander of the 46th make courtesy calls on the Theater Commander, Maj. Gen. Howard A. Craig, and the commander of the Alaskan Air Command, Brig. Gen. Joseph H. Atkinson, on an occasional basis to keep them appraised of the 46th's progress and any lack of theater support being experienced. The Alaskan Air Command provided a C-47 transport aircraft to the 46th that could be ski-equipped for winter operations. They also provided a smaller, twin-engined C-45 aircraft for utility use.

SAC's Chief of Staff, Brigadier General Frederic Smith said to Major White, "I don't know if you fully realize at this time what a really tough job you have ahead of you. You are going to run into problems that you can't solve. Now, I'm talking primarily about rank problems. I wish I could promote you to colonel today but I can't. All promotions are frozen and that won't change for a long time. You will get into situations where you can't talk your way out."

General Smith continued, "You have been given responsibilities normally given only to people with much higher rank. Higher ranking people will sense that, and there are those who will challenge you. One thing I have been able to do for you is to make sure you have a set of quarters on the base in the officer's row at Ladd Field, so you can take your family with you when you go to Fairbanks. I already know you have the ability to carry out this job to which you are assigned; but when you get into a situation where you are stopped, I want you to understand that I still hold you responsible for getting the job done."

"I want you to know and understand," the general added, "that you can call me any time of day or night, and I will help you solve any problem confronting you that you can't handle." He handed Major White a card, saying, "Here is my private line number at my office, and the other number answers at my quarters. Carry that card in your billfold." Major White needed that card just a few hours later when he arrived at the depot at Oklahoma City to find that the camera installations were not workable. Afterwards, he continued on to Grand Island to see to the organization and movement of the 46th Recon Squadron to Ladd Field, Fairbanks, Alaska.

Major White looked forward to this assignment in Alaska with a little apprehension. He knew what the Arctic could do to a person. When he was stationed on Umnak Island in the Aleutian chain in 1942 as wartime photographic officer for the Alaskan Defense Command, he often had to slog through ankle-deep mud battling sheets of rain, sleet and snow that blew horizontally through the camp from across the Bering Sea. Conditions were so bad that men often chose to terminate their Alaskan tour and escape its misery and isolation by removing a boot, placing their big toe inside the trigger housing of a .30-06 Springfield rifle, putting the muzzle under their chin and pushing on the trigger. A less violent but equally effective method of ending the boredom was to drink "torpedo juice", a raw wood alcohol used in the torpedos they dropped. This approach had the effect of destroying one's brain tissue, leaving the person staggering around camp bellowing like a bull moose for a week to ten days before passing on. It seemed like one or two people would use these techniques each day, and there was nothing the medics could do for any of them. The Major resolved that he would do all that he could for the morale and well-being of those people assigned to his organization.

# Chapter 4

## Deployment

***Washington Post: (June 9, 1946) - "The Air Force disclosed earlier that a squadron of converted B-29 long-range bombers has been assigned to Alaska to make frequent weather flights over the Arctic, termed by ranking military men the world's most strategic stretch of geography in an age of atom bombs and 10,000-mile planes."***

Speculation and rumors were buzzing at Grand Island. Captain Carl Palmer felt that although there was much confusion about the 46th's mission, they did learn that they were going to Alaska, and that they were the "chosen few", according to Brigadier General Peck from Fifteenth Air Force Headquarters at Colorado Springs. The general visited Grand Island several times and told the personnel at every opportunity how "fortunate they were to have been chosen for this outstanding assignment." Colonel Feldman and Colonel "Killer" Kane of Congressional Medal of Honor fame were also there among other high ranking officials, adding both mystique and confusion to the situation.

On Special Order #21, backdated to 3 June 1946, people were finally assigned specific tasks in the unit. Captain Palmer had previously been in charge of supply, transportation and food service. He had managed to maneuver his friend, Lt. Cecil Shover, out of the 449th Bomb Group and had him assigned to the 46th, so his mess problems were pretty well taken care of. Lt. Brumbach had been acting as adjutant in the past, but Captain Palmer discovered that according to the special order, that job would be his. Captain Carl Gundlach was then made the mess, transportation and supply officer. Captain Frank Ferrell was appointed operations officer, Captain John LeGrand was appointed squadron navigator, and Captain Emory Ferderber was the squadron communications officer. Also on that special order, Major Lewis Hallberg was appointed deputy squadron commander, and Major Robert L. Ramsey was relieved of command of the 46th. That special order was signed by Major Maynard E. White, Commanding.

The majority of the 46th Recon staff were selected from the personnel at Grand Island. This was done by screening all the personnel records, from which the best qualified personnel were selected to be interviewed, at which time the final selections were made and the personnel chosen were assigned to the 46th. At the completion of the screening of all personnel at Grand Island, teams from the 46th went to other SAC bases and repeated the screening process. Most of the remaining personnel and crews came from Salina, Kansas.

With the resolution of the personnel problem in progress, it was time to address the equipment problem. It was determined that six each of the B-29 aircraft would be flown to Oklahoma City Air Materiel Area (OCAMA) at Tinker Field, Oklahoma City, for winterization and modification to increase the suitability of the aircraft for the polar mission. By researching all information available

throughout the Air Force relative to cold weather operations and the requirements of the "Project Nanook" mission, it was determined that the B-29 must undergo extensive modifications. These aircraft at OCAMA were to be completed prior to the departure of the 46th Recon to Ladd Field. Additional F-13 aircraft (extensively modified B-29s), equipped for photography but lacking many of these modifications, were picked up at San Antonio. These aircraft underwent further changes during the coming winter months at the Alaskan Air Command Depot at Anchorage, Alaska, and at OCAMA, creating a serious shortage of available aircraft for months to come.

At the time the 46th Recon Squadron deployed there was no search and rescue capability available to support "Project Nanook". Since the recent reorganization of the Air Force, this mission was assigned to the Air Transport Command, which had a very limited capability in this area and none in the Alaskan Theater. To provide a semblance of capability two PBY amphibious aircraft and one B-17 aircraft with a boat mounted on the bottom were assigned. It is highly debatable how much assurance this provided the aircrews who would soon be flying over the most inhospitable terrain in the world. But this was the ultimate in the equipment available at that point in time and demonstrated the state of the art, or lack thereof, in rescue equipment; further indicating the requirement for development of survival hardware to support global operations.

It was on or about the 15th of June that Captain Palmer learned that "Project Nanook" would be a 180-day temporary duty assignment. It was also about that time that personnel were selected to meet the support skills and requirements for the advance echelon. An initial team of sixty personnel (4 officers and 56 enlisted men) was identified and assigned to the project as the advance support team to reconnoiter Ladd Field for the 46th Squadron.

Captain Palmer was surprised to be chosen to command the advance echelon of "Project Nanook". 1st Lt. Rufus Ross, 1st Lt. John Stevens, and Warrant Officer Walker were his officers. The chosen officers, non-commissioned officers and men were a very qualified group. The non-commissioned officers had lots of experience; many had served in World War II and several had been officers. On 18 June, the team was prepared to leave, records were collected, orders were cut, and immunizations were completed. He remembers the immunization program as being very thorough. He relates: "Most of us who had been in the service knew about updated shots. I got six shots and a vaccination, as did most of the men. We reported to the field at 6:30 AM on the 19th of June 1946, and, aboard one of the C-54s assigned to the 46th, headed for Great Falls, Montana, arriving at 1900 hours. Most of us were sick from the shots, and the salami sandwiches in our flight lunch. In fact, we even had to leave Sgt. Roy Roller in the hospital at Great Falls, although he joined us later on at Fairbanks.

"On 21 June 1946 at 0600 MST, our team departed Great Falls, Montana and headed for Ladd Field, Fairbanks, Alaska via Edmonton, Alberta and Whitehorse, Yukon Territory. We arrived at Ladd Field about mid-afternoon on the 21st, the longest day of the year, and that one surely was. Our group was met by Colonel Louis M. Merrick, Commander, Ladd Army Air Force Base, his staff, his troops, and a military band. We were really made to feel welcome and wanted. Our personnel were provided temporary quarters, mess arrangements, etc. Colonel Merrick, Major Hansen, his executive officer, Colonel George P. Anderson, materiel officer, and I went on a base tour. I was shown three proposed areas for the 46th Squadron: the "300" area, the "500" area, and the "900" area. After the tour, I was assigned a jeep so I could look around on my own and decide which area was best suited for our

Ladd Field, Fairbanks, Alaska, bordered by Chena River, July 1946.

needs. I was also invited by Colonel Merrick to be his guest at the Annual Midnight Sun Baseball Game between Ladd Field and Fairbanks, which started at midnight. No lights, no sleep, and no way out! Having departed Great Falls at 6 AM (or 3 AM Fairbanks time), and still suffering the shock from six shots and the vaccination, with the glands under my arms feeling the size of baseballs, the prospect of three or four hours of a sport that I never really enjoyed (and still don't), I knew this was damn sure going to be a long, long day.

"After the tour, I picked up my jeep and my officers, and we headed for the areas offered us. The "900" area was by far the best. The quarters, quonset huts, headquarters area, ramp, aircraft parking area, mess and supply areas and buildings seemed to have a homogeneous arrangement that lent itself to our organization, plus the fact that it was remote enough to give us some independence and privacy. There was a lot of work needed, but it basically had the elements required for our operation. We all agreed that the "900" area would be a good home. Colonel Merrick and his people were advised, and on 22 June 1946 we moved in.

"With total support from all base elements working with our people, we picked up our vehicles, furniture, mess equipment and general supplies, and we were in business. There were problems for us as the 46th Recon Squadron was a high priority unit with a special classified mission and specialized equipment. Ladd Field was in a holding or caretaker position with responsibility for a broad range and variety of military outposts scattered over the Yukon Sector, which is the northern portion of Alaska. It also provided housekeeping support for Cold Weather Test Detachment activities during the winter. In addition, Ladd Field was also the hub for the Alaska Railroad (it was all military then). The vehicles and ground support equipment were very limited in number, quite old, and in questionable condition. The 46th Recon Squadron had a TO&E authorization for far more equipment than was available anyplace in the Alaskan Command. Our TO&E had to be expedited if we were to meet our mission objectives and goals. These were the facts, and as such were transmitted back to our headquarters at Grand Island for assistance and advice.

"A major problem turned out to be the giant west coast shipping strike that had the Seattle port shut down to commercial shipping. Our project was making good progress, with facilities preparation, modifications to buildings and work areas, fixing the proposed film processing and camera repair facilities in the hangar, equipping the mess halls with supplies and generally getting things set up. Time seemed to slip right by us and we were keeping up with day-to-day living and really making a lot of progress. We were also getting more of our people in and turning them into the work effort.

"Our first big ego-booster came around the 10th of July when food service inspectors rated our mess hall number one on Ladd Field. It certainly helped the morale and increased work productivity. However, it was no real problem getting people to work all hours, since daylight lasted 24 hours a day and it was boring as hell if a person didn't keep himself busy. We did find time for a little scouting around and seeing the city when transportation was available. The distances were great because everything was so spread out, making transportation critical."

On 12 July 1946, Captain Palmer got a message calling him back to Grand Island to brief the current status of developments at Ladd and the difficulties being encountered, and to help work out some solutions to the shipping problem on the west coast.

# Chapter 5

## The Supply Problem

It was on the 16th of July, 1946, that Captain Carl Palmer reported back to Grand Island to help resolve the difficulties in shipping equipment from the continental United States (CONUS) to Ladd Field. He had attended a series of briefings during which it was concluded that the major problems were a direct result of the shipping strike on the west coast, and Seattle was the bottleneck. The conclusion was that direct personal action was mandatory and urgent. Carl was the officer chosen to report to Seattle on "15 days TDY" on or about the 1st of August 1946, for the purpose of serving as liaison officer to expedite movements of troops and equipment through the Seattle Port of Embarkation.

June and Carl Palmer left Grand Island on August 1st by train. They enjoyed the trip; they hadn't been married very long and were still on their honeymoon. Arriving in Seattle on 2 August, they checked into the "New Richmond Hotel". Carl recalls if that was the "new" Richmond, he'd have hated to see the old one. It sat right beside the railroad station in Seattle, but it was handy. On the 3rd of August, Carl went to Pier 39 to the headquarters of the Port of Embarkation, had breakfast at the port cafeteria where he joined a group at a big table. During the ensuing conversation Carl asked where the headquarters building was, and an Army Transportation Corps lieutenant colonel said he was going there, so Carl joined him. Carl mentioned what he was doing in Seattle and that it was necessary for him to check in at the command section and let them know who he was and what he was doing. The lieutenant colonel said he was going to a staff meeting there and asked Carl to come along, which he did. There, Carl was introduced to Brigadier General Clinton Jacobs, Port Commander, who introduced Carl to the other staff members and asked that all assistance be provided him on his mission.

The general also suggested that somebody find Captain Palmer a place to work, and the lieutenant colonel who had befriended Carl offered him space in his department. As luck would have it, this lieutenant colonel turned out to be the director of space allocation for all military shipments out of the Seattle Port of Embarkation. Carl got a desk, a big table and a file cabinet just outside the lieutenant colonel's office; and among the top staff shipment control people, Carl could not have been surrounded by finer company. The director helped Carl learn his way around, where the bodies were buried, and how to get around major and minor obstacles. With that kind of help, Carl arranged for a holding space for the 46th and "Nanook" material that was coming into the port, some at Pier 39, some at Auburn depot, such as the vehicles and ground support equipment; and some space at the Boeing plant, where they could arrange air pickup of priority items by the 46th's C-54s. Some items even came into nearby McChord Army Air Field. All in all, it was a cooperative effort which produced outstanding results.

Carl's "15 day TDY" was extended by 30 more days, and then 60 more days on top of that. There were trips to Ladd Field, briefings, new orders, and finally things really got moving. Carl received

some good help in the way of Staff Sergeant Henry A. Jones, who was with Carl for some time. After a while, other personnel were assigned to help out, including a lad named Andrews, another named Hannagan, and a young lieutenant named Louis Goglia. All in all, they made a good team and they received lots of help from the port people. As one can imagine, there were peak times when trainloads of equipment would come pouring in and panic set in. Once the situation was again put in order, there often followed a week or two of nothing but paperwork and chasing down incoming shipments that were misrouted.

Unable to afford the amenities of the "New Richmond Hotel", Carl and June located a sleeping room in a big old house on "Capitol Hill". The room was just that, a sleeping room, with shared kitchen privileges (one shelf in the communal refrigerator), and a bathroom shared with two other families that lived in the apartment. It is in situations like that where wives earn their keep, and June certainly did. In addition to household duties, June should have been on the 46th's and Ladd Field's payroll. She ran a shopping and shipping service for many of the wives in Alaska. Carl and June received phone calls day and night to meet wives and children arriving at the port, to help them find rooms and transportation. This was the most gratifying part of the whole duty. The Palmers appreciated the Seattle weather, knowing that it beat the hell out of that in Alaska at that time.

The strike created a lot of problems for a lot of people in a lot of ways. For example, foodstuffs in the Seattle Commissary were in very short supply and marginal in quality and varieties; particularly in meat and produce. But it was as bad or worse in Fairbanks. Colonel Merrick contacted Carl and asked if he had any ideas on how to help in the critical problem areas. Carl then talked with Major White, the 46th commander, about some space on the 46th's C-54s, and Major White said to work it out and keep him posted. Carl devised a plan, which he shared with Colonel Merrick, Major Hansen and the PX officer, about shipping meat, and fresh or frozen produce in short order. Carl talked with the port veterinarian and received a list of the approved packing houses and his recommendations for the best outfit to approach and deal with. The veterinarian advised Carl that one of the best companies that he had enjoyed doing business with was family-operated. One of the sons was back from service, having been a captain in charge of meat product procurement. Upon meeting him, Carl explained to him and his people what the problems were. After a tour of the plant, they arrived at a rather reasonable concept. They would start with hamburger, and hamburger alone; regular grind, 82 1/2 percent lean, government inspected and in five-pound packages. It would be fast-hard frozen, which was a new concept and one which he had worked with when he was in the military, and then have it packed in 50-pound cardboard boxes. He was already shipping some meat products in that fashion. Orders would be in thousand-pound lots, and delivered to Boeing Field military operations. The price was per pound, and no red food stamps were required. The price ended up being much better than they could get in Seattle stores, which required the red food stamps at that time.

Carl advised all concerned and received their concurrence that the "Burger Lift" was a good idea and it was launched. The first order was for about 2,000 pounds of hamburger. The PX sent a check for $2,000 and Carl was to act as their agent. This operation continued until shipping got back to normal. Hamburger remained the only beef. It was not long before additional products were added, including bacon, sausage, cheese, at one time some fish, and several times, apples, oranges, onions and potatoes.

Carl worked out two similar deals before Christmas of 1946; one with the PX officer, and one with the families of the 46th. They sent money, personal checks and personal letters, and Capt. Page or Capt. Murdock, in adjutant capacity, acted as coordinator. June again earned her keep by receiving checks for thirty, forty, or fifty dollars for particular items. The Palmers would get what they could and get it shipped to Alaska. As could be imagined, the bookwork was a problem, but not an insurmountable one. The PX deal was a little cleaner; in fact they said get anything in any amount that you can, and if you need credit or money, here's (a certain amount).

Carl did have a slush fund left over from the meat deals, and as a joke, walked into a hardware store a couple of blocks from the Jefferson Hotel in downtown Seattle, with the intention of creating a stir. The store had two workers, an old man who stood behind the counter, and a young clerk who came up to help Carl. Carl looked around and said, "How's business?" The young man admitted they were not doing very well competing with Sears and Montgomery Ward, and people like that were kind of beating them to the punch. Carl said, "You have a lot of tricycles, scooters, sleds and skates; and you're not doing too good?" "Nope," they said. "Well, I'll tell you what," Carl said, "Give me a price and I'll buy every damn thing you've got here." The sales staff got to joking, thinking Carl was kidding. When they realized that he wasn't, they all set down and worked it out, with Carl buying every toy item they had. When everything was bundled up, it was taken out to Boeing and put on one of the 46th's C-54s and sent to Fairbanks. The 46th people got their money back as well (which is a different way of doing business), in addition to their toys for Christmas. Carl knows they were happy, because he and June and those who helped out got all kinds of letters of appreciation from everybody who was in on what became known as "Operation Santa's Sled".

# Chapter 6

## Maintenance Support

*Washington Post (July 6, 1946): San Francisco (AP) -"Polar defense will be the No. 1 problem in 'this war we hope will never come', Gen. H. H. Arnold, retired wartime commander of the Army Air Forces, told the Commonwealth Club today. 'War-making nations are all north of 30 degrees north latitude,' Arnold said. 'Study your globe and you will see the most direct routes are not across the Atlantic or Pacific, but through the Arctic. The United States is the most vulnerable of the nations with new weapons employed along this route...'"*

On 14 July 1946, the 46th Photo Recon maintenance activities commenced at Ladd Field, Alaska. The mission of the aircraft maintenance section was to perform first, second and third echelon maintenance on available aircraft to obtain maximum availability for assigned missions. This was attempted by a limited number of available personnel. The capability of these personnel was largely an unknown factor since all were newly assigned and had been selected from many different bases and organizations. However, there was a nucleus of highly qualified senior NCOs with B-29 experience.

Additionally, only approximately 40% of the TO&E, Table I and II had arrived. These shortages consisted of everything from common tools, wrenches, pliers, etc. to highly technical test equipment.

Also, the resources of the base were extremely limited particularly in the area of general purpose vehicles, refueling units and ground support equipment. This problem would not be resolved for several months when all the organizational equipment arrived. The arrival of this equipment was further delayed by the sinking of the freighter "USS General Zelinsky", enroute from Seattle, carrying most of the larger items.

A hangar capable of housing two B-29 aircraft was allotted to the 46th, and action was immediately begun to prepare working areas for maintenance and supply functions. This was all conducted with a sense of extreme urgency since the arctic winter could be expected to arrive within 45 to 60 days. The most critical operation was the preparation and winterization of all specialized equipment, i.e. - cletracs, tugs, fuel-servicing units, external power units, ground heaters, as well as the general-purpose vehicles used for transportation of personnel and equipment. This action was determined to be more critical and urgent because there was very limited inside heated storage.

Several temporary, movable maintenance shelters were later received; however, they had to be modified and provided very little protection, and later were determined practically useless in temperatures of even -10 degrees to -20 degrees Fahrenheit.

As a result of this maximum effort and some extremely capable and dedicated people, progress was made and numerous missions were being flown.


F-13s undergoing maintenance in Hangar No. 4. Left aircraft (with gun turrets) is partially modified. Right aircraft (with large astrodome) is more fully modified.

# Chapter 7

## Background of the 46th's First Polar Flight

***Washington Post: (June 14, 1946) - "U.S. Can Keep Atom Secret, Baruch Insists", (June 15) - "Soviets Accuse U.S. of Seeking Arms Control", (June 17) - "Reds Attack U.S. Secrecy on Atom", (June 30) - "Build A-Bomb Shelters Now, Report Urges", (July 7) - "Red Troops Seize Most of Austria's Industries", (July 12) - "Atom Bomb Test Held Success In Two Reports to President".***

The primary mission assigned the 46th Reconnaissance Squadron during "Project Nanook" was to ascertain the extent of the Soviet threat in the Arctic. Prior to August 2, 1946, the free world was generally aware of only three flights that had flown over the polar cap since the birth of aviation. How many flights the Soviets had made, or the extent of their polar navigation capabilities was anybody's guess.[1]

The intelligence communities of the free nations had strong suspicions that the Soviets had developed arctic navigation capabilities, but no one knew for sure. With all the problems the Soviets were creating in Europe and the fact that they hadn't reduced their military strength since the war, coupled with the fact that our own military forces were in almost total disarray, the U.S. government and high military command were left with the conclusion that our mainland United States was in the most vulnerable situation it had faced in its history, and it was an unsettling situation to say the least.

If, however, the United States were to develop the capability of flying and navigating in the Arctic, and could train enough bomber crews in arctic operations, then our capability for counterattack might be enhanced to such a degree so as to provide a deterrent to a Soviet attack. But before the Soviet threat could either be assessed or eventually deterred, first American crews needed to learn the art of arctic navigation.

The first attempt to fly over the Polar Sea was made by a Swedish aeronaut named Andree in 1897. From then until 1946, there were very few flights made over the polar area. In 1925, Roald Amundsen with Lincoln Ellsworth flew to within 170 miles of the pole by air; and in 1926, flying the dirigible "Norge", Amundsen succeeded jointly with Umberto Nobile of Italy in crossing from Spitsbergen, Norway to Teller, Alaska, this being the first flight across the Polar Sea. Admiral Richard E. Byrd made the first flight over the geographic north pole by airplane in 1926. Sir Hubert Wilkins and Ben Eielson made the first landings on the polar pack in 1927. About a year earlier, they flew from Point Barrow, Alaska to Spitsbergen, over the magnetic polar area.[2]

The flights made by Byrd, Ellsworth and Sir Hubert Wilkins provided about all the information available on actual polar flights. These flights proved that aerial navigation was not an insuperable

problem without the benefit of navigational aids. Yet to really make progress in polar navigation, there was a need for regular flights over the polar area. The 46th Reconnaissance Squadron was sent to Alaska in the summer of 1946 to begin a program of extensive polar exploration. Polar navigation know-how simply did not exist when the Squadron was alerted for their project. Articles, pamphlets or other material on the north had not been catalogued or a library kept; therefore it was very difficult, if not impossible, for navigators to familiarize themselves adequately for their mission.[3]

The navigators, when informed that their mission would be over the polar cap, began a widespread search for information on polar navigation. The complete lack of this material made them realize that this mission was not going to be routine. The material available dealt for the most part with subarctic operations and theories possibly adaptable to polar procedures. So many theories, and each different, about the most practical methods tended to frighten rather than enlighten them.[4]

It was known to crewmen that considerable time had been given to the study of air navigation methods for polar regions. However, none of this information seemed to be available in June of 1946. Harold Gatty had been commissioned by the Navy Department in 1944 to make a study of navigation knowledge at that time. His report was completed in early 1945 and was given limited distribution but unfortunately its existence remained totally unknown to the 46th Squadron crewmembers despite their extensive research efforts.[5]

The navigators did have an opportunity to talk with the members of the B-29 "Musk-Calf" detachment at Edmonton, Alberta, Canada. It was through them, and only them, that the 46th crewmembers received any practical and usable information. Although the "Musk-Calf" detachment had made only one flight, they were able to pass on what they had learned about grid navigation. With this limited background, the Squadron started its polar operations.[6]

In the last half of July, the first 46th aircraft and crews began arriving at Ladd Field and immediately thereafter started making orientation flights over the mainland of Alaska, the first of which was made on or about 21 July 1946.

With support personnel, sufficient equipment and crews in place at Ladd Field, Major White arrived in Alaska on the 24th of July 1946. In accordance with SAC directives, operations on the classified missions of "Project Nanook" were to officially commence.

As the complement of the squadron arrived at Ladd Field, eventually nineteen experienced B-29 crews were given assignments to three flights, each assigned specific classified missions. Each flight was briefed separately.

During his briefings of the flights, Major White gave the crews all the classified information he thought they needed in order to fulfill their mission. Major White stressed to the crews that if this top secret information were leaked, the crew involved probably wouldn't come back from their mission, because there were numerous enemy agents in Fairbanks and possibly even at Ladd Field whose sole job was to obtain that information.

He also pointed out that there were many military Criminal Investigation Division (CID) personnel assigned undercover to the unit whose sole job was to report any security leaks. "Get to know those around you in this room here today," he said, "nobodyoutside this room knows anything about what I'm telling you here today. Keep it that way. If you see anyone else in this room divulging such information anywhere anytime to anybody else, stop them; because your lives depend on it. I don't want you to talk about this even among yourselves outside of mission planning or debriefing."

Major White added, "If you hear anyone, and this includes members of other flights, talking about missions or asking you any questions that even hint at what we have discussed here today, whether in the mess hall, theater, the barracks, in a bar or any place else downtown, make sure you can identify them and then report the incident to me any time of the day or night. The reason I am telling you all this classified information is to keep you from speculating. Now you don't need to speculate. We have to stop all speculation, because it is a thousand times worse from a security point of view than knowing what the facts are."

It was during an Air Force Inspector General (IG) inspection a year later that Major White was questioned as to why the 46th had absolutely no known security leaks. He explained his conviction that only by sharing responsibility for secrecy could he hope to stop speculation and prevent a breach of security. The IG couldn't argue with success.

On August 2nd, 1946, the initial long-range flight from Ladd Field to areas in the Arctic was flown. This flight was over areas believed never to have been traversed before. Inasmuch as no arctic or polar flight information was available, this mission took on additional importance as one of exploration and pioneering. Due to unexperienced navigational and operational phenomena presented heretofore in theory only, this mission was considered extremely hazardous. Neither advanced weather information nor radio facilities were available. Emergency facilities were nonexistent; rescue aircraft were limited to other F-13s (B-29s) in the squadron whose crews themselves had not yet flown over the polar cap. During this flight of twelve hours and five minutes, ten hours and twenty minutes were flown under icing conditions. Analytical studies of navigational procedures used on this flight served as a basis for further research in arctic and polar areas.[7]


F-13s of the 46th Recon Squadron on the Ladd Field flightline.

# Chapter 8

## "Project Nanook's" First Operational Mission

On August 2nd, 1946, the first operational flight of "Project Nanook" was flown out over the polar cap by Captain McIntyre and his crew, accompanied by the Squadron Commander, who throughout the flight sat on a folding chair over the nose wheel well of the F-13 aircraft. This first flight over the polar cap was designed to investigate and test the theory of grid navigation over an unknown area that was in all probability without radar returns beyond the range of coastal areas.

It was America's first trip into the arctic unknown in over twenty years. The aircraft departed Ladd Field observing radio silence and crossed the coast at Point Barrow with no information whatsoever on weather, winds, temperatures, cloud formations or heights, land masses, mountain ranges; and without any maps other than grid charts that were hand drawn by the navigators for celestial navigation purposes, which were of limited use for celestial shots during daylight or twilight hours.

They headed into an entirely uncharted area of the world. The plan was to fly in a straight line midway between the coast of Siberia and the north geographic pole for several hours, and then make a 180-degree turn to return on the same line to intercept the coast again at Point Barrow. When the navigators and aircraft commander reached the point where they agreed they should turn back to Point Barrow, Major White interceded and instructed them to continue straight ahead for a few more hours, and he would tell them when to head back toward Point Barrow.

Every twenty to thirty minutes thereafter, the navigators presented Major White with their case to make an immediate 180-degree turn, but with no success. After another couple of hours of flying straight ahead into the unknown on instruments at over twenty thousand feet, Major White agreed to reverse direction.

The navigators were apprehensive, and rightly so. They were only in the initial stages of proving the workability of the grid system of navigation. Several hours after the turn, the navigators became greatly concerned that the aircraft was heading out over the Pacific Ocean, and therefore made another case for an immediate 90-degree left turn to "correct" to course. Major White responded by requesting that the navigators prove that they were heading out over the Pacific and that a turn was truly necessary, which they couldn't. Nevertheless, the navigators continued to rely on a "gut feeling" that a 90-degree turn must be made immediately to preclude the necessity of ditching in or bailing out over the north Pacific Ocean.

Major White again told the navigators that if they couldn't prove to him that they were heading out over the Pacific Ocean, then they would continue straight ahead, which they did. The last thing they needed was to be wandering aimlessly around the Arctic. A navigator made one more presentation

about 30 minutes later; again without convincing evidence for a 90-degree left turn, so it too was denied.

Every crewmember with a radio knob nearby was turning it in search of a radio signal of any kind; and less than an hour later, one crew member heard a radio transmission in English by another pilot talking to a ground radio. Captain McIntyre, the F-13 aircraft commander, discussed the matter with Major White, then broke radio silence to make a call on that frequency, and quickly received a reply. Captain McIntyre then called again asking the location where that aircraft took off from, which turned out to be Umiat. He then thanked the other pilot and went off the air.

The navigators searched their maps of mainland Alaska to locate Umiat, and soon announced triumphantly that they couldn't be more than 50 miles off course if they could pick up a small aircraft's radio transmission to Umiat. Not long thereafter the radio operator began to pick up radio signals from Fairbanks to home on. The flight back to Ladd was long enough for the crew members to calm down, get their circulation going again, and get some color back in their faces and hands in time to climb out of the airplane and walk across the ramp into Hangar No. 4 with an air of confidence that spoke louder than words. Everyone was watching these proud and nonchalant pioneers, whose every move suggested that the flight had been a piece of cake.

The totally unflappable iron-ass commander walked into the hangar to drop off his parachute at Personal Equipment; but instead of going to Operations with the crew to share their new experiences, went to his quarters to shower and change his underwear.

It was on this first flight into the arctic unknown that Major White fully realized how inherently dangerous these polar missions would be. Navigational procedures would have to be developed, refined and made routine among the aircrews. He also decided that crew photographs would be taken prior to takeoff on all subsequent operational missions.

Major White flew with each crew on their initial flight over the polar cap, each time sitting in his usual position on the folding chair over the nose wheel well. He constantly monitored the aircraft's communications systems, listening to crew coordination and their decision-making process. He knew that the confidence of each crew would be made or broken by their first flight over the arctic unknown, and that the success or failure of these critical flights would to a large extent determine whether the 46th would fulfill its mission. He also wanted each crew and crew member to know that he wouldn't ask any of them to do anything that he himself wouldn't do any day, at least any day that he wasn't hunting or fishing.

As a result of this first flight of an American military crew into the polar regions to test the theory of grid navigation, the following personnel on this flight were awarded the Distinguished Flying Cross:

> Capt. Richmond McIntyre, Capt. William G. Catts, Capt. Rictor H. Auman, 1st Lt. Charles G. Hart, 1st Lt. Paul A. Warner, M/Sgt. Lawrence L. Yarbrough, S/Sgt Edward A. Drake, S/Sgt. Rex R. Knaak, and T/Sgt. Fred H. Hutchins.

# Chapter 9

## Maintenance Policy of the 46th

After the 46th had gotten their flying operations organized, maintenance personnel would begin performing maintenance on the airplanes to which they were assigned as soon as the aircraft landed from each mission. More frequently than not, they would work on their aircraft continuously until it was in commission; if need be, around the clock.

One of their motivations for doing this was that when their aircraft was ready for the next flight, the ground crews would have some time off. After short missions of 20 hours or less, it wasn't uncommon for aircrews to join in the maintenance effort until the plane was back in commission. After long missions of 20 hours or more, the aircrews would go to bed, and come in the next day to do their debriefing and write up their reports. But if there was something wrong with the airplane that would take two or three days to repair, the aircrews would often chip in and help the maintenance personnel.

By handling aircraft maintenance in this manner, the end result was that practically all of the unit's aircraft were sitting on the ramp in commission. That wasn't the usual situation within the rest of the Army Air Forces at that time. At most airfields, with the shortage of maintenance personnel, a very low in-commission rate was about the best that most units could maintain. Adding to the problem was the Air Force policy of insisting on flying planes whenever they were flyable, so that all rated personnel could get their flying time. Because there was considerable competition among aircrews to fly those few flyable aircraft, this policy not only kept the in-commission rate low, but kept the maintenance personnel working all the time.

Forty-sixth aircrews were not having any such trouble getting their flying time because each of their usual missions were an average of 20 to 25 hours duration. The Squadron's philosophy about maintenance was that it didn't cost any more money to have a plane on the ramp in commission than it did to have it on the ramp out of commission. Besides, if a plane were lost and down, the lives of the downed crewmembers would depend heavily upon how many planes could be launched for a search and rescue effort.

The high in-commission rate enjoyed by the 46th seemed to rub the people in the Air Command and Theater the wrong way. They said that if the 46th had such a high in-commission rate, why wasn't the unit flying its airplanes more often? Major White responded by saying that the unit had a mission to do and they had figured out, based on their maintenance manning and capability, how much they could fly, and that's the number of missions they were flying.

Major White added that if they had the crewmembers fly every in-commission airplane in the squadron just because they were in commission, all the aircraft would end up sitting on the ramp with a ten percent in-commission rate like everybody else. If a plane went down under those circumstances, the crew would unquestionably be without hope of rescue, because nobody could look for

them, and Tenth Rescue's planes didn't have the range for rescues over the polar cap. The 46th's system worked the way it was being run, SAC knew about it, and there was no logical reason for changing the policy.

It turned out that after working straight through to get planes in commission, many maintenance personnel often had little to do until their plane came back from its next mission. Major White didn't want the personnel just sitting around the hangar, so he encouraged them to get involved in some sort of recreational activity, like hunting or fishing, not to mention how it would be an inexpensive way to stock their food larders. In the "lower 48", a pound of hamburger cost about 25 cents, but in Alaska it cost about a dollar. Most food in Alaska cost three to four times as much as in the States because it had to be shipped or flown in. With this in mind, eight or nine hundred pounds of moose meat worth a dollar a pound was not only a good supplement to the diet, it was money in the bank, especially to those making only a few hundred dollars a month. During the wintertime, once it was butchered, ground, wrapped and quick-frozen, it could be put in a windowbox for storage. One could easily minimize food bills this way, with fish in the summertime and wild game in the winter. Fish and game were plentiful in Alaska, and hunting and fishing provided a great antidote to boredom.

During the first few months in Alaska, the unit did not yet have all the assigned F-13 aircraft from the depot at Oklahoma City (OCAMA). Of the aircraft deployed to the unit, many still did not have all of the required modifications, and aircraft would have to be rotated back to the depot over many months to have the modifications added. For example, although winter and the associated hazardous conditions were fast approaching, many of the F-13s still had the hydraulic Hamilton Standard propellers, while Curtiss Electric reversible props would be needed to maximize operational safety during landings and aborted takeoffs on wet or icy runways. Major White saw trips such as these to OCAMA as excellent opportunities to rotate 46th personnel back to the States for 30 days of leave. He felt that this measure helped to boost morale and compensate for the earlier Air Force operational demands that did not allow leave prior to assignment to Alaska. Although only a minimal aircrew was necessary for the flights to and from OCAMA, the planes often had numerous unit personnel aboard either going on or returning from leave.

Throughout its stay in Alaska, the 46th never experienced an aircraft accident or loss due to maintenance problems. Two crash landings that were made on takeoff were initially attributed to engine failure due to climatic conditions. One of these happened in extremely cold weather, and it was the belief of the engineering section that because of the extreme cold, the engines lost power, and because of the heavy fuel load, the takeoff could not be completed. Much knowledge was obtained from both those accidents about cold-weather operation and heavily-loaded takeoffs. The paramount difference between arctic engine operation and engine operation in temperate climates is that while keeping the engines cool was the normal procedure, the arctic pilot has trouble getting the engines warm enough.

Rules followed by pilots during their entire flying careers, such as keeping cowl flaps open for all ground operations, had to be discarded or disregarded by the arctic pilot, as cowl flaps had to be closed to get maximum heat to the engines. It was also found that at very low temperatures, cylinder head temperatures drop rather than rise during takeoff, because the cooling effect of the cold air passing over the cooling fins is greater than the heat generated by the engine.

Analysis of one F-13 that crashed in extremely cold weather with temperatures around minus 57 degrees Fahrenheit indicated that the carburetor air temperature and cylinder head temperatures were so low that proper burning of the fuel was not accomplished, resulting in the crash.

Less than 24 hours after the December 11, 1946 F-13 crash, a C-54 transport aircraft assigned to the Cold Weather Test Detachment and piloted by Col. Dan Shannahan, was taking off at minimum visibility conditions. As the plane got airborne, it gradually veered to the left and crashed into a large metal hangar adjacent to the far end of the Ladd Field runway. The aircraft ended up positioned nose-up in the hangar with fuel leaking out of the wing tanks when Sergeant Vic Perry of the 46th Squadron entered the plane, crawled under the colonel's body and propped him up so he could breathe until he was cut out of the wreckage. Although there was fuel on the ramp while blow torches were being used to cut Col. Shannahan loose from the aircraft and cut the steel girders of the metal hangar, there was no combustion since at minus 57 degrees Fahrenheit the temperature was too cold for the aviation fuel to vaporize. The accident was attributed to insufficient warm-up time of the vacuum instruments in the cold weather to assure their reliability. The crash also reaffirmed the hazardous nature of arctic flying and the need for extraordinary precautions.

High noon in the wintertime at Ladd Field.

Maintenance personnel and crewmembers preflight aircraft prior to mission.

# Chapter 10

## The Soviet Threat

During the period of 1946 to 1947, the United States had been awakened to the importance of the arctic operations as a field of activity in case of war. General Carl A. Spaatz observed that "the United States was exposed to a possible air attack coming by way of the Arctic"; General Curtis LeMay had said, "Our frontier now lies across the arctic wastes of the polar regions"[1]; and General Henry H. "Hap" Arnold thought that the North Pole would become the "strategic center" should another war engulf the world and that "the United States was the most vulnerable of the nations with new weapons along [the arctic] route."[2]

"Demobilization after World War II had reduced drastically the U.S.'s conventional forces, and in mid-1947 both the stockpile of atomic bombs and the capability to deliver them was limited."[3] Unless deterred, it was fairly clear where the next war would take place, and who would be the adversary. It was only a matter of time before the Russians would end the American monopoly on atomic weapons and attain the means to threaten the vital interests of the United States and the free world. But first, the Soviets would need a bomb delivery system, which some outspoken critics who opposed military spending knew they didn't have. Or did they?

In 1947, a lone modified B-29 (F-13) of the 46th Reconnaissance Squadron was carrying out its mission of assessing the Soviet threat, when it found itself over a Soviet airdrome surrounded by Soviet aircraft. Although the odds were greatly stacked against the 46th crewmembers returning to home station, for some reason their aircraft seemed to remain unnoticed by the Soviet fliers. And while they couldn't imagine how it could be true, they observed another "B-29" was also flying over the airdrome, but without the red tail and wingtips characteristic of 46th Squadron aircraft. As luck would have it, the 46th crew did manage to depart the Russian airspace without further incident.[4]

What very few people knew at the time was that the other "B-29" seen by the 46th crew over the Russian airdrome was in fact a Soviet-made heavy bomber, purportedly "designed" by Hero of Socialist Labor Andrei N. Tupelov, and an obvious exception to the Russian maxim that "everything worth inventing was invented by Russia". Easily mistaken for Boeing B-29s or F-13s, formations of these "Tupelov Tu-4s", as they were designated, displaying "the achievements of Soviet aircraft construction and design", were surreptitiously photographed at the air parade flown over the Tushino Airdrome in Moscow in 1947. Some of our Air Force generals reported to Congress that the best estimate of Soviet Tu-4 strength was at around 300 planes.[5] In fact, it was around 1,500.[6]

The origin of this Soviet heavy bomber stems from World War II exigencies during the fall of 1944, when three U.S. B-29s, crippled and short on fuel, were forced to land at Vladivostok, Russia, the nearest "friendly" territory. The first one was piloted by Capt. Howard R. Jarrell; the second was the "General Arnold Special", the most famous Superfortress produced by the Boeing-Wichita plant and the first aircraft over the target on the first B-29 mission of the war; and the third was piloted by 1st Lt. William J. Micklish. Although the crews were eventually returned to the United States, the

Boeing F-13 (modified B-29) of the 46th/72nd Recon Sqdn., Ladd Field, Alaska.

Soviet-manufactured Tupelov Tu-4 heavy bomber photographed in the Soviet Union.

Boeing F-13 (modified B-29) of the 46th/72nd Recon Squadron.

Soviet Tupelov Tu-4 heavy bomber.

aircraft were retained, dismantled and carefully copied in every detail by Soviet technicians under the direction of Andrei Tupelov. The bomber was put into production soon thereafter, and was manufactured in increasing numbers as the standard long-range heavy bomber of the Soviet Air Forces. Identical in all respects to the Boeing B-29, the Tupelov Tu-4 was fully operational and deployed in strength by 1947.[7]

While Russia's adoption of an American-born bomber design perhaps indicates an inability to develop a satisfactory long-range bomber of her own, it nonetheless sheds some light on the state of technological progress in the Soviet Union. As the 1950 edition of *Jane's All the World's Aircraft* points out, "...the translation of an aeroplane back to its production breakdown is an engineering task of the first magnitude, and one which is assuredly unique in aviation history."

Boeing designers estimated that on one-way "suicide" missions, the Tu-4 would give the Soviets a reach of some 3,000 miles. Thus, from bases on the Siberian side of the Bering Strait, they could carry bombs as far south as San Francisco. Or, from a seized base on Iceland, they could cover the industrial section of New England, New York, Pennsylvania and Ohio, as well as Washington, D. C. From bases in Greenland, they could reach as far as New Orleans and Denver.[8] Unquestionably, the Soviets had the delivery system; but did they have the bomb?

On 17 September 1947, the Air Force Long-Range Detection System was initiated to detect by radiological means any Soviet atomic explosions. This program was carried out by launching B-29s, WB-29s and F-13s modified to carry filter systems designed to pick up radioactive debris that would be in the atmosphere following a Soviet atomic test.

On 22 July 1948, a modified F-13 from the 72nd Recon Squadron (formerly the 46th) from Ladd Field was launched to detect radioactive residue from a suspected Soviet atomic detonation. The aircraft commander was Lt. Norman Skjersaa. The flight path was along the eastern border of the Soviet Union, but the flight crew had not been briefed on the detection aspect of the mission. The only thing they knew was that at approximate three-hour intervals, the airplane would be depressurized and a new piece of filter paper inserted into the "bug catcher" mounted on the top of the airplane. What the purpose of the flight was or what the sampling results were they ostensibly did not know, since the mission was highly classified. The flight was concluded without incident.[9]

During the time between the establishment of the Long-Range Detection Program and 1 September 1949, the program experienced 111 alerts that turned out to be false alarms. Each of these alerts was treated as evidence of a possible Soviet nuclear test, but each was proved beyond reasonable doubt to have been due to such natural causes as volcanic explosions, earthquakes, or normal variation in natural background radioactivity.[10]

It was on 3 September 1949 that an Air Weather Service WB-29, call sign "JOE ONE", flying from Japan to Alaska on the 112th Long-Range Detection mission exposed a filter paper for three hours at 18,000 feet and obtained results (85 counts per minute) that later laboratory analysis would determine exceeded the "level of significance" of 50 counts per minute. Other Long-Range Detection Program flights over the next few days obtained readings as high as 1,000 counts per minute, confirming that the Soviets had indeed finally crossed the nuclear threshold. Although in

his 23 September 1949 announcement to the nation about this first Soviet atom bomb burst President Truman stressed that the event had been long anticipated, there were many in our government who did not expect it until at least 1953.[11] This was proof enough that the Soviets were technologically far ahead of where many believed they were.

Now that it was confirmed that the Soviets had the bomb, it was hotly debated as to how many bombs the Soviets had or could produce within the immediate future. One perhaps conservative estimate was that the Soviets could have 30 atomic devices within one year of their first atomic test.[12] This meant that with a force of 30 bomb-laden aircraft and 270 (or by some accounts 1,470) decoy bombers, the threat from the Soviet Union was very real, and something we had no choice but to deter. It had been for this very reason that the 46th Recon had been organized and tasked to perfect polar navigation so it could train increasing numbers of SAC bomber units in the skills that would turn them into a credible deterrent to the Soviet threat.

# Chapter 11

## The First Monthly Briefing Trip to Washington

Throughout his assignment as commander of "Project Nanook", Major White made monthly trips from Ladd Field to Washington, D. C. to brief the Strategic Air Command staff. Usually, these flights to Washington were made in one of the C-54s assigned under the operational control of the 46th Squadron. On the first trip, the aircraft had to stop at Great Falls, Montana, which was both an aerial port of entry to the United States and a refueling stop. When Major White got off the airplane at Great Falls, he was met by Colonel Hawes, the base commander, and his deputy, who was also a full colonel.

As Major White came down the steps from the aircraft, Colonel Hawes asked Major White where he was enroute to. Major White answered, "Washington, D.C." "Are you the only passenger?" the colonel asked. Major White said, "I am today." Colonel Hawes then said, "Well, Major, we're going to take you off from this airplane and put you on the regular C-47 shuttle aircraft that will leave here later today going to Salt Lake City, and you should get into Washington by tomorrow evening."

Major White said, "Colonel, I'm sure you have been made aware through your command channels that this C-54 is under the operational control of 'Project Nanook'. My name is Major White, and I am the commander of 'Project Nanook'." The colonel responded, "That may be true, Major, but I've decided that we're going to take you off this airplane. No major should be using a four-engined airplane as his own personal transportation. We're not going to use these C-54s for these kinds of activities, and I'm going to put you on the shuttle."

Major White calmly stated, "Colonel, you apparently don't understand what I'm saying. The C-54s with the 46th Squadron are under my operational control, and I'm enroute to SAC Headquarters in Washington, where I will be going monthly to report on the progress of "Project Nanook". "Nevertheless," the colonel interjected, "I'm taking you off of this airplane." Major White then asked, "Can we go up to your office and talk about this?" The colonel agreed. They all got in the staff car and soon arrived at the colonel's office.

Major White asked the colonel if he could use his telephone. The colonel said, "Use that phone over there," motioning to a phone on a desk in the corner, apparently the deputy's desk. Major White took the card from his wallet, picked up the phone and called General Smith, Chief of Staff of SAC. General Smith immediately picked up the phone and identified himself. Major White said, "General, this is Major White calling. I'm out at Great Falls, Montana. The base commander here, a Colonel Hawes, met me at the airplane and explained to me that he was going to take me off from the C-54 and put me on a C-47 shuttle which should be getting into Washington sometime tomorrow evening."

General Smith said, "Did you explain to him that those C-54s are part of "Project Nanook" and you're the commander of that outfit?" Major White said, "Yes sir, I have." General Smith asked

if Colonel Hawes could please come to the phone. "Yes," Major White said, "he's right here." The general said, "Put him on the phone, and I want you to stay on the line also." So Major White turned to Colonel Hawes and said, "Colonel Hawes, I have General Smith, the Chief of Staff of SAC, on the phone and he wants to speak with you. Could you pick up on this same line?" The colonel picked up his phone.

General Smith said, "Colonel Hawes? This is General Freddie Smith, Chief of Staff of SAC. Are you the base commander there at Great Falls?" The colonel said, "Yes sir, I am." The general said, "I understand that you're taking Major White off the C-54 and putting him on the shuttle that will be coming into Washington tomorrow night, is that correct?" Colonel Hawes said, "Yes sir." General Smith asked, "Did Major White explain to you that he was the commander of "Project Nanook", and the C-54s are under his operational control? He's the one who decides where they go and what they do. Did he explain that to you?" The colonel answered, "Yes sir, he did." General Smith erupted, "THEN WHAT IN THE HELL'S THE MATTER WITH YOU? DON'T YOU UNDERSTAND ENGLISH? Colonel Hawes, you don't work for me; you're not within my chain of command, but I'm going to give you some advance information. You're going to get a message within an hour from your boss relieving you of your command. You'd better get your butt down to your quarters and start packing, because you're going to be off from that base before sundown today! This is not an order; this is just advance information. You will get the order within an hour. Do you understand what I've said?" "Yes sir," the colonel said. General Smith stated, "That'll be all, Colonel Hawes; Major White, stay on the line," and Colonel Hawes hung up. With obvious amusement, General Smith said, "Major, do you think he got the message?" "General," Major White said, "I'm sure he did. He has already left the office." General Smith said, "OK, I will see you later," and he hung up.

When Major White stopped at Great Falls on the return trip from Washington, a staff car pulled up to the stairs after the plane was parked, and the colonel who had previously been Col. Hawes' deputy jumped out and greeted Major White, who was subsequently given the red-carpet treatment. Not only was he chauffeured by the colonel to the Officers' Club for lunch, but when they returned to the flight line, the plane was fully fueled and ready to depart, with all clearances expedited for his return to Alaska. On the flight back to Fairbanks, the major reviewed in his mind how the obstacles to getting his job done had vanished at Great Falls. Thinking about the card in his wallet and the task before him, he wondered if similar problems had led Teddy Roosevelt to coin his famous phrase - "speak softly and carry a big stick."

# Chapter 12

## Operations - Late 1946

***Washington Post: (September 1, 1946) - "Representative Short (R,Mo) declared he felt there was 'imminent danger' of 'another Pearl Harbor...in Alaska'." (September 3, 1946) - "Spaatz Warns: The United States is 'wide open at the top' to devastating attack by air through the Arctic. Every industrialized country is within reach of our Strategic Air Force. America is similarly exposed."***

During September of 1946, the 46th Recon logged 513 hours of flying time, of which 187 were logged as instrument time. Future research and development of arctic and polar navigation and aviation in general, were formulated at this time.[1]

From the first flight, the navigators were faced with many new and unexpected problems. These difficulties had to be ironed out by the navigators themselves as there was no other source of information to help them. By the time analysts had studied the problems and given advice, much time had passed and many flights had been flown. For immediate answers to their problems it was up to the individual concerned to work it out for himself. Most of these difficulties came during flight where it was necessary for the crewman to solve his problem on the spot or look for alternate methods.[2]

As the squadron gained experience, the problems to be solved grew in number. Various agencies were asking that experiments be made for them; others asked that instruments be tested and evaluated. For the experiments, a Technical Projects Control Board (TEPROCOB) was formed. Flight Analysis Boards were formed to supply interested personnel with immediate and preliminary evaluation of missions flown, to prove, disprove, or substantiate current theories, to act as an incentive for the securing of usable information, new concepts and techniques to improve procedures.[3]

Previous pioneering flights in the Arctic, such as those of Wilkins and Eielson, had depended upon variations of the magnetic compass. But as the grid system of navigation was moved from theory to practice, procedures were developed to enable navigation in the Arctic to be steered by gyros along the Great Circle route with minimum difficulty. It was possible to know exactly where one was located at that precise moment of time, an achievement never before accomplished in the annals of arctic aviation. Despite unpredictable gyro precession rates after turns, navigation error was minimized to the extent that the overall result of combining errors of radar information and sun lines, and the error in estimated time of arrival (ETA) at landfall for approximately 1274 hours of flying time over the polar sea, was a nominal 6 minutes and 8 miles. The grid navigation system was proven to the extent that navigational errors, when they occurred, usually resulted from procedural

oversights (failure to record gyro precession or update the compass) or from a lack of crew coordination, factors which resulted in the loss of two of the 46th's aircraft.[4]

Flight Analysis board members flew with a number of flights to evaluate procedure; however, there was no attempt made by the Flight Analysis Board to completely analyze every mission. This was done by the Operations Analysis Section of the Strategic Air Command in Washington, D.C. It should also be understood that the Flight Analysis Board consisted of personnel assigned to the flight. They were crewmen trained for their flight specialty and not professional analysts. Therefore, the interpretation and evaluation of reports was limited by their experience and the facilities at their disposal. This analysis did assist in improving techniques, which were badly needed in the early days of the flights. Their efforts were also of assistance in anticipating requirements for continued operation.[5]

At the time of the first flights, there was no satisfactory projection for polar navigation in the Air Force. For the first five months, the entire operation was carried out using maps that were hand drawn by the navigators. This was done by projecting lines from a World Aeronautical Chart, scale 1:1,000,000 with latitudes 68 to 72, by placing tracing paper over this chart and projecting the lines to the pole, then laying down the parallels of latitude and scale. A protractor was used to cover the 360 degrees at the pole. Once this was done, the tracing was put through an ozalid machine and the blueprint served as a chart. It was not until December 1946 that the Hydrographic Charts of the NPV-30 series reached the squadron.[6]

The 46th navigators developed an extensive theoretical background enhanced by practical knowledge and crew experience. As specific crews became more experienced, they were assigned to fly with less experienced crews to maximize the training and crossfeed of useful information. Besides enhancement of the training factor, this measure had the added benefit of minimizing aircraft and crew losses due to lack of experience.

The search for land masses in the Arctic (code named FLOODLIGHT) commenced with the first unit flights from Ladd Field. The main area of concern was from the Alaskan coastline (between the Soviet Union and the easternmost Canadian Archipelago) and northward over the polar cap, concentrating on the area on the Alaskan side of the north geographic pole. In the process of looking for land masses within this area, on 14 October 1946 the presence of a "landform" 300 miles north of Point Barrow was "confirmed" on radar, and this was exactly the kind of discovery SAC had sent the 46th to Alaska to find. They had wanted to know whether there was land in the polar cap, and if so, was it occupied by the Soviets?

According to Captain McIntyre, the aircraft commander on the flight that made the discovery, this "island" was visible to the naked eye, with definite land contours standing out from the rest of the ice pack. It was also detectable on radar as a landmass return due to the gravel in it. There were no bases on this "landmass", referred to as "Target X", which measured approximately 14 miles wide and 17 miles long. By the 16th of October, this information was given to SAC Headquarters in Washington, delivered by the crew that made the sighting. Four to six weeks later, it was determined that "Target X" wasn't actually land, but turned out to be a large "floating ice island".

Robert N. Davis, the SAC Operations Analysis scientist attached to the 46th, took four L-5 liaison aircraft with crews, landed on "Target X", set up camp, and spent several days inspecting the "ice island" firsthand. He observed that "Target X" was made of "paleocrystic (prehistoric) ice, perhaps ten thousand years old or older, and imbued and covered with mountain glacial moraine." His conclusion was that "Target X" was "a tongue off of a glacier; there is nothing else it could be." Although initially it was commonly believed that the "ice islands" (including "Target X", redesignated "T-1"; plus a second one found named "T-2"; and a third, "T-3", also called "Fletcher's Island") were possibly portions of an ice shelf broken off from Ellesmere Island, later research indicates they may have originated in the larger glacial fjords of Greenland, corroborating the theories of Robert N. Davis.

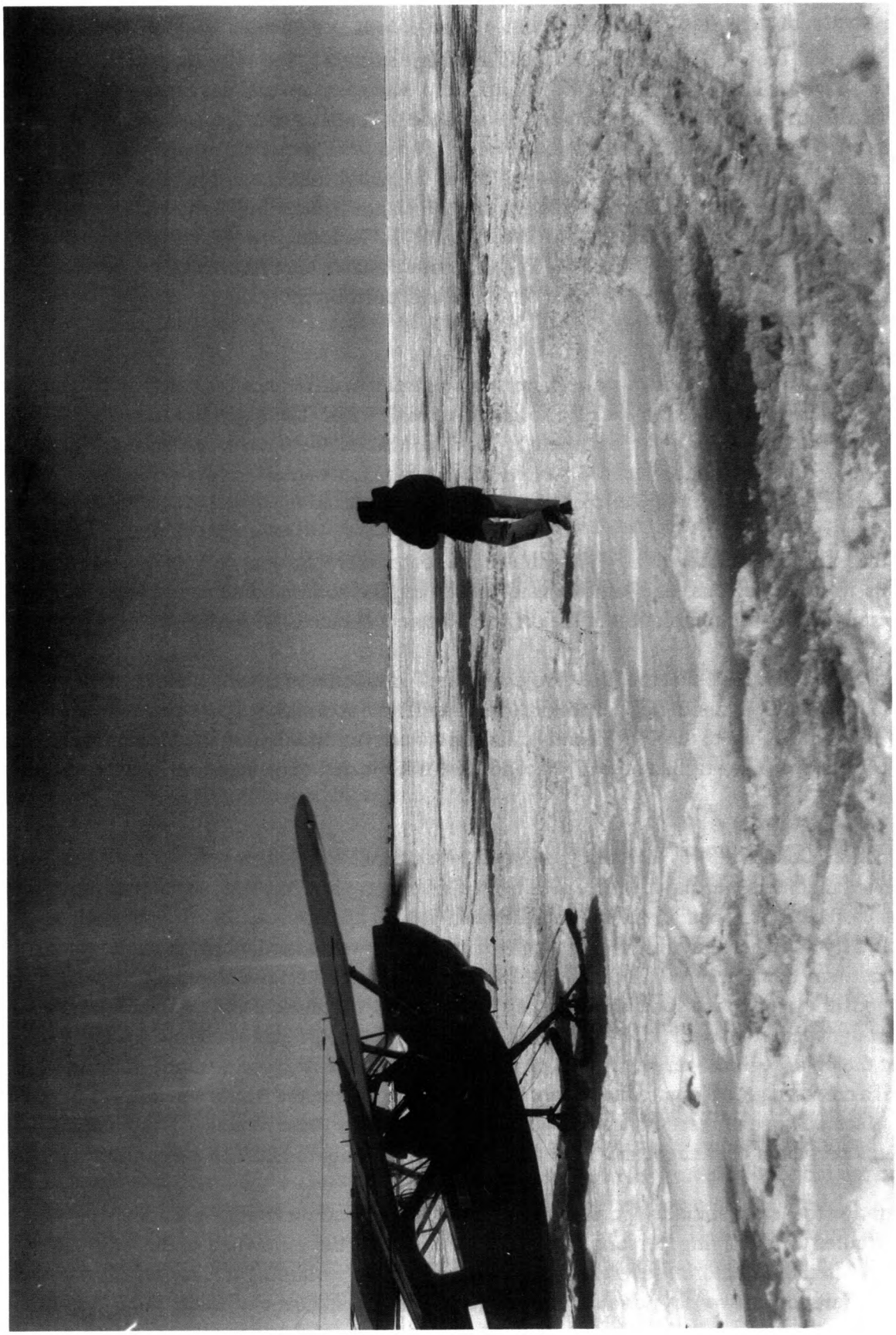
Upon inspection, it became obvious that there was a significant difference between the "island" ice formed from fresh water and the pack ice formed from salt water. The higher density of the island ice allowed it to plow through the pack ice in its movement about the polar sea. Also significant, the subsequent plottings of the ice islands' movements revealed that currents in the Arctic Ocean were moving in the exact opposite direction from previous predictions.

During the long arctic winter, radar photography and scope interpretation studies were emphasized on flights to polar regions, and were considered by higher command as a worthy addition to information desired for completion of the original "Project Nanook" objectives.[7]

It was on 24 October 1946 that the first "Project Polaris" mission was flown, pursuant to directives from Strategic Air Command. Six Canadian officers under the command of Squadron Leader Harry A. Forbes were attached to the 46th Recon Squadron for active participation in planning and flying "Polaris" missions. The original objectives concerned trailblazing of an arctic air lane from Alaska to Iceland.[8]

By the end of October 1946, the policy of having experienced crewmembers fly with the lesser experienced members was paying off, and almost all the crews had reached the same high level of proficiency. The grid system of navigation had been proven and improved to the point where any crew could fly anywhere anytime over the polar cap, and this was exactly what the unit was doing. This is not to say that there weren't problems. Due to weather conditions or oversights in procedure, absolute positive navigation sometimes seemed elusive. This was particularly so when fall and early winter brought perpetual twilight, during which celestial shots were next to impossible. Many of the charts of the polar regions were inaccurate at best, although corrections were made during the unit flights. If a crew did get off course due to these conditions, however, the Arctic was unforgiving, and there was scarce hope of rescue if a crew were forced down. For these reasons, flying in the Arctic remained a perpetual challenge, and there was always something to learn on every flight.

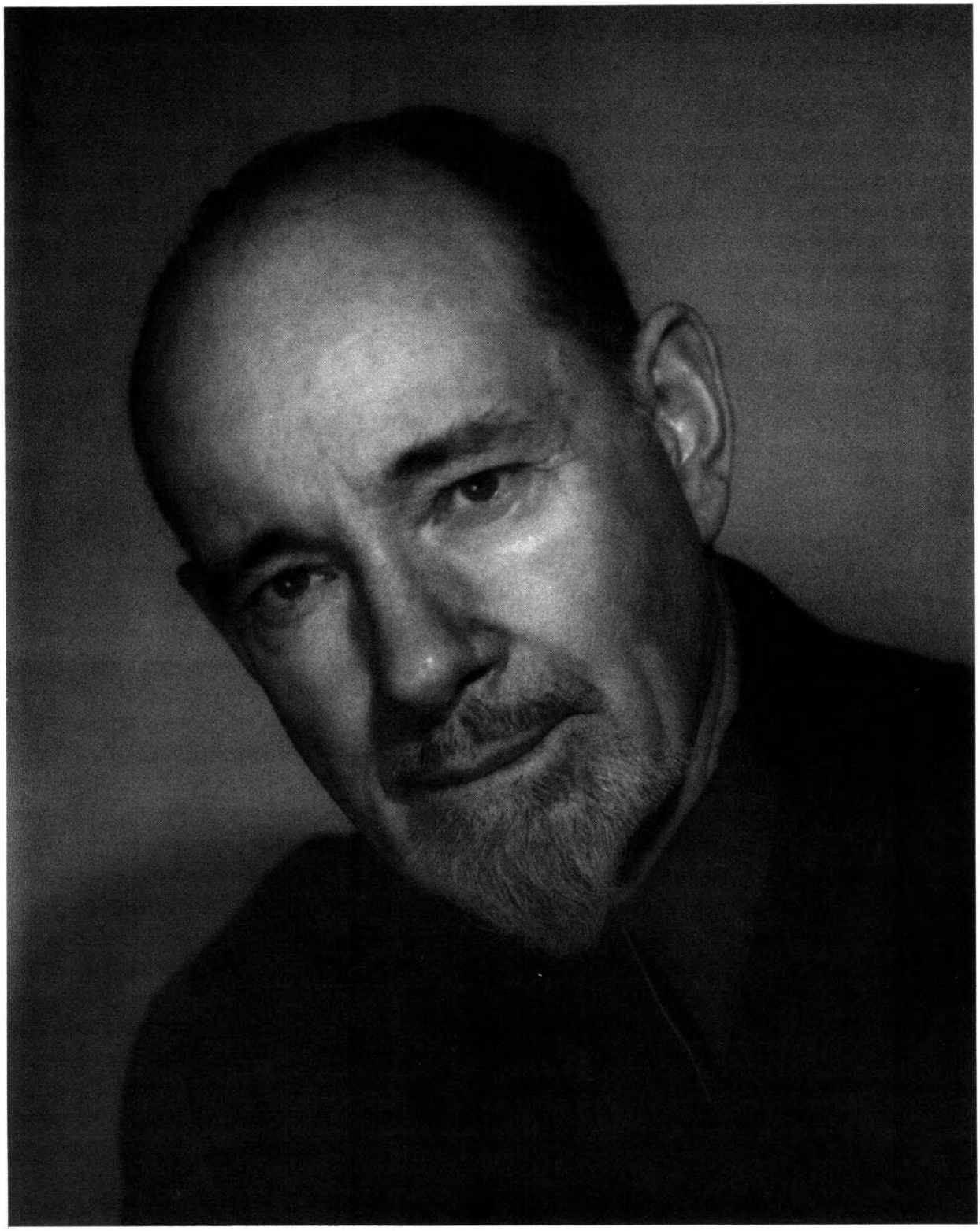
In preparation for any eventuality, procedures for crash landing and surviving on sea ice were written and distributed to all flying personnel. Sir Hubert Wilkins, the renowned arctic and antarctic explorer, visited the squadron several times and gave lectures pertaining to survival. Crews were trained as units on a two-day bivouac in the wooded areas adjacent to Ladd field. Snowshoe technique, proper use of sleeping bags, and care of clothing were demonstrated in thirty-degree-



Robert N. Davis expedition to inspect "Target X".

below-zero weather. The 46th's program in survival training would prove important to several crews later on.

It was in November 1946 that the Deputy Commander of Strategic Air Command, Major General St. Clair Streett, commended the 46th Squadron for having fundamentally achieved its major assigned objectives of finding a means to navigate over the polar cap and assessing the extent of the Soviet threat in the Arctic. The knowledge being learned about arctic operations was of profound interest to the Air Force, and the scientific findings of the unit were opening up new fields of study for the scientific community. However, many more surprising discoveries were still in store.



Sir Hubert Wilkins

Sir Hubert Wilkins (third from right) instructing squadron personnel on cold weather equipment. (From left): Capt. Dick McIntyre, Capt. Frank Ferrell, 1/Lt. "Whit" Williams, Maj. Maynard White, Capt. Maurice Murdock, Maj. Louis Hallberg, Sir Hubert Wilkins, Capt. Jack Setterich, Capt. Charles Ward.

**HEADQUARTERS STRATEGIC AIR COMMAND**
**ANDREWS FIELD**
**WASHINGTON 20, D. C.**

8 November 1946

SUBJECT: Commendation

TO: Commanding Officer, 46th Reconnaissance Squadron (VLR) Photographic.

1. I desire to commend you and thru you all of the personnel of the 46th Reconnaissance Squadron for the brilliant services you have rendered to the Strategic Air Command and to the Army Air Forces during the sojourn of your organization in Alaska.

2. You and your men have worked under severe difficulties not completely understood and appreciated by all. However, in spite of all obstacles, you have not only performed your assigned mission in a superior manner but have been able to far exceed expectations by opening new vistas for the exploration of the frontiers of a new era. Without the foresight and individual effort of each of you this opportunity may well have been lost. Because of your pioneering spirit and effort an unbounded opportunity to gather new basic scientific and developmental information has been realized and thrust into the foreground for serious consideration and attention by the Army Air Forces and by our scientific institutions.

3. I extend the sincere appreciation of the entire command to each of you for your splendid work.

ST. CLAIR STREETT
Major General, U. S. Army
Deputy Commander

## DIFFERENCE BETWEEN POLAR AND LOW-LATITUDE NAVIGATION

1st Lt. David J. Haney, *Navigation North of Seventy*

"Before planes were able to fly safely and regularly over the polar area, many problems had to be solved and definite steps taken to overcome unexpected or unknown problems that may occur in flight. It was known to navigators that the only method of fixing position would be by celestial methods, due to inaccurate and inadequate charts, extensive ocean areas, and no navigational aids (i.e. radio, Loran or D.F. (Direction Finding) facilities). Other aids to navigation that were not available in polar regions are such man-made pilotage points as cities, dams, railroads, etc. Knowing this, navigators made plans accordingly by brushing up their techniques in dead reckoning and celestial.

"Most navigators in the Air Force have found themselves many times to be without the above listed navigational aids due to a number of reasons during the war. The two things that caused them to lose sleep was losing the long practiced methods of course measurement and steering. All our lives we compared geographical points in relation to north. We have always known that the sun rises in the east and sets in the west. In the polar regions this is not true. At the pole there is only one direction, that being south. The sun either doesn't rise at all or appears to spiral upward in the spring, then downward in the fall until it disappears for six months. Even at as low a latitude as Fairbanks the old rule, rise east, set west is not true. In mid-winter the sun rises slightly southeast and sets southwest. In the summer it rises just east of north and sets just west of north.

"To further the early Air Force polar navigator's worries, authorities could not agree on a grid orientation most suitable for practical use. This grid orientation is the method of measuring direction to get a constant value for desired course. If true direction were attempted, it is apparent that an aircraft approaching the Pole on a true heading of north will immediately, upon reaching the Pole, have a true heading of south. Not only that but any other heading he may try to take would be south. Crossing the geographic pole is not the only time direction definition would be difficult if true north were used as a reference. If the course of an aircraft were to pass near the pole, but not directly over it, the true heading might be northeast at the beginning of the flight, changing to east at the point nearest the pole, and then southeast when withdrawing from the pole. To overcome this nuisance of converging meridians, the Grid System was adopted.

"As mentioned earlier, various individuals had made recommendations as to their theory on the most practical grid orientation. Following the recommendation of Commander Catlett, the navigators of the B-29 detachment at Edmonton adopted the 180th meridian for heading reference. This system was passed on to the navigators of the 46th Reconnaissance Squadron a few months later. The way this system works is simple. An observer standing at the north pole facing down the 180th meridian, with his back to the 0 degree meridian toward England would be facing north according to grid reference. As he faced the 180th meridian and the Pacific Ocean, his east would be the 90th east meridian, or Russia. England would be grid south and Canada grid west. (Fig. 2). Thus, by placing lines parallel to the 180th meridian, separated enough to allow convenient course measurement, his reference system would be set up. Any courses measured with reference to these lines would give a constant value for direction.

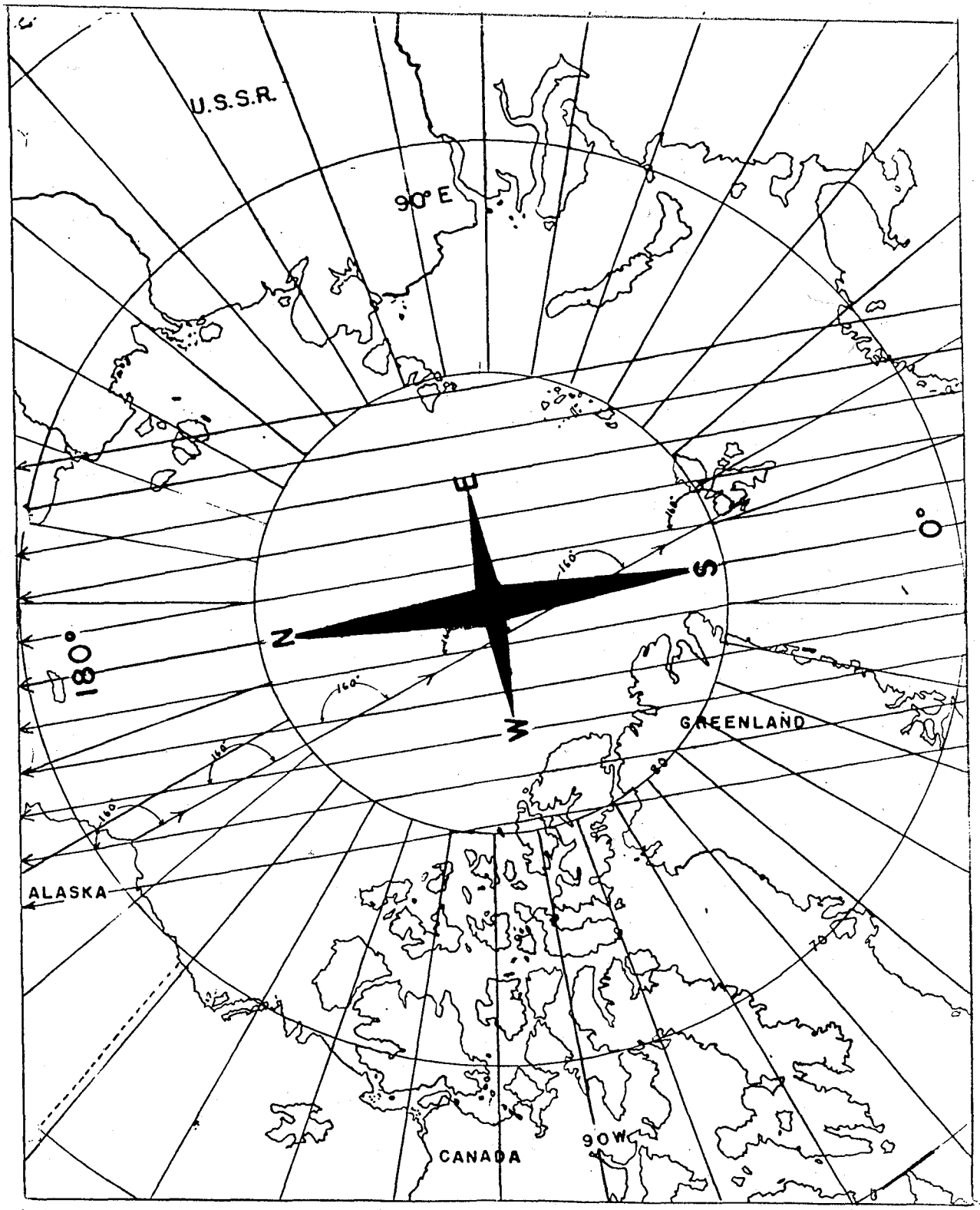



FIGURE 2. POLAR STEREOGRAPHIC PROJECTION WITH GRID LINES ORIENTED TO THE 180TH MERIDIAN.

"When the grid is superimposed on the polar stereographic chart and the heading measured in a clockwise direction from grid north, the problem of steering must be overcome. Grid headings usually are radically different from true headings. Obviously the magnetic compass cannot be utilized in the conventional manner because the lines of equal magnetic variation are oriented for use with true direction. The only time grid heading and true heading are the same is when an aircraft is flying north or south along the Greenwich meridian. If flying north, the true and grid heading are both north. However, as soon as the Pole is passed, the true heading changes immediately to south, but the grid heading remains north.

"The instrument presently used for steering is the directional gyro. The directional gyro, unlike the magnetic compass, had no direction-seeking ability and must be set to the grid heading. If the directional gyro had no precession, it would give a constant reading over a great circle course, which approximates a straight line on a polar stereographic projection. Since directional gyros do not have a direction-seeking ability and will precess [or gradually turn off heading], it is not as satisfactory for steering in polar regions as the magnetic compass is for lower latitudes. As a result of this precession, it is necessary for the gyro to be checked frequently and reset as the error accumulates.

"The only available means of checking the gyro is to use the astro-compass. Constant use of the astro-compass requires the aircraft to fly on top of weather in order to obtain regularly-timed shots on the sun or stars. Readings taken at intervals of approximately twenty minutes provide a means of determining precession and applying it with reasonable reliability if an overcast should prevent further observation.

"It is time to realize the fact that grid reference for course measurement and gyros or some other non-direction-seeking instrument for steering are here to stay for awhile. No matter how many aids to navigation may be installed over the polar area, a constant value for course measurement and instrument free from influence of the earth's magnetic field will for a long time be preferred by navigators. Not that the magnetic compass is useless; rather it is impractical for use when simpler, more efficient methods are available. [Studies of magnetism made by the 46th Squadron are discussed in more detail later.]"

46th Recon crew preparing for takeoff in F-13 "Bucket A Bolts": (Left to Right) (Front Row) - M/Sgt. Cecil Allain, Crew Chief; Cpl. Sierastki, Mechanic; Capt. Charles A. Ward, Aircraft Commander; 1/Lt. Cushman, Navigator. (Back Row) - Capt. Bird, Copilot; M/Sgt. Klemz, Aerial Photographer; 1/Lt. Paul A. Flynn, Radar Operator; 1/Lt. L. B. Larson, Engineer; 1/Lt. Sheetz, Navigator; S. Sgt. R. B. Smart, Radio Operator.

First Lieutenant Frederick Sheetz in the nose of aircraft.

Lieutenants Frank O. Klein and Marvin Greenberg at work at the navigator's station.

# Chapter 13

## The First Arctic Survival Training

The 46th Recon moved the survival training program from the classroom to the field during the first snowstorm in the winter of 1946. Captain Harrold Strong, an arctic expert of Eskimo heritage assigned by Army Air Force Headquarters from Wright Field to the 46th, was the most instrumental person at Ladd responsible for indoctrinating personnel on how to survive in the Arctic. It was a known fact that if crews went down either over land or over the polar cap they would in all probability have to survive for several days, if not several months, on their own. They would have to know how to live off the land or survive on the ice. They had to be prepared for extreme conditions and would need to be knowledgable about how to walk back to home station from over the polar cap, from Russia, or overland in Alaska if they could not be rescued. Captain Strong started this program, which took advantage of winter conditions in the environment near Ladd Field.

Major White and approximately a dozen other people accompanied Captain Strong on the first hands-on training session, which left the base, headed down the highway towards Mile 26, and set up camp among the pine trees along the highway 13 miles from Ladd Field. They had four jeeps and a couple of weapons carriers on this first trip. Captain Strong was particularly knowledgable about the camping amenities, such as how to dig out the snow down to the permafrost to provide a floor for a lean-to, and how to easily build fires in the Arctic. To get firewood, Capt. Strong located some small pine trees that were about four inches in diameter, and demonstrated how one could clasp his hands up along the trunk and bring his hands down to break off all the frozen and brittle branches, which made excellent kindling and padding for under one's sleeping bag.

Major White took an axe from one of the still-warm vehicles and found that just a couple of blows by the axe to the base of a frozen pine trunk would usually shatter it and provide plenty of wood. One could then feed the fire at night while still in one's sleeping bag by pushing the pine trunks into the fire bit by bit. This arrangement, done from within the lean-to, would protect one from the snowfall as well as provide enough warmth to get some sleep during subzero temperatures. It was important, Captain Strong said, to sleep in the nude for maximum warmth. This didn't make sense to most of the students, but it worked amazingly well when they got enough nerve to try it. In fact, most found that it was impossible to sleep otherwise.

It was discovered that the cold was something to reckon with when the following morning Major White decided that he would cut down some more pine trees. He took an axe, hauled off, and hit the bottom of a tree trunk. At the same moment as the axe struck, he heard what he thought was a rifle shot very close by. When he looked down, he found that he was no longer holding an axe handle, but saw what looked like a million toothpicks laying on the snow. The axe had totally disappeared. What had sounded like a rifle shot was the frozen axe handle exploding from the shock of the axe hitting the tree. Everyone learned in a hurry that the axe handles must be kept warm or warmed gradually over a half hour or so before being used. An axe head is useless without the handle, although that particular axe head was never seen again.

When they began looking at the vehicles, which they had left running overnight, they found that some of them had stopped. It became apparent that the engines had seized during the night. It just so happened that Captain Strong's expertise didn't include how to maintain vehicles in the low temperatures of the arctic winter environment. It was only after the vehicles were towed back to the base that the problem was discovered. The oil in the oil pans and transmissions had been very thin, but it nevertheless had congealed due to the subfreezing temperatures. There were grooves in the gelled oil where the rods and crankshaft had turned, and neither they nor the bearings were getting any lubrication, causing the engines to overheat and grind to a halt. What they did learn, however, which became of value for all the unit's transportation vehicles, was that this would not happen if the engine lubrication was made up of the lightest possible weight oil mixed about half and half with kerosene. This mixture was thereafter put in the rear ends, transmissions and oil pans of all vehicles to provide lubrication during extreme cold temperatures. So, learning how to winterize vehicles was an added piece of knowledge learned from this experience.

Since living off the land was one of the other skills to be learned during the survival course, it was soon noted that the indigenous game was caribou, although they hadn't seen any yet, and hadn't seen any tracks. There also should have been big snowshoe rabbits, but they were hard to see in the snow. When somebody did spot one, it looked like the rabbit was jumping straight up in the air, and only for a fraction of a second. Sitting in the snow, they were almost impossible to see. The question was whether to try to catch the rabbit by hand or shoot it while it was briefly up in the air as it moved.

Any arctic hunter will know from experience that when a shotgun that has been kept indoors is left out overnight in the arctic winter, it undoubtedly won't fire the next morning. This is because it would usually have enough moisture or condensation in it so that it would entirely freeze up. The same was true for a rifle. The trick is to make sure the firearm is absolutely clean of all traces of oil and condensation as you allow it to gradually cool to outside temperature, and then make sure the weapon is kept cold and not placed near the fire or in a sleeping bag where it is liable to get warm again.

The group had a few survival rations with them, but they took no water since they were sure that they wouldn't have any problem melting the fresh, white snow. They assumed that all they had to do was to put a large, five-gallon lard pail full of snow on the fire, and in a short time they would have all the water they could drink. It didn't work that way. They didn't count on the snow in the bottom of the pail melting and cavitating within the pail, allowing the water to boil, and the bottom to melt out of the pail. This not only caused the loss of any melted water, but the water could easily put the fire out as well. They weren't doing well at turning snow into water, but they were managing to burn holes in the bottoms of most of the lard pails before coming up with a more workable solution. Eventually, they learned to gradually heat the lard pail with a small amount of snow in it, and then keep adding increasingly larger quantities of snow into the liquid to keep both the water temperature low and the pail from overheating. They found out that everything about living off the land in the arctic winter was an art, and at first an unknown art to all the military personnel taking the training course.

From the base camp, the crews were then taken out on treks for several miles on snowshoes and brought back on skis, and vice versa for alternating groups, to give the personnel some orientation in cross-country traveling.

During the winter of 1946, the next phase of the winter survival program was conducted at Blair Lake, about 60 miles from Ladd Field. Crews were flown there in a C-47 with just their aircrew survival equipment and the knowledge they had accumulated so far from the classrooms and survival training experiences they obtained close to the base. All they had to do was remain in camp for a week to pass the test, or they could walk back to base and pass the test. As a safety measure, the crews had signaling panels and the C-47 flew over the route to the encampment every day.

They had plenty of problems to keep them busy, like how to catch a fish with a piece of red flannel through lake ice many feet thick. It was not as simple as digging a four-foot-diameter hole many feet deep, because this was impossible with the equipment they had. They solved the problem by starting at the top with a twelve- to fifteen-foot-diameter hole, and then stepping it down in size until they reached the water level with enough room for a two- to three-foot-wide hole at the waterline. At this stage, the only problem was keeping the ice from forming on the water surface so one could fish with a line, hook and piece of red flannel for bait. It turned out that "goin' fishin'" involved at least six people working for many, many hours hauling blocks of ice, which could not be done quickly, since perspiration in sub-zero temperatures was hazardous to life itself.

# Chapter 14

## General LeMay's Visit

***Washington Post: (September 12, 1946) - "U. S. Readiness Urged Against Atomic Attack", (October 7) - "General George C. Kenney: War, should it ever come again, will not come over or across oceans as it has done in the past. It will come 'over the top' - the transpolar route."***

On 15 October 1946, Major General Curtis LeMay, accompanied by several high-ranking officers from the Pentagon, arrived for a five-day tour of Ladd Field. His first stop was at a reception given for him at the quarters of Col. Lloyd H. Watnee, the base commander. Immediately after introductions, General LeMay took the 46th's commander, Major Maynard White, off to a far corner of the dining room where they would not be disturbed. For the next three and one-half hours, General LeMay discussed capabilities with Major White, wanting to know all about the operational and scientific findings of the 46th Recon Squadron.

General LeMay had been quoted by the media as saying that "our frontier now lies across the arctic wastes of the polar regions."[1] In order to obtain as much firsthand information as was available on the subject, and knowing that the 46th was recognized as the authority on polar operations, the general had sought out its commander. Long-range and cold-weather operations of reconnaissance and bomber aircraft were his main concerns.

General LeMay was no stranger to heavy bomber operations. He had been commander of the XXI Bomber Command in the Pacific during World War II, tasked with the B-29 raids over Japan. Under his command at that time was the 509th Composite Group which had dropped the atomic bombs at Hiroshima and Nagasaki. General LeMay knew what a B-29 could do. It was that same 509th Bomb Group, considered "the best bomb group in SAC",[2] that would soon rotate through Ladd Field for training by the 46th in grid navigation and cold weather operations.

After the war, General LeMay became the Deputy Chief of Staff for Research and Development, a position primarily responsible for developing the future technological capabilities of the Air Force. Much of what General LeMay was learning at this time would be reflected in his strategic doctrine when he would become Commander of Strategic Air Command two years later on October 16, 1948.

To test the range capabilities of the B-29 Superfortress, General LeMay had flown a combat-configured B-29 from Japan, flying along the mid-latitudes route and intending to land at Washington, D. C.; however, the flight ended early when fuel/weather considerations forced him to land short of his destination. He questioned Major White at length about the feasibility of flying reconnaissance missions across the Soviet Union, landing in Europe, and returning a few days later on parallel routes.

Ladd Field, the General felt, was an ideal location for cold weather indoctrination of SAC forces. It was clear that even in the early winter of 1946 the base was experiencing minus 55-degree temperatures, much colder than any temperatures encountered at Salina, Kansas, (the "temperate zone" B-29 base which was generally known for having worse winter weather than Anchorage, Alaska), and General Lemay seemed to have a vital concern for the need to train bomber crews in the extremes of arctic conditions.

The General had flown primarily as a navigator early in his military career and had great interest in navigational problems encountered over the polar cap and Canadian Archipelago. He was thoroughly conversant with all aspects of "Project Nanook" and continued to delve into all facets of its mission with probing questions to Major White.

As a result of this meeting, on November 6, 1946, less than a month after General LeMay's visit to Ladd Field, Major White was summoned to SAC Headquarters, then located at Andrews Field, Maryland, on short notice with a request that he come in a B-29 (F-13) so he could fly direct nonstop for a meeting early the next morning. This he endeavored to do; however, when Major White passed Great Falls, Montana, he learned that the weather on the entire east coast was closing down all flight operations due to ice, sleet and heavy snow; so Major White, his copilot, Captain Marvin Sims, and his crew had to divert into Chicago.

As they descended through the clouds approaching Chicago Midway Airport (which was the main Chicago airport then), the radar approach controller kept telling the crew to descend a few thousand feet at a time, and each time he would request a descent to a lower altitude, he would punctuate his request with the word, "IMMEDIATELY!!" After making a series of immediate descents, the plane broke out from the base of the clouds. Captain Sims called out that the airport was right below them, so Major White made one spiraling turn and landed. On their radio they then heard the approach controller, quite apprehensive, asking what altitude they were at since they had dropped off from his radar screen. Major White said not to worry, that they were already on the ground. The approach controller responded, "Wrong airport!" They had landed at O'Hare Naval Air Station instead of Midway Airport.

The next morning, a call to SAC Headquarters revealed that the meeting had been postponed, pending Major White's and Captain Sim's arrival. Later that afternoon, the weather on the east coast lifted and Major White and his crew arrived at Andrews Field to find another set of orders and a smaller plane to take Major White and Captain Sims to Long Island, New York for the meeting.

During that meeting on Long Island, Major White better understood the purpose of his earlier conversation with General LeMay at Ladd Field. The meeting turned out to be a requirements review called by General LeMay, Deputy Chief of Staff for Research and Development, to discuss the feasibility of a new, long-range, high altitude reconnaissance aircraft, which later became known as the U-2; and whose primary mission would be to eventually replace the 46th Squadron's F-13s in conducting reconnaissance flights over the Soviet Union.

Crewmembers pose before first unit flight to the North Pole.

16 October 1946, (Left to right)(Back row): Maj. Maynard E. White, Dr. Paul A. Siple, Lt. "Whit" Williams, Lt. G. Sturgis, Lt. Howard A. Mitchell, Lt. D.C. Atwill, Robert N. Davis. (Front Row): Capt. L.G. Butler, Capt. Frank E. Ferrell, Lt. R.J. Perron, Sgt. Victor E. Perry, Sgt. W.H. Kohlagen, Sgt. Ernest C. Stewart, Capt. G.J. Wagner.

# Chapter 15

## A "First" in Polar Aviation

On 16 October 1946, an F-13 made the first extended long-range flight over the geographic north pole. This was not a mission of singular purpose, but was one of pioneering for the purpose of exploration and research. Dr. Paul A. Siple, Military Geographer and Scientific Advisor to the Research and Development Department of the Army General Staff, and Mr. Robert N. Davis, Operations Analyst from the Strategic Air Command, accompanied Major White as special observers for this mission. It was on this flight that the theory of north polar weather was refuted. Huge cumulus clouds of 12,000 feet were observed, and extremely violent winds were encountered, disproving the common belief that a calm existed over the pole. Extreme clear icing conditions resulted in recommendations for engineering modification of the aircraft to be used in future flights.[1]

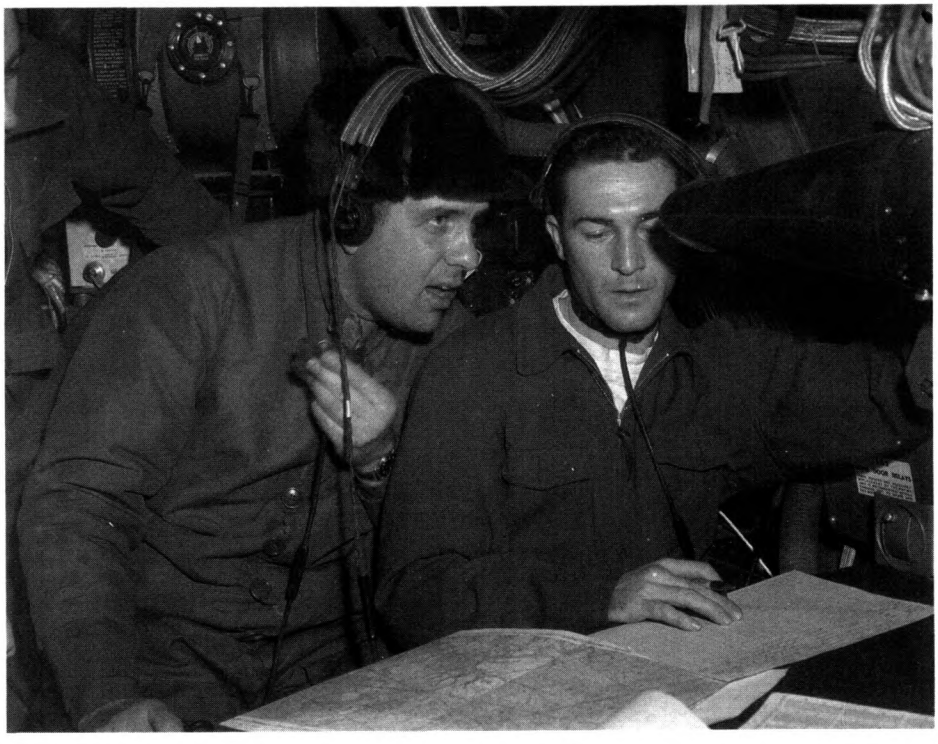
Captain L. G. Butler's crew was scheduled for this particular mission. As with all missions of the 46th Recon, all personnel on the crew were photographed prior to flight, always with the expectation that they would be able to see the processed photo a day or so later.

As the aircraft departed Ladd Field, Fairbanks, Alaska, radio silence was observed immediately following retraction of the landing gear, as was routine on all 46th missions. For the crewmembers, this flight was doubly interesting; not only because it was the unit's first flight to the north pole, but because each of the two visitors on board were considered brilliant in their respective fields.

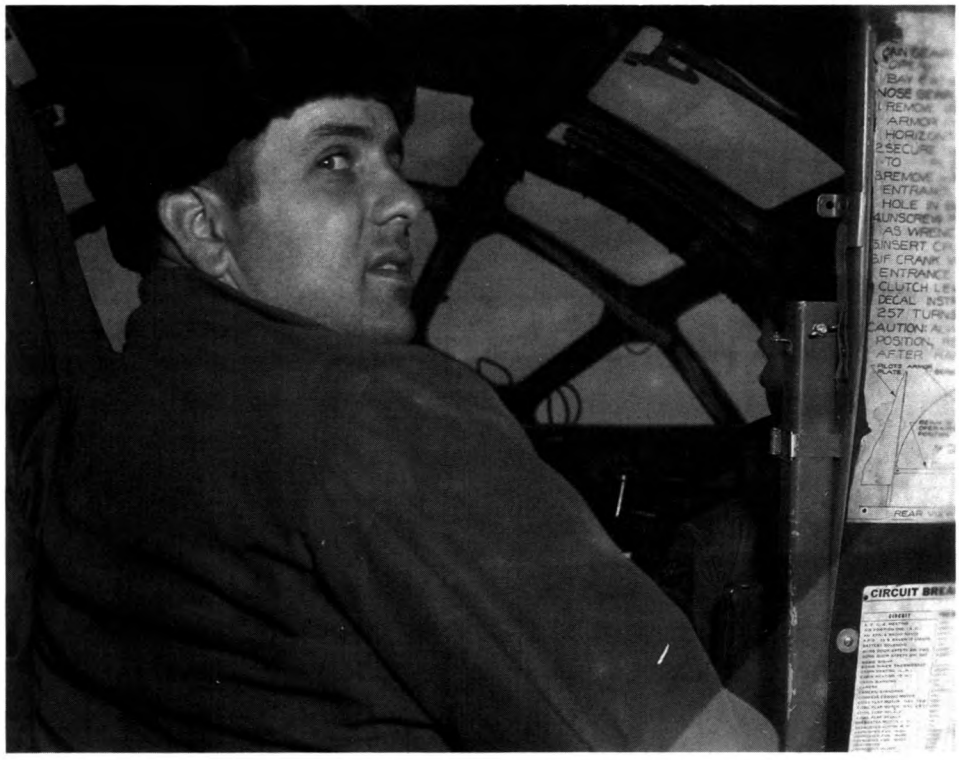
Dr. Paul A. Siple was seated in the bombardier's position in the nose of the aircraft, surrounded almost entirely by the heavy glass windows which offered him an optimum view. He was no stranger to polar landscapes, as he had been the Eagle Scout chosen by Admiral Byrd to accompany him on his first expedition to the Antarctic in 1928, and a veteran of Byrd's second expedition from 1933 to 1935. Dr. Siple had also been in charge of West Base, Little America during the U. S. Antarctic Service Expedition from 1939 to 1941, from which extensive flights and sledge journeys were made and comprehensive scientific investigations undertaken, including Dr. Siple's calculations that would become universally known as the wind chill index. Dr. Siple would eventually accumulate 62 months in the Antarctic, more than any other man alive, including Admiral Byrd. His pioneering efforts on the "last continent" were memorialized by a mountain, a coast and an island bearing his name.[2]

Bob Davis spent the majority of his time observing Lieutenant "Whit" Williams grid navigation techniques and Lieutenants Sturgis' and Mitchell's radar navigation procedures. Being by the aircraft's radar set was of particular interest to Bob Davis, who, as a civilian expert during World War II, flew as radar bombardier on lead planes during mass bombing raids over Germany. This took place when airborne radar was in its infancy. When there was only one allied airborne radar set in all of Europe, Bob Davis was its only operator. Bob Davis was later to become one of three officials in control of the development of America's Nuclear Energy program.

Dr. Paul A. Siple enjoying the view from the nose of the aircraft.



Major Maynard E. White and Lieutenant "Whit" Williams looking at the radar scope at the exact instant they pass over the north geographic pole.




Major Maynard E. White at his usual position on the folding chair over the nose gearwell.

(Clockwise from ten o'clock): Dr. Paul A. Siple, Major Maynard E. White, Lt. "Whit" Williams, and Robert N. Davis.

As usual, Major White was sitting in his folding chair over the nose gear well monitoring crew coordination and flight procedures. Both Dr. Siple and Bob Davis continually asked technical questions pertaining to all aspects of the flight on the aircraft's interphone system.

Flying over the Brooks Range between Fairbanks and Point Barrow presents an awesome view of unconquered wilderness. The low October sun lent an unimaginable beauty to the surroundings, with the knife-edged pastel purple shadows of the mountains streaking across the soft blue landscape. Maynard mused that it is beauty such as that which tranquilizes the spirit and brings about a frame of mind to enjoy rather than fear what lies ahead.

While crossing the coast of the polar sea, below them was a lagoon twelve miles southwest of the Eskimo settlement of Barrow, where the unforgettable humorist, Will Rogers and his pilot, Wiley Post, met their fate a number of years earlier. This point in the flight stirred the emotions and made one wonder why that historic tragedy had to happen here of all places.

The leg stretching out over the polar cap seems to be a new experience on each flight, and this one was no different. The scenery dramatically changes from what a pilot is normally used to. Some days a crew is surrounded by various types of clouds extending to the distant horizon, making one feel as though he is on center stage of a theater-in-the-round with the scenery constantly being changed in slow motion as though by invisible stage hands. Even the floor of the stage develops first fissures, then cracks which grow before one's eyes, and soon reach as far as the eye can see. It appears as a river cut through a stark barren landscape. If fear of the Arctic's immensity is not one's predominant emotion, it is easy to become mesmerized. In a short distance the "river" (called a lead) narrows and the sides merge, creating high walls of ice perhaps fifty feet wide and thirty feet high where the plates of ice crush together. Where the ice crushes downward, a large depression is left, which soon fills with water.

The hours quickly pass for those observing the scenery, and Lieutenant "Whit" Williams, the navigator, is constantly working on his grid navigation and waiting for that historic moment of being directly over the geographic pole. A few other flights in the past had flown over the pole with a Bumstead Sun Compass, but they never knew exactly when they were over the pole until they analyzed their data later on after the flight. This would be the first time in history that aviators knew they were over the north pole at the exact moment they were over it.

As the plane crossed the pole, Lieutenant Williams announced over the interphone that the historic feat had been accomplished. The pilot banked and noticed beneath the plane a depression where a lead had terminated - exactly at the pole. That was as close as they would get to a visual "confirmation." The return trip to Ladd Field was somewhat anticlimactic, but one characterized by a sense of great pride and accomplishment.

For this historic flight, Distinguished Flying Crosses were awarded to the following crewmembers:

> Capt. Lloyd G. Butler, 1st Lt. Wayland W. Williams, Capt. Frank E. Ferrell, Capt. Gordon J. Wagner, 1st Lt. Roland J. Perron, 1st Lt. George Sturgis, 1st Lt. Howard A. Mitchell, 1st Lt. Dwayne C. Atwill, S/Sgt. Ernest C. Stewart, and Sgt. Victor E. Perry.

The Brooks Range from an F-13.

Flying northward to the pole, as seen from rear upper fuselage dome.

View towards the tail of an F-13 from left gunner's blister.

# Chapter 16

## Winter Maintenance

Despite all the maintenance preparations for the wintertime, there were many unforeseen difficulties as winter progressed. All the problems encountered were not on the aircraft, but equally as great were the difficulties of maintaining ground support equipment.

The ground support equipment was manufactured for operation in temperate climates. They included general purpose vehicles, jeeps and trucks, as well as special purpose equipment, i.e. fuel servicing tank trucks, cletracs, ground heaters, test stands, starting units and even hydraulically-operated maintenance stands.

The factors which contributed to this unhappy situation were many and diverse. In the first place, the men who were scheduled to carry out the mission of first and second echelon maintenance of squadron vehicles and the establishment of a shop wherein third echelon maintenance might be accomplished, arrived in Alaska almost completely unaware of the difficulties attendant to the rigors of an Alaskan winter. In the interim months before spring, they were to become closely acquainted with the old problem of supply, aggravated in this case by the unforeseen shipping strikes and the sinking of an Army supply vessel.

Another constant problem was the shortage of facilities and adequately trained personnel, the acuteness of which was at times so great as to constitute a threat toward the continuation of the transportation system. At one time, fifty-five vehicles were maintained by a very limited number of persons.

Extreme cold temperatures resulted in a fifty percent increase in maintenance and an overall decrease in efficiency. It was next to impossible to prevent the fuel pumps on tank trucks from freezing. Vehicles had to be towed sometimes for miles in order to start them after they had remained idle overnight. Winter lubricants in wheels and the steering apparatus of the machines froze, resulting in highly increased driving hazards. The ever-present ice fog, by lowering visibility to an absolute minimum, raised the accident level. Tires froze to the snow while springs froze and snapped in the bitter cold. Batteries crystallized and cracked. There was a critical shortage of essential parts, including coils, radiators, and shock absorbers. These shortages of parts, personnel and space, coupled with disheartening conditions, made any work, excepting preventative maintenance, impossible to accomplish.

Performance charts of the various types of vehicles indicated that the omission of Dodge manufactured automotive machinery from the TO&E of an arctic-bound organization of this nature would result in considerable savings of man-hours and an increase of average operating time on the other makes of vehicles. It was discovered that, at temperatures ranging from minus thirty to minus fifty-seven degrees Fahrenheit, carburetors froze even with the motors idling, and a strongly negative opinion was formed concerning the general value of Dodge products at temperatures of minus forty

degrees and below. Ford, General Motors, and Willys-Overland products were found easier to start and operate at extremely low temperatures.

To combat the plethora of disorders which was disrupting their organizations, the men of the motor pool busied themselves in building and installing plywood cabs and bodies on the framework of vehicles for protection of personnel from the elements. Ordinance hardware and defrosters were utilized as added protection from the weather. Ground heaters and six-volt batteries were ordered to aid in starting time. All vehicles were painted and renovated. Thousand and six-thousand mile inspections were completed on schedule. First echelon maintenance was improved upon. Further instruction was given to drivers in winter operation, and checks were made on their performance. Recommendations were made pertaining to larger and more efficient heated accommodations, which would be suitable for maintenance storage and dispatch facilities, without which an efficient transportation system cannot be maintained.

As winter approached, snow began to fall and temperatures dropped, and the effects on both personnel and equipment became readily apparent. The effects of temperatures on equipment and personnel were observed as temperatures progressively declined.

## EFFECTS OF LOW TEMPERATURES ON AIRCRAFT AND EQUIPMENT, AND PERSONNEL

A. 32 degrees F. (freezing) and above:

1. Aircraft and Equipment and Personnel - Operation similar to operation in any temperate climate.

B. 32 degrees F. to 0 degrees F.:

1. Aircraft and Equipment - Time required to accomplish any outside maintenance operation increased by approximately 25%. Flight preparation time increased proportionately with added tasks required prior to flight. Snow will freeze to the surface of the aircraft. Wing covers are required and often froze to wings requiring heating or return to hangar. External heat must be applied to engines, Auxiliary Power Units (APUs), cockpit instruments and electronic equipment. Taxiing and movement of aircraft and equipment became more difficult due to depth of snow on taxiways and ramps. Aircraft windows fogged up, propellers were damaged in snow banks, as distances were difficult to judge in an all-white environment. Snow and ice on runways increased already critical length of takeoff rolls.

2. Personnel - At these temperatures, personnel begin to require additional protective gear and clothing. As the bulk increased, the efficiency decreased, increasing time required for any outside tasks. Slippery conditions as a result of snow and ice, plus freezing temperatures, increased the possibility of accidents.

Warming the engines prior to flight.

C. 0 degrees F. to -30 degrees F.

1. Aircraft and Equipment - During this temperature range, total time required for maintenance operations performed outside increased by as much as 50%. Preparation for flight time increased to where it became advisable to perform all maintenance and preflight operations inside the hangar. Application of external heating increased to two or three hours. Any delay in takeoff could result in an increase of fuel leaks, collapsed struts, frozen microswitches, frozen oil lines, frozen instrument lines and frozen hydraulic systems. Operations in outside maintenance shelters was extremely limited. Refueling tankers must be started inside, as the pumps and valves would freeze up when exposed during outside refueling operations.

2. Personnel - Personnel required heavier cold-weather gear and clothing, thereby decreasing their efficiency proportionately. Personnel must utilize the buddy system working in pairs to preclude accidents and inadvertent exposure to frostbite. Limitations had to be placed on the time personnel could work outside prior to returning to the hangar for warm-up. Even the flight crews had to wear heavier cold-weather gear due to the limitations of the inflight heaters.

D. -30 degrees F. to -50 degrees F.

1. Aircraft and Equipment - During the times that temperatures in this range were encountered, any maintenance or other operation accomplished outside required an increase in time involved to approximately 200%. During these periods, heavy banks of ice fog began to form, restricting visibility to 100 feet. The danger of accidents increased two-fold, tires began to freeze flat on the bottom and even freeze to the ground making it extremely difficult to move the aircraft. Transportation for personnel became an extremely serious problem. Vehicles froze rapidly and had to be started and warmed up every hour or so when outside.

2. Personnel - At these temperatures personnel could only remain outside for twenty to thirty minutes and operate at a greatly reduced efficiency. Observance of the buddy system became extremely critical.

With the present type of equipment consideration must be given to drastically curtailing all operations at temperatures below -40 degrees Fahrenheit if any margin of safety is to be maintained. The following listed items indicate some of the types of problems encountered at temperatures below -30 degrees Fahrenheit:

1. Hydraulic fluid freezing at -54 degrees F.

F-13s on the Ladd Field flightline during the winter of 1946.

2. Fluid in pressure instrument lines freezing.

3. Removal of ice and snow from aircraft before takeoff; when temperature is below -20 degrees F., it is necessary to pull aircraft in hangar to thaw the aircraft.

4. Fuel shut-off valve leaks, due to temperature changes.

5. Fuel injection pump leaks, due to temperature changes.

6. Nose wheel struts leaking due to temperature changes resulting in differential contraction of various metal parts. In several instances packing had to be replaced. Winterization was entered in winterization checklist as completed, but was found to be inadequate.

7. Excessive amount of time used in preheating engines and installing wing covers.

8. Several tires have been cut sliding on ice. They also freeze with flat spots where aircraft has been sitting. Several revolutions of the wheel is necessary to remove the flat spots.

9. Three instances of props hitting the snow banks resulting in prop changes.

10. Some injuries to men have occurred while cleaning wings of snow and ice, as a result of slipping and falling to the ground. It is believed that the type of shoe issued to the mechanic is inadequate for warmth and traction.

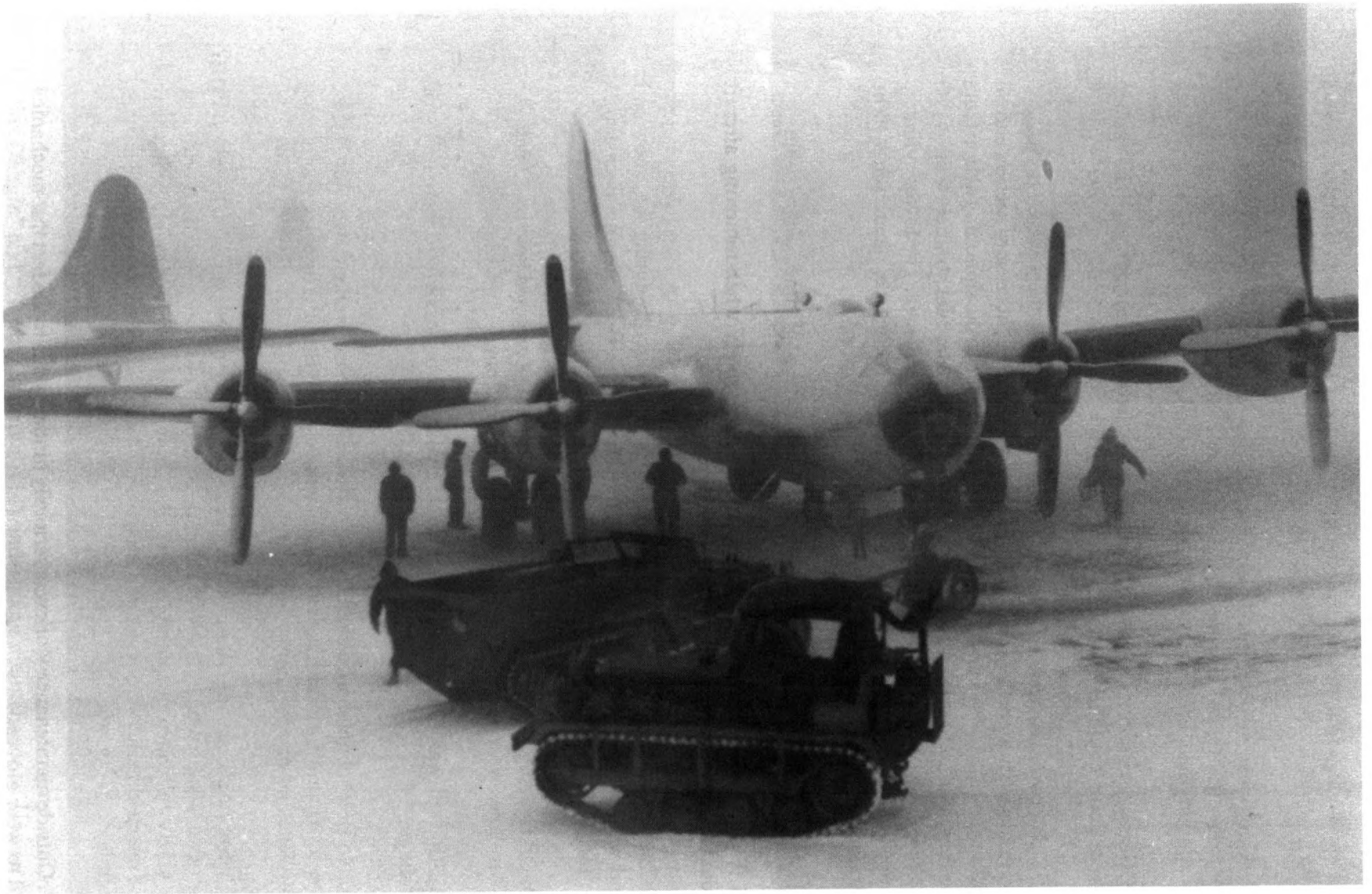
11. Gear boxes in flaps have been frozen on several occasions and have had to be cleaned and diluted.

12. During extreme cold weather, batteries must be removed from aircraft if aircraft is to remain outside for a period of 3 to 4 hours, or kept fully charged to prevent freezing.

13. Excessive numbers of fuel booster pumps have burned out.

14. On 5 December 1946, No. 4 engine froze up and required an engine change. This was caused by oil congealing in the "Y" drain, allowing the engine to be starved of oil. Heaters had been applied to the engine for 6 hours prior to trying to start engine. Oil was removed from the "Y" drain with a screwdriver and it was like "gooey tar". Oil emersion heaters and Herman Nelson heaters were both applied, and after 2 hours oil would flow.

15. Excessive trouble was encountered with gyro instruments due to extreme cold temperatures at which these instruments were used.



Getting ready for a mission at about 40 degrees below zero.
(Halftrack and Cletrack in foreground)

16. Spark plugs foul out due to moisture collecting in the cylinders if engines are not started immediately after heat is removed.

17. Upon several occasions main landing-gear struts have been found leaking immediately after pulling aircraft from hangar; these leaks were stopped completely by applying heat to struts for about an hour and a half.

18. Bomb door control valve collected moisture, froze up and heat had to be applied before doors could be operated.

19. Upon two occasions oil dilution solenoids stuck open during the long periods required for dilution. This caused the front and rear sumps, accessory section and oil tanks to be filled with a mixture of gasoline and oil. Due to the siphoning action from the oil tank, the fuel injection pumps, master control and fuel strainers were filled with oil. These units had to be removed, cleaned and replaced. The lower cylinders were filled with a mixture of gasoline and oil which required all spark plugs to be removed, the cylinders drained and all new plugs installed.

20. Brakes froze on several occasions. Heat had to be applied to release same.

21. Front nose windows and blisters cracked excessively when removing aircraft from hangar to temperatures below -40 degrees F.

22. Inadequate towing equipment available for B-29 aircraft during ice, snow and cold weather. Three cletracs have been used to move a B-29. On one occasion, 2 cletracs and 1 caterpillar, type D-8, were used.

23. Oil freezing in servicing hoses of oil trucks in temperatures below -30 degrees F. Airplanes were serviced by hand on several occasions.

24. APU oil was freezing while airborne, making it impossible to start APU for landings.

25. No B-29 maintenance shelters were available. Those on hand were for B-24s, therefore requiring modifications before being used on B-29s. The acute shortage of acetylene and oxygen hampered this modification.

26. On several occasions, the exhaust stack screens had frozen on Herman Nelson F-1 ground heaters while they were running. Sufficient pressure was built up, forcing the safety door open and putting out the fire. This caused exhaust fumes to be injected into the heater ducts. Considerable time was lost in cleaning the screens and putting them back in operation.

27. Outside maintenance work was seriously hindered due to the fact that mechanics had to wear gloves.

F-13s as seen from Hangar No. 4.


"Ladies Delight" and "Barrow Sparrow" (14) undergoing maintenance in Hangar No. 4.

28. Inadequate storage space for gasoline servicing units. On one occasion bomb bay tanks were refueled by hand. The Wisconsin engine on servicing trailers would freeze up and were impossible to start. At temperatures below -40 degrees these engines would freeze up while running. From 1 December to 12 December 1946, fuel service was not obtainable due to the above.

29. Inadequate storage space for auxiliary equipment, making it necessary to heat the auxiliary equipment before it could be used.

30. Due to the effect of extreme temperatures on vehicles, the unavailability of adequate transportation to travel the great distances between hangars and barracks areas, there was considerable loss of man hours on the job.

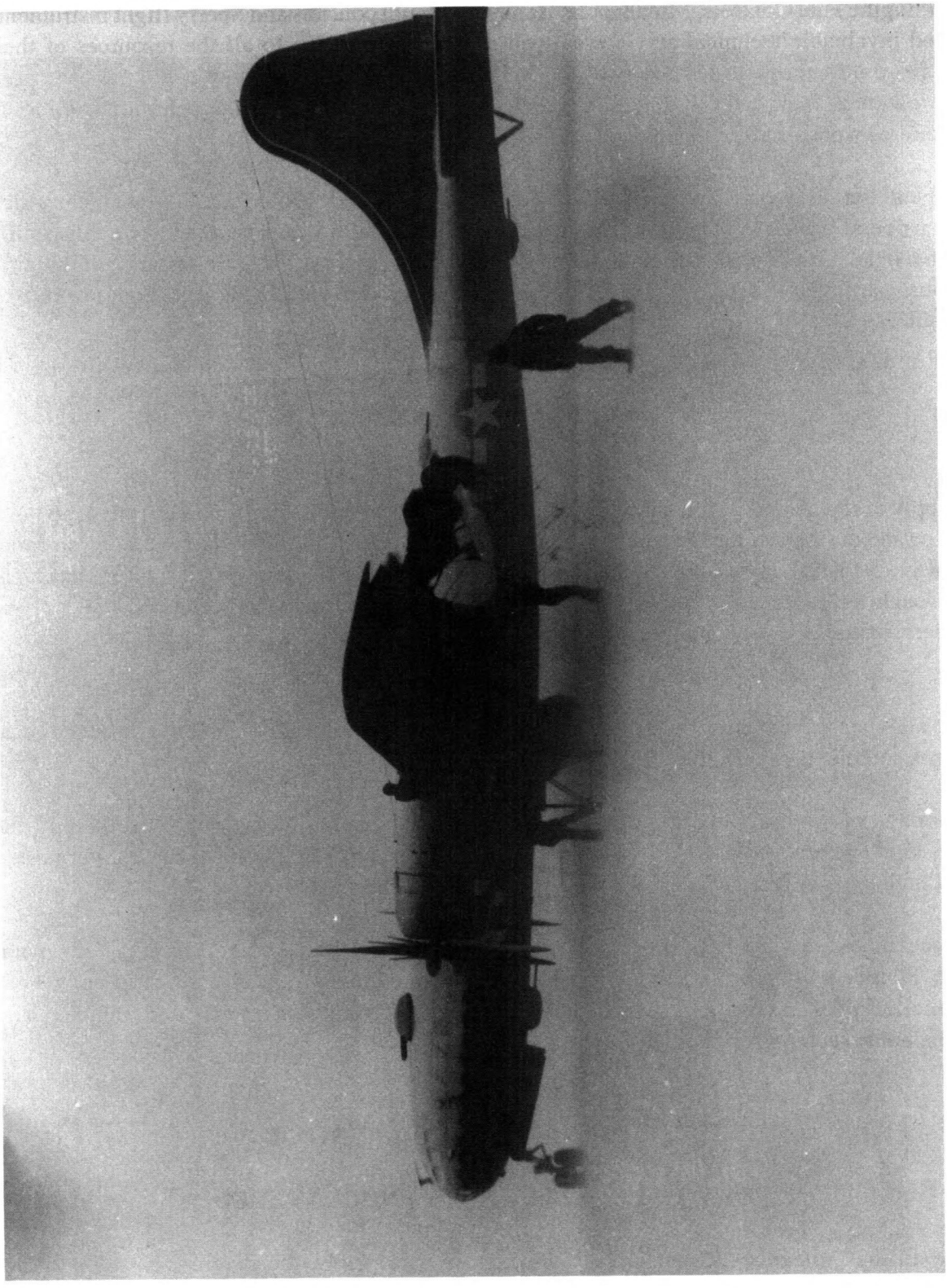
## THE B-29 (F-13) AIRCRAFT AND ITS LIMITATIONS

The B-29 aircraft had some inherent deficiencies which rendered it not the most reliable or easily maintained aircraft for this type of operation. Despite utilizing all the information known by the Air Force and extensively modifying the aircraft within the state of the art, there were many unknown factors which surfaced when operating in this hostile environment.

The B-29 was probably as good as any aircraft available at that time; however, some of its weaknesses required excessive actions and maintenance procedures to overcome problems and attain maximum reliability. One of the most critical was the history of engine and cylinder failures as a result of burned valves and loss of compression and/or subsequent engine failure. To minimize this, a standard operating procedure of performing a compression check and other inspections prior to every flight was initiated. This was not normally performed except at each inspection after 100 hours flying time. This procedure was credited with practically eliminating inflight engine failures and subsequent loss of aircraft. In two years of operation, no aircraft were lost due to inflight engine failure.

Other deficiencies resulting in additional maintenance effort were excessive fuel leaks in fuel injection pumps, master controls and all operating components of the fuel system. Most of these leaks were a result of the inadequacies of the material of the seals to withstand the extreme temperatures. Many of these fuel leaks were discovered during final pressure checks made immediately prior to takeoff, resulting in delays or cancellation of missions.

The exhaust system was highly susceptible to hot spots and burned segments resulting in a high attrition rate. This excessive replacement rate of engines, cylinders, fuel system components, exhaust system components, and propeller system components resulted in a high AOCP (aircraft out of commission parts) rate, and overworked an extended supply line. All support was provided by the major depots in the ZI (Zone of the Interior - U. S.) or directly from the prime manufacturers.



Securing the wing covers on an F-13.

Field Service representatives for Boeing Aircraft, Wright Engines, Curtiss Electric Propellers, Bendix Engine Fuel Controls, Minneapolis Honeywell flight controls and Sperry flight instruments provided invaluable technical services as well as a direct pipeline to all the resources of their respective contractor facilities. Many of the technical problems encountered could not have been resolved without their dedicated assistance. Many of the problems which were routine at normal temperatures were amplified manyfold as a result of extreme cold temperatures.

These Field Service representatives worked closely with the Cold Weather Test Detachment which had been operating at Ladd Field for several years. Their operations consisted of testing for specific problems in a controlled environment rather than general operations. Their assistance on specific problems, particularly design problems of electronic, electrical and navigation equipment, was invaluable.

## SUPPLY PROBLEMS

The supply of replacement parts was aggravated by the high attrition rate resulting from the type of operation and the long supply lines. The waiting period for AOCP (aircraft out of commission parts) items was 15 to 120 days. This resulted in critical shortages in the items with high replacement factors such as engines, cylinders, exhaust systems, fuel pumps, fuel controls, fuel valves, propellers, propeller power units, engine components, hydraulic system components and even spark plugs.

To help alleviate this situation, excessive cannibalization was accomplished in order to consolidate shortages and maximize availability of flyable aircraft.

The shortage of ground support equipment became very critical as a result of the sinking of the supply ship "General Zelinsky" in October 1946. This was a major portion of the quartermaster, aircraft maintenance, medical and ordinance equipment authorized by the TO&E 1-298.

This necessitated reordering through normal supply channels with a subsequent delay of several months. Many supply problems related to the more common items such as winterized engine oil, hydraulic fluid for aircraft and specialized vehicles, spark plugs for aircraft and vehicles, and common housekeeping supplies.

## THE WINTER OF 1946 AND THE SPRING OF 1947:

## ONE OF THE COLDEST EVER ENCOUNTERED

Despite all the problems encountered in maintenance and supply, the severe winter, the living conditions and the shortage of experienced personnel, the first year of operation must be considered a success. However, this could not have been accomplished without some very dedicated personnel.

Moon over Ladd Field, Alaska, winter of 1946.

The assistant aircraft maintenance officers: Lt. W. C. Hosey, Lt. B. D. Hackett, Lt. H. F. Nutting, and 1st Lt. L. Goglia contributed many long hours in all types of weather and under adverse conditions to assure maximum success.

Since the success of any military operation is dependent on the sincere dedication of its non-commissioned officers, recognition must be given to all for their efforts. Some of these remembered are: M/Sgt. E. J. King, Line Chief; M/Sgt. M. J. Scrivner, Chief Inspector; M/Sgt. M. L. Ball, Chief Engine Buildup; and M/Sgt. V. F. Mahan, Flight Chief.

Marvin S. Sims, Capt. AAF
Maintenance Officer

# Chapter 17

## Crash on Takeoff on Runway 24 Right

On the evening of December 11, 1946 during temperatures of minus 57 degrees Fahrenheit, the 46th Recon Squadron suffered the crash of the first of four F-13s that would be lost during the squadron's arctic flying from Ladd Field, Fairbanks, Alaska.

On the day of the accident, two flights had been scheduled. The one commanded by Lt. Vern Arnett was on a classified arctic mission. The other was commanded by Lt. Clark O. Holland, to fly the F-13 named the "Kee Bird" south to the Tinker Air Field depot to be modified by the installation of Curtiss Electric reversible propellers for continued arctic flight operations.

At the time for takeoff, the arctic ice fog was extremely dense with visibility restricted to a few hundred feet. It was necessary to taxi the F-13 to the end of the runway between small pine trees which had been inserted in the snow mounded at each side of the runway from the snowplow clearing operations. Once at the end of the runway, the aircraft was lined up with the runway magnetic heading since the ice fog prevented visual sight down the takeoff runway.

The first F-13, piloted by Lt. Arnett, was cleared for takeoff and disappeared into the ice fog down Runway 24 Right. The second F-13 (the "Kee Bird") was then directed into takeoff position to hold for final clearance. After several minutes, takeoff instructions and enroute departure clearance were received and the "Kee Bird" rolled down 24 Right on takeoff. Ladd Tower cleared the "Kee Bird" enroute to Oklahoma City with the first reporting point to be at Big Delta to the south.

As Lt. Holland in the "Kee Bird" reported his position over Big Delta, he was asked about he crash of the last F-13 that had taken off from Ladd Field. Needless to say, the crew in the "Kee Bird" were astonished since they had been the last F-13 off from Ladd and had obviously not crashed.

What had happened was that Lt. Arnett's aircraft had lost power on the takeoff run beyond the refusal point, cleared the Chena River off the end of the runway and slammed into the ground just beyond. The control tower had seen no evidence of Arnett's takeoff crash when it cleared Holland in the "Kee Bird" for takeoff. Nor had the crew of the "Kee Bird" seen any indication of the crash or fire as they passed directly overhead at an altitude of less than a hundred feet. It was later described by Arnett's crew that they were sure the "Kee Bird" was also in trouble and would smash into their downed aircraft.

As luck would have it the temperature that evening was so cold that the spilled fuel wouldn't vaporize to cause an explosion. It took hours for the scattered small fires to merge, turning the aircraft into a blazing inferno by the predawn hours of the following morning, and reducing the plane to smoldering ashes by daylight on December 12th.

Thankfully, except for George Sturgis's broken arm, there were no critical injuries during this first aircraft accident of the 46th Squadron; however information was later learned from this incident about engine performance during the extreme cold temperatures that would prove useful in minimizing future accidents and loss of life.


The "Kee Bird" crew just prior to their flight on 20 February 1947:
(Left to Right), Back Row: Aircraft Commander, Lt. Vern H. Arnett; Copilot, Lt. Russell S. Jordan; Flight Engineer, 2nd Lt. Robert Luedke; Navigator, Lt. John G. Lesman; Navigator, Lt. Burl Cowan; Copilot, Lt. Talbert M. Gates; (Kneeling): Photo-gunner, M/Sgt. Lawrence L. Yarbrough; Photo-gunner, S/Sgt. Ernest C. Stewart; Radio Operator, T/Sgt. Robert Leader; Photo-gunner, S/Sgt. Paul R. McNamara; Radar Observer, Lt. Howard H. Adams.

# Chapter 18

## The Last Flight of the "Kee Bird"

Flying over the barren and vast expanses of the polar cap and the arctic always carried with it the chance of being forced down by any one of a number of causes, and at first it was generally accepted that in such a case the chances of rescue were remote. For this reason the limitations of air/sea rescue had a decided effect on the morale of the flight crews. They were constantly hearing reports that some generals in Washington were "discussing the problem very seriously" and were aware of the condition that existed. Be that as it may, what the crewmen wanted to see was a machine that would fly, walk, crawl or tumble that they could depend on for rescue if they were downed on the ice. No such machine was on Ladd Field as of February of 1947.[1]

It is a well-known fact that the Air Force spares no expense when a flight crew is down. All the equipment and men available will be sent to the job. Yet in polar regions, one of the world's largest unpopulated areas, this policy was confined to a much smaller sphere in which qualified personnel were available. It would most certainly be a costly error to send out search planes manned by crews not familiar with polar operations. Also, it would be impossible to train numbers of them in time for any effective participation. It was, therefore, left up to the 46th Squadron alone to search for a downed crew and direct rescue. Every crew knew that if a plane should go down without reporting its position, it would be, in most cases, a matter of luck if they were ever spotted.[2]

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As with all 46th Recon missions, the "Kee Bird" flight of 20-21 February 1947 was the culmination of many days of planning and preparation. For several days before the flight itself, the crew had been doing their mission planning and briefing their mission. Maintenance personnel had been preflighting the aircraft during that time, warming the plane so instruments and systems could be checked out prior to flight.

On the morning of February 20th, Staff Sergeant Ernie Stewart was assigned to take the place of Staff Sergeant Robert Zwisler, who had a bad cold. Sergeant Stewart felt he was lucky. In order to earn flight pay, a flier had to fly a minimum of 4 hours per month, and Stewart needed the flight time. The crew reported to the operations room at about 0500 hours for a briefing, had breakfast, and then went out to make the final preflight check of the aircraft, a job that usually required about 4 hours.

Emblazoned in large orange-yellow block letters askew along the left side of the aircraft fuselage near the nose was the name, "KEE BIRD", with a representation of a bird trudging through the snow. Looking at this, few crewmembers could forget the story of the plane's namesake, a mythological

arctic bird. It was said that when winter snows came and other birds flew south, the "Kee Bird" would trudge around in circles in the snow, ruffling its feathers, saying "KEE-KEE-RIST BUT IT'S C-COLD". But the crewmembers didn't need reminding that it was close to 55 degrees below zero.

During preflight, number four engine's propeller was found to be loose, and the takeoff was delayed. Lt. Burl Cowan, the navigator, had computed the twilight time and said it was safe to delay until 1600 hours if necessary without endangering the mission or their safety. But once maintenance took care of the propeller problem, the plane was in good shape, and was subsequently airborne at 1420 hours and climbing to a 12,500 foot cruising altitude.

When maximum cruise power was established, the aircraft commander, Lt. Vern Arnett, noticed the airspeed was lower than it should have been. Instead of increasing the power setting, he decided to let the aircraft settle down to 10,000 feet, thereby saving fuel and keeping the airspeed up. He reasoned that as the plane became lighter from fuel burned, the airspeed would climb up to normal. This did not turn out the way he planned, and he was eventually required to increase his power setting slightly. By doing this he could not practice the strict cruise control that is desired on all long polar flights.

Point Barrow was passed at 1800 hours in twilight as the crew flew outbound from the Alaskan landmass northward over the ice cap. There would be two more hours of flying before stars were available for steering by celestial fix. Weather forced them to climb back to 12,500 feet in order to remain on top of the clouds. A fix was taken at 2125 hours and gave them their position as 81°40'N - 135°50'W, and a correction was made to put them back on course.

At 2335, when a final alteration was made to take them over the pole, the aircraft was moving up along the 60th west meridian. Capella, the star they were sighting on, was giving a good course line and indicated that they were on planned track. The last leg to the pole caused some worry to the navigators as the twilight was bright enough to make celestial sightings extremely difficult. It was necessary to use the telescopic sight on their sextants while making observations. At 2400 hours, the pole was crossed and course was set to Alaska. Once this course was established, the celestial navigator took three sightings for another fix. These were plotted and the Dead Reckoning navigator disregarded them as the triangle was too large. This fix showed them to be drifting to the left of course but no alteration was made as he didn't believe the fix. Another fix was taken which also indicated the aircraft was drifting to the left of course. At this time an alteration was made, and it was the last time they were to have any stars visible for steering or fixing their position.

Just as the plotting of the last fix was finished, the weather began to close around and over them. The last position, determined by celestial fix, gave their position as 86°35'N - 122°00'W, with the stars obscured by clouds. Lt. Russell Jordan, the copilot, later said that as they flew into the cloud bank, "At first, we thought very little about it, since we had been flying VFR (Visual Flight Rules) on our first leg...we assumed we would soon be breaking out of the clouds. However, after flying IFR (Instrument Flight Rules) for about 45 minutes, we decided we would have to get a fix on our position and to correct our gyro setting. To save fuel, Lt. Arnett decided to make a gradual climb to get on top of the clouds. Using a climb power setting, it took us about 30 minutes to get above the clouds at 24,000 feet into twilight." The crew needed to find a star to give them an idea of their heading,

but even at 24,000 feet there was still an overcast of cirrus clouds above them. Unfortunately, the twilight conditions precluded them from getting a good celestial shot and accurately determining their position.

Lt. Cowan, the navigator, said that under these conditions, it would be impossible to get a good fix, and recommended that the present heading be held until the sun got high enough to get a fix on it. However, as they watched the sun rise above the horizon, it immediately started to set. Lt. Cowan pointed out that if they took a fix, there would be so much of a refraction error that it would not be a good one.

At this point, the navigators felt that they had at least a reasonable chance of coming through to the mainland of Alaska. If the gyro precession rate determined two hours earlier was correct, radar winds and ground speeds would keep their dead reckoning fairly accurate. There was nothing left to do but hope the precession data was correct and they would cross the coast at some point identifiable by radar.

At this time, the crew had been in the air approximately 16 hours. Lt. Arnett and Lt. Cowan were going over their navigational charts trying to figure out the "Kee Bird's" approximate location. Shortly afterwards, Lt. Cowan told the pilots that he was unable to give them a new heading or determine their location.

The ETA (estimated time of arrival) for landfall was approximately 0630, but at 0500 the radar operator reported land coming in on the scope, and called "Landfall, 100 miles ahead." Flying for some time further on the same heading, the crew noticed that the undercast was breaking up, although what they saw below was not a very inviting sight, with mountains, rugged peaks, and a jagged coastline as far as they could see. They endeavored to identify the terrain, but without success. The mountains seemed to go right up to the coastline, which was surprising since in Alaska the terrain is smooth for more than a hundred miles inland.

The crew felt they were faced with two possibilities. The first one was to hold the same heading until it got dark enough for Lt. Cowan to get a celestial fix. In this case, knowing that they faced approximately 16 hours of total darkness and estimating approximately 9 to 10 hours of fuel, it would give them time, once they knew where they were, to make a safe landing either at Fairbanks or stations unknown. The other possibility was to find a place safe enough to make a crash landing during the remaining daylight. While all this was going on, Sgt. Leader, the radio operator, was trying to make contact with anybody who could offer any assistance.

Lt. Russell Jordan proceeded to use the radio compass to locate a radio station to home on, and after considerable effort, picked up KFAR, an AM station in Fairbanks, Alaska. The signal was fairly strong, so he informed Lt. Cowan and Lt. Arnett of his finding, and they turned to follow the direction of the beam. After approximately a half an hour, however, the signal faded out and the radio compass started wandering. He knew then that the signal had to have been a skip wave bouncing off the ionosphere instead of coming directly from the station.

Radar observations were of no help either. It was known that around Herschel Island the land is mountainous to within about 40 miles of the Beaufort Sea. But this did not fit the picture that came on the scope. First, the crew turned left to look over a piece of land that looked familiar, then changed their minds and did a 180 degree turn to follow the coast. This heading was followed for about 45 minutes. By this time the crew was becoming anxious as to their position and wanted to turn inland. This was done, and later they began turns to the right, then left, and more 180-degree turns until it was impossible to record them all. Lt. Arnett was obviously looking for a smooth place to set the plane down.

Optimism rose when, using the radio compass, the crew picked up a station transmitting a strong continuous signal. It did not have an identifier. It was not conclusively known at that time, as it was later, that the Russians were beaming bogus radio homing signals over the ice cap to lure our aircraft and crews into Russian territory. Lt. Arnett suggested that they follow the radio beam and if they hit a cone of silence over the station, to bail out. Lt. Jordan, the copilot, looked out at the broken undercast, and not sure of what was beneath it, politely informed Lt. Arnett that if he wanted to bail out along with those who wanted to go with him, he was welcome; but in no way was Jordan going to leave the plane. He was staying with the aircraft.

With the plane aimlessly boring holes in the sky and with no way to determine direction, every effort was made to make radio contact with someone. Although he had great difficulty raising them, Sgt. Leader finally made contact with Ladd Field, and requested a QDN (radio fix). When the Ladd radio operator asked if it was a practice QDN that they wanted, he was informed that it definitely was not. Ladd responded that no operators were presently on duty but that they would get the operators out of bed and immediately contact the "Kee Bird" when the operators were at their duty stations. It was at this time that the "Kee Bird" crew radioed information to Ladd as to the type of terrain the crew was flying over and the fact that the sun was just below the horizon.

It was becoming increasingly obvious to Ladd Field that the "Kee Bird" crew would have to crash-land. When the commanding officer, Major White, was awakened in the early hours of the morning of 21 February, it was reported to him that the last message Ladd Field received from the "Kee Bird" was, "We're heading into the sun, and we're going to set her down." It was as the "Kee Bird" was on final approach just prior to the crash landing that Sergeant Leader locked down his radio transmitter key to enable Ladd to get a line on their position. Ladd picked up that transmission, found its bearing to be 046 degrees; but then, abruptly, the signal went dead.

**Lost in the Arctic**

Lieutenant Jordan noticed through a break in the clouds at about the one o'clock position and 10 miles away what looked like a saucer-shaped area among some rolling hills in the vicinity of a large glacier. He turned around and told Lt. Arnett that he should take a look at it, as it appeared to be a possible landing site for the "Kee Bird." When Lt. Arnett got back to his seat, he took the controls from Lt. Jordan and began a slow descending turn to get a better look at the flat patch of snow. As it was starting to get dark very quickly, there wasn't much time left to decide where to land and the twenty-hour arctic night was fast approaching.

At approximately 100 feet above the area, Lt. Arnett began banking around to get a better look at the other side of the frozen patch of snow, when the engines started cutting out because of lack of fuel; although as the plane leveled out again the engines caught, giving the crew a few more minutes of flight time. With what little time they had left, Lt. Arnett proceeded to fly away from the site so he could make a gradual turn to line up for a final approach as low as he could over the rolling hills at the far end. The pilots agreed to make a normal traffic pattern and landing except that, although they would lower the flaps, they would leave the landing gear up.

Since no one had any idea what was underneath the patch of snow, Lt. Jordan suggested to Lt. Arnett that it might be a good idea to open up all the escape hatches while airborne, so that in the event of a rough landing they wouldn't be jammed and trap them inside in the event of fire. But in doing so, they found that the noise level became so great that they were unable to communicate with Lt. Luedke, the flight engineer, on final approach. To compensate for this, they arranged that when Lt. Arnett wanted the fuel selector switches turned off, he would let Lt. Jordan know, and Lt. Jordan , in turn, would pass the word by patting Lt. Cowan on the back, who would make sure the message got through to Lt. Luedke. This effort at purging all of the fuel out of the fuel lines was necessary in order to lessen the chance of a fire upon impact. In the same way, when Lt. Arnett wanted Lt. Luedke to turn off the master electrical switch, the same procedure was used, and the master switch was turned off immediately before touchdown, cutting off all electrical power, including power to Sgt. Leader's radio.

While this was going on, the crewmembers in the back section of the aircraft were preparing for the landing by getting all the emergency equipment next to the escape hatch so it could be unloaded quickly in case of a fire. After stowing all loose articles and getting strapped in, Sgt. Ernie Stewart offered a short prayer, asking that if the plane caught fire, that they would have time to get out of the aircraft and take most of the survival gear with them. He also prayed that if the plane exploded on impact that everyone would be given a painless death.

The tail skid struck first and dragged for about 25 feet. Then the tail skid bounced up and the fuselage touched down, causing the crewmembers to lurch forward. The plane skidded on its belly for about 800 feet before it finally came to a stop. The only sensation was the deceleration. The plane did not turn from its initial heading once it touched down on the ice.

Once the plane had stopped, Sgt. Ernie Stewart, who was sitting in the right scanner's seat in the rear of the plane, became somewhat nervous and was having trouble unfastening his seat belt. Master

Sergeant Yarbrough, sitting in the left scanner's seat, told Stewart to calm down. When Stewart followed this advice, he had no problem releasing his seat belt.

At the same time, in the nose of the aircraft, Lt. Jordan climbed through his escape hatch with a fire extinguisher to combat any fires that might erupt. The number three engine appeared to be smoking, but it was later determined to be caused by snow in the exhaust. The crew abandoned the aircraft with all possible speed, but not before throwing the emergency equipment out the open hatches onto the snow.

The first person out the rear hatch was S/Sgt. Paul McNamara, who immediately knelt on the ice, made the sign of the cross, and offered a short but silent prayer. While he was still on his knees, he was overheard making an audible comment about how he thought this kind of thing only happened to other people.

On initial inspection of the aircraft, Lt. Arnett noticed that the tail skid had not retracted with the main gear on takeoff, which accounted for the slow indicated airspeed they experienced during the entire flight.

At this point good luck began replacing their previous bad luck. On close inspection, the "patch of snow" turned out to be the smooth surface of a frozen lake and the plane had been cushioned after touchdown by four to nine inches of snow. The "Kee Bird" had skidded the length of the lake and had come to rest on the edge of the shore. All were thankful that there was no evidence of fire.

The crew was soon searching through the survival gear and found lots of equipment they needed and some they did not really need on this particular trip, such as mosquito netting, tropical leggings, and campaign hats. They immediately started organizing their camp. Lt. Arnett was suffering from a severe cold and sore throat, so Lt. Jordan took over the duties of commander of the crew. Lt. Luedke, the flight engineer, immediately drained oil from the engines while it was still warm and fluid, which was later to come in handy for heating purposes. Emergency equipment was stored, rules for sanitation made, and then the crewmembers discussed where they might be, whether in Alaska, Canada, or, heaven forbid, Siberia! No one even considered Greenland.

Lt. Jordan talked with the other crewmembers and did not detect any fear or doubts. The crews' spirits seemed to be high and all felt it would be just a matter of time before they would be rescued. There was not much else to do except wait for it to get dark enough for Lt. Cowan and Lt. Lesman to take celestial sightings in order to determine their location.

Lt. Luedke mixed some of the oil and gasoline he had drained from the engines in a can, which, with the addition of a wick made out of a piece of parachute harness, made a heater to warm up the "putt-putt" (APU - auxiliary power generator). He subsequently covered the generator and its battery with a tarpaulin to conserve the heat so that neither the battery nor the generator would freeze at the minus 55 degree temperature. Many anxious moments were spent wondering if the generator would start and thus supply electrical power to the aircraft radio so Sgt. Leader could contact anyone that could be of any assistance. It meant the difference between the possibility of an early rescue and an

extended, possibly tragic, stay in this arctic no-man's land. The time spent waiting for Lt. Cowan and Lt. Lesman to determine their location before attempting to start the generator were some of the longest moments in the crewmembers' lives.

Another fire had been made using the plane's gasoline and oil, which let off a lot of black smoke. The food they had on hand was frozen solid. Sgt. Stewart opened one of the K-rations and found it almost impossible to remove the clear plastic wrapping from a fruit bar, as the plastic was frozen firmly to the fruit bar it covered.

Lt. Jordan went back to the copilot's seat. Sgt. Leader was still at his position at the radio controls and they both continued to wait for the navigators to determine their location. As soon as it was dark enough for a three-star fix, then it would only be a matter of getting the right charts and determining where the three lines intersected. As cold as it was, coupled with the bulkiness of the clothing and gloves, it was a miracle that they were able to accomplish what they were trying to do. "We waited," Lt. Russ Jordan remembers, "anxiously wondering where we were, whether we would get a fix, and whether the putt-putt would start."

Finally, the word was passed to see if the auxiliary power unit would kick over. By heating up the oil pan under the APU for some time, Lt. Luedke had greatly improved the chances of getting the putt-putt started. Sgt. Yarbrough, with the assistance from other crewmembers, made the first attempts to turn it over. As the temperature was so low that the starter would not turn the engine, they decided to wind a rope around the flywheel and pull it to assist the starter. On the first try, they discovered that the rope was wound backwards, opposite the direction the engine was supposed to turn. Their hands were almost frozen trying to wind the rope around the flywheel for try after try with no results. Anxiously, they awaited the sound that could mean the difference between early rescue and long exposure, even death.

After about two hours of "sweating it out" in more ways than one, they finally got the putt-putt to kick over. When it came on the line, Lt. Jordan recalls that it was the sweetest sound he had ever heard in his life. This meant that as long as they had fuel, they had a chance of making contact with the outside world, since the auxiliary power unit was the only source of power to the radio. Once the putt-putt was started, the crewmembers never let it remain idle for more than 30 minutes. Now it was Sgt. Leader's turn to warm up his radio, get on CW (long-range Morse Code channel), and put out the word where the crew was down.

During this time, Ladd Field was humming with activity. It was known that the "Kee Bird" went down somewhere along the 046 degree radial from Ladd Field, but nobody knew how far out along that radial the "Kee Bird" was. Major White, conducting the search effort from the 46th Squadron operations room, immediately dispatched several F-13s to run search patterns over the areas on either side of that radial, progressing northeastward. At about the same time, Major White made a call to his immediate supervisor, Brig. Gen. Frederic Smith, the chief of staff at Strategic Air Command Headquarters at Andrews Field, and informed him that he had a plane down somewhere along the 046 degree radial from Ladd, and that he was conducting the search in rotating shifts with all available aircraft. This meant that seven or eight aircrews were being launched at various times during the long night in order to cover their search areas during daylight or twilight hours when a

visual sighting was possible, and then returning to Ladd Field the following night. The Alaskan Air Command and Alaskan Theater were subsequently notified. Immediately, Gen. Joseph H. "Hamp" Atkinson, the commander of Alaskan Air Command, flew to Ladd to support the search and rescue effort.

The 46th Squadron navigators were also working the problem with as much information as they had at their disposal. They soon determined that, based on the time the "Kee Bird" crew had seen the sun on the horizon from the 046 degree radial from Ladd Field, as reported in their last radio transmission, the "Kee Bird" crew therefore had to be somewhere in northern Greenland. However, the first position report from the downed crew suggested that they were somewhere on or near Borden Island in the Canadian Archipelago.

Immediately, Captain McIntyre, flying one of the search F-13s, was notified to set course for Borden Island. Once he was in contact with the crew of the "Kee Bird," Capt. McIntyre changed course toward updated coordinates radioed by Sgt. Leader. Based on those communications, the "Kee Bird" was approximately along the 80th parallel where it intersected the western coast of Greenland, at an estimated 150 miles north of the Thule weather station run by the Danish government. Captain McIntyre's aircraft relayed the welcome news to Ladd Field that the "Kee Bird" crew was down safely and passed on the information where the "Kee Bird" crew said they were located.

In anticipation of being located, the "Kee Bird" crew had set up the hand-cranked "Gibson Girl" radio for the search planes to "home" on. As they did, they checked its operation by listening to it on the "Kee Bird's" radio. It was later learned, however, that none of the search planes received any of the Gibson Girl's transmissions.

Not having made a visual contact, and running low on fuel, Captain McIntyre's plane was forced to return to Ladd Field. But before they did, Captain McIntyre gave the lost crew encouragement, and informed them that another plane had left Ladd and would arrive early the next morning. He then briefly described the activity at Ladd to let them know that everything possible was being done to effect an early rescue.

Though Captain McIntyre gave all the encouragement and hope he could, his inability to pinpoint their location was disappointing. At first, Ladd did not know whether the "Kee Bird" was 200 or 2000 miles out along the 046 radial, but Captain McIntyre's findings would be analyzed even before his aircraft touched down back at Ladd. Major White and scores of other 46th Recon personnel would continue to remain actively involved, without sleep, until the "Kee Bird" crew was safely recovered, no matter how long that would take.

Lieutenant Jordan then put on a set of earphones and shortly afterwards heard a message from Thule, Greenland, saying that the "Kee Bird" was located approximately 200 miles north of Thule and that all further transmissions should be directed to the Thule radio station, adding that they would be in touch with Ladd Field and others concerned with the rescue effort. A schedule was established between Thule and the "Kee Bird" as to when each would contact the other; but for the present all was taken care of, and there was no further requirement for the "Kee Bird's" radio operator to stay on the air. Only after all information was coordinated with Thule and the rescue effort was underway,

did Sgt. Leader leave his post at the radio. Now that the crew's spirits were lifted, the thought came to mind to see if anyone could get some sleep, since most of the crew had been awake for over 30 hours. But some things needed taking care of first.

Some time was spent storing away the survival equipment. Sgt. Ernie Stewart pulled from the survival kit a pair of mukluk arctic boots. To get maximum insulation, first he put on three pair of socks, each one progressively heavier than the one before. Over all these went the canvas boot. He found the mukluks to be amazingly warm, and soon his feet were as comfortable as he could ever hope. As night approached, the outdoor temperature dropped to about 60 degrees below zero.

The crew had a portable toilet in the back section of the plane. Stewart quickly found that the usual Air Corps coveralls were not designed for use in the extreme cold when one had to use the toilet. Instead of exposing only part of one's usually-covered anatomy, much more surface area than desired had to be uncovered when the flight suit was positioned in the necessary configuration. By popular demand, the "bathroom", such as it was, was soon moved to an area just under the left side of the tail where it was covered by a parachute hanging off the stabilizer. In this outdoor location, the bathroom was still cold, but luckily during all the time the crew was in Greenland, the wind never blew.

A plan was worked out where one person would stay on guard, while the others attempted to get some sleep. They had difficulty getting comfortable places to sleep, and in keeping warm. The natural anxiety of being rescued ran through their minds. Prior to the mission, the crewmembers had attended a survival course conducted by Sir Hubert Wilkins, the Arctic and Antarctic explorer, who gave them some tips on how to survive in the arctic. One of them was that, even though it was extremely cold, the body would still give off moisture that is usually trapped in one's clothing, amplifying the effect of cold temperatures. So, instead of sleeping with clothes on, it would actually be warmer to take them off. The clothing should then be turned inside out to let the moisture evaporate in the air. Lt. Jordan found the experience of climbing into a sleeping bag at 55 degrees below zero wearing only his underwear as quite a shocking experience. Despite their training, the crew discovered that they had very little practical experience in surviving in the bitter cold, although they learned a lot through trial and error. Their common sense and sound thinking was proven, as they survived the inhospitable environment without a single casualty from frostbite.

They were awake and stirring early the next morning. It felt good to be up and moving; blood began circulating and knots and kinks in their muscles from the uncomfortable night began to loosen. Lt. Jordan was awakened by frost in his face which had accumulated on the fur of the arctic sleeping bag as somebody shook him and told him that there was an F-13 in the vicinity. Apparently Captain McIntyre's promise was carried out on schedule. It was still total darkness, but the crewmembers dressed and took turns turning the hand crank on the Gibson Girl hoping the plane would home in on its signal. "I don't know how long we were grinding away," Jordan recalls, "but they never could get a fix on us and we were informed by Sgt. Leader that the aircraft would be returning to their base."

When it started to get light, Lt. Luedke took another crewmember and started hiking across the lake to the far end. As Lt. Jordan remembers, "We heard later that he had seen some rabbit tracks and had

Allenby's crew preflighting "Boeing's Boner" for "Kee Bird" search mission.

Preflighting aircraft for "Kee Bird" search.


Captain Allenby's crew photographed prior to the flight during which they located the "Kee Bird" crew.

the idea of bringing home a nice rabbit for dinner. Bob Luedke has since denied finding the rabbit tracks, but we all agreed that the story had been good for morale at the time."

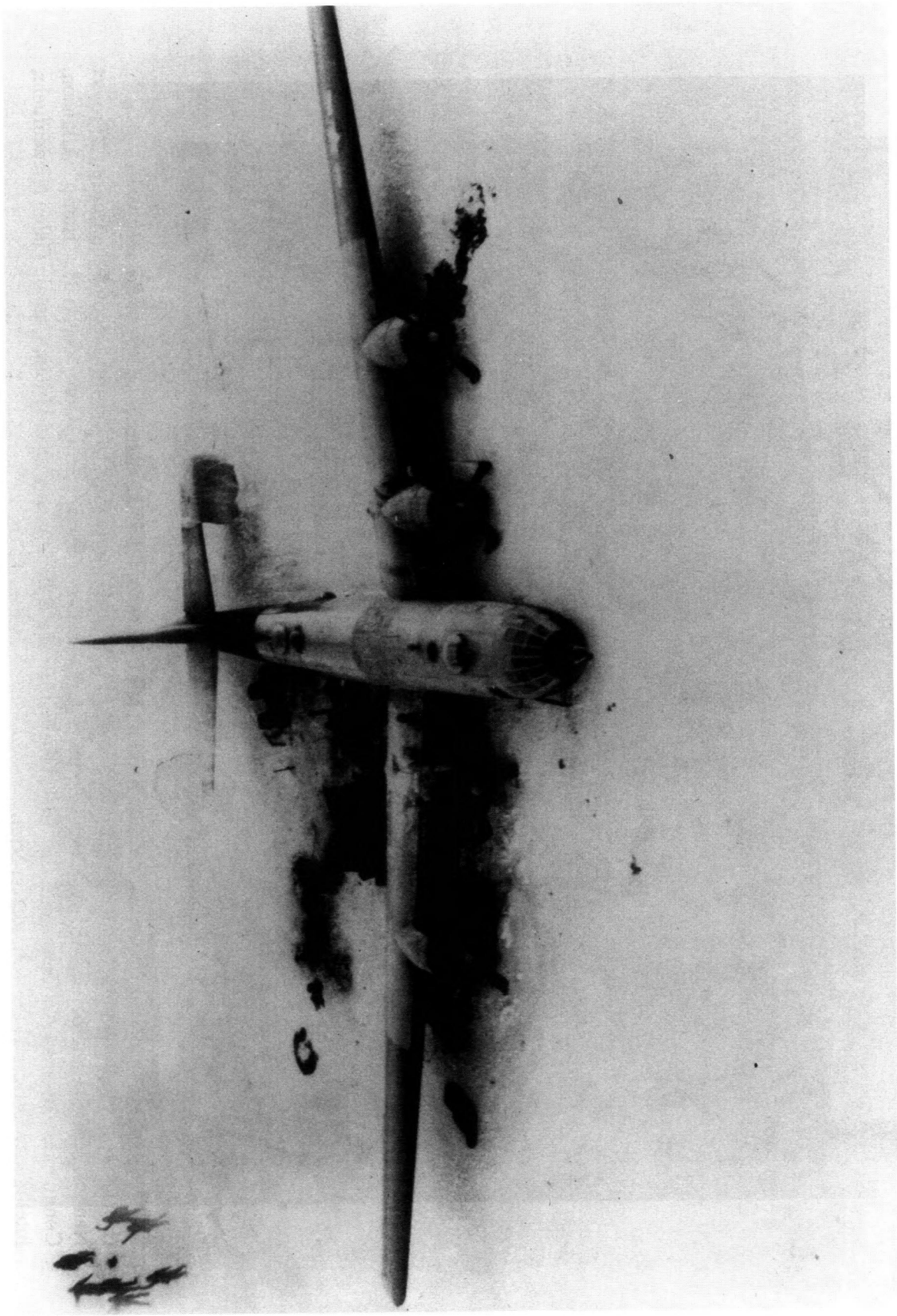
About this time, with the putt-putt again powering the "Kee Bird's" radio, Sgt. Leader notified the crew that he was in contact with another F-13, nicknamed "Boeing's Boner", from Ladd Field, piloted by Captain Donald Allenby. The ETA was given and the crew anxiously awaited the plane's arrival. Captain Allenby radioed that they were in the area, but could not see the crew. They were trying to home in on the Gibson Girl, but were unable to pick up the signal. Captain Allenby and his crew were scanning every inch of the terrain for any sign of the downed plane.

Then Sgt. Leader contacted the radio operator on the search aircraft, telling him to hold the heading they were on and to talk continuously, reciting poems, stories or whatever they wanted, but not to break up the conversation. Sgt. Leader turned his volume down as low as he could hear, listening, detecting, fade or build. After several minutes, he told the radio operator on the F-13 to have the pilot change course 90 degrees to the right. Here again, he told the radio operator to inform the pilot to hold course. At that time Lt. Jordan left the radio compartment and exited the plane. The navigator, Lt. Cowan, then told him approximately which direction they should be able to see the F-13 coming from; and then, at about the 11 o'clock position off the nose of the "Kee Bird," there was a small speck in the sky. Lt. Jordan told Sgt. Leader that he had visual contact and asked him to have the F-13 alter his course about 20 degrees and start letting down. This brought Captain Allenby's aircraft right down over the "Kee Bird." The plane made several passes, and soon the "Kee Bird" crew saw many small parachutes opening with bundles underneath them which the crew were grateful to receive. Then, after a short while, Captain Allenby bade the "Kee Bird" crew farewell and flew off on his way back to Ladd Field.

The crew's next job was to gather up the supplies which were scattered all over the area of the frozen lake. Once they had them all together, they started examining the contents of the containers dropped to them. Someone must have had a wry sense of humor. One of the things Ernie Stewart found in a canister was a calendar advertising one of the bars in Fairbanks, Alaska, depicting a partially clad young lady. That was probably the one thing Stewart would have never thought to request under the circumstances. Handwritten on it, however, were many "encouraging" comments from Captain Allenby's crew, which were much appreciated.

Another thing that looked good was the Dinty Moore beef stew, but they were faced with the problem of getting the contents out of the can, as it was frozen solid. Sgt. Yarbrough took an empty metal barrel that had been used to drop supplies and filled it about half full of gasoline, then submerged a parachute harness in it for a wick and set it on fire. This gave off plenty of heat and would burn for about five hours. It also provided a means of heating up the cans of food in boiling water. Still, it was quite difficult to heat up the food to thaw it out, put it in a cold aluminum mess kit and try to eat it before it got cold again. The crewmembers quickly learned not to touch their lips to the metal utensils, since they would stick to the metal and feel like it was on fire.

The cold eventually affected everything mechanical. Sgt. Stewart had brought with him a Clarus camera with which he had shot about half a roll of black and white film during the preflight the day before. The camera had been advertised as ideal for cold weather work, but perhaps the manufacturer



The "Kee Bird" and crew in Greenland as seen from Allenby's aircraft.


Debriefing Captain Allenby's crew after they had located the crew of the "Kee Bird":
(Bottom row, facing camera, left to right): Major Maynard E. White, Commander of the 46th Recon Squadron and "Project Nanook"; Maj. General Howard A. Craig, Commander, Alaskan Theater; Brig. Gen. Joseph H. "Hamp" Atkinson, Commander, Alaskan Air Command; Col. Lloyd H. Watnee, Base Commander, Ladd Field; Captain Galen Niedenfuehr, Intelligence Officer of the 46th Recon Sqdn..

Debriefing of Captain Allenby's crew after they located the crew of the "Kee Bird". (Allenby is third from right, facing camera.)

hadn't considered it being used in quite such cold weather. When he tried to take a picture, it refused to work. Sergeant Stewart had also checked out an M-1 rifle as part of his survival equipment when he was back at Ladd. When he pulled it out on the second day, he removed the trigger housing, cleaned it off as much as he could, and then fired one shot to test it. About 20 minutes later, he decided to test the rifle again, but the cold had done its work. He could feel the firing pin moving forward, but without enough force to fire the cartridge. If it were thawed out, Stewart thought, it might make someone a good hunting rifle.

The crew spent three days on the ice, and never saw the sun once. They had partial light for seven hours, followed by about seventeen hours of total darkness during each 24 hour cycle. The plan for the second night was the same as the first. They would each take turns standing fire guard while the rest of the crew would sleep. Lt. Jordan found that by using an Army blanket to prop up his parachute, and laying his sleeping bag on top, it was much warmer than sleeping on the cold metal inside the aircraft. As the crew retired that night, they did so in much better spirits. They kidded one another and told jokes. They felt now that their chances of being rescued were good.

As the crew settled in their sleeping bags for a good night's sleep, not only were their minds more at ease because rescue was near at hand, but experience had taught them how to prepare for sleep. On the first night, some crewmembers slept in the fuselage with all their heavy clothes on and were cold and uncomfortable all night. For the ones who slept out in the open with most of their clothes on, it was somewhat better but not cozy. On the second night, some of the crew stripped down to their underwear before climbing into their sleeping bags and found it much better in both warmth and comfort.

The following morning, the big question back at Ladd Field was, now that the crew had been pinpointed, how to get them out of northern Greenland. A C-54 was soon dispatched from Ladd Field towing a rescue glider. This aircraft was headed on the most direct route across the arctic to Greenland. The intention was to land the glider near the "Kee Bird," and once the crew was loaded aboard, snatch the glider off the ice with a hook attached to the C-54. This system had been tested and found practical for certain crew recoveries. And at the time, it seemed like the best possible solution for recovering the "Kee Bird" crew. And if the relatively good weather over Greenland did not hold out, there was no telling how long it would be before another rescue attempt could be made.

That same morning, fifteen hundred miles from Ladd, Sgt. Leader was again in touch with Thule. He was informed that another C-54 rescue aircraft, specially equipped by the Air Transport Service with "JATO" rockets for this type of operation, was on its way from Westover Field, Massachusetts, by way of Thule, to investigate the possibilities of effecting a rescue. At that time, an appointment was also made to have Lt. Arnett talk with Lt. Cavnar, the C-54 pilot, to advise him whether he thought a wheels-down landing on the ice would be possible. Arnett was confident it could be safely done, and told Lt. Cavnar that the "Kee Bird" crew would mark out a runway.

Several crewmembers had earlier found the ice to be solid and the covering layer of snow to be an average of five inches deep. Now, to give the pilot something to line up on, Lt. Jordan sent out several men the length of what was to be the runway, and had them lay out cut-up sections of signal tarps

C-54 towing rescue glider, taking off from Ladd Field enroute to the crash site of the "Kee Bird".

with the blue side up to mark the landing strip. They then placed flares at both ends of the ice surface of the lake to let the pilot know that there was land at both ends, thinking it would be dangerous for the rescue plane to touch down before it was over the ice, or if it were to overshoot the landing and run onto the shore at the other end. All that remained was to light the flares as soon as the crew received word that the rescue plane was in the vicinity and ready to come in for a landing. This report was given to Sgt. Leader, who in turn relayed the message to Thule; and, in Lt. Jordan's words, "All we had to do was to sit back and wait, and wait we did."

At last, very close to his ETA, Lt. Cavnar's C-54 was spotted on the east horizon, but appeared to be going past without seeing the "Kee Bird." Sgt. Leader gave Lt. Cavnar a radio call and directed his plane to their lake. At this time, the crewmembers lit the flares and then tore up a rubber raft and placed it in the barrel of burning gasoline and oil. This gave off a thick, black smoke and was soon seen by the crew of the C-54. Arnett talked again with Cavnar and told him that the runway was marked off by the crewmen and gave him a heading on which to approach. The C-54 circled and finally made a low pass at the marked landing strip and went around. On the next approach, he was to touch his wheels, then give her the gun and go around once more. Arnett was going to inform the transport if his approach and touchdown looked OK and recommend whether or not a landing be attempted. This, however, is not the way Cavnar carried it out. On his second approach, he touched his wheels and completed the landing, but overshot and ran into soft snow and rougher terrain. As there was no damage done, this area was determined suitable to be used as runway if needed for the takeoff.

After landing, the C-54 transport taxied up and down the improvised runway several times to pack the loose snow. During this period, the crew gathered back at the "Kee Bird" and waited to load. The C-54 finally taxied in and Lt. Cavnar kept his engines running while members of his crew were unloading emergency supplies which they had planned to drop to the "Kee Bird" crew in the event they were unable to land. There was not much gas in the C-54's fuel cells because Lt. Cavnar wanted to fly with as low a weight as possible. JATO (Jet Assist Take Off) rockets were attached to the C-54, which gave the aircraft the equivalent of several extra engines worth of power. The "Kee Bird" crewmembers were told not to take anything aboard the C-54, so Lt. Arnett had all sensitive material destroyed, and the "hunting rifle" was quietly hidden in someone's pantleg. Also not to be forgotten was the swell pinup calendar with the memorable comments of Allenby's crew. After home movies were taken of the crew, they climbed aboard the transport, which taxied to the far end of the lake, where Lt. Cavnar prepared for takeoff.

Once the checklists were complete and the C-54 was ready for takeoff, all of the "Kee Bird" crewmembers were apprehensive about the ability of the plane to take off. The engines built up to a roar. Suddenly, slowly, they started down the frozen lake. At about 50 miles per hour, the JATO rockets were ignited and suddenly the acceleration was impressive. Lt. Jordan recalls that at that time, "With the noise and smoke, my thoughts were that we had an engine fire, and I was thinking, 'here we go again'."

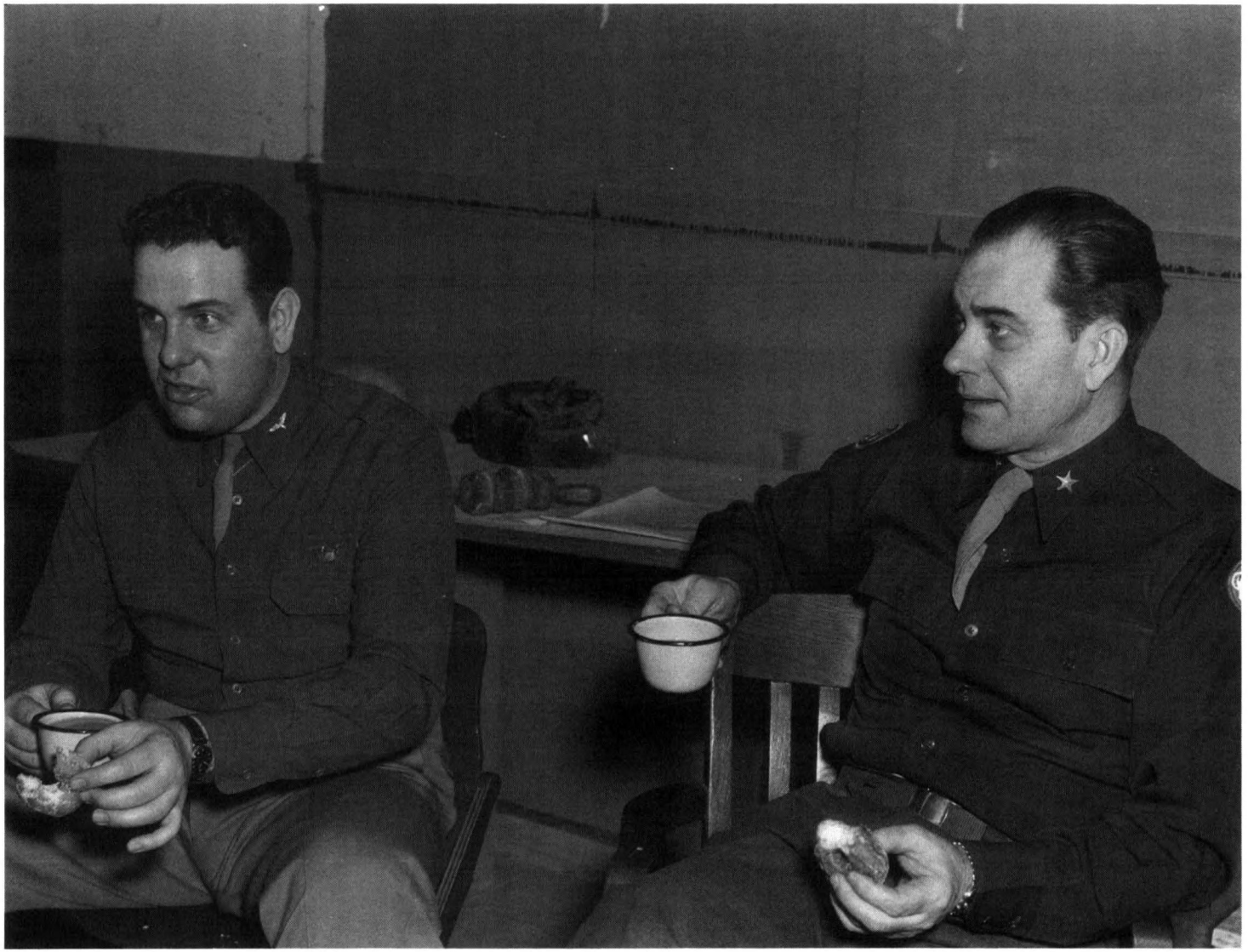
Meanwhile, another F-13 from Ladd had arrived on the scene, piloted by Captain Jack Setterich. "Moose" Holland, flying with Capt. Setterich, remembers looking down at the C-54 while it was on its takeoff roll and seeing a large white cloud engulf the aircraft. His first thought was that the rescue

effort had failed and the transport had ploughed into a large drift. But the cloud was smoke from the JATO rockets, and Lt. Cavnar was already safely airborne. Since all the C-54's emergency equipment had been off-loaded on the lake, Lt. Cavnar radioed Captain Setterich and asked if he would escort his C-54 back to Thule, in the event they ran into difficulties. Captain Setterich readily agreed, as he had enough fuel to do this and still return to Ladd Field. He subsequently accompanied the rescue plane until it was on final approach at Thule, after which he set course for home. It was during this flight to Thule that Ernie Stewart learned that his twin brother, Earl, was flying as a crewmember on the F-13 piloted by Capt. Setterich. It was a welcome reunion.

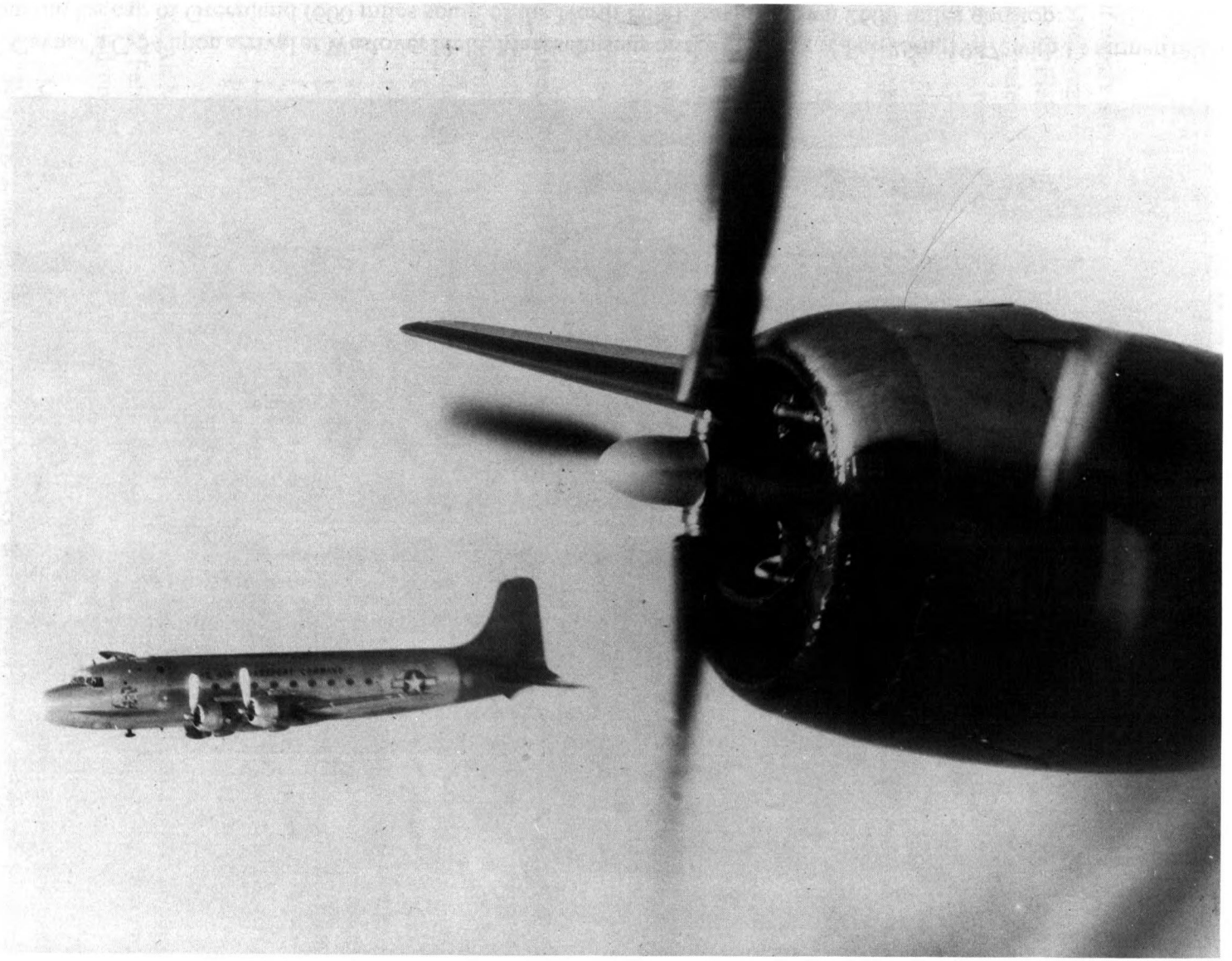
Meanwhile, Ladd Field was notified by military Air Transport Command communiques through Strategic Air Command, as well as by relayed messages from the unit's F-13s, that the "Kee Bird" crew had been successfully rescued. With this information verified, the last of the F-13 search aircraft and the C-54 towing the rescue glider were recalled back to Ladd Field. Only now could Major White, General Atkinson, the squadron navigators, staff, aircrews and dozens of others get some well deserved sleep. It had been over sixty-eight hours since the "Kee Bird" had been reported lost.

When the "Kee Bird" crew were on the ground at Thule, they were invited into a hut where they were served an excellent steak dinner. Outside, the C-54 was being refueled by some local Inuit Eskimos using a hand pump to transfer aviation gas from the 55-gallon drums to the aircraft's tanks. Shortly afterwards, the crews were loaded back on the C-54 for a nonstop flight to Westover Field, Massachusetts. Aboard the plane, a medical doctor gave each of the crewmembers a sleeping pill, and the next thing several of them knew, they were landing at Westover Field. There the crew was greeted by the military brass, an array of photographers, newsreel cameramen and the Red Cross. The crew was immediately taken to the base hospital, where they had a wing of the hospital all to themselves. Military Policemen were posted at the door going to the hallway, and others were stationed at the door leading outside. New uniforms were issued as all they had with them was their flight clothing. They showered, were given pajamas and bathrobes, and were escorted to the mess hall where breakfast was waiting for them. In addition to providing them with the usual shaving equipment, toothpaste and soap, the Red Cross had also arranged for the crewmembers to make phone calls to their families.

Shortly afterwards, several ranking officers came into the hospital wing, including a full colonel, who greeted the crew and told them what they could and couldn't say to other people. They were told not to talk about the mission at all. He even went so far as to say that the crewmembers would even be accountable for what they said even after they got out of the service. "It was strictly a training mission," was all they were to say. The base officer said that they were setting up a question-and-answer press conference in the lounge of the hospital and asked Lt. Jordan if he would go down and speak to them. Lt. Arnett didn't want to go. Whether he figured that Lt. Jordan didn't know as much about the mission as he did and had less of a chance of slipping up, it's hard to say. But Lt. Jordan went down and talked to them, remembering what he was told by the colonel. Jordan recalls, "They must have thought I was either stupid or a doggone liar because all I talked about was a training mission." After a while, they shut down the press conference and Lt. Jordan was relieved to get out of there.



Major Maynard E. White, Commander of the 46th Recon Squadron, and General Joseph H. "Hamp" Atkinson, Commander of the Alaskan Air Command, celebrating the rescue of the "Kee Bird" crew by having doughnuts with their coffee.



Lieutenant Cavnar's C-54, with the "Kee Bird" crew on board enroute to Thule as seen from Captain Setterich's F-13.


Lt. Cavnar's C-54 upon arrival at Westover Field, Massachusetts on the morning of Feb 25th, 1947, with 11 airmen rescued from the ice cap of Greenland (600 miles south of the North Pole), having flown 2600 miles nonstop.

Meanwhile, other crewmembers started out the door to find a post exchange or a bank where they could cash some checks. The military policeman at the door had strict orders not to permit any unauthorized visitors into the ward, but apparently had no instructions about letting the crewmembers out. Ernie Stewart remembers that they soon found a place to cash their checks, with each of them identifying the others for the benefit of the bank clerk.

It wasn't long before the "Kee Bird" crew was loaded into a C-47 and flown to Selfridge Field in Michigan, where they stayed overnight, and then on to Great Falls, Montana, and finally on back to Ladd Field. "Our mission was complete," Lt. Jordan recalls, "It just took us much longer than anticipated." For his role in the rescue of the "Kee Bird" crew, Lt. Cavnar, the pilot of the C-54 rescue aircraft, received the Distinguished Flying Cross from the Commanding General of the Army Air Forces, General Carl A. Spaatz; approbation from the United States Congress, and personal congratulations from President Harry S. Truman. Lt. Cavnar's commendations were well deserved as they proudly reflect the Air Force's tradition of looking after its own.

In a few days the "Kee Bird" crew was back with their unit ready for work. This flight did more than cause some excitement at Ladd Field and put the search and rescue program to the test. Other crewmen who were making similar flights on a daily basis learned that they were not expendable, and that there was a good chance of rescue if they were forced down in the polar regions. The "Kee Bird's" crew was back to tell whether the emergency equipment carried aboard the planes was adequate or not. They knew what it was like to be down within the shadow of the pole and survive. The information they passed on to their fellow crewmen was invaluable in boosting the unit's morale and confidence, and further contributed to the 46th Recon Squadron's ability to accomplish its assigned mission.

By direction of the President, the Distinguished Flying Cross for extraordinary achievement while participating in aerial flight during the period from 21 to 22 February 1947 was awarded to the following named officers and enlisted men of the 46th Reconnaissance Squadron:

> Captain Donald R. Allenby, Captain Richmond McIntyre, First Lieutenant David A. Patterson, Captain Norbert A. Zwicke, First Lieutenant Enos L. Cleland, First Lieutenant Karl E. Tipper, First Lieutenant William P. Van Liere, First Lieutenant Lawrence E. Bennett, First Lieutenant Marvin Greenberg, First Lieutenant Kenneth H. Hall, First Lieutenant Frank O. Klein, First Lieutenant Richard J. Meyer, First Lieutenant Walter J. Schlecht, Second Lieutenant Roland J. Perron, Second Lieutenant Clarence H. Pfirrman, Technical Sergeant Harvey L. Poff, and Sergeant Charles D. Weers.

The Air Medal for meritorious achievement while participating in aerial flight during the period of 21 to 22 February 1947 was awarded to the following named enlisted men of the 46th Reconnaissance Squadron:

> Master Sergeant Earl L. Stewart, Staff Sergeant Lewis D. Chamberlain, Staff Sergeant Robert E. Zwiesler, Sergeant Victor E. Perry, and Private First Class Roger J. Pontillo.

By direction of the Secretary of the Air Force, Technical Sergeant Robert Leader, the "Kee Bird's" radio operator, was awarded the Commendation Ribbon for meritorious service on 21 February 1947.

General Carl Spaatz, Air Forces Commander, presents the Distinguished Flying Cross to 1st Lt. Bobby J. Cavnar, who, with his crew of five, landed a Douglas C-54 Skymaster on a frozen lake in northern Greenland to rescue the crew of a stranded F-13. At Washington's National Airport Air Medals were awarded to the other crew members (left to right): 1st Lt. Fred Sporer, co-pilot; 1st Lt. William A. Soward, navigator; Pfc. Charles J. Erchak, first flight engineer; T/Sgt. Walter L. Hustus, second flight engineer; and (not in picture) T/Sgt. John H. Schuffert, radio operator.

Lieutenant Cavnar and his crew are congratulated by President Truman for rescuing the "Kee Bird" crew.

**Ode to a Kee Bird**

**By Ken White**

There's a story they tell which others should know
Of stalwart men and the planes they flew
Over arctic ice and drifting snow
In the rescue of the "Kee Bird" crew.

The pilots and crews remember it there,
Of warming the engines prior to flight;
The throaty roar in the morning air,
And cloudless skies in the early light.

Once all the instruments came on the line,
They taxied the runway to round out the wheels;
When ready for takeoff with everything fine,
Flight-pay seemed one of life's better deals.

They aimed down the runway and poured on the coal
And lifted her up in the cold arctic sky:
The 46th Recon fulfilling its role
On the most challenging mission they ever would fly.

They headed away from the rising sun,
To the north of the frigid Siberian coast.
Their problems had not yet seemed to begun,
And all was going smooth - almost.

The crew discovered as they flew
The compass wasn't pointing true;
They discussed the matter and all averred
That turning home would be preferred.

They made their turn but soon they learnt
They missed the navigator's goal,
And where they thought they were, they weren't,
As they flew southward from the pole.

When cloudy skies engulfed the ship,
The crew was turned and tossed,
And it became an ill-fated trip
As crew and plane seemed lost.

They thought they found a radio beam
On which they tried to home;
But "skip waves" are not what they seem,
And the crew resumed to roam.

At last they found some solid land
Of cliffs of gray and brown,
And a frozen lake of ample length
To set the "Kee Bird" down.

So, low on fuel, they brought her 'round
And circled once or twice;
Then lined her up and set her down
Gear up, on the ice.

Once they stopped, they tallied heads
With all accounted for.
The plane had slid across the lake
And stopped against the shore.

Still calling on the radio,
The sergeant made them glad
When he said that he made contact
With home station back at Ladd.

He then touched base with Thule,
Who said they got a fix,
And that they'd handle everything
To see the rescue clicks.

So then they settled for the night,
But unlike the Eskimo,
They found it difficult to sleep
At fifty-five below.

Next morning saw some F-13s
Make passes overhead
While dropping food and more supplies
To keep them warm and fed.

The third day, Thule told them
That they should do their best
To mark them out a runway
And expect some welcome guests.

A transport made a low approach,
Then landed on the ice.
The "Kee Bird" crew saw many things,
But nothing quite as nice.

They loaded on the transport plane,
And turned for one last look;
The tales behind that F-13
Could someday fill a book.

On a frozen lake in Greenland still,
On the north and western shore,
Lies the wreckage of an F-13,
From an era long before.

It's a story of men and the challenge of flight,
And the frontier that they tamed,
And the lengths they would go to save their own,
And the courage that made them famed.

Those glorious days of the pioneers
Who flew in the Army Air Corps
Are a legend of those who have few peers
In aviation lore.

**Superfort on Ice**

# "Kee Bird" Recovery Effort

By Gary Larkins

***Forty-six years ago a USAAF reconnaissance B-29 crash-landed in remote Northwest Greenland. It is still there, remarkably well-preserved and today GARY LARKINS and his recovery crew are preparing to fly the "Kee Bird" back to the United States.***

The quest to recover the "Kee Bird" began in 1978 when I saw an aerial photo of the "Kee Bird" lying on the edge of a lake in Greenland. During the next several years, I wrote dozens of letters, made dozens of faxes and phone calls to the Danish Government seeking permission to recover the aircraft and eventually became Director of Recoveries for the Institute of Aeronautical Archaeological Research in Sacramento.

During the summer of 1992, I was hired by the Greenland Expedition Society through the Institute to descend 26 stories into the Greenland Ice Cap to disassemble and raise to the surface a P-38 Lighting. During my return trip from this project, I had the opportunity to travel to Thule and get a firsthand look at the "Kee Bird" and the conditions surrounding it. I came away with an even greater desire to get on with its recovery and somehow cut through the red tape.

I hired an Expedition Planner in Denmark who made one trip after another on my behalf to the Danish Polar Center and Minister of Foreign Affairs offices. Before long, I received a letter from the Danish Government stating that they had been in contact with the U.S.A.F. and that they did not claim title to the "Kee Bird." Also, they said that the Danish Government felt that whoever took possession of the "Kee Bird" became owner, providing they had a permit from the Polar Center to enter the area. I acquired an application from the Polar Center and, with the assistance of the Institute, was given a permit for the "Kee Bird" Recovery Expedition of 1993. I now had but a couple of months to overcome the major problems of funding and how to transport the personnel and equipment 235 miles north of Thule, Greenland.

Eventually, the additional funding was secured for an exploratory expedition through Tom Hess, and a UH-1 helicopter was supplied by Darryl Greenamyer and Ascher Ward. The National Air and Space Museum provided their sponsorship which allowed us the assistance of the U.S. Air Force at a price.

We traveled to McGuire AFB, New Jersey, where we worked all night to prepare and load the Huey on a C-141 Starlifter for the 6:00 AM flight to Sondestrom, Greenland. At Sondestrom, we transferred the Huey and all our equipment into two Minnesota Air Guard C-130 Hercules for the flight up to Thule.

At Thule, we reassembled the Huey and had a test run on it. For two days, almost around the clock, the pilot, Tommy Hauptman, and mechanic, Rick, made flights out to establish fuel/supply stops. When everything was ready, we strapped two 20-ton jacks and two 10-ton jacks onto the skids along with ladders and other equipment.

Inside the Huey, we loaded two generators, tool boxes, our personal gear, a tent, several cases of M.R.E.s (Meal, Ready to Eat), a shovel and everything else laying around. This left a space about 18-inches high to crawl into between the top of the pile and the ceiling. This Huey definitely had that ruptured duck feel as it dragged the skids down the ramp at Thule trying to get airborne. Tommy's attitude was that if it doesn't fly soon, we'll just throw something out. He was exactly the right man for the job. We only had one chance of reaching the "Kee Bird" and that would mean stretching the Huey to the limit.

Approximately seven hours and two fuel stops later, we arrived at the "Kee Bird". The preliminary inspection told us the "Kee Bird" was in absolutely fantastic condition. None of the rumors had been true. There was no detectable corrosion, the damage from the landing was minimal, and the interior was 99 percent complete. As we investigated the area, we were able to locate the missing cowling, hatches, even the nose and main gear locks.

The first thing the following morning, we began removing the spark plugs and placing the jacks under the wings. We filled the cylinders with penetrating oil and started digging. There was a lot of digging. As Tommy said, "I ran away from my Dad's farm and joined the Army to fly Hueys so I wouldn't have to shovel manure; now here I am running a shovel again."

The jacks had to be set and reset time after time in order to slowly raise the 80,000-pound airframe high enough to lower the gear. Once the main gear were down and locked by manually hand cranking them into place, (this was Wee Gee Smith's job; Wee Gee had been in the hole with me for the P-38 recovery the year before), the "Kee Bird" sat at a strange tail-high attitude. In order to right the aircraft, 7,000 pounds of sand was shoveled into empty fuel drums and onto canvas make-shift bags. It was then transported by the Huey to the horizontal stabilizer of the "Kee Bird", as close to the vertical stabilizer as possible. As the second load was eased onto the tail, the "Kee Bird"'s nose raised to the proper attitude and the nose gear was cranked down and locked.

The next day we called the Virginia Air Guard C-130 and they made a spectacular air drop of seven cargo pallets to place under the "Kee Bird" tires. By the way, the tires were still holding their air pressure after 46 years!. We then pulled the prop through on #1 engine, transferred oil from #2 over to #1 (the oil had been drained from #1 and #4 to use for heat by the crew), plumbed the 55 gallon drum of avgas direct to the engine, installed the battery from the helicopter and, after a few moments of cranking, we were able to bring the "Kee Bird" back to life.

All that could be done on this trip had been done. The "Kee Bird" was on her feet and ready for the second phase of the recovery. We strapped her to the cargo pallets she was resting on and secured all the hatches. We broke down our camp and placed everything on another pallet and covered it for next year. Then it was back into the Huey for another long ride back to Thule.

It was a good feeling to have accomplished so much, so quickly with so little. The plan is to return during the summer of 1994 and change the props and engines and fly the "Kee Bird" out to Thule and then back to the U.S.

# Chapter 19

## General Eisenhower's Visit

On 4 August 1947, General of the Armies Dwight D. Eisenhower, accompanied by several of his senior staff officers from the Joint Chiefs of Staff, came to Ladd field, Fairbanks, Alaska to visit the 46th Reconnaissance Squadron for the express purpose of learning firsthand the details of the Soviet threat in the Arctic.

Major White's presentation to General Eisenhower lasted a little over two and one-half hours and was immediately followed by a question-and-answer period that lasted another hour and a half.

At the end of the question-and-answer period, General Eisenhower asked Major White to have all the Military Police guards removed and arrange for all other personnel of the 46th Recon and "Project Nanook" to informally gather in the hangar (Hangar No. 4) because he wanted to talk to them. The general said that after he finished talking with them as a group, he would like for those who worked in the hangar to go back to their work stations so the general could circulate around and talk to them individually.

At that time, photographers were brought in for a 30-minute photo session until the Squadron personnel were gathered, and the photographers were informed that they would be allowed to photograph throughout the general's remaining visit.

General Eisenhower talked to the assembled group of 46th personnel for 20 to 30 minutes, and then spent the next hour talking to individuals. He departed the 46th Recon area just a few minutes before 5:00 PM, having spent his entire day at Ladd Field with the 46th.

At 7:00 o'clock that evening, there was a reception at the Ladd Field Officer's Club for General Eisenhower. Officers and their wives stood side by side in a reception line that went entirely around the open area of the club. General Eisenhower, accompanied by General Frank Everest (Yukon Sector Commander and host), made his way down the entire line, and not only shook hands but talked to each officer and his wife individually for at least a minute each. The reception lasted for hours, but not only did no one complain, everyone seemed delighted to meet the famous general.

Captain Kozel and his wife were standing to the right of Major and Mrs. White, and when General Eisenhower was introduced to Mrs. Kozel, she spoke up and said, "General, I met you once before..." At that point General Eisenhower interrupted Mrs. Kozel by saying, "Wait, don't tell me; let me tell you. That was back in 1938 at Fort Leonard Wood on May 8th at the Officer's Club. You had just graduated from high school. Your father was Major (naming her father), and your given name is Gloria." Everyone within hearing distance stood there in wide-eyed amazement.

Every officer and wife at that reception thought that General Eisenhower was very personable and down-to-earth. He always seemed genuinely interested in each and every person he talked to at the reception, and made the officers and their wives feel that the general had come to Ladd Field just to have that enjoyable little chat with them.

General Eisenhower addressing 46th Recon personnel in Hangar #4, 4 Aug 47.

General Eisenhower talking to ground crew members in Hangar #4.

General Eisenhower inspecting "the Club".

Major and Mrs. White greeting General Eisenhower at reception. (Capt. & Mrs. Kozel at left).

# Chapter 20

## Beacon Hill Crash

On 29 May 1947, Lt. Edgar Fowler was scheduled for a mission and made his takeoff on Runway 60 Left to cross over the Chena River and Beacon Hill to the east.

At the Hangar No. 4 ramp there were several 46th Squadron flight crewmembers watching Fowler's F-13 preparing for the takeoff run. They watched in horror as the F-13 took off and ploughed into the top of Beacon Hill, erupting in flames. They ran to get into vehicles to get to the crash site but as they came up even with it, they were on the wrong side of the Chena River from the downed aircraft.

In the flurry of excitement about what to do, Lt. John Clark and Lt. "Moose" Holland decided to swim across the Chena and go on foot up to the crash site. So they stripped down to shorts and GI shoes and went into the water. The river was swollen with the snow melt and full of floating debris. "Moose" didn't think about it at the time, but the river was icy cold.

After coming out of the river, they started to run through the underbrush and work their way towards the burning aircraft. The going was extremely rough and difficult. At one point "Moose" became bogged down in a muddy pond and it took him some time to struggle out. John Clark had run on alone and "Moose" followed as fast as the terrain permitted.

Upon arriving at the aircraft, "Moose" found it burning and smoldering with no sign of the crew or John Clark. While they had been swimming the river and struggling through the underbrush, a rescue team had gone from Ladd Field across the Chena to the north and then east on a maintenance road up to the top of Beacon Hill and the burning aircraft.

The 46th lost three good friends in that crash: 1st Lt. Lawrence E. Bennett, 1st Lt. Bruce T. Marshall, and 1st Lt. Carl A. Carlson. Even today, "Moose" suspects that all those who flew over the Arctic with those men can recall their names, even after 43 years. As an old Air Corps saying went: "They were good men to have fly on your wing."

So, in the end, the efforts of "Moose" Holland and John Clark to reach the crashed F-13 were to no avail and contributed nothing to the rescue effort, but they did try.

Later, "Moose" found that some of his civilian friends in Fairbanks were amazed that they had dared to swim the Chena River at that time of year and, "if the truth were known," "Moose" suspects, "they thought John and I were a little bit nutty."

F-13 crash on Beacon Hill, 29 May 47.

F-13 crash on Beacon Hill, Ladd Field, Fairbanks, Alaska.


LAWRENCE E. BENNETT
1ST LT., AIR CORPS
BRUCE T. MARSHALL
1ST LT., AIR CORPS
CARL A. CARLSON
1ST LT., AIR CORPS
B-29 NO. 45-21848
29 MAY 1947

# Chapter 21

## General Spaatz Visits the 46th

On 4 September 1947, the Commanding General of the Army Air Forces, General Carl A. Spaatz, visited the 46th Reconnaissance Squadron for a briefing on "Project Nanook" at Ladd Field, Fairbanks, Alaska. General Spaatz was accompanied by his aid and two senior officers from Army Air Forces Headquarters. Also with him were Major General Howard A. Craig, the Alaskan Theater Commander, and Brigadier General Joseph H. Atkinson, the Commanding General of the Alaskan Air Command.

Because of General Spaatz's visit, Major White had to return early from his monthly briefing trip to Washington, where he was told by SAC's Chief of Staff, Brigadier General Frederic Smith, that after briefing General Spaatz, not to be surprised if major changes were to result. Major White was not certain what this meant, but he would do the best job he could.

General Spaatz and his entourage arrived at Ladd Field at about 9:30 in the morning. Major White delivered his standard briefing to the generals, which took about two and one-half hours. It contained approximately fifty charts which 1st Lt. Charles G. Hart kept updated on a daily basis. Most of the charts had many transparent overlays, each one depicting a month's activity starting with the unit's arrival in Alaska, and a separate chart for each facet of the 46th's mission. In this way, Major White could start at the beginning with each subject of interest, showing the number of flights made and their findings on each, and thus unfold the complete story on each subject.

General Spaatz was apparently impressed. About halfway through the briefing, he jumped up with some congratulatory remarks, looked Major White straight in the eyes and asked, "Major, is there anything in this Air Force that you want?" By then, all the other generals and the two colonels had stood up. Major White was so startled by all this that he was speechless. He finally responded to General Spaatz's question by saying, "No, General. I'm very happy with what I'm doing."

The generals formed a semicircle around General Spaatz, talking among themselves, as Major White drifted out of hearing range to collect his thoughts and regain his composure. About ten minutes later, the generals began taking their seats again, and General Spaatz said, "Major, let's resume the briefing." When Major White finished his briefing, the question-and-answer period didn't last more than ten or fifteen minutes, at which time General Spaatz said, "Major, we want to talk among ourselves, but don't you leave the room. We may have some more questions." The general turned his chair around about three feet out in front of the others, and the generals talked among themselves for about an hour.

It was after the generals' discussion broke up that General Spaatz said, "Major, how about taking me on a tour of your activities? I want to go everywhere, see everything, and talk to your people," which he did. The general and his entourage spent the remainder of the day in briefings and visits

to various offices, facilities, shops and to the Reconnaissance Technical Laboratory, where the general posed for several portrait photographs before asking Captain Abe Wayshak, commander of the Augmented Reconnaissance Technical Squadron to show him all aspects of camera operation, maintenance and film processing procedures. General Spaatz departed the 46th shortly before 5:00 PM, by shaking hands and saying, "Major White, this was an interesting and enlightening day. I appreciate it."

It was on Major White's next trip to SAC Headquarters in Washington at the end of September when he learned firsthand from SAC's Chief of Staff, General Freddie Smith, that in the very near future "Project Nanook" would be discontinued, and some of the 46th's mission would be downgraded from top secret to confidential. Several aspects of the original mission would be continued, although the Squadron name would be changed from the 46th to the 72nd. This would necessitate the transfer of surplus people to the Ladd Field base command or to the Alaskan Air Command.

General Smith continued, saying that all of these changes would come from SAC Headquarters, and would be followed by a rather large nationwide publicity campaign that would be conducted by Air Force Headquarters in the Pentagon. The general added, "Air Force Headquarters has assured me that they would send you several copies of their compilation of all the articles published as early as possible. When you get them, read each and every one of them carefully. Don't question any of them. If you are asked to comment on any of them, reply only by saying, 'I have read them and I think they speak for themselves.' Any other comments would negate the program. If everything turns out as planned, a major objective may be realized."

True to General Smith's words, within two weeks the 46th Recon received a special order with the effective date of change of military records (EDCMR), changing the unit's designation from the 46th to the 72nd Recon, as of 13 October 1947. The 46th Reconnaissance Squadron (VLR) Photographic was officially deactivated and its records were sent to SAC Headquarters, analyzed, and placed in top secret repositories. As far as the Air Force was concerned, "although the 46th Recon Squadron was inactivated the same day as the 72nd Recon Squadron began similar duties at Ladd Field, and personnel were transferred from one unit to the other, there is no official connection between the two squadrons."[1]

It wasn't until a week later that Major White received the Air Force news releases promised by General Smith, and realized what it was that General Spaatz had been discussing with his staff during Maynard's briefing. The significant achievements of the 46th Recon were being used to provide just enough truth to blatant disinformation to make the media campaign plausible.

After the Air Force issued its news release, numerous articles appeared across the nation, thirty-nine of which were printed up by the Air Force. Among the articles' titles, which included accurate statements such as, "46th Air Squadron Does Historic Job in Arctic", "U.S. Air Force Ready to Fly 'Anywhere, Anytime' in Arctic", "Air Force Conquers Problem of Flight over Polar Regions", and "U.S. Air Force Discovers 3 Magnetic North Poles"; there were total fabrications and exaggerations like, "Air Force Bolsters Alaska's Defense", "U.S. Takes Steps to Set Up Arctic Radar Warning, Plan Underground Bases and Flying Fields", "Air Force Projects 'Bristling Network' of Arctic Defenses", and "Big Alaskan Air Defense Network Being Built".[2]

If indeed a disinformation campaign could effectively deter the Soviets from "expansionism" through the Arctic until our SAC bomber crews were trained in polar navigation, presenting a credible deterrence, then the media campaign would have served its purpose. For this reason, Major White knew that he could neither confirm nor deny the articles' veracity. It may never be known how much General Spaatz's disinformation campaign may have deterred the Soviets from a subsequent confrontation in the Arctic, but the fact remains that the confrontation never happened.

"World powers had become aware of the strategic significance of the northland. Realizing the importance of having an active reconnaissance unit in the polar areas, government agencies of the United States requested and received permission to use the 72nd as a source of information. The Coast and Geodetic Survey, Aeronautical Chart Service, Naval Petroleum Reserve, and Permafrost Division of the U.S. Engineers were only a few agencies that directly benefitted from 72nd projects. Other information was supplied to official departments interested in the performance of the B-29 aircraft in the Arctic.[3]

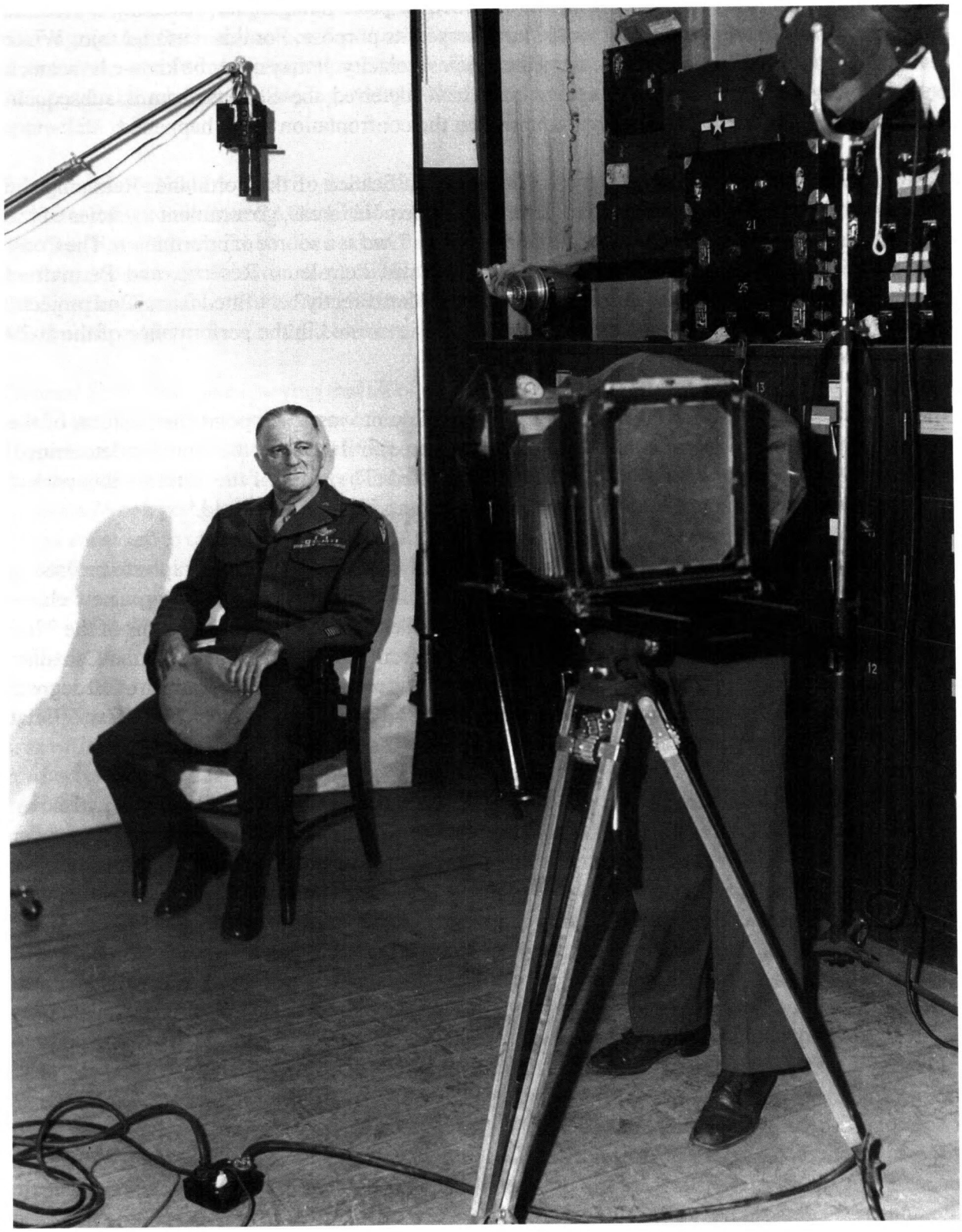
"One of the most interesting projects carried out by the unit was to pinpoint the position of the magnetic north pole. Mission after mission flew over the area until the exact location was determined. It was found that not one but three magnetic poles existed. The work of the 72nd on this project brought the commendation of many scientific organizations all over the world.[4]

"Meanwhile other missions departed regularly to obtain visual and radar photographs to be used in correcting maps. As a result of the many missions flown in the Canadian Archipelago, new charts were prepared and distributed by the Aeronautical Chart Service." One of the missions of the 72nd Reconnaissance Squadron was to establish a safe route from Alaska to Iceland, via the Canadian Archipelago and Greenland, and additional functions were to reconnoiter the area north of 60 degrees and locate uncharted and unknown arctic land masses.[5] And although it is recorded in few official records, this meant that the 72nd Recon would continue to assess the Soviet threat.

Within two years of its deployment to Alaska, the 46th/72nd Reconnaissance Squadron had flown over 500 missions exploring 5,500,000 square miles of the Arctic using both visual and radar photography. As the *History of the Strategic Air Command* points out, the 46th/72nd "accumulated sufficient hours of polar flying to qualify it as probably the most experienced polar flying unit in the world...carrying out the most ambitious reconnaissance project of the post-war period."

In retrospect, this achievement should be viewed in terms of what the world situation would have been like if the 46th/72nd had not been able to carry out its mission. If it weren't for the electronic, radar, photographic and visual intelligence gathered by the 46th/72nd, our nation's ability to respond to Soviet threats would have been critically limited, leaving our deterrent capability largely illusory.

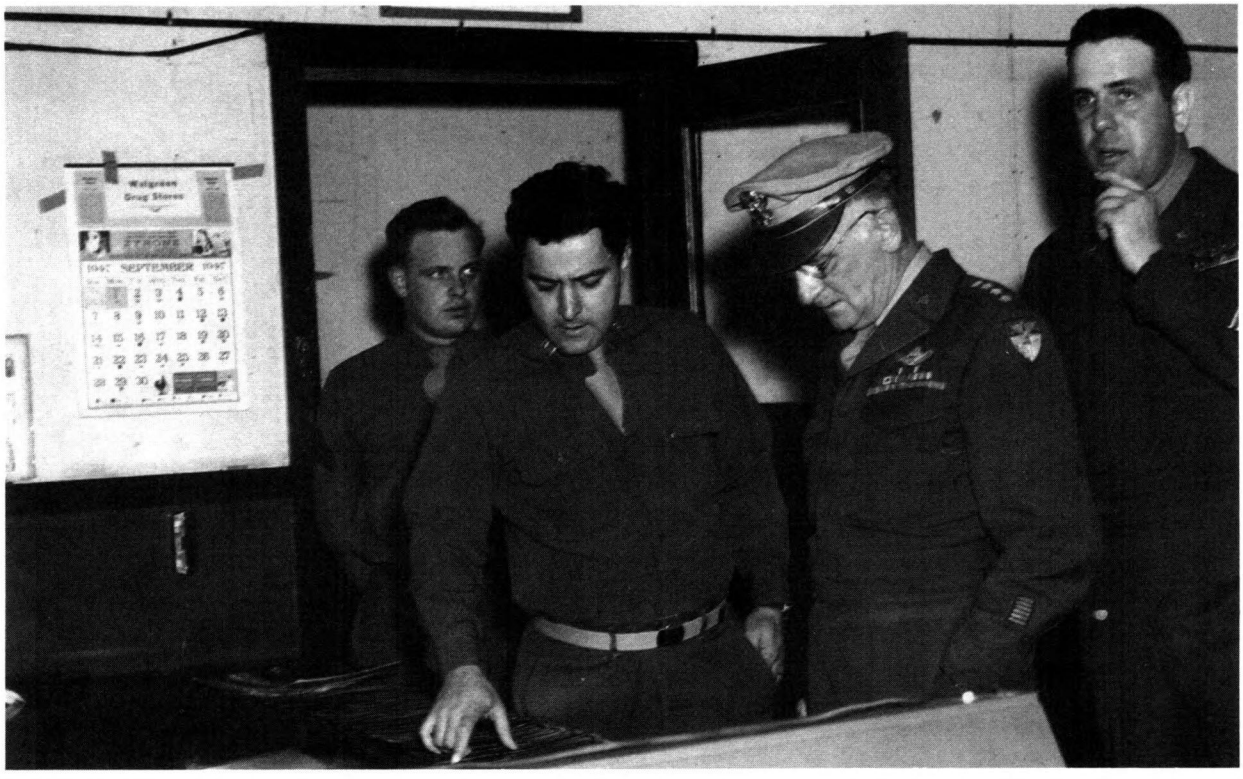
Without hard intelligence on Soviet capabilities, uncertainty or fear of war may have prevented prudent responses to Soviet provocations and we certainly would not have acted as boldly as we did during the Berlin Crisis of 1948. Information provided by the 46th/72nd was particularly valuable when one considers that miscalculation of Soviet capabilities during this period could well have resulted in either capitulation in the Cold War, or even more tragically, World War III.



General Carl A. Spaatz poses for photograph in 46th Recon Photo Lab.

General Carl A. Spaatz
Army Air Forces Commander, 4 Sept. 1947

General Spaatz and Major White inspect 46th Recon headquarters, 4 Sep 47.




Capt. Abe Wayshak showing General Spaatz tri-metrogon photography.

DEPARTMENT OF THE AIR FORCE
Public Information Division
Press Section
Tel. RE 6700
Ext. 73868 and 74189

IMMEDIATE

October 20, 1947
RELEASE

AIR FORCE FLIGHTS SOLVE
PROBLEMS OF POLAR NAVIGATION

Flights by Alaska-based squadrons during the last twelve months have shown the United States Air Force how to operate aircraft and equipment efficiently in the polar regions and have proved that USAF units can fly anywhere in the polar regions during any season of the year.

These flights also have determined that there are three magnetic north poles instead of the previously-believed one.

Though cognizant of the strategic value of Alaska, USAF leaders knew from experimental flights and reports of the groups that operated there during the war that there were many and broad gaps in general knowledge of polar flying.

Air units, charged with the defense of Alaska during World War II limited their operations in accordance with seasonal weather and limited navigational facilities.

The 46th Reconnaissance Squadron was sent to the Alaskan theater in June, 1946, as the pioneer combat-type unit to attempt operations under polar conditions. The squadron flew its first operational mission on July 21, 1946 [author's note: correct date 2 Aug 46, see chapters 6 & 7], from its base at Ladd Field, Fairbanks, Alaska.

Since that time the unit has flown more than 5,000 hours and 1,000,000 miles to test materiel and personnel, and to find safe procedures for year-round flying in the Arctic. The 46th has made more than 100 flights over the geographic pole and its immediate vicinity.

The squadron was given the long-range project to observe and photo-map the Alaskan area for the strategic location of defense components. These included an interdependent system for early-warning sites, fighter bases and underground fighter control centers with necessary facilities for cold-weather testing of heavy bombardment units.

Two other projects included:

Exploratory flights to obtain information necessary to establish regularly-scheduled air transport service.

The photo-mapping of a 35,000-square mile area to determine the possibility of oil formations. The latter project was in cooperation with the U. S. Navy.

Leaders of the squadron in the normal course of routine missions carried out studies on terrestrial magnetism, gyros, Loran navigational aids, radar mosaics, radar targets, and map corrections and comparisons.

Other units, operating in the theater or ordered there on polar training operations, began using the methods developed by the 46th Squadron. Their missions disclosed additional information. Some of these units were the 57th Fighter Group, the 54th Troop Carrier Squadron, the 415th Night Fighter Squadron, and the 10th Rescue Squadron.

Several operations were carried out in cooperation with the Army Ground Forces, testing ground equipment and the mobility of troops by air.

When the 46th Reconnaissance Squadron arrived in Alaska, navigators found their maps were marked with large white areas marked "Unexplored". They were told that conventional means of navigation could not be used in the polar regions. In their first missions, navigation was difficult. They found many of the landmarks indicated on the map were out of position, and small islands, closely grouped, were shown as a large body of land.

During the last year, they have worked out a system of reference-heading navigation enabling the planes of the squadron to fly anywhere and know their location to within one mile. To keep the track flown by the aircraft using this grid system, radar operators have learned to estimate wind, drift, and ground speed to a fine margin even through an overcast. The margin of error in figuring the drift was narrowed to one degree. Ground speed could be computed to within five knots.

One of the most interesting studies in terrestrial magnetics was the additional information learned by the actual location of the magnetic north pole. In more than 1,000 variation readings, the magnetic field was determined to be elliptical in shape, consisting of three poles. The major pole was determined to be on Prince of Wales Island, with two local poles on Bathurst Island and Boothia Peninsula.

The lower tip of the ellipse on Boothia Peninsula was formerly given as the location of the pole. The center of the field was 1,750 miles northeast of Ladd Field.

Discoveries of various weather phenomena during the flight were innumerable. The pilots concluded that polar weather "looked worse than it was." The air was mostly stable and the greatest hindrances to flying were fog, snow, or ice haze.

In winter there were a few clouds and it was fairly clear. There were no thunderstorms and very little icing.

During the summer, however, it was practically always cloudy. Weather in Alaska was controlled by the location of a shifting high pressure area in the Pacific. Science had not yet been able to successfully forecast the location of the high pressure center.

The oddities of flying in the far north were many. Summer missions were flown in continuous daylight, even though the average mission was 20 hours. The longest mission flown was approximately 30 hours. On the other hand, winter missions were in continual darkness.

Flying was held to a minimum during the Fall and Spring equinox periods because of the hazards presented in flying in continual twilight. Twilight prevented reference to the stars for navigation, and made it extremely difficult for pilots to estimate heights and distances on landings and takeoffs.

When flying the top of the world, the crews often saw the sun rise and set twice during a 20-hour flight. On a night flight, in October 1946, an Air Force navigator knew for the first time that he was exactly over the North Pole, according to a celestial fix.

Temperatures were recorded frequently indicating 90 degrees warmer air at a 3,000-foot altitude than registered on the surface. In winter it was warmer at the North Pole than at Ladd Field. Very strong winds were prevalent in these areas, one mission hitting a cyclone over the polar cap with a measured wind velocity of 100 knots.

A great many of the Air Force's tasks in Alaska were seasonal and resulted in a continuing readjustment and rearrangement of personnel.

The job of training units deployed to that theater was given to the Alaskan Air Command to enable them to receive maximum benefits from the time spent in the theater. Personnel of the experienced units in the theater [gave] top priority [to the] instruction of the training units.

In operating the units, the Air Force found much of the standard-type ground equipment was inefficient. Additional requirements were given to the Air Materiel Command at Wright Field, Dayton, Ohio, for equipment that could operate in the low temperature ranges. Pipelines were needed to move the large quantities of fuel, and an improved railroad and highway system. Transportation in Alaska was hampered by snow and terrain and made the servicing of units difficult.

General Carl Spaatz, Air Force Chief of Staff, after a recent trip to Alaska, described it as "a still unconquered immensity, calling for wisdom and strength, and challenging the ingenuity of Air Force engineers and scientists."

END

Thirty nine different articles resulting from the news release were compiled from newspapers across the country and sent to Major White. The following article, printed in the Denver Post on October 20, 1946, is typical of how many newspapers handled the material:

U. S. RUSHES DEFENSES IN ALASKA

Washington, Oct. 20—(AP)— The Air Force is projecting a bristling network of defenses in strategically critical Alaska, an integrated system including such installations as radar warning stations, underground command posts and fighter fields.

An official summary issued Monday by the Air Force high command lifted a corner of the curtain on U.S.A.F. activities on the arctic frontier during the last year.

Twelve months of flights by Alaska-based squadrons making aerial studies, weather flights and conducting training operations, said the statement, "have proved that U.S.A.F. units can fly anywhere in the polar region any season of the year."

Ranging out from American territory over no-man's land, aircraft of the Forty-sixth reconnaissance squadron have made more than 100 flights "over the geographical north pole and its immediate vicinity," the statement disclosed. The Forty-sixth had been followed by other units.

The squadron was sent to Alaska in June, 1946, to "observe and photo-map the Alaskan area for the strategic location of defense components."

These components, the statement said, "included an interdependent system of early warning sites (radar), fighter bases and underground fighter control centers with necessary facilities for cold-weather testing of heavy bombardment units" (such units are made up of B-29 and newer models of the ultra-long-range bomb carrying aircraft).

The Air Force statement did not say how far these defense projects had been advanced, but Army engineers and the Air Force have been authorized, so far, to spend more than 73 million dollars in Alaska. In addition to announced construction programs for Ladd Field, Mile 26 and the Nenana air base (all in the general area of Fairbanks) there have been unconfirmed but undenied reports of new bases being built on the Arctic Ocean and Canada.

## 46TH AIR SQUADRON DOES HISTORIC JOB IN ARCTIC

By Gill Robb Wilson

(Reprinted from The Air World, New York Herald Tribune, 24 October 1947)

When the Union of Soviet Socialist Republics made polar-area development a major project in Communist expansion twenty-five years ago, the democratic world was tolerantly interested.

When, following the recent war, the full import of air power was understood and the polar area was seen to be a no-man's-land between Communism and democracy, the free world became more than tolerantly interested in the north country. Subsequent Soviet behavior has whetted democratic anxiety.

Lack of Anglo-American experience across the top of the world eventually came to be regarded as a weakness in free-world security. To bring American air power abreast of its responsibilities in the north became a critical military and political requirement.

Popular opinion thinks of cold and survival as the big problems of the polar area. Cold and survival are problems, but the $64 question above the Arctic Circle is not so simple as that.

### Air Is Crux of Security

The crux of Arctic security has to do with air operations and all that they imply — an accurate method of navigation where the magnetic compass will not function, proven principles of weather forecast in the very breeding grounds of weather, dependable communications in an area where electronic disturbance blots out radio, and development of maps for an area which is either unexplored, inaccurately mapped or constantly changing as to shoreline and mountain altitude.

To find answers to this new boundaryland is a problem as complex as the range of science. At what degree of cold will metal fail? How long will human eyes endure at a radarscope? What causes lie behind the shifting emphasis of the magnetic pole? How to overcome the influence of the northern lights on radio? How to detect 150-mile wind drift without landmarks, celestial navigation or radio beacons?

The answer to cold and to individual survival in the polar regions, while reversing many of the practices used in temperate zones, is still simple compared to the

requirements in preparing to checkmate northern international air aggression.

To conquer the north air-wise in a degree which would bring the United States abreast of effective knowledge was a project assigned in May, 1946, to an Air Force unit known as the 46th Very Long Range Reconnaissance Squadron.

## Courage and Genius

Screened from the entire personnel of the Air Forces, the officers and men of the 46th have written in the last eighteen months an unparalleled saga of cold courage and calculating genius. Flying specially conditioned and equipped B-29 aircraft, the 46th has carried out 140 missions averaging twenty hours a sortie.

Each mission was a venture into the unknown with remote chance of rescue in case of human or mechanical error. Drama unfolded in terms of loneliness, of inhuman punishment in fatigue and cold, of natural phenomena such as the purple dusks, the setting and rising of the sun several times during a single twenty-four hours, the crystal haze of the intense cold, the temperature inversions of 90 degrees within a few thousand feet of altitude...

When in May, 1946, General Spaatz activated the polar project, the directives of the 46th were of almost unimaginable proportions. Basically it was to: (1) Produce a comprehensive weather pattern of polar areas; (2) develop a self-contained positive and accurate system of polar navigation; (3) fill in the blank spaces on the maps by new scientific methods of reconnaissance, and recheck existing maps for accuracy as to location of shorelines and islands of the Canadian Archipelago and other arctic lands; (4) test the endurance and efficiency of men and equipment under all arctic conditions; and make such studies of polar magnetism and other phenomena as were possible.

## Full Story is Secret

Security requirements prevent the full story of the 46th Squadron's arctic achievements. It is enough to know that the chapter written by the young men redeems the United States from the extreme vulnerability in which it stood...

I dare not mention the names of living individuals lest through lack of space to list the 46th roster I do injustice to some. Three names I can mention with the blessing of every officer and man of the squadron. They are Bennett, Carlson and Marshall, who died trying to get a B-29 away on a mission under critical conditions of extreme cold.

The 46th would like an arctic military field named in honor of the three. That would be nice, but to all who understand what they faced in the routine of toil which rivals the work of the deathless Magellans of the past, no monument is essential. The world of free men has a better chance for its continued freedom because of them.

Photograph of "The Forlorn Turkey" taken prior to its final flight.

# Chapter 22

## The Loss of "The Forlorn Turkey"

On the evening of 23 December 1947, "The Forlorn Turkey", an F-13 from the 72nd Recon Squadron, winged its way south from the Eskimo village of Kotzebue to Nome, considerably off course on its return to Ladd Field from a mission, and already overdue. Lieutenant Don Duesler, the copilot, asked the pilot, Lt. Vern Arnett if he was getting sleepy. "No," replied Arnett, who although without sleep for over 24 hours indicated that the copilot didn't have to spell him. Radar was inoperative. Sergeant Decker, one of the scanners, reported over the interphone that the plane was flying lower than the mountaintops which were ten or fifteen miles out to the left of the aircraft. Arnett's answer was, "We know." Approaching Hot Springs Mountain, suddenly Sergeant Decker yelled over the interphone that the ground was coming up fast. Lieutenant Duesler grabbed the wheel and pulled it back with all the strength he could muster. Just as the nose of the aircraft started up, the tail hit the snow-covered slope and broke off. Instantaneously, the rest of the plane smacked into the mountainside with a terrific crash; the forward section rotated to the right with the right wingtip coming to rest on the tail section. Then the plane caught fire.

Having struck the mountainside at 220-plus indicated airspeed, the propeller anti-icing tank, containing mostly alcohol and water, exploded in the aft section of the fuselage, spewing the mixture on Sgt. Decker's hair and face and was quickly ignited. The noise of breaking and twisting metal and the excruciating pain caused Sergeant Decker to black out. 1st Lt. Lyle Larson had just crawled through the "tunnel" to have the scanners sign the form one, and was standing up using the urinal at the moment of impact. He immediately went through the floor panels and broke his ankle when he hit the ground. After what seemed like several minutes of deafening noise, there was a dead silence. Wilbur Decker couldn't believe he was alive.

A hole just large enough to crawl through was punctured through the right hand side of the fuselage just behind the right scanner's position. Staff Sergeant Warren had been in that position when the plane hit the ground. Having been ejected from the plane, Lt. Larson was the first crewmember outside the airplane and farthest from the burning wreckage. Sergeant Warren had apparently made it out safely. Sergeant Decker was the last one out of the rear. The first thing Sergeant Decker did once outside was to heave his guts out. The smell of his sizzling hair and flesh and the sudden cold had put him into shock. He had lost his hat to the flames.

It was funny, Decker later thought, that no one had thought to get the A-3 personal clothing bags out of the rear crew compartment. He saw Lieutenant Arnett throw parachute harnesses for the chest pack and two one-gallon water jugs out of the plane. Arnett emptied water out of one jug and filled it with gasoline, which was spouting from a wing fuel hose. Lieutenant Arnett then looked at Sergeant Decker and said, "Where's your hat?" Decker told him he lost it. Arnett immediately ripped apart a pair of flying trousers and wrapped it around Decker's head and face, where they soon froze to the left side of Decker's face because of the blisters from the burns. Sergeant Decker said, "Sir, we have had it." Lieutenant Arnett replied, "No way. We will live in Florida someday."

Afraid the plane would blow up, the crewmembers walked about 200 yards down the slope and huddled around one of the three engines that had broken off the wings during the crash. Decker shivered and shook so much his teeth were chattering. No one got any sleep. In fact, Sergeant Decker's injuries were such that he wouldn't get any sleep for days and nights to come.

Meanwhile, back at Ladd Field, it became obvious to personnel surveying fuel reserve figures that "The Forlorn Turkey" was down somewhere, but no one knew where that might be. When notified, General Atkinson, among others, thought that the Russians might have shot the plane down. In the event, however, that "The Forlorn Turkey" had crashed in Alaska, word was immediately passed to 10th Rescue, the Alaskan Air Command Rescue Service, which quickly began conducting a radio search, contacting all bases and stations in the Alaskan Theater of Operations and all bush airlines offices, but with negative results. At this time Strategic Air Command Headquarters was notified by Major White that a F-13 aircraft had failed to return from an operational mission, that no radio contact had been received from the crew since their departure, and that search and rescue efforts were commencing.

At this time of the year there are only about six hours of daylight and twilight combined; that is, if the weather is clear and visibility unlimited (CAVU); otherwise daylight could be as short as four hours or less.

The next several hours were spent analyzing "The Forlorn Turkey"'s flight plan, preflighting search aircraft, organizing the search effort, and briefing crews in preparation for the search to be conducted over their respective search areas at first light the following morning on December 24th, Christmas Eve. The most logical search area was determined to be from Point Barrow on Alaska's north coast to Nome on the west coast, starting along the shorelines and working inland by sectors, an aircraft assigned to each.

On Day 2, December 24th, 1947, at the wreck site, the airplane had finally stopped burning. Only the unpressurized tail section, No. 4 engine, and the outer wing sections were left, though blackened, in the soot-covered ice and snow. Lieutenants Arnett, Sheetz and Schaack punctured holes in the empennage and fastened the unburned wing covers to ward off some of the drafty winds. A metal pail was found and used to burn parachute pieces that were soaked in oil and gasoline. Lt. Sheetz and Lt. Arnett had some area maps and were considering walking for help. The situation looked grim for the injured crewmembers, and with the poor weather, no plane could locate the crew even if it flew within 50 feet overhead. Walking out for help seemed like the right thing to do. Sheetz and Arnett were in very good physical condition. Perhaps because they were, the crew had survived so far.

Day 3 at the wreck, December 25th, 1947, was a real disheartening Christmas. Convinced that walking out was the only way to get help, Lieutenants Sheetz and Arnett obtained a supply of K-rations that were stored in the tail section, dressed well for the cold, and trudged away from the remaining crewmembers to get help. They had figured that the crash site was 21 miles from the village of Shishmaref and that they could get there in two days. It was an impossible walking distance under the circumstances. The terrain was all up and down many hills above the tree line, so there was

no wood to burn for heat or smoke for signaling rescue people. The snow was knee-deep with a crust on top. When walking, the crust would hold your weight in some places and break through in others. It could wear a person out quickly.

Despite his injuries, Sergeant Decker began to come out of shock by this time, and "survival" began to make sense to him. He put on a pair of heavy socks and "bunny boots" and it made a difference. He began walking around looking for things to burn for heat. Soon he located some rubber hoses that had come off of the engines during impact, as well as deicer boots that came off the leading edges of the outer wings and horizontal stabilizers. He then discovered some 10 weight oil in the No. 4 engine (the only one that didn't break off), but the oil was like molasses. He also located some gasoline in the APU (Auxiliary Power Unit). Flames had licked all around the rubberized protective coating, but had only melted and blistered it. It seemed they had just barely enough survival items to keep them alive. Sergeant Decker was not the only one who prayed to God often.

The remaining crewmembers, particularly Sergeant Decker, had a hard time breathing in the cold, sub-freezing air. They got as close to the firepail as they could, though it belched black smoke. Decker found that he had trouble swallowing, and no desire to eat. All he wanted was to drink hot liquids.

Day 4, December 26th brought little hope to the crash survivors. The snow had stopped coming down. It had been said, and Sergant Decker believed it, that snow is the quiet thief of the north. The temperature dropped very low. For a couple of days, Decker had thought he saw airplanes coming toward the crash site, then he heard and saw for sure two very beautiful P-51 fighters. That plane would always be Decker's favorite from that day on. All the crewmembers waved and shouted with glee. Soon after, the sky cleared and a full moon shown brightly on the snow. An airplane circled overhead.

Back at Ladd Field, sixty-eight hours had passed since "The Forlorn Turkey" was determined to be out of fuel and down, before the squadron received a search aircraft's radio message that the wreckage of the lost plane had been sighted on the east slope of Hot Springs Mountain on the Seward Peninsula about 65 miles east of Shishmaref, 50 miles below the Arctic Circle and 120 miles north of Nome. The search aircraft flew low enough over the crashed F-13 to see that there were survivors. Three men suddenly appeared from the tail section of the wreckage. Two of the men went back into the tail section and carried out a fourth person they laid on the snow. They then picked up the injured man and all went back into the tail section.

The search aircraft determined that the air temperature at the crash site was approximately minus 40 degrees Fahrenheit with wind blowing between 40 and 50 MPH, creating a wind chill of approximately 115 degrees below zero.

The search aircraft had dropped a hand-cranked radio, but in their condition, the survivors found it was too tiring an ordeal to operate it and generate a message. Many other articles had been parachuted but landed too far from the wreck to find and retreive. Finally, survival equipment was thrown from the search aircraft without parachutes, which landed nearby. The sleeping bags were most

appreciated. The "Bear Paws" for walking in deep snow made excellent firewood. No one was about to walk anywhere with rescue at hand.

Lieutenant Larson was the only crewmember who had attended the Ice/Sea survival training at Nome, but he did very little moving due to his broken ankle. Lieutenant Shaack was the morale officer, and he had his work cut out for him.

Following receipt of the information from the search aircraft that the wreckage of "The Forlorn Turkey" had been located, Brigadier General Frank F. Everest, Commanding General of the Yukon Sector at Ladd Field, and Major White, Commander of the 72nd Recon Squadron, decided to fly the general's B-17 aircraft to Marks Air Force Base at Nome from where they would conduct the rescue of the downed crew.

It was decided to have Master Sergeant London (who had previously made a parachute jump in the Antarctic); Corporal Casey, a paramedic, and Captain Aiken Mays, Nome Air Base doctor, outfitted and briefed in case it was decided to parachute them into the site of the crash to assist the injured crewmembers, thought to be as many as five in number.

Enroute from Ladd AFB to Marks AFB, General Everest and Major White discussed the pros and cons of jumping the three paramedics into the crash site and decided it should be done. It may be the only chance the injured crewmembers had. The question was when. Should it be done at seven or eight o'clock that evening, or at ten o'clock the next morning? Considering the fact that the crew had been exposed to the elements for three days already, with chill factors approaching minus 115 degrees Fahrenheit, the sooner the better. It was decided to make the drop into the crash site as soon as possible after the arrival of the B-17 at Marks AFB and the drop could be organized.

When on the ground at Marks AFB, with the B-17 being serviced and the paramedics being outfitted at base operations under the direct supervision of M/Sgt. London, General Everest turned to Major White and said, "Major, you look like death warmed over. When did you last get some sleep?" The major replied that it had been a little over four days ago. The general suggested that the major get something to eat, then check in at the Bachelor Officer's Quarters and get some rest. The general said, "I will take the flight out to the crash site and drop the three paramedics. When I get back from the flight, I'll wake you up and let you know how things went."

Later on that night, General Everest woke the major up and told him what a horrible night it had been. He had jumped the three paramedics into the crash site, but there were strong surface winds and he wasn't sure if any of them ever got to the wreckage. The general was terribly distraught.

On the morning of December 27th, General Everest and Major White decided to have 10th Rescue load a glider with food, blankets, fuel, warm clothing, communications equipment, medical supplies including stretchers, and land the glider beside "The Forlorn Turkey". The two officers decided that Major White would man the Airborne Command Post (in the nose of the B-17) and General Everest would stay at base operations at Marks AFB so the two of them could stay in touch during the rescue operations.

The B-17 got off the ground before sunrise and an hour ahead of the C-47 towing the glider. The glider had on board equipment to set up the poles and tow rope that would enable the C-47 to snatch the glider off the side of the mountain after they had loaded aboard the F-13 crew. Before arriving over the crash site, and still in darkness, the B-17 carrying Major White was notified by General Everest that the C-47 with glider in tow was airborne.

At first light, the B-17 was starting to make low passes over the crash site to determine the best spot to set the glider down near the crash site, when the major heard a radio transmission stating, "BROTHER, WE'RE IN TROUBLE!" The major asked who was calling. The glider pilot responded by saying that his tow plane had just lost its left engine. The major then called the tow plane and asked him what happened. He responded by saying that his left engine had stopped running for no apparent reason, but he was able to start it again and it seemed to be running all right now.

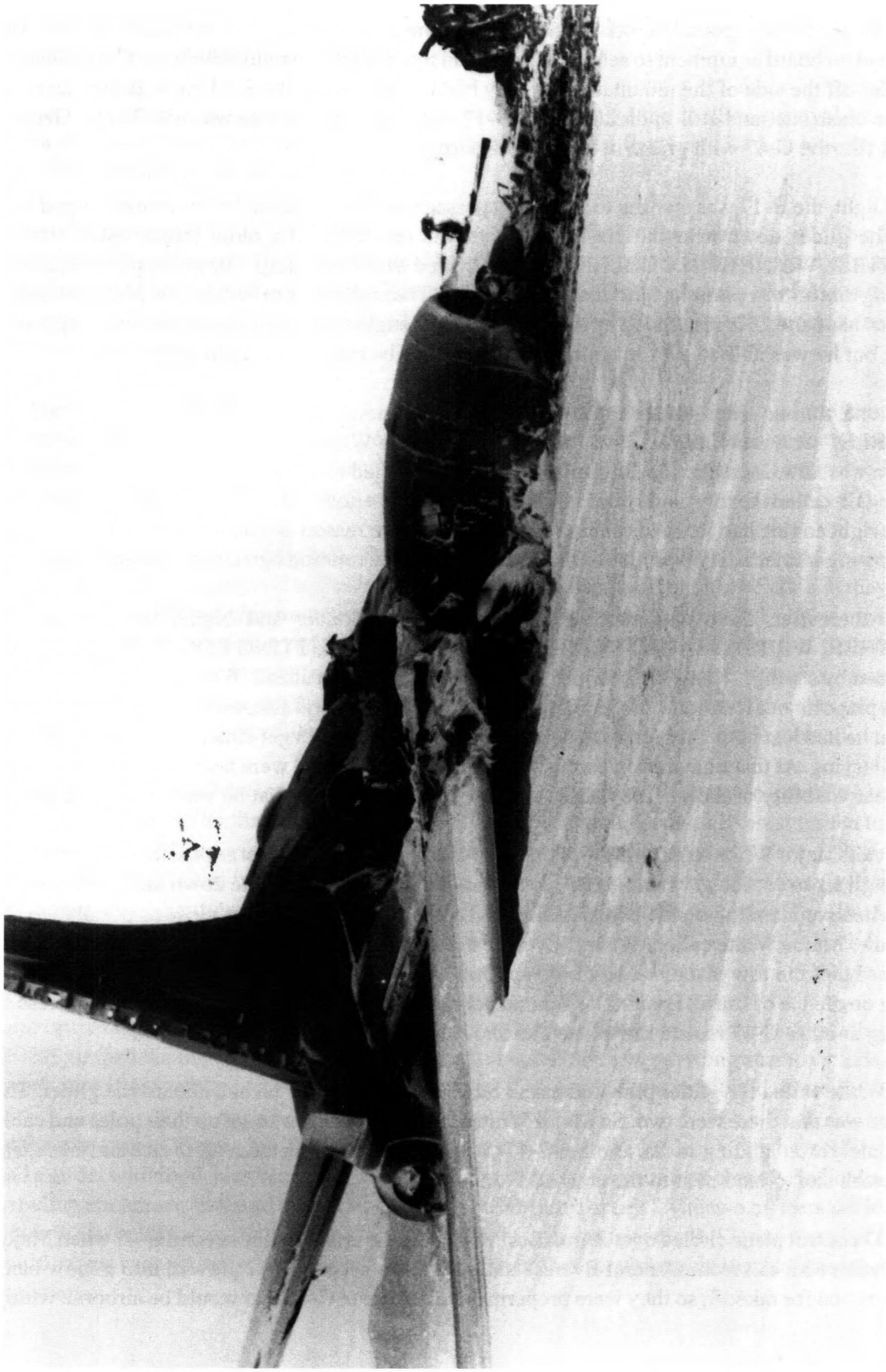
About one minute later, there came another transmission stating, "BROTHER, WE'RE IN TROUBLE," at a much higher pitch and volume. Major White asked the glider pilot what the problem was now. He responded saying that the tow plane had lost the right engine this time. Major White again called the tow plane pilot asking him what happened. This time he responded by saying that the right engine had stopped running for some unknown reason and he was still trying to restart it. Following immediately was his comment that it was now running again and appeared to be OK.

Shortly thereafter, there was another transmission even louder and higher in pitch saying, "BROTHER, WE'RE **REALLY** IN TROUBLE NOW!! I'M CUTTING LOOSE." The tow pilot responded by saying, "Hang on! I can see a break in the undercast ahead. When I get down through it, I can pinpoint our location." Major White called the tow pilot and asked what happened, and was told that he had lost both engines at the same time and was unable to get either one started again but was still trying. At that time the tow aircraft with glider still attached were below the layer of clouds with clear visibility of the surface below. The tow pilot transmitted that he was over Imruk Basin.

At that call, Major White told the B-17 pilot to head for Imruk Basin as fast as possible. The tow pilot told the glider to cut loose whenever he wanted to so the C-47 could glide down and make a dead-stick, wheels-up landing on the lake. He also told the glider pilot to land as close as possible to the tow plane. Major White called General Everest at Marks AFB operations and asked if the general had heard that the tow plane had lost both engines and was in the process of making a wheels-up landing on the ice of Imruk Basin. The general acknowledged that he had and was in the process of readying another C-47 rescue tow plane that should be enroute within an hour.

Major White called the glider pilot and asked how many tow cables he had aboard the glider. The response was that there were two. So Major White told the glider crew to set up their poles and cable immediately after landing so that another C-47 tow plane could snatch them off the ice and take them to the crash site to land next to the crashed F-13.

The B-17 control plane circled over Imruk Basin awaiting the arrival of the second C-47 when Major White received a call from General Everest stating that the second C-47 plowed into a snow bank in preparation for takeoff, so they were preparing a third rescue C-47 that would be airborne within an hour.



Crash site of "The Forlorn Turkey" on Hot Springs Mountain on the Seward Penninsula.

The third tow plane was airborne shortly. The glider crew had their stakes in place and their pick-up loop ready for the C-47's arrival. Shortly, the C-47 arrived, made one low pass and then went around to set up for a second approach to snatch the glider off the ice. When it was lined up, the C-47 made its low pass and snatched the nylon tow rope, which promptly snapped, jerking the glider only a few feet along the snow-covered ice.

The glider crew quickly strung up their second nylon tow cable and got back into the glider, preparing themselves for liftoff. This time, when the hook engaged the loop, the tension pulled out of the cable, but it too snapped. The tow pilot and glider pilot discussed the problem and reasoned that the ropes had gotten too cold and lost their elasticity. The tow aircraft had a warm tow rope on board which was dropped to the glider crew, but the effort turned out to be a repeat performance. They too had to be rescued by 10th Rescue sometime after that.

Major White touched base with General Everest to brief him on the Imruk Basin glider pick-up problem. Major White asked the general if they had a small airplane like a C-45 at Marks that they could load with supplies and fly up to the crash site and land wheels-up beside "The Forlorn Turkey". General Everest replied that he would check and call right back. In about five minutes the general called and said that they had a C-45 and it would be loaded and airborne within an hour.

With this news, Major White cancelled further effort at Imruk Basin for that day and the B-17 headed back to the F-13 crash site to circle and await the arrival of the C-45. On the way there, General Everest called again and said that the C-45 was taxiing out for takeoff. He stayed on the air and further reported that the C-45 was rolling down the runway, that he was airborne, that...wait, he stalled and crashed at the end of the runway. The general said he would call back.

About thirty minutes later, the general called again and said that the C-45 was a total loss and the crew was taken to the hospital. The plane apparently was overloaded. It looked like there was at least one fatality. Major White responded by saying to the general that he'd seen enough for one day, to close down operations. The major would bring the B-17 back to Marks Air Force Base.

General Everest met the major when he came into base operations and the two of them went to the mess hall to get something to eat and discuss the plans for the following morning, December 28th, 1947. The general stated that he had some discussions with a couple of the local bush pilots who felt they could fly into the crash site and pick up the crewmembers and bring them out. The general went on to say that there were a lot of serious legal problems surrounding this approach that were difficult to discuss with anyone outside of the military, but he felt that the two bush pilots were going up to the crash site the following morning, weather permitting, to see what they could do or recommend.

The following morning, bush pilots William S. Munz of Munz Airline, and Frank H. Whaley of Wien Alaska Airlines (both of Nome), their crewmembers and equipment were assembled at the municipal airport for a planned 9:00 AM takeoff. The weather was clear and calm. Ground temperature was an even minus thirty degrees Fahrenheit. For a ground crew, Munz took Dr. M. R. Kennedy and Bud Richter, the local photographer. In anticipation of making a landing some distance from the

wreckage, Whaley had secured the services of Chuck O'Leary, a former Alaskan Scout in World War II. Chuck, an experienced dog musher, took along a small Yukon sled and three dogs.

After a night in the warm hangar, Munz's Stinson started easily, but the engine in Whaley's plane refused to start although it had been well warmed up in advance. The sub-zero weather had so affected the storage battery that, although fully charged, its efficiency was depleted by more than half. There was nothing for Whaley to do but drive into town and pick up a warm battery. Rather than wait while both ships got cold, Munz and Whaley agreed that Munz would go on ahead, since his ship was slightly slower.

Exactly on schedule the fourteen-year-old Stinson began scooting ahead on the ice, faster and ever faster. Finally, with a couple of slaps at the frozen surface with the heel of the skis, she broke contact and for the next fifteen minutes battled gravity and turbulent air masses to attain a serviceable altitude. At five thousand feet the air became more stable, with only a moderate headwind directly on the nose.

The ever present temperature inversion, without which Arctic flying would be impossible during the winter months, had boosted the outside air temperature to an even zero - a rise of thirty degrees in one mile of altitude.

The weather report from the 72nd Recon Squadron F-13 flying weather station that remained over the crash site daily throughout daylight and twilight hours was much the same as on the previous day when Munz and Whaley had made a preliminary reconnoiter of the area, but improvements in visibility were forecast. The usual mile-thick blanket of fog and storm covered the entire northern half of the Seward Peninsula, as on former days. Above it, the weather was a delight for high-flying pilots only.

One hour and thirty minutes after the takeoff, the 3105 K.C. receiver in the CAA station at Nome sputtered and came to life.

"N.C. 13499 over the scene of the wreck. Will attempt a landing. Please stand by."

"Roger, Wilco," and then silence.

One quick circle, and the situation was clear to Munz at a glance. A strong wind was blowing at right angles to and over the top of the ridge, below which the wreckage was somewhat sheltered. The outside temperature was dropping rapidly, the visibility was not good, and the turbulence left much to be desired. Under such conditions the approach procedure is uniform, if not orthodox. The plane is leveled off as high as possible to prevent a sudden down current or lull from spilling the lift before recovery can be made. The ground speed is reduced to the barest minimum, and as much power as can be utilized is drawn from the power supply.

So efficiently was the landing made that the first touch down was made only a hundred yards from the wreck. Realizing that the slope was steep and rough, Munz continued to gun the plane until the distance had been doubled, and shut off the engine about four hundred feet from the summit of the

ridge on less steep terrain. All hands turned to, to secure the wildly flapping, light canvas motor cover. Then a heavy wool blanket was draped over the front as added protection and immediately plastered there by the driving wind. The thermometer was steady at thirty-five below, and at times the wind would reach gusts close to fifty miles an hour.

At a shout, "Your face is freezing!" from Dr. Kennedy, Munz climbed into a heavy sheepskin parka and they both started down the hill toward the wreckage. Overhead at a few hundred feet, an F-13 cruised back and forth.

Surprisingly enough, during the short downhill journey to the wreck, no one had appeared to welcome the would-be rescuers. Munz soon learned why. The approach had been made at such a high altitude that the survivors had discounted any possibility of the landing up the mountain, and hadn't even bothered to look!

Rounding the end of what had once been the fuselage of "The Forlorn Turkey", Munz accosted a solitary individual from behind with the usual question under the circumstances, "Well, how is everything going?"

A startled airman, his reflexes dulled by days and nights of exposure, could only make soundless motions with his mouth for several seconds. Finally, still not believing his eyes, he managed to gasp, "Where did you come from?"

Munz explained that he had just made a landing a short distance away, whereupon the excited airman shouted, "We're saved, fellows!" and dived head-first into the tangle of human bodies under the windbreak of canvas.

As Kennedy and Richter arrived the survivors began to crawl out from under the shelter. They were a sorry sight. After almost six sleepless days and nights, they were blackened by fire, covered with a week's beard, and were chapped, burned and starved. There were three able-bodied men left of the original eight. Two had gone in search of help and never returned. Two were burned, one very badly about the face, and one had a fractured leg. Dr. Kennedy crawled into the space vacated by the active members, and administered such first aid as was possible under the circumstances.

In fifteen minutes the group began the trip up the hill to the plane. The man with the injured leg was supported by two others. The survivor with the lesser burns walked behind a front man, who acted as a windscreen. The one with the severe burns was unable to face the wind at all, and was forced to walk the entire distance backward, guided by Dr. Kennedy.

So strong was the wind that, even with help, the injured survivors had great difficulty negotiating the short distance to the plane. Even then, the trip was accomplished in fifteen minutes. Thirty minutes after landing, the plane was ready to leave.

The motor coverings were whipped off and shoved inside the plane. Well primed in advance, the motor caught instantly. Since any excess ground running tends to cool the engine further, Munz

opened the throttle to full position and locked it. Meanwhile, all men available were tugging and shoving to ease the heavily loaded craft to the summit of the ridge.

At this juncture Whaley, who had just arrived, landed alongside and somewhat ahead, on the summit, to avoid the difficulty the first plane was experiencing. The addition of two more heavyweights to help push simplified matters somewhat, and soon the ship was moving at a steady pace. As it reached the summit and increased its speed, the outboard "power plants" let go, and Munz and his passengers were on their own. As the tired old Lycoming engine hammered away the plane began to get lighter, while the driving winds tore up the steep hillside almost at right angles to the lifting surfaces.

Finally the ship ballooned into the air with a ground speed of not more than fifteen miles per hour. Dropping the nose instantly, Munz dived the ship down the steep contour as sharply as possible without making contact with the ground. By the time his plane reached the valley floor, it had attained enough speed to pull out above the foggy-looking mass below and point her nose toward Nome.

After ten anxious minutes, as the altimeter slowly crawled up to five thousand feet, Munz throttled her down and looked the heatless winter sun squarely in the face. Over the top of the overcast, Munz could hardly believe that he was on the return trip.

During the following ten minutes while the radio was warming up, Munz got the missing information from the injured men, then carried on the following conversation:

"N.C. 13499 calling Nome Radio, over."

"Nome Radio to N.C. 13499, go ahead with your message."

"N.C. 13499 back to Nome Radio, off at eleven A.M. with four survivors, one with a fractured leg, two with burns, one serious, all suffering from exposure and shock. Paratroops never arrived at crash scene. Pilot and navigator left crash overland for Shishmaref, have not returned. Believed themselves to have crashed in the Ear Mountain area. Please request permission to land on Army Field."

"Nome Radio to N.C. 13499, Message received okay. Please stand by."

A short while later came the message, "Nome Radio to N.C. 13499, Message delivered, permission granted for landing at Marks AFB. Nome Radio out."

One hour after the takeoff the little plane clattered to a landing on the icy runway of Marks AFB, taxied up to operations entrance, and was practically swamped by men and officers, all intent on helping. Finally some semblance of order was restored, and four very happy men were loaded into a waiting ambulance and whisked away to the hospital.

About two hours after the first four survivors were taken by military ambulance from William Munz's aircraft to the Marks AFB medical facilities, Major White was given an opportunity to talk

to the crewmembers and the doctor. The doctor was very concerned about Technical Sergeant Wilbur Decker, who had the burned, terribly swollen and frozen face. The doctor asked if Sgt. Decker had a family at Ladd Field and if he did, immediate arrangements should be made to have them brought to Marks AFB, because, the doctor thought, when Decker thawed out, in all probability he wouldn't survive the trauma.

Major White called the 72nd Recon at Ladd Field to learn that T/Sgt. Decker did indeed have a wife and two small children, a boy and girl, ages two years and three years old in Fairbanks. The major made arrangements for Mrs. Decker to be flown in the 72nd Squadron's C-54 to Marks AFB at Nome as soon as possible.

When Major White told the doctor what he had learned and what he had done, the doctor asked if it was possible to make a change in plans. Instead of bringing Mrs. Decker from the airplane to the hospital, it would be better to take Sgt. Decker and Lieutenant Larson (with the broken leg) from the hospital in an ambulance to meet the C-54, load them aboard and, accompanied by a doctor, fly them to the 183rd Hospital at Elmendorf Air Force Base at Anchorage. If this could be done, it would greatly improve Sgt. Decker's chances for survival. It was done.

Meanwhile, Frank Whaley had picked up the other two survivors, leaving his own ground crew at the crash site, which Munz returned to pick up yet that evening so they wouldn't have to endure needless hardships if the weather became worse. As Munz climbed out of Marks AFB on his second trip of the day, he saw concrete evidence of why the Air Force had decided not to attempt further landings that day. Sitting up on the frozen drifts of the high tundra boundary of the airfield was a ski-equipped C-45, its undercarriage washed out along with other damages. It had failed to get off, and it became clear, that had it not been for the bush pilots, the survivors would still have been at the wreck.

At two o'clock Munz made his second landing of the day at the scene of the wreck, stopping this time on the very summit of the ridge. Quickly, the three men and three dogs were loaded. Chuck O'Leary was elected to shake the plane loose, but after he did, he only managed to come about two-thirds the way into the airplane. Meanwhile the plane was climbing rapidly towards Nome. The door had closed on him, which led to a drafty condition in the cockpit, and Chuck complained that his feet were getting cold. While Chuck's feet were not excessively large, there didn't seem to be room for them inside so long as he continued to stand on his head among the dogs. Eventually he was pulled completely inside and the door was shut, and by getting his feet where his head had been, Chuck managed the rest of the trip with some degree of comfort.

An hour later the tiny ship came in to rest on the home airport having accomplished the impossible. Needless to say, the bush pilots and crews had every reason to be proud of their accomplishment, but would probably never know the far-reaching effects of their courageous and selfless actions in the lives of others.

The next day the C-54 brought the doctor back from Anchorage to Marks AFB and picked up the four crewmembers at the Marks AFB hospital and flew them back to Ladd Field's hospital. Those brought to Ladd from Nome were Lieutenant Donald B. Duesler, Lieutenant Francis J. Shaack, Staff

Sergeant Leslie R. Warren and Sergeant Alan R. Samford. It was then that the detailed story of the missing crewmembers was made known.

The crashed F-13 pilot, Lt. Vern H. Arnett, and the navigator, Lt. Frederick E. Sheetz, had set out for the village of Shishmaref on foot on Christmas day. The possibility that they may have taken refuge in one of a half-dozen trapper's cabins and Eskimo shelters known to exist in that section was regarded as the last hope for survival of the pair. Pilot Frank Whaley, who with Munz participated in the earlier rescue of the six crewmen, was to fly from Kotzebue in a small ski-equipped plane to attempt landings beside these shelters.

Adding to the difficulty of the search for the two fliers, as General Everest pointed out to the news media, was the fact that the crew was amiss in its calculations as to the location of their crash site after they were on the ground. The survivors reported that the crew estimated its position at a point 38 miles southwest of the true location. It was the intention of Arnett and Sheetz to make their way a few miles north, follow a stream to Shishmaref Inlet, then trace the coastline to the village. From their actual starting point, though, any stream they encountered would lead not to Shishmaref Inlet but into Goodhope Bay on the opposite side of the peninsula.

The two men left the plane wearing arctic flying clothes with their feet and bodies wrapped in parachute cloth for extra protection. They carried sleeping bags, maps, pocket compasses, knives and K-rations for several days' travel.

No further word had been received at Ladd Field on the reported sighting of what was believed to be the bodies of the doctor and two paratroopers who leaped to the rescue after the plane wreckage was sighted. They would be officially listed as missing until the bodies were recovered.

"Fantastically inaccurate" aerial maps - the best available for current Air Force weather observation and navigation training missions in Alaska - were given partial blame for the December 23rd crash of "The Forlorn Turkey", according to Brigadier General Frank F. Everest, who stated that the search for the two officers from the F-13 and the three paratroopers would continue as long as "the slimmest hopes" remain for their survival.

Meanwhile, Bill Munz reasoned that since only six men had been rescued, the job was far from completed. Five men were still missing, and though there were many who held no hope for them, until they were actually found dead there was always the possibility they might still be alive.

Consequently, under similar weather conditions as the previous day, the search continued full blast. The F-13 weather aircraft was combing the crash site and surrounding areas. As Whaley was unable to assist on this day, Munz left early accompanied by Chuck O'Leary as observer. Shortly after they arrived in the search area, an object that both the Air Force and Munz had sighted the previous day was identified as one of the paratroopers. Landing a quarter of a mile from the wreck, the parachutist had scrambled up the hill to the rocky crest, which he may have thought to be the plane. Unable to locate the craft, he had returned to his chute and died there.

The other two parachutists were not so easily found. It was possible to find where they had hit on their landings, and traces of trenches scooped out through the drifted snow where they had been dragged for miles over the tundra by high winds showed their courses. Doubtless they had been too badly injured to spill their chutes in the darkness and blizzard of the endless arctic night.

The previous day, Whaley and O'Leary had left five ten-gallon cases of gas on their makeshift landing strip, so while the F-13 watched from overhead, O'Leary and Munz salvaged the gas and flew forty-odd miles to the smooth ice of Goodhope Bay. There, taxiing under a bank, they got out of the wind to refuel.

At forty below, high octane gas spilled on the bare skin is exceedingly painful and will induce almost instant frostbite. To refuel safely it is necessary to wear heavy fur mittens, which slows the operation somewhat. Nevertheless it took the bush pilots half an hour at most to refuel, and they continued flying until it was too dark to see, then made most of their return flight to Nome after darkness had fallen.

As a result of that day's flying, it was decided to continue the search with ground forces. Accordingly, arrangements were made to have Frank Whaley and Chuck O'Leary, Sammy Mogg, their dogs, sleds and winter gear as close to the scene as possible so they could transport the frozen body of the paratrooper to a suitable landing field on a nearby lake, and assist in the search for the four men still missing.

Shortly thereafter an Air Force ski-equipped Norseman stationed at Ladd Field was flown to Marks AFB by the head of the Cold Weather Test Detachment, Colonel R. R. "Bearpaw" Stewart, carrying Captain Harrold Strong, the head of the 72nd Recon Squadron Arctic Survival Unit, who, complete with his dog team, sled and rations, was put in charge of the ground search for the four missing men. In addition to his own dog team and equipment, Capt. Strong soon had several Eskimo drivers and their teams from Shishmaref, Cape Espenberg and Deering to help him cover the entire area north of the wreck on the peninsula.

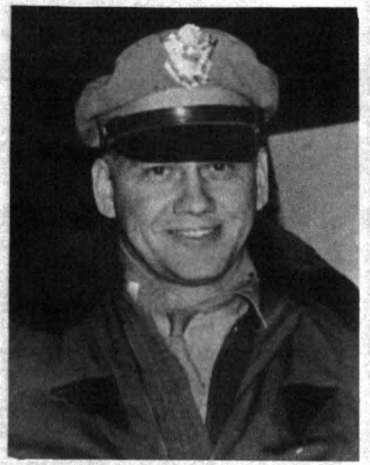
As the days stretched into weeks, the ground units doggedly continued the search until three of the four remaining bodies had been found. The aircraft commander, 1st Lt. Vern Arnett, and the navigator, 1st Lt. Frederick Sheetz were found frozen to death, evidently having become exhausted four miles from the plane, inward bound on their outbound trail. The second paratrooper was traced to a large indentation harboring a small, frozen lake, where he was covered with snow. The body of the last missing man, the doctor, wasn't located until the thaw the following spring. It was found by John Cross, an old-time bush pilot and retired Army Air Corps lieutenant colonel flying for Wien Airlines out of Kotzebue.

For a unit commander, there is no such thing as "case closed" on an aircraft accident, and Major White felt his responsibilities deeply. There would be accident investigation boards, countless analyses, refinements of procedures, and corrections made, if possible, to assure that the problem didn't repeat itself. Aerial charts would have to be revised, and survival procedures modified. Although the 46th/72nd had flown over a million miles on hundreds of missions under the most

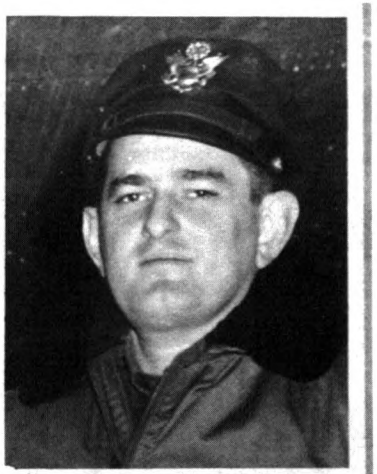
unfavorable circumstances, it was not enough to recall the old military maxim, that "in an operation of this size, you've got to expect losses."

It wasn't until Major White's next trip to SAC Headquarters that General Frederic Smith put the matter into perspective when he said, "Major, when your unit was deployed to Alaska, we expected you to lose half your airplanes and half your crews during the first six months; and we expected you to lose the other half of your planes and crews during the second six months. Here it is over a year and a half later and your unit has only lost four aircraft and five crewmembers. That is a fantastic accomplishment for your unit."

And it was.

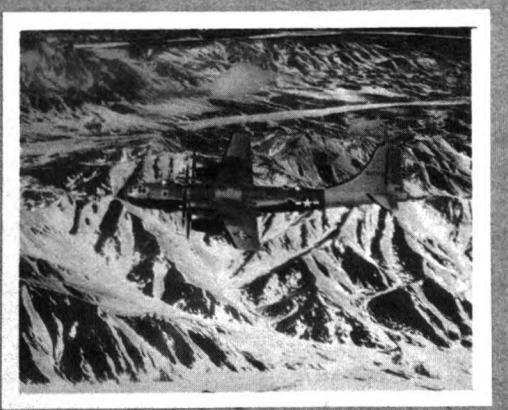


ON OR ABOUT 25 DECEMBER 1947 LTS. ARNETT AND SHEETZ GAVE THEIR LIVES IN AN ATTEMPT TO WALK TO CIVILIZATION IN ORDER TO OBTAIN AID FOR THEIR INJURED COMRADES IN THE "FORLORN TURKEY" WHICH HAD CRASHED 100 MILES NORTH OF NOME, ALASKA ON 23 DECEMBER 1947.



VERN H. ARNETT
1ST LT., USAF

FREDERICK SHEETZ
1ST LT., USAF



"THE FORLORN TURKEY"

According to documents found in the National Archives forty-five years after the fact, the flight of "The Forlorn Turkey" had also become an item of interest to the Soviets and the U.S. State Department, as the following memorandum indicates. It is interesting that with all the communiques and controversy involving restrictions to preclude overflights of the Soviet Union, none of these directives or limitations ever reached the 46th/72nd Recon Squadron.



MEMORANDUM FOR RECORD

PROBLEM:

1. To reply to Department of State request for investigation of Soviet allegation of American airplane violation of Soviet Frontier.

FACTS AND DISCUSSION:

2. By letter dated 16 January 1948, Department of State requested USAF investigation of allegations made in an inclosed note from the Soviet Embassy. The Soviets allege that "on 23 December 1947 at 1415 an American airplane violated the Soviet Frontier in the region of Cape Chukotak, flying for about seven miles along the coast of the Chukotak Peninsula at a distance two miles from shore".

3. By R&R, dated 5 February 1948, the D/P&O requested that the Director of Intelligence prepare an appropriate reply to the Department of State, The P&O request is based upon a determination through contact with the Alaskan Air Command (CK-OUT-94507, 21 Jan 48 on CM-IN-5231, 29 Jan 48) that the incident of 23 December 1947 is believed to have been precipitated by an aircraft of the 72nd Reconnaissance Squadron on a Project 23 mission. Project 23 is an electronic reconnaissance project.

4. The Department of State has placed a limitation on Project 23 flights of 12 miles from territory belonging to other than the United States.

5. An examination of the Project 23 Mission Report Number 7 M 265 A (T.S. control number 2-936) indicates that the Department of State limitation has been violated but it is impossible to determine that the Soviet frontier has been violated as alleged.

6. The objective of Project 23 can be accomplished without violating the Department of State limitation. The security of the equipment used on these missions dictates compliance.

7. While the original operational directive for Project 23 was issued by the Director of Intelligence, US Army, it is considered that the reply to the Department of State request is a P & O matter.

TOP SECRET

# Chapter 23

## Survival Rations Test at Birch Hill

In early 1948, the Air Force scheduled a program to test, under actual field conditions, newly developed Emergency Food Rations. This ration test had been developed at Wright-Patterson Air Force Base and the field test was to be made in Alaska under the supervision of Capt. Harrold Strong and Colonel Dick Bolerud, a medical officer with the Cold Weather Test Detachment.

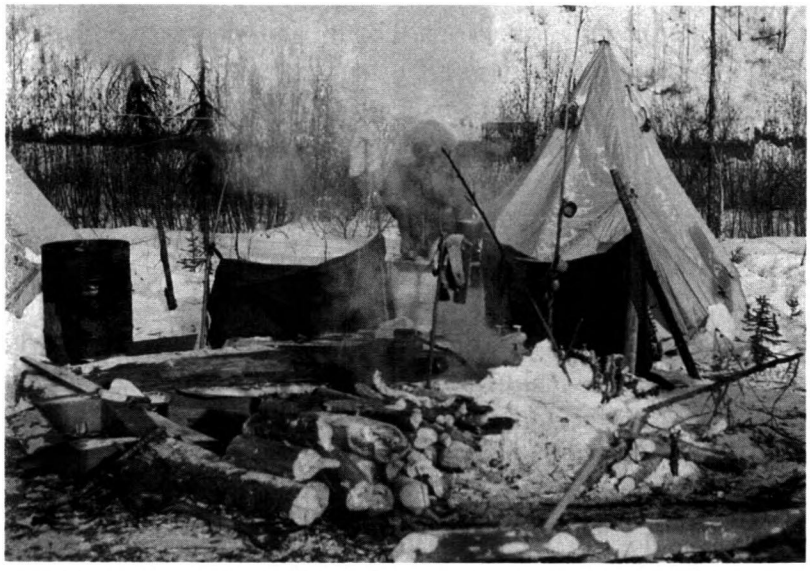
To carry out the rations test it was decided to use active flight crew personnel to be selected from the crews of the 72nd Squadron. The basic concept for the test was to have several groups, each in its own separate camp, given separate individual pre-designed food menus differing in caloric content and specific foods. The caloric values ranged from zero to as high as 4500 per day. Each test subject was required to fully consume the selected diet with a specific and controlled amount of water. The selected diets included existing army rations, such as "C" rations, as well as the newly developed ration of dehydrated food bars which provided about 1000 calories each.

To establish individual base lines for physical and health analysis and comparison, each test subject was given an extensive and detailed physical examination, part of which was a physical endurance test which consisted of strapping to the back a pack weighing one-third of the subject's body weight. The subject was then required to step up onto a platform 18 inches high and then back down to the floor, all in time with a metronome set at a specified speed.

Up-down-up-down...until the subject could no longer proceed or until the expiration of the time limit, which had been set as the test criteria. This same endurance test was again administered at the conclusion of the rations test.

Each test group was taken to a separate spot within the overall test site location at the foot of Birch Hill on Ladd Field. Here, pre-positioned equipment, tents, sleeping bags, emergency gas stoves, axes and the selected test rations were waiting for the group to set up and establish their test camp. A strict activity schedule for meal times was required along with a written evaluation of the meal consumed from each test subject.

The test group to which "Moose" Holland was assigned included Lt. Roland Perron, Sgt. Welty, Sgt. Lister and others. They were to eat and evaluate the new dehydrated food bars which for the most part were quite palatable. Some were less tasty and appealing than others, however. Lt. Holland found only one, a cheese food bar, that was completely unacceptable. When the outer covering was pierced, the contents poured into the mouth with the consistency of beach sand, and with almost the same taste. A large amount of water was needed to eat and swallow this bar, using an inordinate amount of the daily limit of water allowed.



Fire pit at Rations test campsite - Birch Hill.

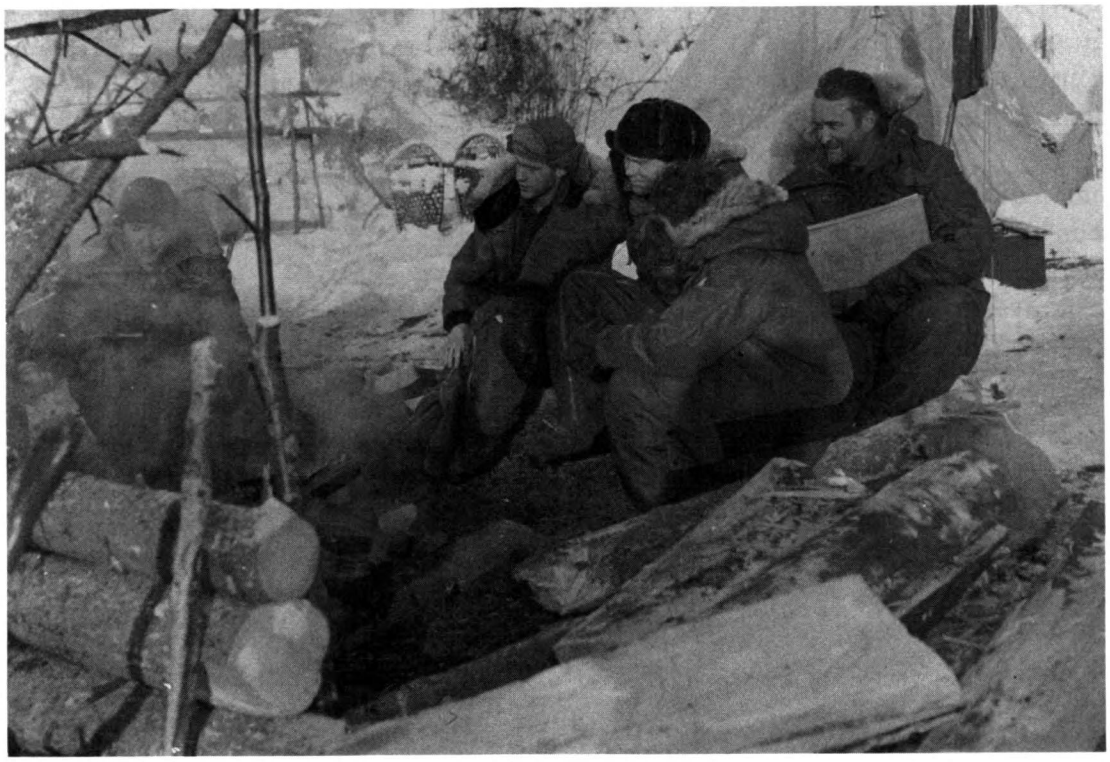
Around fire - Rations test Birch Hill, Ladd Field, 1948.

Rations test campsite.

Each group was closely watched by the medical staff, with vital signs being constantly monitored. Blood, urine, and stool samples were taken periodically. It got to be quite an exercise to take these samplings, in view of the deep cold of the below zero temperatures encountered.

The combined effects of the extreme below-zero cold and the reduced caloric intake had quite an impact on individuals in the zero calorie and new dehydrated rations groups. Large losses of weight and general onset of physical weakness and slowdown of mental processes were observed. It seemed to take forever to reach a decision on even the most simple tasks. Capt. Frank Ferrell, 72nd Operations Officer, and Lt. John Statzer were in the group on the water-only diet. This group became the most debilitated and were taken off the test prior to its scheduled conclusion.

Further testing of both the New Emergency Ration and newly developed arctic flight clothing and equipment was to be accomplished later in the Brooks Range of mountains at Chandler Lake.



Around fire, Rations test, Birch Hill, Ladd Field, 1948.

"Moose" Holland - Rations Test.

Dehydrated food bars tested at Rations test, Ladd Field, 1948.

# Chapter 24

## Survival Kits Test

Shortly after the conclusion of the Birch Hill Rations Test at Ladd Field, the 72nd Squadron was again asked to provide flight crew personnel to participate in an extended field test of an Emergency Survival Flight Kit. The kit consisted of tents, sleeping bags, stove, utensils, emergency rations (previously tested at Birch Hill), arctic flight clothing and also an over-and-under .22 caliber/.410 shotshell rifle.

The Cold Weather Test Detachment, under command of Colonel Stewart, had pre-selected a test site to the north of Ladd Field above the Arctic Circle in the Brooks Range of mountains on Chandler Lake. The lake was located at the northern edge on the mountains as they descended into the north slope to the Arctic Ocean. To reach the Chandler Lake site, a ski-equipped, single engine Noordoyn Norseman aircraft was used to ferry in people and equipment.

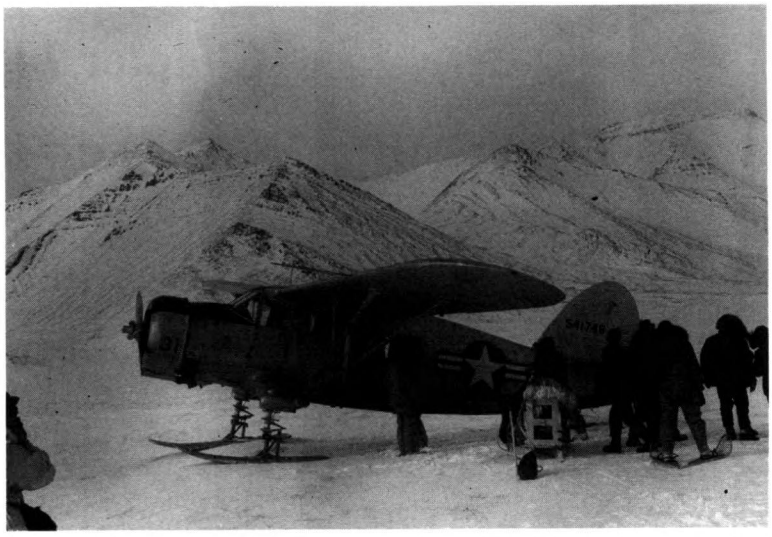
Bettles, Alaska (of Alaska pipeline fame many years later) was used as a transfer refueling point on the way from Ladd Field to the lake test site. A C-47 cargo plane would fly to Bettles from Ladd and transfer men and equipment to the Norseman for the last leg on into Chandler Lake.

The test site selected for the location of the base camp was at the inlet (south) end of the lake in the leeward side of the mountains on the eastern shore. Here, brightly colored tents were erected to house the test management team, as well as the sleeping gear, medical equipment and supplies, storage, etc. The survival test site was located further to the east and up-slope from the base camp at the foot of a mountain deeply drifted with snow. The test crew was taken to this location and given two newly-designed survival kits, each to last three men for ten days.

The two fluorescent-red barren-land arctic survival tents were erected on level areas cut out of the deep snowdrift against the mountain. Each tent was surrounded by snow-block walls built to protect against the almost constantly blowing winds. Between the two wall tents, a semi-cave was cut back into the snowbank and topped with a single personal parachute shroud to form a tent-like covering. The small emergency survival stoves used to melt snow to obtain water for drinking, tea or bouillon, were placed in this "mess tent". No heating stove was used in the sleeping tents for fear of fire. Only candles were used in the tents and provided an amazing amount of heat.

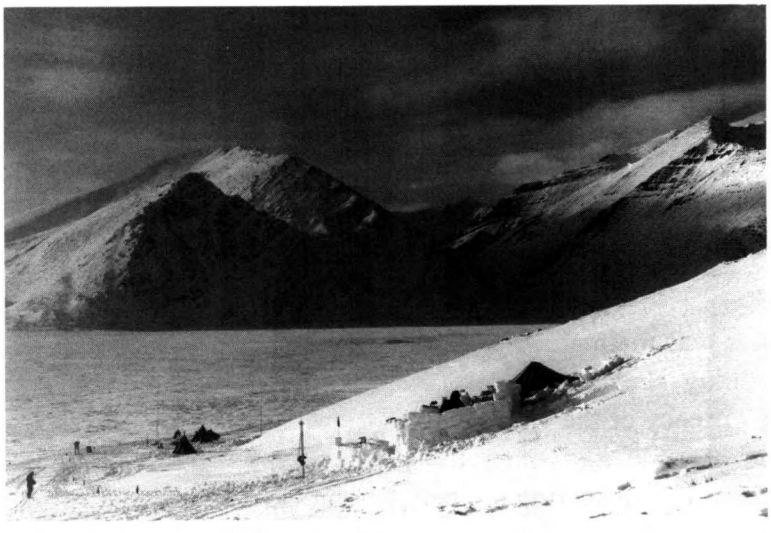
A rigorous schedule of physical activities was maintained which included foraging for fuel (low willow, shrubs, etc.), extended hiking, fishing, sledding trips and medical tests. After each activity, comments were recorded relative to the efficacy of the various items being tested.

One of the medical equipment tests consisted of measuring temperatures at various body locations for use in later evaluations of the arctic flight suits. This was done by taping electro-thermocouple to various body locations (i.e. - feet, chest, groin, armpits, back, etc.). All of the thermocouple leads were attached to a measuring unit (worn on the chest) with a switching capability to isolate and



Chandler Lake Test
Norseman picks up test subjects
Easter, 1948

Survival Flight kit test
for 3 men for 10 days



Chandler Lake
Base Camp below Test Camp
(Lake in background)

separately record the temperature of each lead. To establish a base line for temperature correlation, it was necessary to secure deep body temperatures.

After being "wired" with thermocouples, the test subject was required to be physically active out in the weather for extended periods of up to 12 hours. Every half hour, thermocouple readings were taken and recorded. Once an hour a deep body temperature was taken. Since an oral temperature was impractical in the deep below-freezing weather, the only other solution was to take the body temperature rectally. This became quite a chore to unzip layers of clothing and insert a **cold** thermometer. It soon came to feel as if that thermometer had sharp barbs on it! Ah, well, all in the interest of science.

To test chisels for cutting through thick arctic ice, a sled trek was made out onto the ice towards the middle and north end of Chandler Lake. The chisel sections were screwed together and formed a length of some eight to ten feet, as was the ice scoop. The lake ice was hard but yielded to the chisel and it was soon discovered that it was well over six feet thick. Lt. Perron got down into the ice hole to demonstrate its thickness.

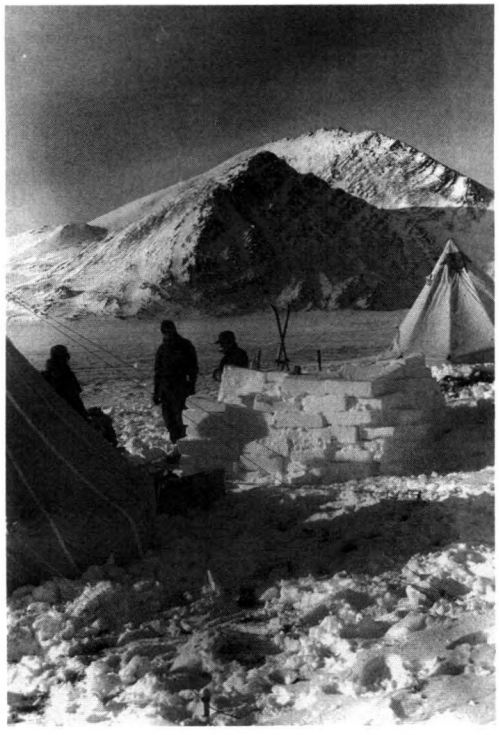
Resupply of food and fuel for the expedition was done by para-drop and free fall from the C-47 aircraft from Ladd Field. The passes were made over the base camp area to keep the dropped supplies as close in to the camp as possible, thus preventing long hauling by people-pulled sled.

As an integral part of the base camp, a latrine had been constructed from an open-ended 55-gallon drum suitably "seated" and surrounded by a high snow-block windbreak wall. During one of the C-47 resupply drops, the latrine was being used and to the horror of the occupant, as he looked up, he saw a 55-gallon drum of fuel hurtling through the air on a trajectory that seemed headed directly for the latrine. Fortunately, the drum overshot and missed the latrine, but for a few seconds there was a frantic scramble to pull up pants, etc. in an effort to escape.

One of the Wright-Patterson scientists was Mr. Butler, who had been with Admiral Byrd at Little America in the Antarctic. It was interesting to hear of his experiences and comparisons of conditions between the Arctic and Antarctic. While the weather at Chandler had not been as cold as desired, the testing of the equipment produced excellent usable data.

It was on Easter Sunday, 1948, upon completion of the test, that the Norseman landed at Chandler Lake to pick up the test personnel and ferry them back to Ladd Field. The test subjects were looking forward to some anticipated rest and recreation at Edmonton, Canada, but a little thing called the Berlin Airlift came up, and they went straight back to crew duty, flying missions in the 72nd Squadron.

Refueling at Bettles enroute to Chandler Lake: (on wing) - Van Liere;
(on ground) - Hanaway, Perron, Holland, unknown, Kniepe.



Chandler Lake base camp.

Chandler Lake - Lt. Roland Perron in ice hole.

Chandler Lake test camp.

Major M. E. White
Lt. C. O. Holland

# Chapter 25

## The Christening of "The Barrow Sparrow"

One of the mission objectives of the 46th/72nd Squadron was to train SAC and Weather Service crews in polar operations, so that they in turn could train yet other crews in the same arctic procedures. As related by Milt Hollacher, a navigator in the 46th/72nd, this effort was not without its drawbacks:

"On the 3rd of November, 1948, I was the instructor navigator accompanying one of the weather recon crews on one of their standard flights from Ladd to the Pole and back. Piece of cake, right? Wrong! It was more like a nightmare.

"I believe the instructor pilot from the 72nd was Captain Perry but I am far from certain. The only other crewman from our squadron was Marion Shelton. The primary crew members were all weather squadron personnel and the flight mission was to gather weather information in the polar regions. The flight was to proceed from Ladd AFB direct to Point Barrow, to the Pole, Point Barrow, and then direct to Ladd AFB and land. The aircraft was a WB-29 weather reconnaissance type and not a photo recon type (F-13). I believe both of the crew navigators were captains, and as I was just a first lieutenant, I more or less assumed they were more experienced than myself. Mistake No. One - **NEVER ASSUME ANYTHING!**

"The takeoff was uneventful and the pilots turned to the magnetic heading for Point Barrow. The two navigators decided that they would go into grid and proceed to Barrow on a grid heading. After checking their work I returned to my cushion on the entrance hatch by the flight engineer. On my next check of our position I discovered we were heading for Kotzebue - they had one of those wildly precessing autopilot gyros and must have been 60 degrees off course. After correcting course, we finally made it to Point Barrow but by now we were at least 30 minutes behind flight plan. What was supposed to be about a 16-hour mission was now closer to 17 hours long.

"The flight from Barrow to the Pole was uneventful; the celestial computations were pretty good, the winds were fairly normal and except for the high precession rate of both the autopilot and the Sperry gyros, everything seemed to be OK. But there was a problem on the turn back toward Point Barrow. Because of an error in arithmetic on the gyro log, instead of turning approximately 180 degrees, they only turned 30 degrees.

"On the next heading check, twenty minutes later, I discovered the error and got them on a corrected course. But now we had gone 20 minutes beyond the planned turning point and it would take about 25 minutes to return to a point abeam the turning point, so the 16-hour flight plan was more like 18 hours. No sweat, we were only about 5 hours from Point Barrow and no more than 8 hours from Ladd. Anyway, that is what I was thinking until the DR (Dead Reckoning) navigator said they had indications of an unexpected headwind from their most recent celestial fix. After checking the computations and plotting, it was apparent that we were running into a fairly strong headwind.

"With each succeeding fix our ground speed was decreasing. To add to our problems, we were running into intermittent overcast conditions which were limiting our celestial observations, both for fixing and true heading. Using the radar altimeter, we were computing headwind components in excess of 120 knots. With a groundspeed of less than 100 knots we could see there was no way to get back to Ladd with the fuel left in the tanks.

"We had been airborne about 16 hours (by now we were supposed to be landing at Ladd) when the pilots were able to make radio contact with Point Barrow radio. The pilots informed Barrow that we would need to stop and visit with them for a spell. Point Barrow Radio then informed us that they had only 4000 feet of PSP (pierced steel planking) for a runway and it was covered with about three inches of snow. The pilots asked Barrow to do what they could about the snow since we had no other choice but to land on their short strip.

"About an hour later we began picking up Point Barrow on radar at about a hundred mile range. Although the pilots had Barrow's radio on the "birddog", his was the first positive indication of our actual range. Before this, we found the information we were getting from the celestial fixes pretty hard to believe. At this time, I had over two and one-half years of flying over the ice and never had I encountered wind velocities much over 50 or 60 knots. It was just hard to believe that a jet stream that strong could be that far north. But with the radar return confirming our past information, I guess we became "born again" navigators.

"Our landing at Point Barrow could not be considered normal. Although we were extremely light, 4000 feet of snow-covered runway is not the normal thing for a B-29. The pilots were planning on landing as close to the end of the runway as possible and had worked out the procedure for reversing the props immediately after touchdown.

"The ends of the runway had been well marked but there was a lot of snow on the entire length of the runway - there just wasn't time to clean it down to the surface of the PSP. The touchdown was as planned and the props were reversed at the instant of touchdown, but the pilots needn't have bothered - by the time the throttles were advanced, we were stopped. The braking action of the snow was sufficient to stop us by itself. It was later discovered, however, that as we rolled down the runway, snow had become packed between the dual wheels and was then thrown back against the flaps, doing enough damage to require some sheet metal work. To the best of my knowledge there were no other problems as a result of our emergency landing at Point Barrow, Alaska. The tanks were dip sticked and I believe we had about 400 gallons of fuel remaining. Our flight time up to this point was 18 hours.

"We remained at Point Barrow for two nights and then returned to Ladd on 6 November 1948. By the 6th, they had cleared the runway, refueled us from 55 gallon drums and had fed us all day long. Food supplied for the construction workers assigned there was available 24 hours a day and it was all delicious. Because of their isolation, the contractor had to produce the best they could in living conditions.

"The flight back was 3 hours in length and the most exciting thing about it was the short field takeoff.

"Before our return, somebody at Ladd had decided the instructor pilot, Perry, should be replaced, so another IP was flown up to take over as Aircraft Commander/Instructor Pilot. To the best of my recollection the replacement pilot was Norm Skjersaa. Personally, I thought the pilots had done a good job, and if anybody had screwed up it was the navigators, myself included. The bad heading to Point Barrow and the bad turn at the Pole cost a couple of hours of flight time, but the big problem was the headwind coming into Barrow. Like any unexpected turn of events, it was a combination of factors that gave a couple of days vacation in the land of free refrigeration."

# Chapter 26

## Contributions to the Squadron Mission

There is no way of measuring the scientific value of the squadron. During its operation, many noted scientists and dignitaries visited the flights and talked with the crews. Some of these men went on flights to get firsthand views of the projects. These visitors were helpful in many ways to the organization; their advice on many issues helped the squadron over some difficult obstacles. Dr. Paul A. Siple and Sir Hubert Wilkins, both veterans of arctic and antarctic exploration, gave advice on survival techniques and equipment. Their reports on accomplishments of the squadron were favorable, and made higher headquarters more knowledgable of the work that was being accomplished.

The Air Force recognized the squadron as the official source of information on polar operations. Reams of reports and pamphlets were prepared by members of the unit on every subject pertinent to polar flying. Cold weather operation of aircraft was one of the major problems to solve. Technical representatives from all the companies that built the major airframe components were contracted for by the Air Force and made an integral part of the maintenance organization of the 46th Recon Squadron throughout its Alaskan tour. These technical representatives studied their equipment and its operation under extreme temperatures. Survival equipment, which had been a problem, was constantly being studied and tested.

Members of the flying crews were selected to camp out for a week in mid-winter with food allowances ranging from nothing but water to 4500 calorie per day diets. Most of these same men camped above the Arctic Circle for thirty days, surviving on rations they would have had in the event of a crash landing or bailout. Their experiences were passed along to other crewmen. These experiments gave the Air Force field-proven equipment for all flying crews.

In the spring of 1947, the 46th became a school on polar operations. Members of the 59th Weather Reconnaissance Squadron (later changed to the 375th), were sent to Ladd Field for polar indoctrination. The program was set up to give each man a course according to his specialty. After ground training was finished, flights were made with the crews until they were ready to fly out over the polar cap on their own. The Commanding General of the Alaskan Air Command charged the 46th with the responsibility of determining whether or not any crews coming through Alaskan bases would be allowed over the polar region. The Commanding General of Air Weather Service wrote of his sincere appreciation for the unit's help in inaugurating weather reconnaissance flights over the North Pole.

About the same time that year, a navigator, Lt. Whit Williams, was sent to Headquarters, Strategic Air Command, to attend a polar navigation conference. This conference was to set up training of units according to the recommendations of the 46th Squadron. In addition, Lt. Williams briefed the Navy regarding their pending flights to south polar areas.

Subsequent to the conference, and conducted by Lt. Dave Haney, Polar Navigational Instructional trips were made to other SAC bases where lectures were made to flight crews, and courses were given to navigators. Also, as both actors and technical advisors, Lieutenants Marvin Greenberg and Frank O. Klein helped to make a polar navigation movie in Hollywood. These two navigators also made two trips to Canadian Loran and radar stations in coordination with the Royal Canadian Air Force regarding "Dew Line" effectiveness.

In the summer of 1947, the 7th and 43rd Bomb Groups came up for more study and training flights, with the 46th squadron furnishing instructor personnel for both ground and air work. This was extra work for the 46th crews as they were still carrying on their assigned mission. In the fall of the same year, the 97th Bomb Group came up for the winter and were stationed at Eielson Air Force Base. Again the squadron (which had become the 72nd) was charged with the training. Instructors were sent over every day until all crews had been put through a comprehensive ground course and a check ride.

Lieutanants Frank O. Klein and David J. Haney were sent to Headquarters, Aeronautical Chart Service, Washington D. C., to attend a conference for the selection of a polar chart. The final selection was a scale of 1:2,188,800 on a modified Lambert Conformal projection. The chart layout consisted of 8 charts for the polar area, and were used as the basis for all subsequent polar navigation.

The members of the squadron, almost to a man, may have moaned their fate at being in Alaska for a tour, but not one of them would have denied that he is proud to have been a part of the organization that has conquered Thule, the name given to the most northerly land in the world. They are proud of General Eisenhower's comments in a letter to the Commanding General of the Yukon Sector and forwarded in a memorandum to Major White: "[General Eisenhower] particularly asks that all members of the 46th be advised of his personal appreciation for the splendid work which they are doing in exploring hitherto unknown areas of the world and in adding to our knowledge of polar regions."

Marvin Greenberg, Norbert Zwicke and Frank Klein.

Polar sunset from 46th Recon F-13.

Melville Island in the Canadian Archipelago as seen from 46th Recon F-13.

# Chapter 27

## Terrestrial Magnetism Studies

After the first flight by the 46th over the polar sea, the navigators on the flight recommended that an intensive study be made of the magnetic compass and its reliability in this area. One of the navigators in the flight made preparations to carry out such a study, but abandoned the project as flights did not go over enough area at that time to permit a complete survey. When "Project Polaris" got underway the opportunity for a complete study presented itself. First Lieutenant Frank O. Klein accepted this responsibility and went all out in pursuit of definite information on magnetism. In Frank Klein's own words:

"It all began when we were told in textbooks and by the authorities that any magnetic compass was useless in the Arctic. The magnetic compass was said to fluctuate wildly because of proximity to the north magnetic pole. But as is often the case, conventional wisdom was proven to be flawed.

"As chance would have it, I had been appointed the 'Flight B Navigator', whose primary area of concern within the Arctic encompassed the islands of the Canadian Archipelago. This was the area within which the north magnetic pole was to be found.

"To my surprise, early flights in the fall of 1946 suggested that the fluxgate compass was not entirely useless. Although the indicator typically oscillated slightly in the region (2 to 3 degrees), the requisite sensitivity for directional indications appeared always to be given. Unfortunately, its navigational use was precluded since the magnetic variation (declination) values depicted on our charts were purely extrapolated values, could not be immediately corroborated, and obviously could not be relied upon. A plan of action suggested itself. I would ask our Flight B navigators to read and record the fluxgate compass indication every time a true heading value was obtained from the astro-compass. This procedure could be made optional for navigators in the other flights of our squadron. Since a great many polar flights were being planned, these flights could produce sufficient magnetic variation values to develop a reliable chart of polar isogonals. Such a chart would provide polar navigators with a backup means of navigation, particularly in an emergency. At this time, a search for the current location of the north magnetic pole was at best an afterthought; but the afterthought provided a valuable by-product.

"Since the contemplated project was not a part of our squadron's assigned mission and would involve additional work for our navigators, I sought approval for the work plan from my immediate supervisor, the Squadron Navigator, Norbert Zwicke, who, true to form, gave his approval and enthusiastic support.

### I. THE DEVELOPMENT OF AN ARCTIC MAGNETIC CHART

"Sufficient data had been collected and analyzed by the end of 1947 to prepare a chart depicting isogonals north of the North American continental shelf to 85$^{o}$N latitude and roughly from the

western half of the Canadian Archipelago westward to the International Date Line. The chart reflected approximately 600 mean variation values computed from data recorded by a number of navigators.

"The individual magnetic variation values were determined by comparing true headings obtained from an astro-compass with magnetic headings simultaneously obtained from the fluxgate compass. In a large percentage of the magnetic observations, readings were averaged over a two-minute period and compared with the true heading value existing at the mid-period of the observation. Consequently, the total of individual magnetic readings considerably exceeded 600. The chart was sectored into many areas, for each of which mean variation values were determined. The average probable error for the mean was calculated to be no more than three.

"The subject chart was published in Vol. 30, No. 2, TRANSACTIONS, AMERICAN GEOPHYSICAL UNION (AGU), for April 1949. In addition, the AGU extended its membership to the author. The Department of Commerce, U. S. Coast Guard and Geodetic Survey also accorded recognition to the project in a letter to Lt. Klein stating, '...the availability of the data and the chart have been of great specific value to this Bureau in preparing magnetic charts...'

## II. THE SEARCH FOR THE MAGNETIC NORTH POLE

"By mid-year 1947 sufficient data (1000 determinations) had been collected within the Canadian Archipelago to provide some surprising findings. For one, the fluxgate compass was responsive to the relatively weak horizontal component of the earth's magnetic field in almost all of the region. The exception was a small elliptical-shaped area whose axis extended NW-SE from Boothia Peninsula to the Bathurst Islands, about the area of Montana, which is small compared to the 5,500,000 square miles of the Arctic ocean. Although magnetic readings were sometimes possible within this area, they were often erratic and unreliable. However, sufficient data became available to yield unexpected and confusing results. From a navigational standpoint, it appeared we were confronted not with one, but with three magnetic poles. A more critical analysis became necessary. This analysis indicated that only one of the poles met the acid test of complete isogonal convergency. This was the central pole on northwestern Prince of Wales Island, at 73°30'N - 101°00'W as reported at that time.

"The two foci of the ellipse, one on Bathurst Island and the other on Boothia Peninsula were particularly perplexing. Neither of the two indicated complete isogonal convergency. Of the two, the area on Bathurst Island was more complete in this respect. (Incidentally, the Air Force charts current at the time depicted the magnetic pole on Boothia Peninsula).[1] Then, too, we had experimented with a number of "homing" missions which had successfully "homed-in" on each of the two foci. This was particularly significant since it suggested that the two local poles could prove of singular importance in a polar navigational emergency. Furthermore, I had personally witnessed complete fluxgate indicator gyrations at only three locations on all of my missions in the Arctic - and these were very near or at the three subject locations. These conditions prompted the reference to two local or secondary poles - one on the Bathurst Islands at 75°35'N - 103°30'W (the more dominant secondary pole) and the other on Boothia Peninsula at 70°40'N - 97°20'W.

"It was not long after these findings had been officially reported that we learned that a Canadian ground expedition had been sent into the Canadian Archipelago with the specific mission of locating the position of the north magnetic pole. This expedition could not confirm our indications of secondary poles on Boothia and Bathurst. However, a letter dated July 21, 1948, written by R. Glenn Madill, Chief of Terrestrial Magnetism, Department of Mines and Resources, Canada, addressed to Lt. Frank O. Klein stated, '...However, we agree on one point and that is the presence of what we can call the main magnetic pole on northwestern Prince of Wales Island. I have accepted as a purely preliminary value the position latitude 73°N and longitude 100°W. Your value of 73°15'N and 99°45'W is in excellent agreement, and I suggest that you use your value by all means...' This is astounding! Being just a few miles from the ground expedition's results!"

A United States Air Force nationwide press release on October 19th, 1947 announced the discovery of the three magnetic north poles - unfortunately without qualification. Although Frank Klein was never accorded any formal recognition from the USAF for his efforts, he nevertheless has remained thankful for the fortune of having been a member of the 72nd Recon Squadron (VLR) Photographic. It was only by virtue of his having been an Air Force member of that unit, that aerial terrestrial magnetic research in the Arctic was made possible.

In the words of 1st Lt. David J. Haney, another outstanding navigator in the squadron and author of *Navigation North of Seventy*: "As is so often the case, Klein's co-workers did not always appreciate the hours of study and hard work he did on this project. His findings, probably more than any other single project, have been responsible for the attention focused on the organization by scientific agencies. The much-deserved recognition for his work came when he was invited to accept membership in the American Geophysical Union. This honor is not only a hard-earned recognition for Klein, but also for the squadron and the Air Force."

# Chapter 28

## Clues to a Cataclysm

Frank O. Klein's pinpointing of the north magnetic poles' locations at positions 125 to 200 miles further north than was earlier predicted attracted great interest in the scientific community, particularly among top government scientists under Vannevar Bush. Since 1831, when the first observations were made, the magnetic north pole had remained almost static on Boothia Peninsula until 1945 (from 70°06'N-96°54'W to 70°30'N-96°00'W). Klein's discovery in 1947 that the main magnetic north pole was located at the northwestern shore of Prince of Wales Island (73°15'N-99°45'W) revealed that it had dramatically moved 165 miles closer to the geographic north pole.[1] The government scientists subsequently began a scientific investigation into the ramifications of Klein's findings. Many of their study groups, held at the Pentagon, were attended by Major White and Dr. Paul Siple.

The first determination of the Pentagon study was that while the rate of northward magnetic polar movement (which Dr. Paul Siple sought to establish) seemed to be unpredictable, it had been in a decidedly north-north-westerly direction, moving ever closer to the geographic North Pole. The question in the minds of many in the scientific community was what would happen if and when the magnetic pole converged on the geographic pole. Was there a connection between the powerful geomagnetic forces involved in polar movement and the mechanism that caused geologic change?

The forces that have created mountains have remained a mystery, and yet there has to be an explanation for high strata of mountain rock containing marine fossils. Some tremendous force had to lift up the land with such pressure so as to raise former sea beds to high altitudes. There must be some reason why "beaches" of sand formed from ocean-wave action are found at 1500-foot altitudes in the mountains of Italy[2]. Scientists have not yet been able to agree on whether the change that raised the sea beds was slow or rapid.

Spitzbergen is an island well within the Arctic Circle, and is now snow and icebound most of the year. Yet on Spitzbergen there is ample evidence that tropical corals once grew on the shores of the island.[3] Spitzbergen also has considerable coal deposits, attesting to the island's once-temperate or tropical climate. Also found there were numerous fossils of water lilies imbedded in lignite, also confirming that the island once had a warm and marshy environment.[4] How can we explain the once-temperate climate of this arctic region unless either the whole earth was once warmer than it is now, or unless the poles were previously in different locations relative to the earth's crust?

When Admiral Byrd went to the Antarctic from 1933 to 1935, his expedition found leaf stem imprints and fossilized wood under the snow and ice.[5] Sir Ernest Shackleton found coal beds within 200 miles of the geographic South Pole, evidence of massive primeval forestation in Antarctica.[6] The explanation is not as obvious as saying that the Antarctic was once devoid of ice so that the plants

and forests could grow. We still must account for the fact that massive forestation doesn't occur where there are six months of darkness during the year, a characteristic of a polar area.

Also found near the geographic South Pole were the fossilized footprints of a prehistoric mammal-like reptile.[7] Since reptiles are known to be cold-blooded, and need the warmth of the environment to sustain their body heat, it is evident that the Antarctic did not always have a cold climate. If this is true, Antarctica could not have always been located at the south geographic pole.

Although the phenomena referred to as Ice Ages are an accepted fact, few scientists can agree on how they are caused. Not only have mile-high ice sheets covered the northern North American continent as far south as New Jersey, Ohio and Wisconsin; but Europe, Africa and India have had their ice ages too. There are many theories as to how they are caused, but none have been proven. We are left with numerous explanations, some plausible, and some improbable. The last Ice Age is believed to have ended only about 10,000 years ago, leaving many mysteries unsolved.

Millions of animals were frozen alive by the sudden glacial conditions of the last ice age, and hundreds of thousands still remain where they died, buried frozen in the ground. The New Siberian Islands, located 200 miles off the northern coast of Siberia, are almost literally composed of the bones and remains of multitudes of prehistoric mammoths, saber-toothed cats, giant beavers (the size of goats), prehistoric rhinoceros, buffalo, deer, horses, and other small mammals.[8] How could so many of these animals (also found throughout Siberia and Alaska) be frozen intact within the ground in such a way that ten thousand years later their flesh, when thawed, was said to be "edible"? Indeed, at one Russian scientist's banquet at Moscow's Academy of Sciences in the 1930's, the main course consisted of quite "delicious" mammoth steaks.[9] Another question is how the tundra of northern Siberia and Alaska could have supported such large populations of prehistoric animals, unless the Arctic once had a temperate climate with lush vegetation?

It is well-known that tree rings are a measure of tree growth over annual seasons. Why then do prehistoric frozen trees unearthed in Spitzbergen, Norway, have no rings?[10] Only if there were once no seasons in Spitzbergen would the trees have no rings. But the only place on earth where there are no seasons is at the equator. If the earth's equator once passed through or near Spitzbergen, then it is obvious that, relative to the earth's crust, the earth's geographic poles would once have to have been in different locations than they are now. What caused their apparent shift?

An expedition digging in the Canadian Archipelago only a few hundred miles from the geographic North Pole found under the ice and snow hundreds of frozen (not petrified) prehistoric tree trunks, shattered as though by massive tidal wave activity, and buried in the sand. Beneath the surface they found another layer of similar tree trunks, and beneath that layer yet another, until they had identified nine different levels of evidence of catastrophic change.[11] Not only was the Arctic apparently once a highly forested temperate or tropical region, but it was subject to periodic cataclysmic upheavals.

It is clear that there have been times in the earth's history when geologic change has upset the living conditions of its flora and fauna. Many examples argue that such changes are violent and dramatic. As Professor Frank C. Hibben points out in his book *The Lost Americans*:

> The Alaskan muck is like a fine, dark gray sand...Within this mass, frozen solid, lie the twisted parts of animals and trees intermingled with lenses of ice and layers of peat and mosses. It looks as though in the midst of some cataclysmic catastrophe of ten thousand years ago the whole Alaskan world of living animals and plants was suddenly frozen in midmotion in a grim charade...
>
> Throughout the Yukon and its tributaries, the gnawing currents of the river had eaten into many a frozen bank of muck to reveal bones and tusks of these animals protruding at all levels. Whole gravel bars in the muddy river were formed of the jumbled fragments of animal remains...
>
> The Pleistocene period ended in death. This is no ordinary extinction of a vague geological period which fizzled to an uncertain end. This death was catastrophic and all-inclusive... The large animals that had given their name to the period became extinct. Their death marked the end of an era.
>
> But how did they die! What caused the extinction of forty million animals? This mystery forms one of the oldest detective stories in the world. A good detective story involves humans and death. These conditions are met at the end of the Pleistocene. In this particular case, the death was of such colossal proportions as to be staggering to contemplate.[12]

If life on earth can be subject to such wholesale destruction, there is much to be said for learning all that we can about the geological forces involved.

# Chapter 29

## Polar Wander

By Frank N. Magill

**Type of earth science**: Geophysics
**Field of study**: Geomagnetism and paleomagnetism

*Evidence from several of the earth sciences clearly demonstrates that the earth's magnetic and geographic poles have been located at widely separated places relative to its surface during the planet's geological history.*

### Principal Terms

ASTHENOSPHERE: a hypothetical zone of the earth that lies beneath the lithosphere and within which material is believed to yield readily to persistent stresses.

ICE AGES: periods in the earth's past when large areas of the present continents were glaciated.

LITHOSPHERE: the outer layer of the earth.

NORTH GEOGRAPHIC POLE: the northernmost region of the earth, located at the northern point of the planet's axis of rotation.

NORTH MAGNETIC POLE: a small, nonstationary area in the Arctic Circle toward which a compass needle points from any location on the earth.

PALEOMAGNETISM: the intensity and direction of residual magnetization in ancient rocks.

PLATE TECTONICS: the study of the motions of the earth's crust.

### Summary of Phenomenon

Shortly before World War II, geophysicists discovered a method of determining the location of rocks on the earth's surface at the time they were formed, relative to the north magnetic pole. Thus began the study of paleomagnetism. Paleomagnetic studies quickly yielded very puzzling and often contradictory results. The new science produced evidence that the north magnetic pole has changed

its location by thousands and even tens of thousands of miles hundreds of times during the earth's geologic history. Since earth scientists are generally agreed that the north magnetic pole has always corresponded closely with the north geographic pole, this evidence seemed to indicate that the earth's axis of rotation must have changed, a highly unlikely occurrence.

As the paleomagnetic evidence for different locations of the poles in the past accumulated through measurements of rock formations from around the world, more and more earth scientists began to accept the theory of continental drift. This theory offered an explanation of the paleomagnetic evidence without the necessity of postulating that the earth's axis of rotation had changed in the past. Alfred Wegener, early in the twentieth century, had drawn attention to the theory that the continents moved in relation to one another. Most geologists initially greeted his theories with derision, but many others agreed with him, causing an often bitter controversy in the earth sciences that lasted almost half a century. The ever-growing body of paleomagnetic evidence could be explained by postulation that the surface areas of the earth move in relationship to the planet's axis of rotation. This explanation proved to be more acceptable to geologists than the idea that the axis of rotation changed.

With the growing acceptance of the theory of continental drift in the 1940's, geologists began trying to explain the mechanism that caused it. They postulated that the earth has a stable and very dense core overlain by an area called the asthenosphere, which is made up of rock rendered plastic by heat and pressure. Floating on the asthenosphere is the earth's outer crust, or lithosphere. Dislocation within the earth caused by the action of heat and pressure result in the movement of the lithosphere relative to the core and to the axis of rotation. The initial attempts to explain continental drift have been considerably revised and refined into the modern theories of plate tectonics and ocean-bed spreading, but the basic premise remains the same: The surface areas of the earth move in relationship to its core and to its axis of rotation. The result of the movement of the earth's lithosphere is that the surface area located at the axis of rotation does not remain the same over long periods of time. This shifting accounts for the apparent "wandering" of the poles as well as for several other puzzling aspects of earth's geologic history.

Striking evidence that the surface areas of the earth have moved enormous distances during geologic history relative to its axis of rotation comes from the study of glaciers. Observations from around the globe show that almost all the land areas of the earth have been glaciated at some time in the past, including parts of Africa, India, and South America presently located on or near the equator. Without postulating either a substantial shifting of the earth's surface relative to its axis of rotation or a change in the axis, equatorial glaciation is inexplicable. If global temperatures dropped to levels sufficient to glaciate even the equator at some time in the past, all life on earth would have been destroyed. If, however, the areas of Africa, India, and South America which are presently located in tropical locales once shifted to the polar regions and shifted from there to their present locations, their ancient glaciation is not at all mysterious.

*Shifting of the earth's surface relative to its axis of rotation is almost certainly a major cause of the so-called ice ages*, the origins of which have puzzled glaciologists since the beginnings of that science. Previous explanations of ice ages - including global drops in temperature, the passage of the earth through exceptionally cold regions in space or through areas containing "spacedust" that

blocked out a significant amount of the sun's radiation, and unexplained fluctuations in the amount of radiation generated by the sun - are all unsatisfactory. It seems much more likely that areas of the earth that were glaciated in the past, such as northern Europe and North America as far south as present-day New Jersey, were located much closer to one or the other of the poles at the time they were covered with ice.

The study of paleoclimatology has also produced evidence supporting the proposition of the shifting of the earth's crust relative to its axis of rotation. Paleoclimatologists study the climates of past ages on the various parts of the earth's surface. They have found that Antarctica once supported rich varieties of plant and animal life, many of which could only have lived in temperate and even subtropical climates. Explorations in the far northern regions of Canada, Alaska, and Siberia have revealed that those areas also supported multitudes of animals and luxurious forests in the past, as did many of the islands presently located within the Arctic Circle. Obviously, those regions must have had much warmer climates at the times when the plant and animal life flourished there, which can be explained in only one of two ways: either the climate of the entire world was much warmer in the past, or those areas now located near the poles were once located in much more temperate latitudes. If the entire world had warmed to the point that the polar areas had temperate climates, the tropical and subtropical areas of the earth would have been much too hot to support life, which is demonstrably untrue according to the fossil record. Thus, the areas now near the poles must have been located in temperate climatic latitudes in the past.

Earth scientists, using the evidence discussed above and paleomagnetism, have established an approximate chronology showing which areas of the earth's surface were located at its north rotational axis during past ages. At the beginning of the Cambrian period (roughly 600 million years ago), the area of the Pacific Ocean now occupied by the Hawaiian Islands was at or near the earth's north rotational axis. By the Ordovician period 100 million years later, the surface of the earth had shifted in such a manner that the area approximately 1,000 miles north and east of modern Japan was on or near the North Pole. Fifty-five million years later, during the Silurian period, modern Sakhalin Island north of Japan was within the Arctic Circle. During the next 20 million years, the area of modern Kamchatka in eastern Siberia shifted to a position very near the Pole. Earth scientists have identified ninety-nine separate locations that occupied the polar regions at one time or another during the ensuing 395 million years from the Silurian to the Pleistocene. During the past million years, forty-three different areas of the earth's surface have been on or near the north geographic poles, averaging over 1,500 miles distance from each other.

Although contemporary earth scientists have reached a consensus that the surface of the earth has shifted relative to the planet's axis of rotation many times in the past, several problems remain. *One area on which there is no unanimity of opinion is the mechanism responsible for crustal shift.* The answer most likely lies in high-pressure physics and the nature of the asthenosphere. *Another, more controversial, problem concerns the speed of crustal shifts.* During most of the twentieth century, almost all of the geologists who were daring enough to accept the theory of continental drift assumed that the movement of surface features of the earth relative to the axis of rotation and relative to one another was very slow, on the order of a few inches per year at most. Then an increasing number of earth scientists began arguing for short periods of relatively rapid movement of the earth's crust and long periods of stability.

Those problems notwithstanding, there can no longer be any doubt that the surface of the earth has shifted many times relative to its rotational axis. The phenomenon has led to the mistaken assumption that the rotational axis has moved relative to the earth's surface - thus the term "polar wander." The rotational axis of the earth has remained constant throughout its history; apparent polar wander is caused by the shifting of the earth's crust.

## Methods of Study

The study of paleomagnetism during the twentieth century has yielded irrefutable evidence that many different areas of the earth's surface have occupied polar positions during the history of the planet. Scientists studying paleomagnetism measure the weak magnetization of rocks. Virtually all rocks contain iron compositions that can become magnetized. In the study of paleomagnetism, the most important of these compositions are magnetite and hematite, which are commonly found in the basaltic rocks and sandstones. Paleomagnetism may also be measured in less common rocks that contain iron sulfide. In igneous rocks, magnetization takes place when the iron compositions within the rocks align themselves with the earth's magnetic field as the rocks cool. In sedimentary rocks, small magnetic particles align with the magnetic field as they settle through the water and maintain that alignment as the sediments into which they sink solidify.

Magnetized rocks not only indicate the direction of the north magnetic pole at the time they were formed, but also show how far from the Pole they were at formation by the angle of their dip. Scientists call their horizontal angle of variation and their dip, the inclination. Variation reveals the approximate longitude of the rock sample at the time of its formation, relative to the north magnetic pole, and inclination gives its approximate latitude. By ascertaining the date at which the rock sample being examined was formed, using well-known methods, scientists are able to establish the area of the earth's surface relative to the north magnetic pole that was occupied by the rock at the time of its formation.

There are, however, many pitfalls for the unwary scientist investigating paleomagnetism. A rock whose magnetism is being studied may have moved considerable distances from its place of formation by glacial action or by crustal movement along a major fracture in the earth's surface, such as the San Andreas fault on North America's west coast. High temperatures, pressure, and chemical action can distort or destroy the magnetization of a rock. Folding and the movement of the continents relative to one another may also alter the original orientation of the rocks whose magnetism is being studied. All these pitfalls may be avoided through the expedient of basing estimates of the relative position of the north magnetic pole on a great number of rock samples of the same age, gathered from many different locations on all the continents.

Another problem in paleomagnetic studies involves the constant movement of the north magnetic pole relative to the north geographic pole. Recent studies show that the north magnetic pole moved from 70 degrees to 76 degrees north latitude (approximately 345 miles, or 576 kilometers) during the period 1831-1975. This phenomenon might accurately be called true polar wander, though it does

not involve any alteration either of the earth's axis of rotation or of the surface of the planet relative to its axis of rotation. More geophysicists studying this movement have concluded that over a period of several thousand years, the average position of the north magnetic pole coincides with that of the north geographic pole. Thus, when scientists learn that the north magnetic pole was located near Hawaii 600 million years ago, it is a virtual certainty that modern Hawaii was at that time located near the north geographic pole.

## Context

*The most immediate and pressing question facing all residents of planet Earth concerning apparent polar wander is the speed with which the phenomenon may occur.* An historian of science, Charles H. Hapgood, compiled a huge amount of compelling evidence in the 1950's that massive shifts of the earth's crust relative to its axis of rotation occur in geologically brief periods of time. Hapgood made a very strong case for the surface area of the Canadian Yukon, which is now located at approximately 62 degrees north latitude, and longitude 137 degrees west, having occupied the north geographic pole prior to 80,000 years ago. Then, in a massive movement which took less than 5,000 years, the earth's surface shifted in such a way that an area of the Greenland Sea now located at approximately 72 degrees north latitude, and longitude 10 degrees east occupied the north polar region. This shift involves a distance of almost 5,000 miles.

Hapgood offers further evidence that the earth's surface remained stable relative to its axis of rotation for approximately twenty thousand years, then began another massive shift resulting in the area of Hudson's Bay that now occupies the surface region located at about 60 degrees north latitude, and longitude 83 degrees west, moving to the earth's north rotational axis. This movement of approximately 3,500 miles took less than 5,000 years. Again the earth's surface became stable, according to Hapgood, this time for more than 30,000 years, until about 17,000 years ago. At that time, the earth's surface began another movement lasting nearly 5,000 years and resulting in the present surface-pole relationship.

If Hapgood is right about the surface of the planet shifting enormous distances in relatively short periods of time, the period during which the shift actually occurs must be a traumatic era for the earth's flora and fauna, including humankind. Such rapid movement would certainly produce earthquakes and volcanic action of almost unimaginable proportions throughout the globe. Weather and tidal patterns would be greatly and unpredictably altered, which could have fatal consequences for many plant and animal species. The last result offers yet another piece of powerful evidence for the rapid-shift hypothesis.

The earth's fossil record offers examples of the mass extinction and extermination of many species of flora and fauna during the geological history of the planet. The most recent such event occurred at the end of the Pleistocene epoch, about 12,000 years ago. Literally tens of millions of animals in North America alone died in a relatively short period of time, leaving their sometimes remarkably well-preserved remains lumped together in huge "boneyards," stretching geographically from Alaska to Florida. This mass extinction of fauna must have been caused by the events accompanying

crustal displacement: volcanic action on a gigantic scale not only would throw huge amounts of ash into the air, causing a lowering of global temperatures and an increase in rainfall producing widespread flooding, but would also produce quantities of poisonous gasses lethal to animals and humans in the vicinity; rapid and pronounced weather changes would destroy food supplies which may have been the ultimate cause of the extinctions of many species; widespread earthquakes could also take a large toll on animal life.

If, as more and more geophysicists are coming to believe, the shifting of the earth's surface does take place rapidly at infrequent intervals and for reasons not currently well understood, the phenomenon is of the utmost importance. Modern civilization would not survive the enormous climatic dislocations that must accompany such a shift. It is therefore imperative that the phenomenon known as polar wander be studied to the point that it can be, if not prevented, at least predicted and prepared for.

# Chapter 30

## The Flip of the Earth

***Washington Post: (October 7, 1946) - "General George C. Kenney [Commander of Strategic Air Command]: 'Apparently the magnetic North Pole is about 200 miles closer to the North Pole than previously believed.'"***

In the previous chapter Frank N. Magill points out (1) that apparent "polar wander" has frequently occurred in the geologic past, (2) that "polar wander" is actually caused by the shifting of the earth's crust relative to the geographic poles, (3) that crustal shift is almost certainly a major cause of catastrophic geologic upheavals and ice ages; however, (4) the "triggering mechanism" responsible for crustal shift remains unknown, and (5) the speed of crustal shift is also unknown but would determine the consequences to civilization and the world's flora and fauna.

Although contemporary science raises numerous questions, many of their answers may have been found by government scientists and geographers over forty-five years ago. The data on terrestrial magnetism that the 46th/72nd Squadron obtained indicated that the magnetic pole was 125 to 200 miles north of where it was predicted to be according to projections from findings obtained on earlier expeditions. This indicated that the north magnetic pole had moved toward the geographic pole much faster than previously anticipated. Among the government scientists, the question arose as to what would happen when the magnetic and geographic poles coincided.

To answer this, under the project control of Dr. Paul A. Siple, the Rand Corporation was contracted to conduct lab studies using models of the earth constructed of concentric spheres - an inner sphere representing the electromagnetically-charged molten iron core of the earth whose axis defined the "magnetic" poles; and an outer sphere representing the crust of the earth which rotated around a "geographic" polar axis. It was determined through repeated experimentation that as the "magnetic" pole approached the "geographic" pole, the "magnetic" pole would at some point accelerate its rate of convergence as though pulled toward the "geographic" pole by centripetal force and jump to coincide; but instead of the poles coinciding, the "magnetic" pole would rapidly "flip" around the "geographic" pole, then spin off towards the equator as though by centrifugal force, ending up at a position where the two axes assumed an approximate 89-degree divergence. After this polar "flip" occurred, the axes would then gradually begin to reconverge over a long period of time.

This "polar flip" phenomenon may explain how crustal shifts are triggered. Albert Einstein, in his foreword to Hapgood's book, stated that, "such displacements [crustal shifts] may take place as the consequence of comparatively slight forces exerted on the crust..." It is believed that the earth's magnetic field originates in its electromagnetically-charged core; and that in the presence of this field, the crust becomes discernibly magnetized over a period of time. It may be that, much as a rotating magnet draws iron filings, when the magnetic pole "flips", the induction caused by the radical and rapid rotation of the earth's magnetic field impels the crust to break from the underlying astheno-

sphere and follow. Unlike what is known as a 180-degree "magnetic pole reversal," the 90-degree magnetic polar flip would theoretically exert maximum lateral magnetic pull on the crust, causing it to shift.

If crustal shifts are triggered by polar flips, it could explain what has happened and could happen on our planet, and help us to better understand the earth's geologic history. It is fairly well-known that the earth's crust has shifted, accounting for "continental drift." As Hapgood suggests, a previous shifting of Hudson Bay to the north geographic pole would not only explain the last "ice ages," but also the once-warmer climates of Siberia, Alaska and the Arctic Ocean, then being at lower latitudes. Only when the crust subsequently shifted to its present position were Alaska and the lush, northern steppes of Siberia turned into arctic tundra, freezing the inhabitants.[1] Similar cataclysms have undoubtedly occurred throughout geologic history, when, according to paleomagnetic evidence, California, Hawaii, areas off the coasts of Russia and Japan, and even South Africa were at different times shifted to the north polar area.[2]

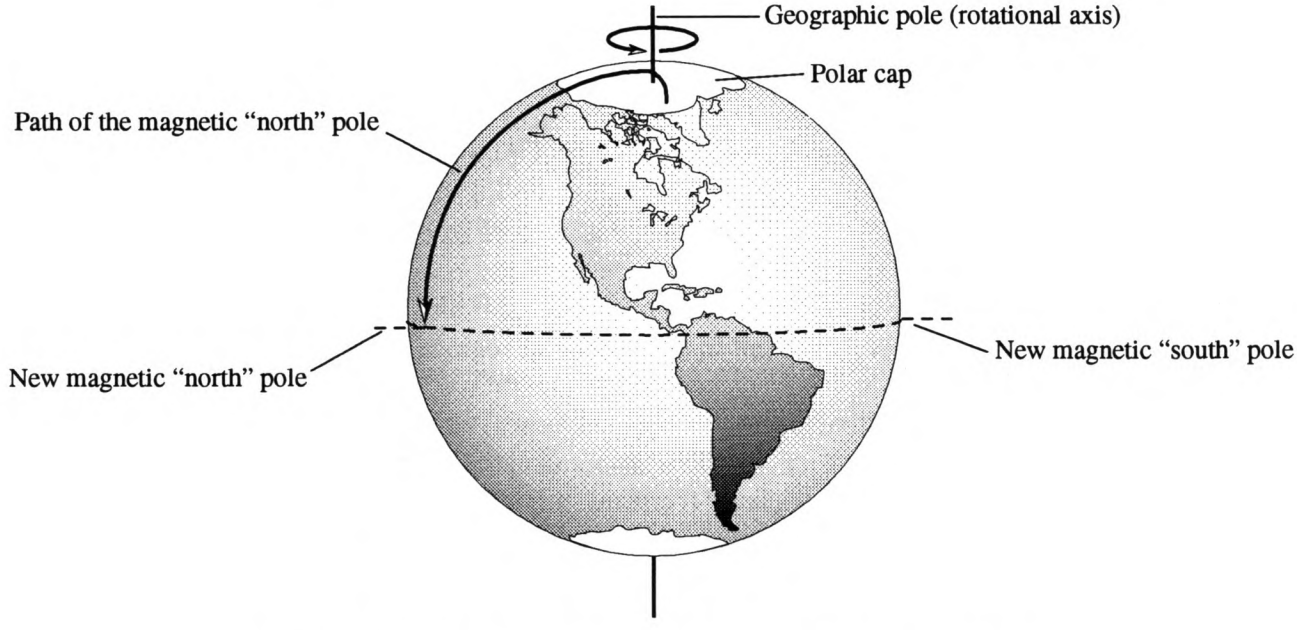
The question of how fast crustal shifts occur is an all-important one. A clue to this mystery may have been found at Fairbanks Creek, on the outskirts of Fairbanks, Alaska in 1948. During sluicing operations while mining for gold, a team was thawing and washing away the permafrost to get to the gold ore at bedrock level when they uncovered the frozen remains of a young (first year) mammoth. Unearthed were the remarkably well-preserved head, trunk and front leg of the animal which paleontologists soon named "Effie". Two interesting aspects of the frozen fauna were evident. The lush vegetation in its mouth and carbon-dating analysis indicated that the animal had died during the growing season in an apparently warm climate 20,000 to 22,600 years ago.[3] And secondly, the animal had been frozen immediately after death, since its flesh was said to be edible. For some reason, a mammoth foraging in the summertime or early fall was almost instantaneously frozen and remained so for at least twenty millennia. More perplexing is how a freshly-killed and frozen animal could be found deep in the permafrost. Perhaps the most likely explanation is that Effie, like several hundred thousand other Pleistocene animals, was suddenly killed and buried by an unseasonal, subfreezing glacial loess- or silt-storm, accompanied by a major, permanent climactic change.

Another curious observation occurred during an archaeological dig at the remains of a "sunken" prehistoric tropical lake community between Nome and Kotzebue, Alaska. While digging in the permafrost among the remains of the lake community, an archaeologist unearthed a mosquito in a piece of ice from the 10,000 year old stratum, and set it in the sunlight to thaw. Shortly after the ice had melted, the mosquito stretched its wings and then flew away.[4] Apocryphal as it may sound, this event corroborates our previous observation. In order for a living creature to be successfully revived after being frozen, its freezing would have to be followed by a sharp and permanent drop in temperature. Normal climatic freezing would have caused ice crystals to grow within the creature's cells and tissues, rupturing the membranes and causing the animal's destruction. Therefore, the conclusion would seem inescapable that something cataclysmic caused these sudden deep freezings of temperate or tropical regions and their inhabitants. A rapid crustal shift of lower-latitude land masses into the Arctic would explain these observations.

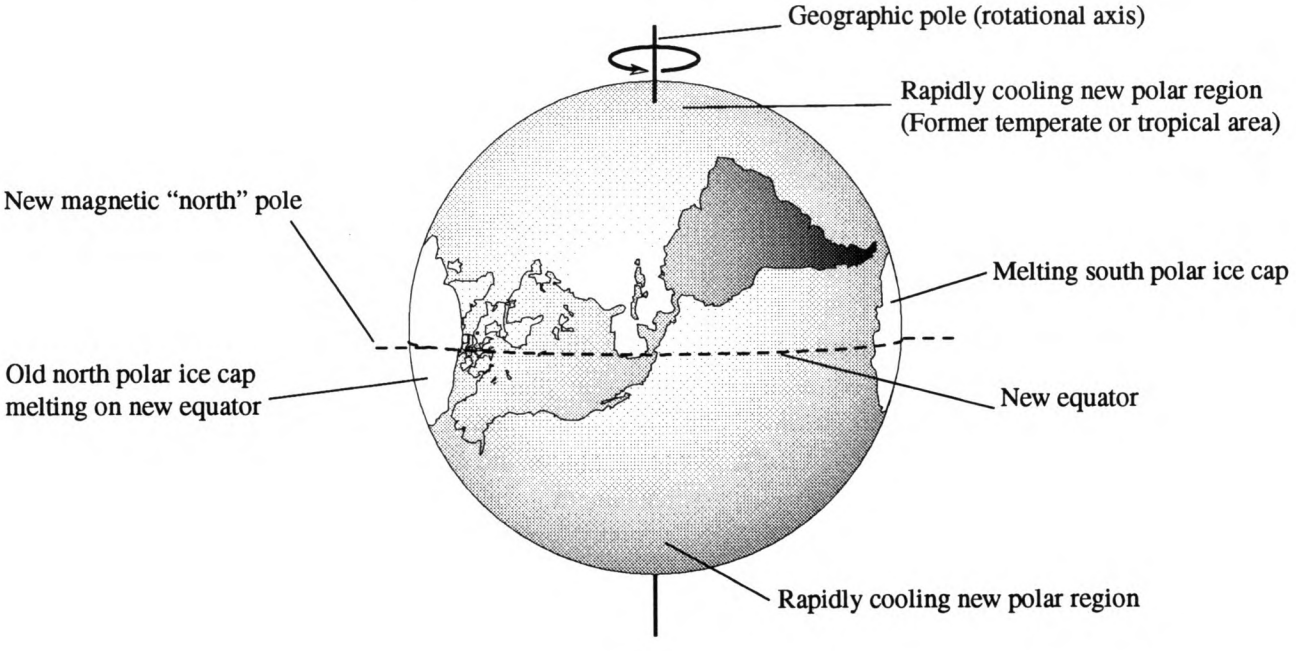
Crustal shift, as an explanation for the geologic upheavals of the past, would also account for the fantastic tectonic stresses that are the probable causative factors in the formation of new mountain ranges. During a scientific meeting at the Pentagon, it was discussed how the flip phenomenon

# THE MECHANICS OF POLAR FLIP

The magnetic pole flips to some point near the equator as the electromagnetic field rotates approximately 90 degrees...




... drawing the earth's magnetized crust with it:




**Note:** Position of the American continents is shown for illustration purposes only.
Magnetic pole could end up near any point on the equator

would cause a "cooling effect", followed by a bilateral "contraction" of the earth and the formation of another "ring of mountain ranges around the planet". Counting the existing chains of mountain ranges of this type on land and within the oceans, they concluded that at least five major polar "flips" had occurred in fairly recent geologic history.[5]

The polar-flip phenomenon could have other dramatic consequences. In the previous chapter, Frank Magill says, "shifting of the earth's surface relative to its axis of rotation is almost certainly a major cause of so-called ice ages..." It stands to reason that a major crustal shift would not only transport the old ice caps to the lower latitudes, but it would produce "ice age" conditions in the new polar regions (which were formerly temperate or tropical areas). Not only would these new polar areas rapidly cool, receiving less solar radiation; but they could be subject to a progressive cooling effect through "positive feedback" with "a little cold begetting more of the same,"[6] until any new polar landmasses were sub-frozen within a matter of hours. Precipitation would increase as the old ice caps quickly evaporate in the lower latitudes, causing torrential rains and flooding in the new temperate and tropic zones as well as heavy snowfall in the new polar regions.

There have been many attempts to determine if such "ice ages" occur in cycles, and if so, when the next one could be expected to begin, namely the astronomical theory, Croll's Theory, Milankovich's approach, and core samplings, to name a few.[7] If crustal shift is interrelated with the onset of ice ages, then the recurring patterns of ice ages should help us predict crustal shifts. For example, one ice age theory based on earth strata studies indicates that following each ice age, broad-leafed deciduous trees cover the earth, followed after many thousands of years by conifers, later by grasslands, and finally by wind-blown silt of the next glacial age. Repeated layers of this soil strata combination suggest a predictable ten to twelve thousand year cyclical pattern. "On the basis of this definition the present interglacial age - the Holocene Epoch - began about 10,000 years ago...and can be expected to end within the next 2,000 years."[8] This estimate encompasses that of the government scientists, who predicted that the next "flip" of the earth could occur as early as seventeen years from the date of their study, which was conducted in 1947. Accordingly, this pending geological event could occur at any time, causing the extinction of many lifeforms, possibly including our own.

Just as a toy top or a gyroscope will occasionally wobble under certain circumstances, apparently the earth too has intermittently "toppled" when its poles sought to converge, causing its crust to make dramatic shifts off the polar axis. It is possible that along with accompanying violent climatic changes and massive tidal waves that could inundate land masses, there would undoubtedly also be earthquakes and volcanic activity along the tectonic plates and within new mountain range formations, resulting in toxic gas emissions that would take a heavy toll on life. Massive temperature differentials caused by the ice caps in the lower latitudes would create unstable weather conditions throughout the globe, resulting in electrical and dust storms, tornados and hurricanes. Needless to say, a post-flip environment would undoubtedly be a hostile one.

It is possible that the polar-flip theory could also explain other observations. Not only could polar flips be the predominant natural phenomena responsible for the reshaping of our planet, but they could also explain mass extinctions and provide a basis for understanding the stages of evolutionary progression. It is fairly well recognized that there is no scientific evidence to indicate smooth evolutionary transitions from more primitive species to more advanced ones. In fact, studies

indicate that each new species seems to have come into existence all of a sudden, almost as though they were created.

Hostile conditions following a flip might produce an environment in which only the most adaptable species would survive. It is easy to speculate that such conditions may have brought about the extinction of Neanderthal Man, who may have been faced with a more difficult and complex survival situation than his reasoning skills could cope with.

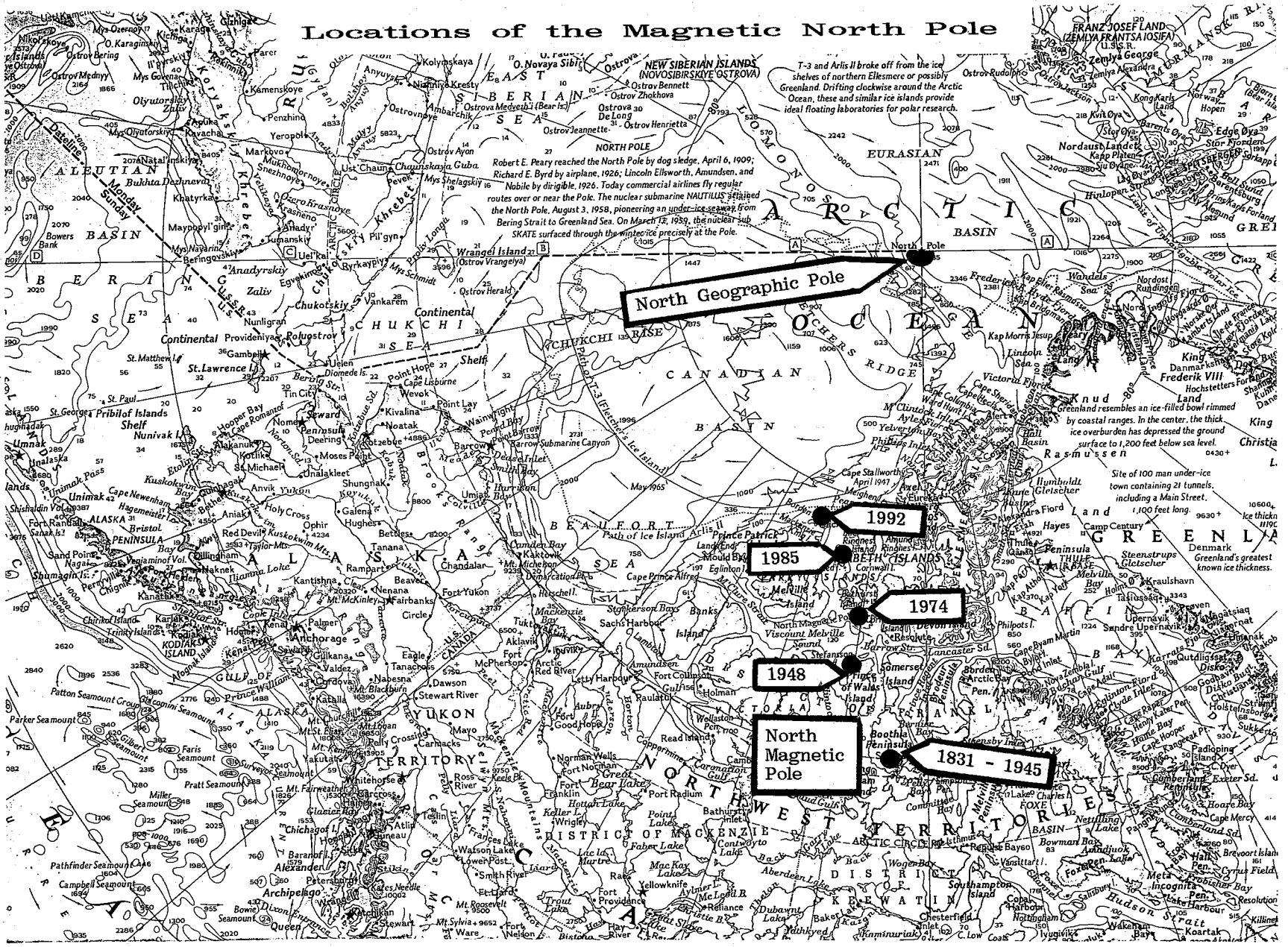
At the same time, the budding strain of CroMagnon man, with a greater cranial capacity and more adaptability, may have much more easily adjusted to the demands of a hostile environment and thus emerged as Modern Man. Possibly stimulated and challenged to overcome the conditions caused by a flip, he became the most fitting creature to dominate the earth. In past history, when competitors or biological pressures were eliminated by catastrophic change, oftentimes those species more suited to adaptation underwent a form of explosive evolution to fill the biological gaps.[9]

Perhaps, with another geological upheaval facing us, we are now once again on the verge of a new quantum leap in what we might call "creative evolution", or transitioning to the next higher stage in human development. With a more developed intelligence, potential to learn and capacity for invention, we may be even better suited to manage our survival and direct our destiny than any creature that has faced catastrophic change in the past. Although, while we have the capacity to survive, the issue is whether we have the will and the wisdom to plan and prepare for what the future may bring. Not only does the viability of our civilization hang in the balance, but so does the very future of our species.

Practically all of the experiences of the 46th/72nd Recon Squadron would be duplicated in major portions of the world in the event of a geological cataclysm. Knowledge of how to build or rebuild a home with scarce materials would be useful. In addition, finding available natural food sources would also be beneficial, as would the ability to conduct successful search and rescue efforts, though on a larger scale. Training in arctic survival would be critical for certain, as of yet undetermined, areas of the globe, as well as an understanding of transportation maintenance in subfreezing climates. Our education systems clearly need to foster not only the natural curiosity needed to solve complex survival and reconstruction problems, but also the dedication to accomplish difficult tasks under adverse circumstances. Wouldn't survival of catastrophic change make a sound national or global objective?

The apparent prerequisite for crustal shift is the movement of the magnetic pole toward the geographic pole, and according to the U.S. Geological Survey, this prerequisite is being met. From 1831 until 1945, the magnetic north pole remained almost static on Boothia Peninsula in the Northwest Territory of Canada, moving only 24 miles in 114 years. However, in 1947, Frank Klein's plottings revealed that the magnetic pole had begun a dramatic northward progression. All told, from 1945 to 1993, the magnetic pole has moved 480 miles northward toward the geographic pole with an average closure rate of approximately 10 miles per year. Today, only 688 miles separate the two poles.[10] Until further research is conducted, exactly when the break and rapid acceleration of the magnetic pole toward the geographic pole will occur is unknown.

## Locations of the Magnetic North Pole



At one of the scientific meetings that Major White attended in the Pentagon in early 1948, the scientists discussed the advisability of alerting the public to the pending polar-flip phenomenon. None of the scientists would agree to withhold the information from the public; but, on the other hand, neither could they agree on how to release it. The knowledge of this phenomenon, some felt, could in itself destroy the moral fiber of society. Their fears were apparently unfounded when, in the early 1950s, information about the flip phenomenon was released in both a newspaper column and a magazine article, but surprisingly generated no responses from an apparently stunned, parochial or incredulous public. It would seem that today's society, however, with its access to vast amounts of information and technological capability, should be better equipped to offer the sophisticated, profuse and innovative solutions that the situation would seem to require.

Only by making the facts known can we begin to mobilize the resources and brainpower necessary to overcome the obstacles. Clearly, a society that can deal responsibly with the concept of catastrophic change has the best chance of preparing for and surviving the change itself. What we do to prepare for the upcoming polar flip and its aftermath will amount to nothing less than a safeguard against total disaster. The difference between human beings and other creatures is that our destiny is not carved in stone. With purpose, ingenuity and fortitude, we can change it if we so endeavor.

Of possible interest is the curious choice of words of the early psalmists:

God is our refuge and strength,
A very present help in trouble.
Therefore we will not fear,
Though the earth should change,
And though the mountains
slip into the heart of the sea;
Though its waters roar and foam,
Though the mountains quake
at its swelling pride.
(Psalm 46, vv. 1-4)

Bless the Lord, O my soul!...

...He established the earth
upon its foundations,
So that it will not totter
forever and ever.
Thou didst cover it with
the deep as with a garment;
The waters were standing
above the mountains.
At Thy rebuke they fled;

At the sound of Thy thunder
they hurried away.
The mountains rose;
the valleys sank down
To the place which Thou
established for them.
Thou didst set a boundary
that they may not pass over;
That they may not return
to cover the earth...

...Let the glory of the Lord
endure forever;
Let the Lord be glad in
His works.
He looks at the earth,
and it trembles;
He touches the mountains,
and they smoke.
I will sing to the Lord as
long as I live;
I will sing praise to my
God while I have my
being...
(Psalm 104, vv. 5-9, 31-33)

Although the next polar flip could commence at any moment, until our governments and scientific institutions begin to seriously study this phenomenon and take the appropriate actions to prepare for global change; it appears that prayer is the only thing we have going for us.

# Chapter 31

## Legacy of the 46th/72nd

At the first 46th/72nd reunion in San Diego in 1989, Major General Danny Burkett addressed the squadron members and their wives at the final night's banquet, saying: "I want to tell you how great I think it is to see this organization back together again. Without getting sentimental, I think there's probably more camaraderie in this room than in any group I've been associated with. I don't know what it is, but I feel a closer tie to this unit than any organization I've ever been in in the Air Force. I think most people feel that way. I don't know if it's the sense of accomplishment or what it is; but I'm proud to be here." General Burkett's feelings were typical of all who were in attendance.

The group was bound together as much then as forty years earlier by a spirit of shared experiences, of enduring hardships and meeting challenges. They had earned their right to be proud. Decorations earned by the unit members while in Alaska included 37 Distinguished Flying Crosses and 6 Air Medals, awarded during one short period of seven months from August 1946 until February 1947. Additional commendations and awards were made during the ensuing period through the spring of 1949, when Lt. Col. Charles S. Overstreet was commander of the 72nd Squadron. It is without a doubt that this superbly unique unit remains as one of the most decorated "peacetime" squadrons in the United States Air Force.

Back in October 1947, long before the cloak of security was lifted from the unit, Gill Robb Wilson, of the old New York Herald Tribune, in his column "The Air World", made the following reference to the officers and men of the 46th Squadron: "If they were Russians, the members of the 46th Recon would be known as 'Heroes of the Soviet Union'. Here, it is enough to say that they are known as members of the United States Air Force."

When asked after a briefing at Ladd Field, Alaska, in September 1947, what he thought of the 46th Squadron, General Spaatz, the first Chief of Staff of the new United States Air Force, replied, "They are one of the great units of aviation history, and I rate their work as the greatest achievement since the war." This assessment prompted General Spaatz to nominate Major White, Commander of the 46th, as the United States Air Force's candidate for the award of the prestigious Collier Trophy, for the greatest contribution to aviation for the year of 1947.

Beyond opening up the Arctic to worldwide aviation and holding the Russian bear at bay, many superlatives and aviation "firsts" can be credited to the 46th/72nd Squadron, but one of the most exhilarating honors was afforded in recognition to all the men of "Project Nanook" in July of 1989, a year after the unit files were declassified.

After remaining shrouded under a cloak of secrecy for over forty years, the meritorious conduct of this extraordinary unit was only recently recognized by a very special award to its first commander, now Colonel Maynard E. White (Retired). In an unprecedented action, the Secretary of the Air Force

approved the award of the Legion of Merit to Colonel White for his distinguished military performance in keeping with the highest traditions of the United States Air Force. This belated award in itself is history making, since normal policy states that commendation for meritorious service must be made with three years of accomplishment. This is an honor reflecting great respect by the contemporary command of the United States Air Force for each and every officer and man who indeed contributed so much to aviation forty-five years ago.

Time has not tarnished the pride of the 46th/72nd Recon Squadron for its arctic accomplishments. Hopefully the recent declassification of the "project" will enable the unit to now assume its rightful place in the annals of aviation history.

46th Recon F-13s in formation near Mt. McKinley.

F-13 "My Achin' Back!!" on Ladd Field ramp.

# PART TWO

## Personal Experiences of Squadron Members and Their Wives

# Chapter 32

## "The Club"

A major problem with most remote military tours is that too often during off-duty hours there is no place to go, nothing to do, and no way to get there if there was. The 46th Recon had all of these problems when the unit personnel first arrived at Ladd Field. Although there were a number of vehicles in the motor pool, their use was restricted; and as a result, very few of the enlisted personnel had any transportation, private or otherwise. Automobiles were scarce, and the ones that could be purchased were usually very old and quite expensive. On occasion, three to six people would pool their money and buy one of these older vehicles, like the venerable "Brown Bomber" and the imposing "Green Hornet", so they would have transportation to go places. But there was still very little to do around the base.

Across the runway from the main side of the base, adjacent to the 46th enlisted area and far from the main hangar which housed the base headquarters, there was an old log building which was built some years before (some said by the Russians), but had never been finished. The logs had dried out, shrunk, and settled down along the sides, leaving about a two-foot gap between the roof and the top of the log walls. In short, the building needed a lot of work to make it usable, and apparently no one had thought it was worth the effort to fix it up except the men of the 46th.

So, after being approached by some senior non-coms, Major White went over to see Col. Merrick, the base commander, and asked if the 46th could have that old log building to turn into a Non-Commissioned Officer's (NCO) club, using their own labor and resources. Colonel Merrick agreed to the proposition. Immediately, Major White had a talk with all the enlisted personnel in the unit, explaining what could be done, saying, "We could make this into a club, but it's going to take an awful lot of labor; and if you are willing to put forth the effort during your off-duty time, then we're in business. The logs would have to be jacked up and caulked, the building would need a furnace, kitchen, restrooms, etc." The enlisted personnel thought it was a great idea.

Major White continued, "What I think we need to do, then, is to find out how many of you are willing to loan twenty, thirty, forty, fifty or even a hundred dollars to get the club started, because there is no other way to raise money. We don't know if or when we'll ever be able to pay you back, but we'll keep a record of it just in case. Surely we've got somebody around here who has had some experience running clubs, and if we can find two to five such people, we want them to organize themselves into a board of governors. I know you can do it, but come to see me if you run into any snags. I'm not going to tell you how to organize the club, how to collect contributions from people or how to go down to the bank and set up a club account - you men can handle all that on your own."

So, the enlisted personnel began soliciting working capital. This was discreetly done by setting up a club table next to the pay table on pay day, and as each man was paid in cash by the commander,

the club representative would ask the man how much of that cash he wanted to loan the club. It was a very effective system and it provided what was needed to get the job done.

The enlisted men did all the work on the club themselves. They got all the logs in the walls jacked up and caulked, the roof fixed, and the outside finished. Then they rebuilt the floor, built a long bar, bought and installed a heating system, refrigerators for meat, coolers for beer, provided a storage area, and secured the building so it could be locked up. By the time all supplies had been purchased, they still had enough money to make change for the grand opening on Friday, December 6th, 1946, when the club started operation.

During this time, when the building had been completed but before it was equipped as a club, the Red Cross decided that they wanted the building for themselves and made a pitch for it to the base commander, who called Major White to his office to discuss the matter. Major White pointed out that the building had sat there unfinished for a number of years and obviously nobody had had any interest in it, at least until the 46th personnel spent thousands of hours of manual labor over several months to make it into a usable facility. Major White said that the building was needed as a club as much now as when the men first thought the project was worth taking on, and he would not go along with it being used for any other purpose now that it was refurbished. Insofar as the base command had no authority over the 46th, but was rather directed to support it, which Major White didn't need to point out, there wasn't any further discussion on the matter.

On a subsequent trip to the states, Captain Jack Setterich, using club money, bought eight new slot machines in Chicago, which were brought back up to the NCO club at Ladd. Slot machines were legal in officers and NCO clubs in those days, and the machines would provide an excellent source of revenue as well as entertainment. So, with the slot machines, the club started making money. At first, the only cuisine served at the club were hamburgers, potato chips and pretzels to go with the beer, hard liquor, mixers and soft drinks.

After only a few months of operation, the club was inspected by the Alaskan Theater Inspector General (IG). After the inspection, the IG wanted to talk with Major White. "Why," they asked, "are you running an illegal club?" Major White responded, "What do you mean, 'illegal'?" They answered, "You don't have authorization for that club." So, Major White replied, "Let me tell you the story about that club," which he did, carefully including how he had received the authorization and blessings of Colonel Merrick to turn that derelict building into a club; and went on to say, "Whether you call that club legal or illegal is entirely up to you, but we needed something for these people to do on this side of the runway where they live, so they wouldn't be walking a mile across the runway to the main base area to find something to do. If they walked around the end of the runway, it would be a three mile walk; and in the middle of the winter when it's forty or fifty below zero, that's absurd."

Major White added, "We were given this building to set up a club, and we got the money for the club through loans from our own people. Nobody was pressured. This was a case of NCOs and airmen working together to provide facilities that would improve morale. If there was any officer supervisor, I guess that would be me, but the club was very well organized and operated by a staff sergeant." The inspection team had no further comments except about the seventeen thousand dollars that the


NCO Club at Ladd Field, Fairbanks, Alaska.

NCO Club.

NCO Club Lounge.

club had accrued since paying back all the money loaned by the men. The inspector said, "That's too much money to have to operate a club, and you'll have to get rid of it somehow." Major White asked if they had any suggestions on how to dispose of the surplus cash. They didn't, but just said to get rid of it; that it's too big a problem having that much money in a club.

Following the discussion with the IG, Major White had the club's board of governors come up to his office to discuss the matter. They wanted to know what kind of suggestions Major White had on how to get rid of the money. He said, "Hey, whatever you want to do. Handle it any way you want to. I don't think passing out a dividend would be the right thing, because some people will argue that they put in more than somebody else, and some people didn't put in anything. Besides, they already have their own money back. You might consider setting up a Saturday night special, with free food and drinks-hot dogs, hamburgers - whatever you want to do. It's up to you, but I think you ought to have a free night. Can you do that?"

The answer became evident shortly afterwards when all the enlisted men were asked to come to a party at the club where all the food and drinks would be free. And as an added amenity, since it was wintertime, the base military police thoughtfully consented to patrol the roads between the club and the quonset hut area to be sure nobody got lost in any snowbanks or ditches and froze to death.

The following Monday morning, when everyone was sober, they found that their losses from giving away about two thousand dollars worth of food and drinks were more than offset by the $2,700 taken out of the slot machines. Since the object of the exercise was to reduce the club funds rather than increase them, it was clear that as club managers they were a darned sight short of being proficient. None of them had ever had this kind of problem before and were very perplexed about how to handle it. The staff sergeant in charge of the club went up to Major White's office and told him about it. Major White asked, "Well, why don't you start a bingo night? Go downtown and buy a thousand dollars worth of nice prizes, and see what you can do to give them away." The sergeant asked if they should charge for the bingo cards or not. Major White said, "That's entirely up to you."

Subsequently, the board of governors set up bingo night once a week. After the first night of bingo when they had given away a thousand dollars worth of prizes, the word spread like wildfire throughout the outfit. So, on the second night they had bingo, the club was literally packed. There was standing room only throughout every room in the club, including the restrooms, where, for lack of elbowroom, people were holding their bingo cards over their heads. A survey of the books the following day confirmed their worst suspicions: that every night they had bingo, the cards were sold out, the slot machines became filled, and the club made more money than they could manage to give away in prizes. Even on nights when they raised their expenditures to twenty-five hundred dollars worth of prizes, the nightmare repeated itself and the club funds multiplied uncontrollably.

The situation was becoming unmanageable, so the board of governors went up to talk to Major White again, who said, "You people have some ideas; what do you want to do?" They said, "What we'll do next time is get some tables and chairs and hire a chef and provide free steak dinners one night a week." So they did, and discovered once again that in redoubling their efforts, their objective became more elusive. When they went back to Major White with the sad news of additional profits, he suggested hiring a band and inviting all the enlisted men from the base contingent as well as from

the unit. In desperation, they started hiring a band one night a week and soon thereafter, almost every night of the week. But the money kept accumulating, and the club's financial books remained embarrassingly in the black, with profits growing by leaps and bounds. The more they gave away, the more money they made. So they decided to put in a new floor with the squadron number emblazoned across it, buy another batch of new slot machines and an all-new bar, more china, new stoves, more refrigeration and everything else they could think of. The bottom line was that no matter what they did to get rid of it, the cash just continued to flow in.

Major White heard more about the club's "financial problem" a couple of years later after he returned to the States and the unit had moved back first to Mountain Home and then to Travis Air Force Base. It turned out that the Ladd Field base command finally confiscated about seventy thousand dollars of the club's money, and this did not include what the unit was allowed to take with them when they returned to the States.

It was a year or two later that the Air Force Inspector General team looked up Lieutenant Colonel White at Barksdale Air Force Base to get the story of why and how the club was started, and what was done to comply with the Alaskan Theater Inspector General's directive to get rid of the money. He explained that this had been the one impossible task that he and the unit had ever faced. The IG told him about Ladd Field having impounded the club money and they asked him what he thought ought to be done about it. Lieutenant Colonel White responded that he thought the money should be taken away from the base command at Ladd Field and given back to the unit that accumulated it, which was stationed at Travis Air Force Base at that time. Since the money came from the unit's combined airmen and NCO club, it should be equally split and given to the airmen and NCO clubs at Travis. As it turned out, that's exactly what happened.

"The Club" did a lot for the morale, spirits and well-being of a large number of people at Ladd. It was a fine building; those who used it continued to improve it with plush amenities. It was used for many purposes. Show troups on tour at Ladd would come over from the base theater and have dinner as guests of the NCO Club. Sometimes there were shows at the club on Saturday nights, and oftentimes concerts were given there by the best orchestras that could be found around Fairbanks. The officers of the 46th were also invited to frequent the club any time they wanted to, oftentimes as guests of the club. The 46th commander was invited and went to the club on several occasions. "The Club" did a lot to weld the unit together and enable people to get acquainted in an environment that wasn't trying to relieve them of their money. It was a club that was trying to provide the best program and the best entertainment available at the least expense to the customer. The club was almost always filled, almost everything was free, and almost all the money the club made was from the slot machines. The more the club spent to please their clientele, the more money it made. And whether one is an entrepreneur or not, there must be a message in there somewhere.

46th Squadron area at fifty degrees below zero, winter of 1946.

NCO Club at Ladd Field.

# Chapter 33

## Building a Home in Fairbanks

Danny Burkett arrived in Fairbanks with his crew in July 1946. At the time, Fairbanks was a small town of about 4,000 people and quite primitive by stateside standards. Alaskans referred to the lower 48 as "outside". After all, Alaska was still a Territory and would not be admitted to the Union for a number of years. One-room log cabins with dirt floors were not uncommon, and high-rise apartment buildings were unheard of. In fact, just about any type of apartment building was unheard of. In Fairbanks, there were only two streets that were paved, and only for a short distance. There were no traffic lights. The first to be installed was at the corner of 2nd and Cushman streets, a main intersection in town. These devices caused more than a little concern and excitement among the old-timers in town. Fairbanks seemed quite content with its small size and there were few signs of any expected growth or changes. The pipe-line boom was still many years away and there was little apparent reason for Fairbanks to grow. It was readily apparent that finding a home for one's young wife was going to be a major problem.

The officers who arrived in 1946 were housed in what the base called the "Tech Rep Building", which was a carryover from Cold Weather Test days when a number of corporation Technical Representatives were hired to assist the Cold Weather Test Detachment determine the effects of the extremely low temperatures on men and materiel. It was designated the Bachelor Officer's Quarters and was located within easy walking distance of the main portion of the base. Since everybody was on temporary duty (TDY) they were not paid per-diem allowances, but at the same time were not authorized to have dependents come to Alaska at government expense. In other words, if you wanted your dependents to join you, you were not going to get any help form the Army Air Corps. Danny relates his experiences:

"Despite these hurdles, there were a number of officers and men who set about trying to find a home for their dependents, and what a job that turned out to be. The local newspaper, The Daily News Miner, carried virtually no classified advertisements or rentals, neither for houses, apartments nor even rooms. Since classified ads are usually the best source of rental information and since they were practically nonexistent in Fairbanks, it meant trying out other methods, to include meeting other people and asking for their help. Early on in the house-hunting game, I learned about the "Hostess of Fairbanks", or at least that is how most people referred to Eva McGown. It is not certain whether that was an official title or one pinned on her for all the great work she did. I remember Eva riding atop a float in the annual Ice Carnival parade and Northern Airways had a sign on the float calling Eva "The Queen of Them All." Regardless of her official status, she maintained an "office" in the lobby of the Nordale Hotel and always seemed to be surrounded by people who needed her help, or wanted her advice on some matter. She seemed to know everybody in Fairbanks and was a delightful person to know and work with. I explained my problem to Eva frequently and managed to drop by to see her whenever I could get into town.

"On one of those trips she suggested that I might want to call on Ted Hudson, one of the original Alaskan pioneers, who had recently lost his wife and had a home in Fairbanks. While I felt somewhat like a ghoul following a hearse, I did decide to call on Ted, on the possibility that he might rent some room in his house.

"What an experience it was meeting Ted, and what a fortunate break that I had followed Eva's advice and called on him. Apparently he had decided to spend the winters "outside" in McAllen, Texas and the summers at his gold mine in Livengood, Alaska, and was delighted with the prospect of having someone live in his house and take care of it. He would retain the upstairs bedroom for his use and would spend a couple of weeks with us on his way to McAllen and a couple weeks when he returned in the spring, before heading to Livengood. Ted was a genuine character and a wonderful individual who had more stories told about him than he would tell himself. He has been mentioned in several books dealing with the early days of Alaska and after knowing Ted I am inclined to believe the mischievous stories I have read.

"Ted's house was one of the nicest homes in Fairbanks, but did have a number of problems. It had running water, but for some reason, the well had been sealed years before. In its place was a large cement tub in the basement that would hold some 3,000 gallons of water, and you had to purchase your water from a water truck that would come by, much like the old ice trucks would deliver ice to houses before refrigerators were commonplace. It worked fine in the summer, but when the temperatures dropped below zero, which they did almost all winter long, getting water became a real problem. When we would run out, we would bundle ourselves up and head for the water man's house only to find his truck's tank frozen into a solid chunk. He would assure us that once he could get the truck into a heated garage for awhile he would be on the road again, but made no promises as to when that might be. Even at that, when the temperature dropped to 50 or 60 below, which it frequently did during the winter of 1946, it had to be a pretty fast trip, or the water and the truck could freeze up while he was driving.

"Of course, even when you had water, you could not drink the water that had been setting in the basement tub, which meant obtaining drinking water on an every-other-day basis.

"The heating system was the next flaw in an otherwise nice place. It just would not keep the house warm, or even at a comfortable temperature in the winter, no matter how much coal you tried to burn in the furnace. It was a hot-water system with the usual radiators in the rooms, however, it lacked any kind of pump and depended on the heat of the water to keep the water warm throughout the house, which it did not. When friends came to visit in the winter, they would normally keep their coats on and sit on a radiator which was only slightly warmer than the air in the house.

"Banking the furnace with coal before going to bed would frequently produce an explosion during the night, when the accumulation of gasses in the furnace would ignite and send dust throughout the basement. It also meant a trip to the basement to close the furnace door which would blow open with the explosion.

"The coal is a story in itself. The house had a coal chute on the side, which emptied into the coal bin in the basement. The first time I ordered three or four tons of coal, I mistakenly assumed that they

would dump the coal into the chute and that when I got home I would find it all neatly stored in the basement. Wrong! Apparently the placement of the coal chute in relationship to the garage made it impossible for a truck to get in close enough to use the chute. So, when I got home, there was four tons of coal laying on the snow, that had to be hand shoveled into the coal bin.

"My wife, Dorothy, worked at a bank in Fairbanks, so we were both gone during the day and the furnace was unattended. Despite our best efforts to bank coal in the furnace, it meant that temperatures in the house would drop considerably, often to below freezing. This, naturally, produced frozen pipes which had to be thawed when we returned from work. I became rather handy with a blow torch.

"We realized that despite these problems we were better off than so many of our friends who were living in quite substandard conditions. However, we thought how nice it would be to have a place with running water, where you could feel comfortable with such daily routines as taking off your clothes to take a bath (we did not have a shower), and where you could invite your guests to remove their parkas and mukluks when they came in.

"Several of us in the squadron had been talking about some lots that were available in a subdivision outside the Ladd Field gate, and how nice it would be to build a house on one of them. Of course, none of us had had any house building experience and no one took these discussions very seriously, at least not at first. But the idea grew on a number of us, and despite warnings from friends and family that 'You don't know anything about building a house, especially in Alaska', several of us decided to go ahead with it.

"Throwing caution to the wind, I went out on a Saturday morning and bought a lot. It was late spring but the lot was still covered with snow. I later learned that buying any ground in that part of Alaska without having it tested for the presence of 'permafrost' can be a foolhardy act. If you hit permafrost, which means just what the name implies, permanently frozen ground, you are out of luck as far as building anything on it was concerned. First of all, you couldn't dig a basement in it, and with the temperatures in the interior of Alaska sometimes reaching -50 degrees F, a basement to put your furnace in and to keep the underside of your house from freezing is not only a luxury but a true necessity.

"I remember one member of the squadron, who purchased a lot in a location out of town on the way to the college, who encountered the dreaded permafrost. When the caterpillar he hired to come in and dig his basement encountered permafrost, the operation ceased as the cat was only able to penetrate the top one-inch or so of the frozen ground. Not to be deterred, he built fires on the ground in an attempt to thaw out the soil, however this simply did not work and the return visit of the cat was equally unsuccessful in making any meaningful penetration of the soil. Now he really got serious and rented a jack hammer (I was surprised that anyone had such a thing in Fairbanks at that point in time) and decided he would see what he could do with that. A day of that activity resulted in his giving up all ideas of building on that piece of land. Of course, even if he had been successful in breaking through the permafrost, he would still have needed to get through it and reach a solid non-frozen subsurface for his foundation.

"That was possible and I know of one house (Gordon Wagner's log house where Dorie and Wag rented out rooms to such people as the McIntyres) where they did just that, which resulted in a natural refrigerator just off the basement. They dug a small space, about the size of a small refrigerator, back into the wall of the basement and covered it with a loose canvas cover. From then on they could pull back the canvas, place the product they wanted to keep cold into the space and they had an instant, energy-free refrigerator!

"I also know of houses that were built without regard for assuring a solid nonfrozen base for their foundation, and you could see any number of them close to Fairbanks. These were obvious in that they had sunk by varying amounts each year as the permafrost melted bit by bit. It was fortunate when it melted uniformly and the house would settle and remain fairly level. That was the case with the house across the street from our rental home. The house's interior sunk about the depth of a stair step each year, and it was simply a matter of adding on to the base of the stairs that went down to the main level of the house. (I saw it recently and it was obvious that it quit sinking a number of years ago). However, there were an equal number of examples where one side settled more than the other, and things became a bit crooked, or lopsided. I remember a saloon in Livengood that had a pool table in the middle of the floor with the pool table mounted on jacks. As the surface under the saloon melted and then refroze, the jacks were operated in an effort to keep the pool table level. During the worst of the seasons, one side of the table might be at chest level while the other side barely made it to your waist.

"With this knowledge at hand, we were delighted when the snow melted and the caterpillar encountered no problem in digging out our basement. We were ready to start building our house!

"Since I had previously located a sawmill out in the woods and had ordered 2,000 lineal feet of logs, squared on three sides, which had been delivered to our lot, I was now ready to go to work. The huge pile of logs was rather awesome looking, and if I had known a little more about building a house, I would probably have been a bit apprehensive to say the least - possibly a little concerned that I had made a poor decision. However, I was eager to start the project and move ahead.

"It was the month of May. The snow had melted and the weather was getting warmer. Days were getting longer and I was to learn later on what a definite plus that factor would be in working outdoors. I know that I would frequently be working on some part of the house and be totally surprised when I checked my watch and would find out that it was two or three o'clock in the morning! I had gotten in about six hours more work that I could have achieved during the same time frame if I had been working out-of-doors in the lower 48. (The sun stays up virtually the entire 24-hour day in the summer in Fairbanks and they celebrate that phenomena by scheduling a softball game in town which starts at midnight). Of course, it is a real blessing when you consider how short the summers are. Snow would generally start falling in September, but would not remain on the ground until about the second week in October. With that short of a building season, it is a good thing that you had so many hours of light to work in.

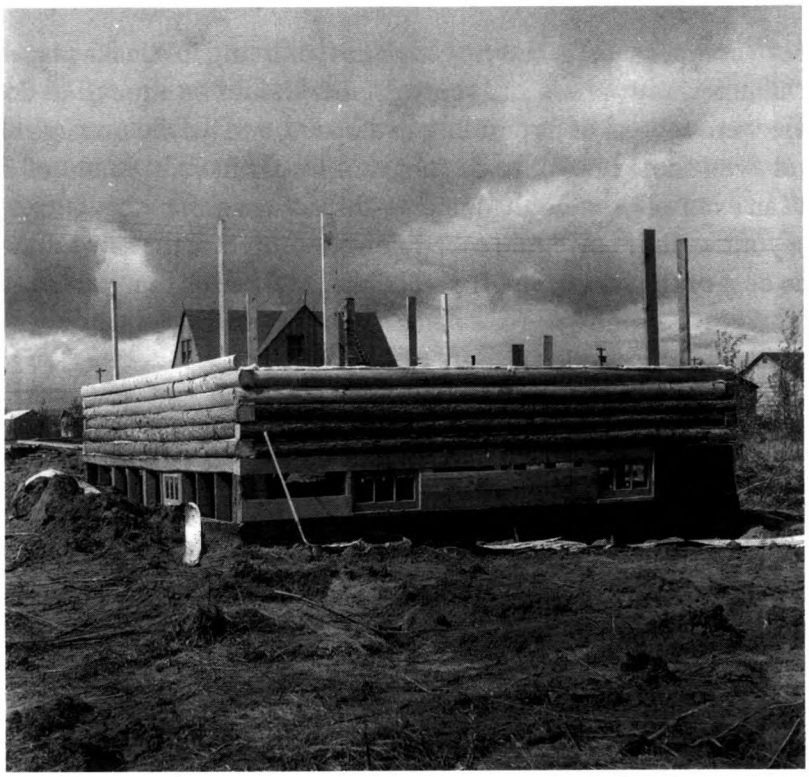
"In retrospect, I believe the next action should have been to install some heavy duty equipment to facilitate handling those logs and to purchase a variety of wood, wiring, masonry and plumbing tools. However, finances were a bit short (the salary of the military in Alaska at that time, with no cost-

of-living allowance to compensate for the very high cost of living in Alaska placed us at the poverty level). After all, a hammer, saw, pliers and screwdrivers should be enough to do the job, and they did! Of course, there were several of us building in the area, and we did manage to share some tools and equipment (and even some brawn) to do jobs that would have been out of the question on an individual basis. As an example, one could rent pipe-threading equipment which was essential when you started sinking your well. If you could schedule your project at the same time as your neighbor, you could share the cost of the rental, and if you could get three or four parties to do it at the same time, the shared rental cost became quite reasonable. We cooperated on a number of similar projects and everyone that started a house ended up with a place to live in. A few, like Bob Hume, never really completed their houses, but Bob and Dottie did have a nice basement to live in.

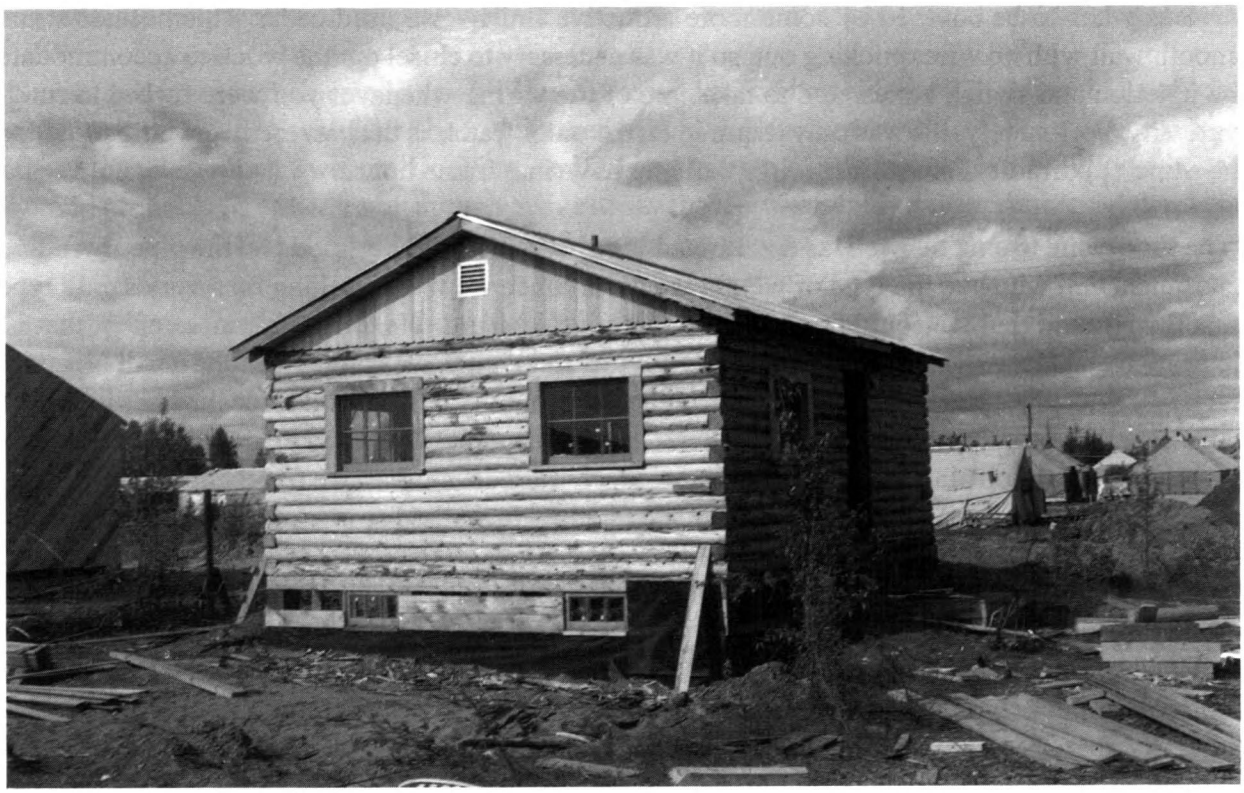
"Once the basement was dug and the foundation was set in place - somewhere I located four 12" by 12" cedar posts to use as the corners of the foundation - the rest of the house was quite easy to build. First, you laid down a layer of insulation, then a layer of logs. When you decided where you wanted a door, or a window, you cut the log at that point, and started the layer again after the proper width of the opening was established. It seems like as a child I had some building blocks that worked about like that. I was able to "walk" the longer and heavier logs up the walls using heavy nails, set in such a manner that I could move the entire log up the wall a foot at a time, alternating ends. Using this technique, the outer walls went up rather quickly.

"Wiring of a log house is another matter though, as you do not simply stretch a wire from point A to point B. With a squared-on-three sides log, you have a rough sawn surface on the inside, which obviously has to be covered by some more attractive finish - we used cedar. This necessitates a smooth wall with no wires sticking out, so it was necessary to chisel out the wood to accommodate the junction and switch boxes, and to take care of the wiring whenever you were forced to run it vertically. Fortunately this was only required on the outer walls, as the basement and attic provided the same opportunity for running wires that you have in a frame house.

"The time came to sink the well, as determined by who in the neighborhood had the pipe-threading equipment and who had the type of weight we used. Since we were working on a very sandy type of soil we found that we could do the entire operation by hand. We, the cooperative effort that is, determined that if we had this big weight welded to a small pipe, we could insert the small pipe into the larger well pipe, and by lifting the big weight and dropping it, we could force the big pipe about an inch or two into the soil each time we performed the operation. Anyway, as crude as it sounds, it worked; and after lifting and dropping that weight hundreds of times, we finally hit water at about 25 feet below the basement level. You would have thought we had struck paydirt or oil when that first water showed up! However, the elation was short-lived. When I put the hand pump on the end of the well pipe and attempted to pump out a pocket (using an electric pump would destroy it as you pulled sand through it), I found that I could not get enough sand through it. On the advice of experts in that sort of thing, I had left the sand point screens on the end of the well point. Since I could not pump out a pocket, only one option was available - to pull the well and remove those screens. Naturally, that hammering on the threads as I lifted and dropped the weight did not do the threads on the pipe any good, and they had to be restored before I could start the process over again. After water was hit again, I had the water tested, and we were in business with clean water. It was just a matter of hooking up the electric pump and storage tank which would provide the necessary pressure.



First few layers of logs on the Danny and Dorothy Burkett log house.



Nearly finished house without the storm porch.

"The remainder of the house construction was rather uneventful. While we could obtain the required lumber and building materials in Fairbanks, we found that they were either very short in supply or very high priced, particularly in plumbing fixtures, stoves and ovens. We found ourselves ordering many of these types of fixtures out of a Sears catalog from Seattle. Somewhat surprisingly, it all came together, and despite my extended TDY to Japan, we were able to move in before the onset of the real winter.

"For the first time in our tour in Alaska, we could take a shower and feel comfortable inside despite the temperature outside. We had put in an oil furnace and no longer had to contend with storing quantities of coal, or put up with the damnable coal furnace. Happy days!

"We went to Fairbanks last year, during 1991, and were absolutely astonished at the changes that have taken place in the town and the area in the last 43 years (we left in December 1948). We saw a modern city with all the amenities that one would only expect to find in a city with a population four to five times the present size of Fairbanks, which is now about 30,843. Our friends who live there now explained that this amazing growth resulted from the pipeline boom, but I still wondered how a city of that size could support so much. Nevertheless, we also saw our log house, which was still standing straight and not so tall, and with the exception of the trees that had grown up in the yard and a fence that had been added, it looked essentially the way it did when we left that cold day in 1948. We did not get a chance to meet the current residents, but I could not help but wonder if they have any idea how much that little log house meant to a couple some 43 years ago. I am sure they do not."

## Driving a Car in Alaska (45 years ago)

**by Danny Burkett**

Although there were only a couple of roads leading out of Fairbanks, Alaska back in 1946, and not really that many roads in town, the idea of having a car to drive seemed like a great idea. Walking to places you had to go in weather that was frequently 50 to 60 degrees below zero in the winter was not only cold, but so cold that I often thought it was hazardous to one's health.

My wife worked in town at a bank and we would walk several blocks together in the mornings before we would part, with her heading north to town and me turning east to the base main gate, where I always hoped that there would be buses to pick us up. Depending on any kind of transportation at those temperatures is really trusting in a lot of good things happening. That the vehicle would start was the first major problem to overcome, then hoping that it would not freeze up enroute; or, if the ice fog was particularly heavy that morning, that the driver would not run off the road or have an accident. At any rate, there was no bus into town so my wife, Dorothy, was committed to walk and I can well remember saying goodby to her in the morning after we had walked together for a few blocks, and seeing her eyelashes nearly frozen together and heavy frost on the scarf she wore over her mouth.

Dressing for that kind of weather presented major problems, particularly for the girls. To go out into 60-degree-below-zero weather for any length of time meant complying with certain clothing requirements. If one did not want to get frostbitten, which could happen in a very few minutes, one simply had to take certain precautions. The usual attire for heading out into that kind of weather was long-handled underwear (I don't recall that we had any of the nice thermal wear in those days) followed by such things as ski pants and if possible, something over that - the layered effect. Mukluks were the best and warmest footwear. Then there were the parkas, gloves, scarves and almost anything else one could come up with to keep warm. After all that preparation, and following a trip out-of-doors, one was soon back in a heated environment that might run as high as 75 degrees - a temperature spread of some 135 degrees! Obviously there had to be a change in attire, and the girls would not be caught dead looking like they did any longer than necessary. In addition, if one was working on the economy, there was the need to look the part, and mukluks etc. did not fit in with that profile.

It should be apparent why the idea of driving around in a car had such appeal. I had ridden as a passenger in a nice 1939 Plymouth sedan on the base, when, for some reason the owner allowed me to borrow it. I thought at the time what a nice car it was. However, the following winter, while the owner was driving in the ice fog, which always seemed to form at those low temperatures (it is a fog made up of ice crystals rather than water droplets and is much more difficult to see through horizontally), a six-by-six truck plowed into the back of the car and smashed in the rear end. The trunk lid was gone and the rear doors would not open, so when the owner was leaving the base, the car, sold "as is", was priced very reasonably. I could not resist a bargain, and as indicated above, I had wanted a car for some time, so I purchased it. As well as I can remember that was in the month of November, or possibly December, as it was quite cold already. I can recall, as it was being towed

into town to my garage, that the wheels never turned and we just slid along across the ice and snow. At any rate, we managed to get it into the garage and I realized that I was the proud owner of "wheels".

Although our garage was not heated, I developed a strategy that I felt sure would put us "on the road." I went into town and bought a kerosene flare pot and some ether. The strategy was to take the battery into the house at night, put the lighted kerosene flare pot under the engine pan and put a blanket over the hood - all designed to keep the engine as warm as possible. I also removed the carburetor in the morning, which would assist the whole process.

Being a cautious car driver, I also decided to check the radiator and the anti-freeze. Deciding that I needed some, I purchased a can of ethylene-glycol, punched a couple of holes in the can to pour some out, and found that it would not pour! According to the instructions on the can, it froze at 42 degrees below zero, but when mixed with 30 percent water, it stayed slushy at those temperatures. Since the temperature was considerably below that, the obvious solution was to take it in the house and heat it up a bit, add the required amount of water and pour it in the radiator. It worked. We were making progress!

I took the battery out of the car, took it into the house to keep it warm, lit the flare pot and put it under the engine, put the blanket over the hood and went back into the house, confident that I would be driving the next day. The next morning, I decided to enhance my procedure by shaking down a few hot coals out of the coal furnace and putting them directly under the engine before I started it. After that, I put the battery back in the car, poured a little ether into the carburetor, got in the car, put the key into the ignition, and whatta-ya-know, the car started! The strategy had worked wonderfully, and I got out of the car and opened up the garage doors (I had broken a number of safety rules by starting the car in a closed garage, but at 55 or 60 degrees below zero, it seemed like the natural thing to do). Back in the car, I observed that all that remained to be done was to place the gear-shift lever, which was mounted on the steering column, in reverse and back out. Wrong! The gear-shift lever was frozen in the neutral position and I wasn't going anyplace until I could move it.

The answer, of course, was to find another kerosene flare pot and place it under the transmission so that the grease would at least stay pliable. Into town for another flare pot. That night, I repeated all the steps described above and added the extra flare pot. It was obvious that come tomorrow we would be driving our car around Fairbanks!

The next day I decided to test the transmission before beginning the rather drawn-out process of getting the car ready to start. Happy Day! I could move the gear-shift lever. With that good news, I repeated my carefully conceived process - coals out of the furnace, battery back in the car, ether in the carburetor - and the car started right up, or at least close to "right up". This time I just knew we were off and running. I got out and once again opened up the garage doors. After all, the engine was running, I could shift into reverse, so what could stop me now? With the garage doors open, I placed the gear-shift lever into reverse, let out the clutch, and promptly felt the engine die - the wheels were frozen and would not turn! With that I finally gave up the idea of driving anytime soon, and decided that the prudent thing to do was to wait until spring to hit the road. From then on the car went into the garage in November, and as I remember, it came out in April, the following spring. We adapted to walking!

Before I leave the subject of the car, I should relate one more story that has to do with that car. As I said earlier, after the accident the car was involved in before I bought it, the rear doors would not open. While this proved inconvenient at times, it was not one of those things that you couldn't live with, and there was no rush to fix it. We often shared rides with our neighbors and good friends, Milt and Opal Hollacher. They had a Pontiac of their own, but I suppose we thought we ought to trade off on who was driving that particular day. Anyway, that worked fine even with the back doors that would not open. The girls would just roll over the front seat into the back seat and away we would go. As I said, it worked fine, until Opal got pregnant in 1947. By the spring of 1948, we could no longer roll her over the seat. She simply would not fit between the top of the front seat and the roof of the car.

Something had to be done or we could no longer be able to share rides. As a result I took the car to our flight line (which would be frowned upon in today's Air Force), and asked a couple of the airmen who drove the heavy equipment used to move airplanes, if they would help me in a little project. Of course, being members of the 46th/72nd Recon Squadron, they readily agreed. After I explained my problem to them, we tied a chain to the front bumper of the car and onto one of the plane movers (for lack of a more descriptive definition), then somehow wedged a bar into what was left of the trunk, wrapped a chain around that and connected it to another of the plane movers. If you can picture it, we had two pieces of heavy ground equipment, facing in opposite directions, both tied to an old car in the middle. After a thorough briefing and synchronizing our watches, the time arrived for them to proceed in opposite directions, at a slow pace, of course! The car creaked and groaned a bit, but due to a precise and well thought-out operation, the car had stretched the required amount and the rear doors would now open!

Happy day! I was afraid that the car might turn out to be so long that none of the doors would stay closed, but it worked out just right! We could now ask a very pregnant Opal Hollacher to get in our car without trying to squeeze her over the front seat.

# Chapter 34

## The Tangle Lake Episode

It was in the late summer of 1946, shortly after the 46th Recon had made several flights out over the polar cap, that a number of unit personnel decided to take all the Technical Representatives of the various companies to spend a Saturday fishing. Preparations for the trip were few. They took their fish poles and dip nets, and a couple of PBY amphibians, but hadn't thought to bring survival gear. Aboard each of the two aircraft were several military men and half of the group of Tech Reps. They took off and headed towards Anchorage, over the first range of mountains. Among the mountains, they looked around to see if they could find a good-looking fishing lake, and then planned to go in with those two PBYs and see how the fish were biting.

Tangle Lake looked promising, so they went in and landed on the lake. They taxied up to the shore, tied up the amphibians, got out their fishing gear and began casting in the lake and in a little stream that came in right by where the planes were moored. Captain Setterich walked up the small stream a little ways, and every time he would put a dry fly on the water, a grayling would jump up and grab it. And every time they threw a bait in the lake, they'd get a trout. It didn't take any time at all before they had more fish than they really needed. They didn't have "tons" of fish, but they certainly had enough for a big fish dinner for all the families connected with the expedition. So, with plenty of fish to go around, they felt it was about time to go home.

Maynard White was in the first airplane to take off, and taxied back into the lily pads in the shallow water at the end of the lake to make his takeoff run longer. This gave him a full run at the lake to get off, but the lake was a little smaller than they thought. When they got airborne, they discovered immediately thereafter that they were faced with a 30 to 50 foot cliff at the end of the lake. To compensate, Maynard turned inside the cliff and was able to extend their distance and get enough airspeed and altitude to "kind of roll up on top of the cliff", get leveled off and climb on out. So, he called back and told the other flying boat to be very careful because there was a cliff at the end of the takeoff run, and to start the takeoff run from back in those lily pads and follow the first plane's flight path. The first plane circled as the second plane took a shot at the takeoff.

The second plane didn't get off on the first run but throttled down and taxied back to the starting point. It then took several more runs at it and didn't get off. It was about their fifth run before they got the plane airborne and it looked like they were going to be all right, but just as they approached the end of the lake, they pulled the plane's nose up too steep, immediately causing the plane to mush back into the water just short of the shoreline and slide quite a distance up into the alderbrush which covered the area from the shore to the cliff.

Maynard had already set up his approach to land on the lake again, since it had been rather obvious that the second plane was going to have some difficulty, enough that there could be severe damage to the airplane, and possibly even serious injuries. He got on the water as fast as he could, taxied up

nearby, and by the time his crew was getting out of the airplane, those in the crashed plane had made it known that nobody was hurt, and everything was fine - except for the plane, of course. Maynard was glad that nobody was injured, and he wasn't as concerned about the airplane as he was about the fact that it was quickly getting dark and much colder. They were still on a lake in the middle of the mountains, and nobody else really knew where they were. He didn't recall filing a flight plan with anybody, other than just saying that they were "goin' fishin'." (Air traffic control wasn't very sophisticated in 1946).

They decided that they would have to shuttle people back to Ladd. They offloaded all of their gear, including heavy jackets for those who would be left on the ground, and then loaded aboard half the people from the beached aircraft. The rest of the other crew would probably have to stay there overnight because there was no way Maynard could get back to the lake until the next day. So he took his plane back to the starting point, took off, getting airborne on the first run, turned inside the cliff, got up over the top, and started flying towards Big Delta. Before long he discovered that the pass in the mountains was closed, and since the mountains were too high at that point for a PBY to climb over, they turned around and went back down the Richardson Highway to go through the pass towards Anchorage. Unfortunately, it, too, was closed, so they turned around and went back to the lake.

In the meanwhile, clouds had formed just above Tangle lake. So Maynard made one circle around the east side of the lake in a left-hand pattern, and noticed that he could see between the cloud and the cliff. He circled once more, lined up the plane with the visible hole between the cloud and the cliff, and dropped the plane down in over the lake, where he found it was pitch black under the clouds. "So", Maynard says, "here we are in a strange airplane, pitch black at night, coming in for our first night-water-landing. We would have made a beautiful landing, but we were somewhere in the neighborhood of fifty feet too high; so when that flying boat quit flying and dropped that last distance, we hit the water like you wouldn't believe." The crew chief came running up to the pilot's compartment screaming, "We've split the hull wide open; give her full throttle and put her on the bank or we're going to sink." So Maynard applied full throttle, which just made the water pour into the plane that much faster, but they did manage to put her on the bank just behind the other PBY.

As if the situation weren't bad enough, naturally, it started raining. A lot of the people were wearing just khaki pants and a flight jacket. They dug around in the aircraft and found some equipment to cut the alderbrush, which they piled up to build a fire. And since one cannot set alderbrush on fire when it is green, let alone wet, they had to douse it with fuel from the aircraft to get it to burn. They then tried to get some sleep in the aircraft, but with the rain pouring over the metal skin of the fuselage, it had the same effect as one of those desert coolers, and the interior of the airplane was ten to fifteen degrees colder than it was outside, making it impossible to get some sleep. Everybody ended up standing out in the rain all night long trying to keep warm by the smouldering fire. The radio operator continued to try to raise somebody on the radio, but to no avail; so he shut off the radio before the batteries ran down.

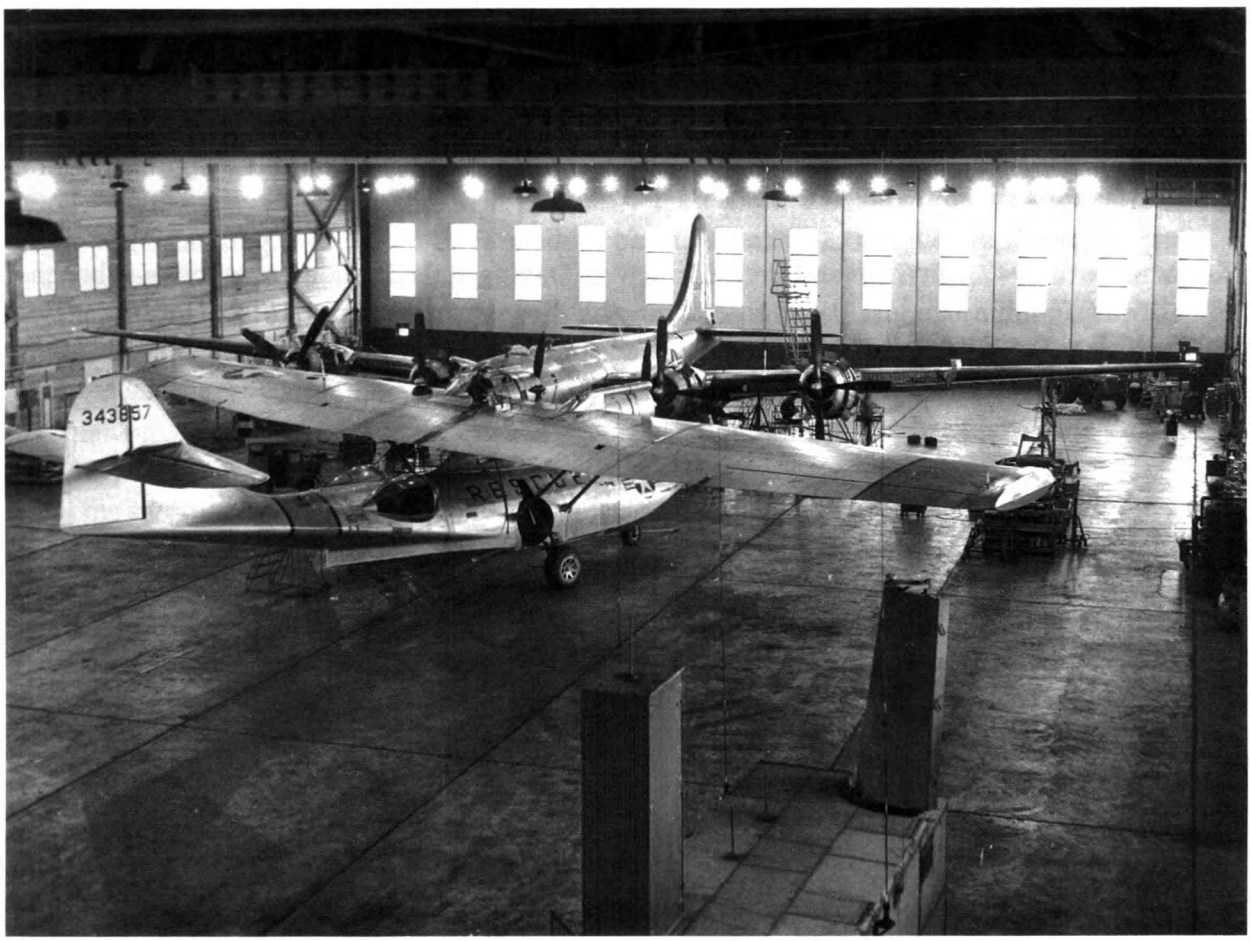
During those moments of reflection, hindsight becomes very interesting. There wasn't any way for anybody to find them, because nobody knew where they went. The stranded group also amounted to almost twenty key people of the 46th's operation: the commander, all the tech reps, and most of

the captains, all of whom were primarily concerned with how they were going to keep warm all night. This expedition was not turning out to be the relaxing respite it was designed to be. Jack Setterich was one who kept insisting that there were bears crashing through the alderbrush, since he had seen one when he was up that little stream fishing earlier during the day. Maynard felt that bears were smart enough to stay away from the scent of humans, so he wasn't a bit concerned about the bears.

The next morning, at first light, the radio operator immediately began picking up other radio traffic on the emergency channel. Somebody somewhere along the line had reported the group missing, so Ladd Field had air rescue out looking for them. On the radio it was decided that the 46th would send a C-54 into an airport nearby to Tangle Lake (where they could get in and out), and from there dispatch a small float plane to rescue the downed fishermen. The float plane subsequently picked up the stranded personnel two and three at a time and took them back to the C-54, which then flew back to Fairbanks.

Maynard knew he didn't have to report for his monthly briefing to SAC Headquarters at Bolling Field for the better part of a month, so he didn't think he would have to come up with an explanation for a while. However, only about a week later, he stopped in at Anchorage to see General Atkinson of Alaskan Air Command to bring him up-to-date on how things were going, and the subject came up as Maynard was on his way out the door. General Atkinson spoke up and said, "I understand you had a little trouble with your fishin'." Maynard turned around and said, "By golly, General, I meant to say something about that... No, no, I'm not having any trouble with my fishing, but we did have a little trouble with those flying boats. We left both of them out there in the alderbrush." "Well," the General said, "betwixt you and me, I think those damn things are right where they oughta be." Maynard was rather glad that the General felt that way.

In the summer of 1947, Maynard and Beth White were staying at the Paxson Lake Lodge, when the lodge's owner, Johnnie Windust, began entertaining his dinner guests with some local lore about two flying boats on a fishing trip to Tangle Lake that had gotten so overloaded with tons of fish that they never got off the lake, and ran aground on the shore. As the story goes, the planes are still there today full of fish bones. Maynard decided not to try to top that one.



46th Recon F-13 and one of the two PBY amphibians lost on Tangle Lake.

# Chapter 35

## "GIs MAKE SUCCESS OF 'PROJECT HAPPINESS'"

*Army Times*, Vol. 7, No. 24

**By S/Sgt. Shelby E. Wickam**

LADD FIELD, Alaska—No high-level planning was involved in this project; no air of secrecy surrounded it. The fate of millions did not hang in the balance as work progressed, for this was 'Project Happiness'—the answer of a group of non-commissioned officers of the 46th Reconnaissance Squadron (VLR) Photo to a housing shortage that was keeping them far from their families.

"When the 46th Recon, a Strategic Air Command unit, arrived in full strength in August, 1946, the housing situation at Ladd Field was already acute. For those men who had volunteered for overseas service with the expectation of their families joining them shortly, this was bitter news, for the great majority of them had returned only recently from other overseas assignments. True, additional housing units were on the drafting board, but they would not be ready for occupancy for another year.

"'If only they'd give us a few of those surplus huts on the base, we'd build our own quarters,' a few of the more ambitious were heard to remark.

Get Green Light

"'Not a bad idea,' mused Col. Louis M. Merrick, commanding officer of Ladd Field, and Maj. Maynard E. White, commander of the 46th.

"An emergency housing program was instituted at once and, at a meeting held early in September, Colonel Merrick directed that surplus barracks of the Pacific-hut type be turned over to the 46th Recon for conversion into family quarters. Twelve units were made available immediately.

"It was explained at this meeting that the Army would furnish items it could spare from surplus—odd lots of Stout houses, nails, screws, etc. The Quartermaster could provide space heaters, but had no furniture in stock. Paint and varnish were critical items in Engineer supply. The actual labor, of course, would be supplied by the men who would live in the quarters on completion. But who were the lucky ones?

"The following day Major White called a meeting of his staff officers and informed them of the availability of quarters for 12 non-coms. These quarters, he explained, would be assigned on an impartial basis and in accordance with existing regulations. He asked staff members to submit the names of NCOs whom they considered to be key personnel in the respective sections. This was done.

### Picked Workers

"Twelve eager soldiers trooped into Major White's office. His message was brief and to the point: 'This is the opportunity for which you men have waited. The success or failure of this project depends on you and your efforts.'

"'Project Happiness' was born. Time was short. The hours of daylight were decreasing daily. Winter was not far off. As all of the work had to be done on their own time, it was imperative that these men devote every spare moment to the project. This they did, laboring until midnight every night until the job was completed.

"Before reconversion operations could be started, it was necessary to haul 11,000 pounds of Stout house material from a remote corner of the military reservation to the housing area. Two Army trucks were provided for this purpose.

### Construct Ramp

"As materials began to pour in, a production line system was set up. Working as a group, the men started at one end of the project and quickly partitioned each hut into a three-room apartment. Next came the construction of a 1300-foot inclosed ramp, made from Stout house material, to connect all the buildings. But there was more to be accomplished.

"Just one month after initiation of the project, seven additional huts were trucked 175 miles up the Alaska Highway from Tanacross, a subbase of Ladd Field. A second ramp, 300 feet long, was erected to connect these units with the main ramp. Although unheated, these ramps enabled the families to traverse the entire area without stepping outdoors.

"During the construction period, residents of the area were assisted by men of the 46th on a voluntary basis. Soldiers with special skills—electricians, plumbers, carpenters—pitched in to speed the job to completion. There was no necessity for assigning anyone to a detail. Everyone was interested in the success of 'Project Happiness'.

"Each three-room apartment consists of a living room, bedroom and kitchenette. To conserve space, built-in closets and cabinets were constructed from scrap plywood. The original four units consist of three wings or apartments with a large vestibule directly in the center. In these units the vestibule serves as a children's play room, game room, and laundry room. Two of these units have bathing and toilet facilities installed in a small room in the corner of the vestibule. Other families are provided with a community latrine and bath, partitioned in the center.

"Power facilities in the housing area were considered inadequate for the operation of household electrical appliances, so a community mess was installed as part of the project. This arrangement has proved very successful. Meals are served cafeteria-style, with each family having its own table.

"Eleven of the original 12 families arrived at Ladd Field on Oct. 5. (One wife had arrived in Fairbanks two months earlier.) As they stepped from the big C-54 transport, the 'pioneers' were welcomed to their new home by Maj. and Mrs. White.

"As each of the men gathered his family about him, the long hours of toil were soon forgotten. They were together again. They were home.

"Although a few good-natured remarks were passed around about the color schemes selected by their husbands, the wives were enthusiastic about their new quarters. Children, worn out from the long trip, perked up sufficiently to inquire about Santa Claus, Eskimos and huskie pups.

"When permanent quarters are completed at Ladd Field, the families will probably leave their little settlement near the banks of the Chena River and move into the new, more elaborate apartments, complete with every convenience.

"Will they be any happier in their new surroundings? That remains to be seen, for home is home, be it an eight-room house or converted Pacific hut. But this much is certain: 'Project Happiness,' with its 18 children and 10 dogs, is a howling success."

## "46th RCN WIVES AND CHILDREN ARRIVE"

The Ladd Field *MIDNIGHT SUN*

Fri., Oct. 12, 1946

"Twelve wives of enlisted men of 46th Recon. Squadron and their 18 children ranging in age from 7 months to 4 years, arrived at Ladd Field last Saturday night at 2130 to be greeted by Major Maynard White, Commanding Officer of 46th Recon., Mrs. White, and, of course, the anxious husbands.

"The twelve new families will live in the four quonset huts in the 46th Recon. area which had been set up for this purpose with the permission of Colonel Merrick by the squadron's enlisted men who have equipped them with all the comforts of home they could.

"The three wings of each of the four quonset huts will each comprise one apartment for each of the twelve families.

"A community mess and tunnel facilities to and from the homes, mess and latrine will contribute toward making these the ideal homes in Alaska. More of these homes are being provided for, and the near future should see an influx of those families so many men have been wanting to have with them.

"The arrivals, who were surprised at how 'built-up' Alaska was, were the wives of First Sergeant Charles B. Douthit; M/Sgt. Robert W. McKee; M/Sgt. Milton W. Wilkinson; M/Sgt. John F. Prater; M/Sgt. Richard C. Cogan; M/Sgt. Charles Roesler; M/Sgt. John P. Lewis; M/Sgt. Lee G. Collins; M/Sgt. Clifford Cathey Jr.; and of the 7th Photo Tech Unit: T/Sgt. Clifford Diez, M/Sgt. Emmett L. King and M/Sgt. Parker."

# Chapter 36

## Alaskan Memories

**By June Palmer**

In August of 1946, we were sent to Seattle for "15 days TDY", and we left there in March of 1947. While Carl was port liaison for the 46th due to the shipping strike, we rented a bedroom with kitchen privileges (that meant the third shelf in the refrigerator), and mealtimes were from 6:00 to 6:30 AM for breakfast, and 6:00 to 7:00 PM for dinner. As the strike dragged on, we were asked to help with items for the wives in Alaska, such as Silex coffee pots, glass tops and bottoms, and other things which were unobtainable in Alaska. Next came the Christmas shopping for the children. Tricycles, sleds and dolls were the big items.

As things returned to normal in March, we went back to Ohio; then Carl headed for Fairbanks, and I stayed in the States until our daughter, Carla, was born. It wasn't until November that I headed for Fairbanks. My flight took two days (no jet lag in those days). As I boarded for the last leg from Seattle to Fairbanks, there were three other passengers on the Pan Am DC-4. Upon arrival at Ladd Field, we drove to our quarters, Building 606 and 607 on very aptly named Crab Road.

Talk about the wilds of Alaska, we were surrounded by it, and two and one-half miles from our nearest neighbor! So the fun began. To adjust to the cold, snow and darkness, we had a 500-gallon oil tank in our back yard, and a 500-gallon water tank in the garage. These two items provided me with more company than I expected. Our oil stoves had to be inspected daily in case an earthquake had misaligned the pipes. The oil man came twice a week and the water man came four times a week. The water tank became a place for the gathering of the clan, and put me on a first name basis with the post engineers. When a 500-gallon water tank freezes solid, you have a very large oval of ice, and it took many men with blowtorches to turn it into water again. After that happened three times, they decided that we needed another oil stove to keep the water tank warm. And speaking of keeping things warm, our refrigerator was on our enclosed back porch. We soon found that we had to keep an electric heater near it to keep it warm so it would keep food cool and not frozen.

As you may well know, we had many heavy snows; and after one big one, we were in bed in Building 607 when I asked Carl if the ceiling was sagging, or if it was just an optical illusion. It turned out to be sagging with about six inches of solid ice and snow on our roof. It was Easter Sunday with 20-degree below temperatures and 40-mile per hour winds. Picture windows are nice to have; however, on that fine day the snow piled up in our living room, forcing us to decorate the walls by tacking up army blankets.

We loved our weekends. We would get into our Ford convertible and head for the big city. I didn't know the streets weren't paved until June; the snow covers a multitude of sins. But we really splurged when we went to town, bought the week-old Seattle Sunday paper, a seventy-five cent quart of milk,

and "air fresh" eggs. I even found myself asking for "air fresh" eggs after we returned to the States (and received some very odd looks).

In order to attend the social functions on the base, we first tried hiring dependent daughters and then secretaries from Chena Courts as babysitters; but with our home being two and one-half miles from anything, they were uneasy. Our salvation came in inviting Carl's first sergeant, Dick Nelson, and sergeant major, John Baber, out to our house for dinner. They brought snowshoe rabbits and I fixed them. After enjoying an evening away from the barracks and in a real home, they offered to babysit anytime. From that time on, we enjoyed our evenings out and the boys enjoyed being at home. Carla was happy, the dishes were done, and cookies were baked. We all benefitted greatly, and we have never forgotten how wonderfully things worked out. In fact, we still see John Baber, who lives quite near our daughter in California today. He feels she belongs to him.

I also recall the day we had 36 inches of snow. We were having some daylight about this time. I saw Carl head down our road and saw the car disappear into a snowbank. I called the motor pool and they sent the six-by-sixes to run up and down our road and pull Carl out of the snowbank. The next morning he headed out it was a repeat performance.

As the daylight grew longer, activity became greater, such as the day I thought the Russians had arrived. I looked out our windows and found that I was surrounded by men in camouflage uniforms firing guns. With great fear I called Carl. As he checked into it, he found that it was our troops having maneuvers. We could have had an earthquake that day and my shaking would have matched it.

I will never forget the radio station. Our engineer was Wally Downs, brother of Hugh Downs, who lived across the street from my home in Lima, Ohio. It is hard to believe in these times that our one radio station was our total entertainment in the home. I did survive my first overseas assignment and resolved to make all future bases the lap of luxury.

# Chapter 37

## The Catch of a Lifetime

If Maynard White had a philosophy about recreation, it was that recreation was the reward for getting the job done; and so far, in most people's estimation, the 46th was doing an outstanding job. Off-duty activities were essential, he felt, for the welfare of the personnel and the morale of the unit, although he never exactly put it into those terms. The job came first, but it was recreation more than anything else that pulled the personnel together into a cohesive working unit and made operational success possible. It was for these reasons that Major White encouraged all types of recreational activities.

In addition to organized recreational activities, such as the Golden Hearts Flying Club, through which personnel could learn to fly and qualify for their pilot's licence, there were other activities that seemed to arise out of personal interests. For instance, when numerous squadron members found a location where there was excellent fishing in a river by Big Delta, they received wholehearted support and encouragement from Major White to set up a fishing camp. Except for the day a bear backed up against a hot stove and ended up burning down the cook tent, the camp offered fine outdoor experiences for the many squadron members and their families who visited it for a few days to a week at a time.

Numerous legendary fishing trips (besides the infamous one to Tangle Lake) were made by Major White, accompanied by various personnel. For those who like to fish and hunt, there is nothing quite as exhilarating or memorable as living off the land and rivers in the wild, untamed Alaska territory.

Fishing in Alaska is an enjoyable sport and great recreation, particularly when the big ones are biting. Experienced fishermen always knew where to get a particular species of fish. For instance, some of the finest lake trout fishing could be found at Paxson and Summit Lakes down the Richardson Highway from Fairbanks to Anchorage, halfway between Delta Junction and Gulkana. Rainbow, steelhead and salmon fishing was excellent in the river between the village of Naknek and Naknek Lake near the village of King Salmon, far southwest of Ladd on the Alaskan Peninsula, and was some of the best in all Alaska. Grayling fishing was always good in almost any spring-fed stream.

Maynard and Beth frequently went down to Paxson and Summit Lakes on weekends in the summertime where they usually stayed at the old stagecoach stop that was run by Johnny Windust. This was a unique lodge unlike anything the White's had ever seen before or since.

The bedroom wing of the lodge had once been the horse stables during the stagecoach days. The entire building, which housed the eating area adjacent to an open kitchen and stables, was made of logs and had a very old rustic appearance. The eating area was small, and consisted of three picnic tables with benches attached, separated from the kitchen only by a long work table. The stables at one time had individual horse stalls which were removed to make room for sleeping accommoda-

tions. Each "room" was separated from the others by stacked bales of hay, cunningly hidden with burlap that was tacked to the ceiling beams and hung down to the floor. Each sleeping room was about the size of two horse stalls, and there were about seven or eight such sleeping rooms in the old stable wing. The rooms weren't soundproof by a long shot. A person snoring in any room was heard by all. None of the rooms really qualified as an ideal honeymoon suite.

The kitchen had an old-fashioned, large cast-iron wood-burning cook stove on which Johnny cooked the best sourdough pancakes around, along with country butchered, thick sliced, sugar-cured bacon and ham. If a person didn't go back for second or third helpings, Johnny was insulted and felt that that person didn't like his breakfast.

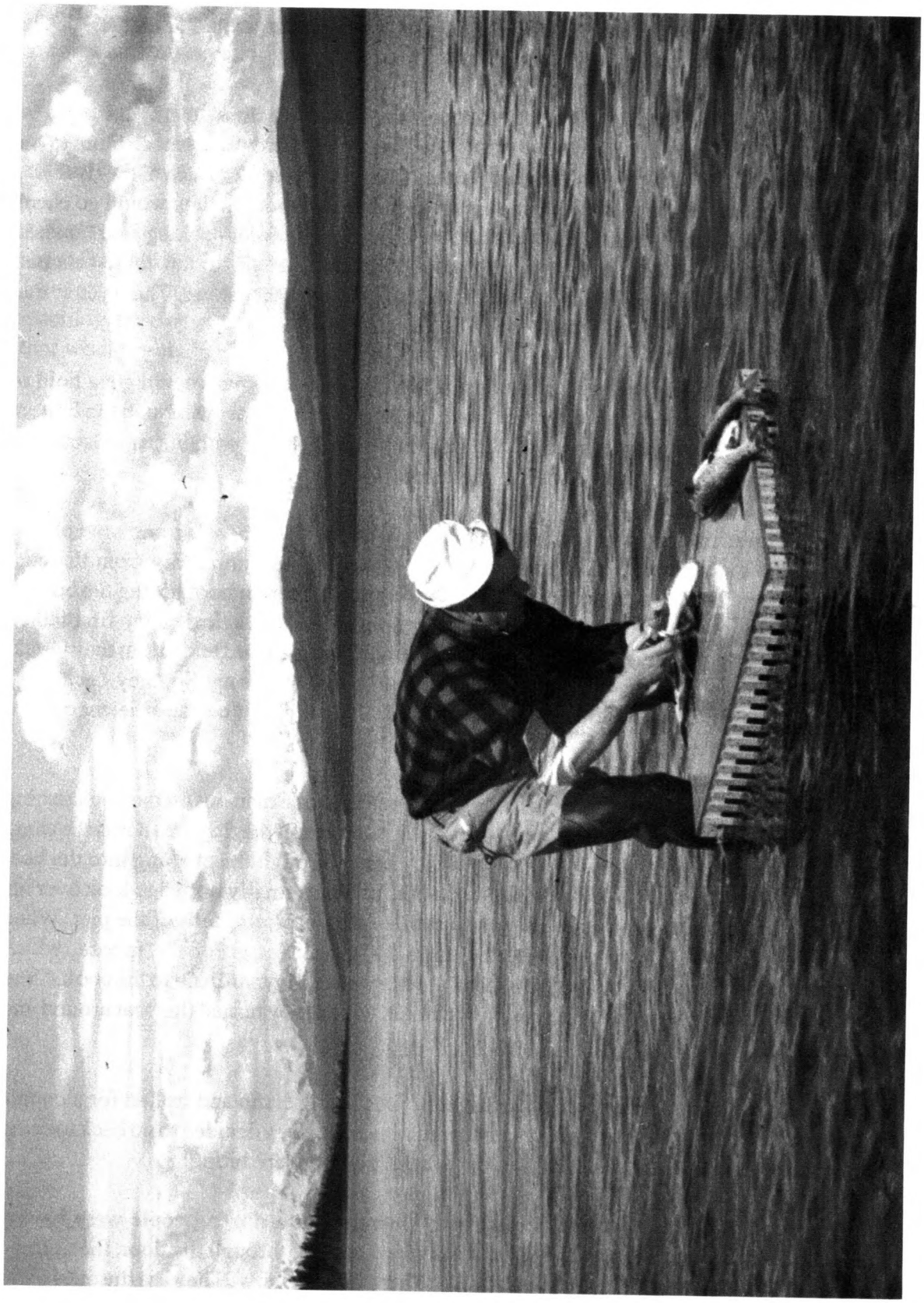
By the time people departed the lodge for the lake, Johnny had made sure each person had a sack lunch of large slices of ham between two thick pieces of sourdough bread with butter. The size of one's lunch depended on the number of servings one had for breakfast. The more one ate for breakfast, the more sandwiches they got for lunch.

The good fishing started by the time the lake ice was about half gone, and lasted until about two weeks after the ice was all gone. This was the perfect time to catch fish on the surface of the lake. Trolling with surface lures provided plenty of action and excitement. Later on in the summer in July and August, the fish were down in deeper water. To catch fish at that time it was necessary to troll along the shore at the thirty-, forty- and fifty-foot depths. In August, one usually caught eight to twelve-pound trout.

When you hooked a big fish while trolling, you frequently would feel a heavy strike and then think you were hooked on a big rock. Your line would be down at about a forty-five degree angle. To keep from breaking your line and losing your lure, you would have to stop the boat and back up, making sure you kept your line taut at all times. When you got back to where your line was pointing down at about forty-five degrees off the front of the boat, with no slack in the line, you should pull and reel as fast as you can. The fight is on. When the big trout takes a lure, they often stick their nose under a big rock, and you have to pull them out. As a rule, if you know how and where to fish, there was always plenty of action anytime day or night.

The White's had an ideal four-foot square and two-foot deep live box that floated with the top four or five inches sticking out of the water. They would anchor it nearby where they were trolling, or near a gravel bar out in the lake where they sometimes pitched their tent and camped. By putting fish in the live box, it would be fresh for breakfast, lunch or dinner when fish was invariably the main course.

One summer, Major Ivan Klohe was in Alaska on TDY and got in touch with Maynard, who arranged for the two of them to go down to the military recreation camp at Naknek to check out the fishing. Never having been there before, they decided to get up early the next morning and see how the fish were biting. They got up about 4 AM, got dressed, checked the mess to find that it didn't open until 7 AM, so they got their fishing tackle, loaded their gear into an aluminum boat with a 5-horsepower motor, intent on doing some serious fishing. The boat was located in a boat "corral" with piers on



Maynard White rounding up lunch on Paxson Lake.

three sides except for about a ten-foot opening through which the boats exited and entered. The shoreline within the corral was a steep gravel bank.

Upon exiting the corral, Ivan hesitated for a moment to decide whether to go upstream or downstream. One glance downstream at the nearby white water rapids convinced him to go upstream. As they cruised up the river approaching Naknek Lake, the smooth surface of the river was broken by a large object moving across the current. Ivan and Maynard thought they would go check it out. It took some time for them to close the gap since a 5-horsepower motor pushing four hundred pounds of load upstream can go only so fast. As they closed on the object, it turned out to be a bull moose, and Ivan and Maynard reached the moose before it got to the other shore. The river at that point was at least ten times wider than it was at the dock.

Maynard talked Ivan into pulling the boat up alongside the moose so Maynard could get a hold of it. Maynard then turned around and faced forward with his knees on his boat cushion in the bottom of the boat; and with his left hand holding onto the front seat, reached out with his right hand and got a secure hold of the hair on the top center of the moose's rump.

It took a little experimenting, but they soon learned that by pulling the moose's rump towards the boat, it resulted in the moose and boat turning to the left. Pushing the rump away from the boat resulted in the moose and boat turning to the right, with the moose's left rear hoof hitting the bottom of the boat. In discussing what to do with the moose, nothing seemed practical. They first talked about riding him, but the water was very cold. That would be one for the record books, but they would probably need a photograph to prove it, and they didn't have a camera along. So, they decided to guide the moose down river to the fishing camp and steer him into the boat corral. It seemed like a good idea, so that's what they did.

As they approached the fishing camp and dock area, they could see one man out on the dock fishing downstream with his back to them. The two recognized by his apron that the fisherman was the camp cook. He wasn't paying much attention to them until they came through the opening into the boat corral. He obviously heard the heavy snorting of the moose. When he finally turned to look over his left shoulder at what was making the noise he was so startled that he almost fell off the pier. When Ivan and Maynard got to about the center of the corral, Maynard let go of the moose, which immediately tried to climb the high, steep gravel bank. At that point, Maynard said to the cook, "You dress that one out while we go back and get you another one." Then they turned the boat around and headed out of the corral opening.

Ivan and Maynard went back up the river out of sight of the fishing camp and trolled for a couple of hours without a strike even after switching lures several times. So, they decided to go back to camp to see if they could get some breakfast and find out where the fish were biting.

As they walked through the door of the dining room where about a dozen people were having breakfast, the cook jumped up, pointed to Ivan and Maynard coming through the door, then turned to the people eating breakfast and in a loud voice said, "There they are now! They are the ones I was telling you about." The cook turned back to Ivan and Maynard and said, "Tell these folks about that moose you brought into the corral this morning." Both Ivan and Maynard almost simutaneously said,

"What moose?" Ivan turned to Maynard and said, "Did you see a moose?" Maynard replied, "I don't know what you're talking about." The cook's expression showed that he was utterly crestfallen.

Ivan and Maynard went about their breakfast at a table by themselves, maintaining their deadpan expressions. And for the remainder of their stay at camp, despite the cook's unfortunate predicament, neither Ivan nor Maynard ever did let on that they knew anything about a moose.

After breakfast, Ivan and Maynard asked the man tending the boat livery where they could go to catch some fish. He replied that anywhere out in front of the corral above the rapids should be fine. They went straight out the entrance into the river and cast their lures behind a big rock and wound up catching three large ten-pound steelheads within an hour. Then there was the one that got away, but that would probably just sound like a fish story.

# Chapter 38

## Homecoming

**By Walter Schlecht**

It all began around the first of May 1946 when we received orders transferring us from Smyrna AAF base to the 46th Recon at Grand Island. I hurried to buy a car, a 1941 Chevy business coupe. It had good tires, but it burned about a quart of oil with each tank of gas. I had to pay a black market price of $1,500 for it, and rushed to get it registered so we could be on our way.

At Grand Island, I was interviewed by Major White in that big, empty hangar. The choice was to go to Alaska or get out of the service. Patriotic fellow that I was, I volunteered to go!!

My next problem was teaching my young wife, Martha, how to drive a car so she could get home to Massachusetts. I took her on the country roads on the outskirts of town until she learned how to drive straight down the road (lesson one). Then I took her two or three times to town to drive in traffic, making stops, starts and turns. Next came her driver's test. A big, burly trooper took her around the block while I sweated it out at the departure point. She made it back and parked the car right next to a big tree, so close that the trooper couldn't get out of the car! He was very understanding and she ended up getting her first license.

With my sister, summoned from Massachusetts to be Martha's driving companion and navigator, they made it home, but only after crossing the Mississippi River three times!

On July 15th, 1946, on Captain McIntyre's crew, we were off for "180 days TDY" to Alaska.

So the time came, five months later, to get my young wife to Fairbanks. She prepared well, having bought nice clothes, high-heeled shoes and silk stockings; and departed Boston for Seattle, and from there via Pan Am DC-3 to Fairbanks by way of Ketchikan and Anchorage. Her arrival at Ladd Field was not without incident on Saturday, December 7th, 1946 which was cold (minus 65 degrees F), dreary with ice fog and very dark.

I got a cab and was at the MATS (Military Air Transport Service) terminal awaiting her arrival. I heard the DC-3 make a missed approach, checked with the airline agent and headed for Weeks Field at the outskirts of Fairbanks where the plane was expected to land. I arrived at Weeks just in time to hear the DC-3 make another missed approach. Speeding back to the MATS terminal at Ladd, I arrived just in time to see the DC-3 taxi in. By the time the cab got parked, it appeared as though all the passengers had deplaned except the pilots. Wait! there was one more passenger to go, a young girl in nice clothes, high-heeled shoes and silk stockings. She seemed to be frozen, staring out the exit of the plane. The pilots, it appeared, had to gently push her out and help her to the terminal. She had arrived!

Fairbanks was not what she expected, especially with the sub-zero temperatures. We went "home" in the cab. We couldn't see out because all the windows were frosted over. Newspapers lined the snow-covered cab floor for added insulation. We went to the best available restaurant in town, Liggett's drug store. We sat next to an attractive, well-dressed girl with very heavy make-up - Martha's first exposure to the girls of 4th Street. Martha shuddered to see the natives in their long dress, and men with huge beards. We dined next to some rough-looking characters slurping their soup. Martha cried most of the night.

Most of our time was spent at the Cheechako Hotel, living in the cramped space of one small room, with a small single bed, a chest of drawers and a mirror. We did have a small space to hang our clothes. Cooking was done in the community kitchen, where we learned to share with all the others. Most of us brought small hot plates for cooking, very much against the rules of the house. Occasionally, when a circuit breaker would pop, the management knew what was going on - an overload of hot plates. But the Cheechako became our home for almost two years. We learned to live with the lack of privacy (the walls were paper thin); and the bath and shower facilities, though segregated by sex, were communal. Social life consisted of much communication, along with game playing, such as bridge, pinochle, and checkers.

Martha worked only part-time in Fairbanks. For a while she worked in the Post Exchange, and then as a photographer at the Casablanca night club. These were short periods of employment. Most of our off-duty time was spent with friends from the area. Walt and Marge Steigman received much of our attention. They had built their own home there. He was a civilian aircraft mechanic in Fairbanks, and she was a new mother. We enjoyed a trip to Mt. McKinley National Park with its hair-raising train ride along the steep cliffs on the way.

In a different way than she did when she arrived, Martha cried again when we left Ladd Field on September 30, 1948. She was very sad to leave Alaska and all the friends she had made, both military and civilian.

# Chapter 39

## Reminiscence of Alaska

By Kate Sims

What was a school teacher from Vernon, Texas - a town where the sand is actually a foot deep and the summer temperature often reaches 110 to 114 degrees - doing at Ladd Field? I was enjoying the weather.

I had been transferred from Base Operations at Love Field, Texas, to Base Operations at Ladd Field, Alaska in January of 1945, during the Ferry Command period, when planes were being sent to Russia during the war. After a few months I was assigned to the Adjutant's Section in Base Headquarters. Although my former superintendant had written to tell me my old job was waiting, I wanted to stay at Ladd. So, along with ten other WACs, I took my discharge and began working for Civil Service.

Immediately after the surrender of Japan there had been an exodus of wartime personnel. Everyone wanted a discharge or transfer to the States. The Russians, many living on base, also left. The arrival of the 46th Recon revived the base and made us feel important again.

On December 21st, 1947, I married Captain Marvin S. Sims, Maintenance Officer with the 46th Recon. In Base Headquarters he was often referred to as "that damned Sims", especially during the fiasco about cannibalizing the old B-29s to repair others when new parts weren't available, and particularly for flying those B-29s at 55-below when Cold Weather Test said it wasn't possible.

When we married, I learned that living off-base wasn't the same as living at Chena Courts. For a while we lived in the Fairbanks Hotel, where the man in the next room had two foxes for roommates. We bought an army surplus building on the highway to 26 Mile (now Eielson AFB). We had three rooms - a kitchen, a bedroom furnished with a bed that Sims made and a dresser composed of two wooden boxes with a board over them, and a living/dining/laundry room which contained a table, an oil stove, and a water barrel. We ordered a chemical toilet from Sears. In the meantime, Sims and Hosey built an outdoor john using scrap lumber. Since they intended to, and did, use the same boards to later build a bathroom, they left the boards at different lengths; so there was no roof. Planes often flew very low over it. Although Sims assured me that I couldn't be seen, I always hid my face during low flybys.

Nick Molinaro, the Tuthills, the Hoseys, and friends from Chena Courts often visited us. When we served drinks, Sims just broke a 6-foot icicle off the house and we had ice for everyone. If I made Jello, I just mixed it, put it on the floor, and it was ready to serve in a jiffy. Occasionally I went to the Tuthills for a bath.

Then our son, Steve, was born there at the St. Joseph's Hospital, which was staffed by a Canadian order of nuns. They were wonderful. The doctors were very concerned about the baby because of

the lack of sun in the winter. They insisted that he have a bottle of orange juice every day. There was no such thing as frozen juice, but Sims always managed to bring home plenty of oranges.

Once the stove blew up. Sims picked it up, threw it out into the snow, and told me to take Little Steve, catch the bus, and go back to the hotel. When Sims got off, he installed the biggest stove he could find.

Then the orders came for Sims to return to the States. At first I said I'd stay and, after he got to his new base, he could ask to come back. This went over like a lead balloon. So, on February 22nd, 1949, at 54-degrees below zero, we boarded the train for Anchorage, and on March 5th sailed to Seattle. I had been afraid of airsickness if we flew. I avoided the airsickness, but ended up with three days of seasickness.

I loved Fairbanks, the beautiful snow, the diminishing days and lengthening nights and vice versa, the wonderfully interesting vigorous people, and the GLORIOUS NORTHERN LIGHTS. Maybe it was all a dream. No, Steve and Barbara and our three grandchildren are real. In a way they are products of Alaska.

The Marvin and Kate Sims' residence in Fairbanks.

Kate's "aircraft observatory".

# Chapter 40

## The Grounding Incident

During the spring of 1948, Major White, Commander of the 72nd Recon Squadron, called "Moose" Holland into his squadron headquarters office. There he gave Moose a "chewing out" and removed him from flying status, or "grounded" him, for a 30-day period.

The incident that caused the Squadron Commander to take this action was a combat approach and landing at Ladd Field, Fairbanks, Alaska, on Runway 24 Right that Moose made in an F-13 at the completion of a maintenance flight test.

In the preceding weeks at Ladd Field, in the mess hall and officer's club, considerable verbal interchange (most of it good-natured) had occurred between the pilots of a P-51 fighter squadron and the pilots of the F-13s of the 72nd Recon Squadron. It was typical single-engine (fighter) pilots razzing the four-engine (bomber) pilots as "bus drivers", etc.

On the occasion of the test flight, it happened that two sets of aircraft approached Ladd Field and requested landing instructions. A flight of P-51s had received instructions to land and the flight leader, whom Moose knew, told Moose over the radio to "sit back and watch how 'real' pilots made a combat-tactical approach." The P-51 flight then proceeded to "buzz" the landing runway in a low-altitude, high-speed pass, pulling up sharply into a continued left-hand circular pattern with a descending turn to the approach end of the runway, delaying to the last minute to extend the wheels just in time for landing.

Having been the brunt of the sarcastic comments from these same fighter jocks, it seemed to Moose that this was an appropriate occasion to demonstrate that the "bus drivers" were also capable of "hot" flying. Consequently, Moose asked the Ladd Field control tower for permission to make a combat-tactical approach and landing.

After a rather long delay, the control tower responded with approval to make the combat approach. (It was later learned that the tower operator had called Base Ops for instructions. The Deputy Base Commander, who was in Base Ops at the time, gave permission, but said to delay the approach until he could get to the tower to watch).

Unbeknownst to Moose, the Alaskan Air Command Yukon Sector commanding general was in an aircraft on the run-up pad for the active Runway 24 right waiting to be cleared into position for takeoff. His takeoff had been delayed by the flight of P-51s, and now he was to be further delayed by the F-13 combat approach.

Having received control tower approval to make the combat-tactical approach and landing on runway 24 Right, Moose proceeded to land , approaching Ladd from the east at minimum altitude and, after passing the crest of Beacon Hill (on which Lt. Edgar Fowler crashed an F-13), Moose was over the end of the runway at about fifty feet and pushing maximum airspeed to the "red line". Moose pulled the aircraft up into a tight left-hand continuing 360-degree turn, delaying to the last instant to extend the gear, and touched down in a real "grease job" landing.

Major White had seen the entire performance as he was driving in his jeep to his office, where, upon arrival, he immediately instructed his deputy to find out who was flying the F-13 and have him grounded on the spot.

No sooner had Moose taxied his plane to the Hangar No. 4 ramp and shut down, than he was instructed to report to the Squadron Commander "immediately", which Moose did, to receive the commander's displeasure, culminating in the 30-day grounding.

Although Moose did not appreciate it at the time, this grounding action was really all to his benefit, because the commanding general, having had his takeoff delayed by this "hot rod" F-13 pilot was, to say the least, a little unhappy. The general had approached Major White and informed him that he, the general, was initiating disciplinary action against the F-13 pilot. Major White's response was that disciplinary measures had already been taken and were currently being enforced. Since the action was accomplished, the general agreed that no further measures were necessary.

The high point in the whole affair came as Moose was leaving Major White's office feeling somewhat put upon. Just as Moose reached the office door the major called out to him, "Moose, that sure was a pretty approach and landing." However, Moose remembers, in all the subsequent years during the occasions when he and Maynard have been together, each telling his own version of the "grounding," Maynard still claims he has no recollection of having made that comment.

That night in the Officer's Club, the pilots of the P-51 squadron initiated Moose into their squadron as the "only four-engined fighter pilot in Alaska."

(Note: Maynard does recall a detail Moose left out. As he and Moose were discussing established procedure, Maynard took Moose's "fifty-mission crush" visor hat from Moose's hands, walked over to the woodburning stove, and dropped the hat in while the conversation was going on. Before they parted, Maynard recommended that Moose drop by the quartermasters and pick himself up a new regulation officer's hat.)

(Added note by reviewing editor (Moose Holland): With this memory jogger, I do recall the "fifty-mission crush" visor hat which had been carefully nurtured from pilot school at Turner Field in Albany, Georgia, to this fateful day. Incidentally, Maynard didn't just "drop" the hat in the stove, it went in with considerable velocity and flourish. Also, Maynard's "recommendation" to get a new regulation visor hat was issued in direct, colorful language with great vigor and emphasis.)

Shown above is the crew of the first electronic intelligence-gathering mission of the 46th Reconnaissance Squadron prior to takeoff from Ladd Field to Tokyo, Japan on 4 April 1947. Back row (left to right): Capt. Abraham E. Wayshak, Photographer; 1st Lt. Wayland W. Williams, Navigator; 1st Lt. David A. Patterson, Radar Observer; Capt. Frank E. Ferrell, Pilot; and Maj. Maynard E. White, Aircraft Commander. Front row (left to right): 2nd Lt. Michael S. Scherer, Flight Engineer; T/Sgt. Willie G. Brantley, Crew Chief; Sgt. Manuel Barros, Scanner; and T/Sgt. Arthur L. Anderson, Radio Operator.

# Chapter 41

## The 46th's Raid on Tokyo

In April 1947, Major Maynard White and his crew flew the first 46th Recon electronic intelligence-gathering mission from Anchorage, Alaska to Tokyo, Japan. Mission requirements involved a week to ten-day stay in Japan before a return mission covering essentially the same route back to Anchorage.

Before departing Anchorage, Major White went into the Personal Equipment section of Base Operations to return his issued navigation watch for a new one, because the one he had been wearing had just ceased working. Personal Equipment didn't have a replacement watch available, so they sent him down to Base Supply to pick up a new one. He was in a hurry and Base Operations furnished him with a vehicle and driver to take him to Base Supply, only to learn that Base Supply was also out of watches, and all he received was the response, "I'm sorry, I can't help you." Major White asked how he, as the pilot, could go on a long-range flight without a watch, and received the reply that perhaps he would just have to go to the Post Exchange (PX) and buy one.

Since the Major still had transportation and a driver, he instructed the driver to take him by the PX on his way back to Base Operations. At the PX, he rushed in to look at their watches to learn that they didn't have any inexpensive ones left. The least expensive watch they had cost $22.00. Major White lamented to the clerk behind the counter, "I guess I'm trapped again. A little over a year ago I had to pay $2,355.45 for a new Cadillac sedan because there weren't any less expensive cars readily available. Now it looks like I'm going to have to pay you twenty-two dollars for the 'least expensive' wristwatch available, and, this too, is outrageous!" He paid the clerk the $22.00, put the new watch on his wrist, and the inoperable issue one in his pocket.

Major White looked at his new watch enroute to Base Operations and thought to himself that it really was a very good-looking watch. It had a square bezel with emerald-cut crystals or diamonds at the three, six, nine and twelve o'clock positions, with no numbers on its bright, shiny gold face. Even the leather band was striking. He felt uncomfortable about spending so much money on a watch, but finally decided that he wouldn't tell his wife Beth about how much money he squandered on it.

Major White arrived at Base Operations just in time to sign the flight plan. Captain Frank Ferrell and the rest of his crew had finished the mission paperwork and, after the preflight was completed, they were soon airborne. Enroute to Japan, they flew above 25,000 feet all the way along the coast of the USSR gathering electronic intelligence. Since it would be a week to ten days before the return trip, there would be plenty of time to do some shopping and sightseeing in Tokyo.

When they got to Japan, they agreed to never go anywhere or do anything alone. Frank Ferrell and Maynard decided to stick together as a team. In this way, Frank could stand guard when Maynard was in the restroom and vice versa. Maynard's father had told him at the start of the war that if he

was ever in a foreign country, not to get caught with his pants down. Maynard was more than a bit apprehensive about these Japanese. He never was convinced that they had surrendered willingly.

After parking the plane at Hanedi Airport at the edge of Tokyo and arranging to have military police guards posted at the aircraft around the clock, the crew went downtown to one of the American military hotels. Maynard and Frank roomed together and when they were shown to their room, they found it spacious with two government issue beds all made up with clean sheets, pillows and blankets. It was very neat and clean.

The room had something in it that neither one of them had ever seen before, and did not quite understand. Behind some doors in one of the walls was an ornately-carved wooden construction that had knobs and what looked like fold-out racks. After looking it over carefully for a period of time, they agreed that it would be a handy place to hang up their underwear, socks and T-shirts at night so they could air out. The next morning, they found it worked just as well to hang their pajamas on so they could air out during the day.

After a reasonable night's rest, Maynard and Frank got shaved and dressed, had breakfast, went to the front desk, each to change a ten-dollar bill into Japanese yen, and then decided to go down to the Ginza to go shopping. However, before they left the hotel, they discussed the merits of walking back to back, frequently changing position so that neither one of them would have to walk backwards all the time. They quickly concluded that this would appear awkward and suspicious, so they decided to stay inside the hotel and look out the windows for a while watching the natives, to see if they seemed to be friendly.

The first thing Maynard and Frank noticed was that all the natives appeared to be wearing their pajamas, bath robes, and shower clogs with white socks. The two wondered to themselves what time of day the natives got dressed. They finally decided that they looked like peaceful people and they weren't big enough to cause much of a problem, unless they came at them in large numbers.

When they asked the front desk clerk for directions on how to get to the Ginza on foot, they were given a map, advised to go by rickshaw and told how much to pay the rickshaw men in the flat straw hats. This mode of transportation sounded like a good idea. They wouldn't have to watch their back in a rickshaw, especially if the barefooted little man in the flat hat ran fast enough.

They arrived at the Ginza in a very few minutes to begin their shopping spree. They also learned how close the hotel was and the way to get back to the hotel on foot. They started out window-shopping. With one looking in the windows and the other one standing guard, and periodically switching, they covered a sizeable amount of territory. After a while, they started venturing into small one-room shops looking at the merchandise offered for sale.

They had been in several shops when Frank sided up to Maynard and whispered to him to take a look at the little man with the bug eyes holding the briefcase standing to Maynard's left at the end of the counter. Frank went on to whisper that the same little man with that same briefcase had been in the last three shops that they had been in. While Frank was whispering in Maynard's ear, the little man with the briefcase started talking with the sales clerk behind the counter. Very slowly, Maynard

turned his eyes to have a look at the little man talking to the clerk. Maynard was shocked that he had actually seen this little guy several years before and that he was a spy! Maynard and Frank decided that it was time to move calmly towards the door to get out of there.

They were about halfway to the door in this 12-foot by 12-foot shop, walking side by side, with Frank walking forwards and Maynard walking backwards, when the clerk at the counter spoke out in broken English, "Officers, may this man have a look at your watch?" Frank turned around, and the two of them moved slowly back toward the counter. Cautiously, Maynard raised his arm slightly, which pulled up the sleeves of his Eisenhower jacket and shirt, exposing his new watch which he had bought the previous day in the Anchorage PX.

The little bug-eyed guy with the briefcase then said something to the clerk, who then asked in broken English if the officer would take off his watch so this other man could have a good look at it? Maynard stated emphatically, "No, that watch is staying on my wrist!" Maynard put his hand down on the end of the counter, pulling up further on his jacket and shirt sleeves. The little man again talked to the clerk, and the clerk asked Maynard if those four bars on the face of the watch were diamonds. Maynard responded, "What do you think they are?" The little man once again talked to the clerk who then asked Maynard how much he wanted for the watch. Maynard responded by asking how much would he give.

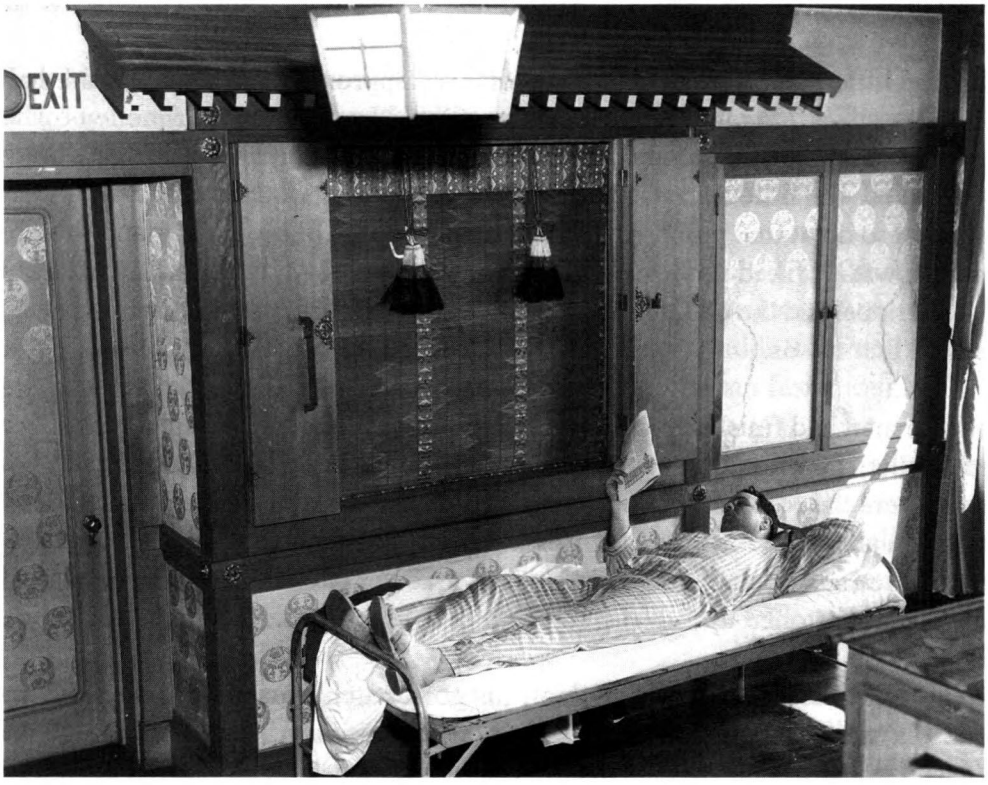
So the conversation went on through the clerk interpreter. The little man made an offer and Maynard replied that he wouldn't sell his watch for twice that amount of money. Frank sided up to Maynard and whispered in Maynard's ear, "Do you realize that you just turned down a fortune for that watch?"

At that point, the little man came back with an offer of approximately two and one-half times the amount of his first offer. Maynard responded by saying, "Let me see your money." The little man put his briefcase up on the counter and opened it. It was full of Japanese currency bound together in neat little bundles. The little man started piling the bundles out on the counter. Maynard obviously didn't know what to do at that point, so he picked up a bundle of the money and thumbed through it to make sure it wasn't filled in the center with newspaper. Maynard then handed a bundle of the money to the clerk behind the counter and asked the clerk if it was real Japanese money, to which the clerk replied that it was.

By then the little man had finished stacking the bundles of money up on the counter. From the size of the stacks of bills, there couldn't have been any left in the briefcase. Maynard counted the stacks, assuming there were the correct number of bills in each bundle, and started putting the bundles into his pockets. When all the pockets in his uniform were filled, there were still many stacks left on the counter, so he started stuffing bundles inside his Eisenhower jacket. Frank helped him with this and in getting his jacket buttoned up.

With the money out of sight, Maynard took off his gold watch, handed it to the little man with the briefcase, and Maynard and Frank departed the shop very quickly. They went straight back to their hotel room to figure out what to do with the money. Maynard decided to stash it in the center section of his B-4 bag and secured the zipper with a small padlock. In the relaxed atmosphere of the room, Maynard remembered where he had previously seen that little bug-eyed spy with the briefcase. He

Street near the Ginza where Maynard and Frank discovered they were being followed.




Maynard reading under the concealed "laundry rack".

was either Peter Lorre or his identical twin. Maynard was certain because he had seen him only a few years before in a "Mr. Moto" movie.

After they had been living in their room for three or four days, they finally realized that someone had been washing their pajamas every day, then neatly folding them and putting them on their beds. Maynard and Frank came in one night and got ready for bed. When they put on their pajamas, Frank's pajama pants came up to his armpits and the pajama shirt sleeves came down over his hands. Frank thought they were either in the wrong room or the wrong hotel. However, the bags were theirs. They had heard of clothes shrinking in the wash, but this was new to them. The mystery was solved when, using deductive reasoning, they decided that the maids had put "Laurel's" pajamas on "Hardy's" bed and vice versa.

They then put their minds to work on how to take advantage of the system. Their pajamas were being worn out in the laundry, and their socks and underwear were becoming a little stiff from use. Then it came to them loud and clear. They would wear their pajamas and shower clogs during the next day, and leave their socks and underwear on the rack to get laundered. The only problem would be how to get out of the hotel without going through the lobby. Once outside, nobody would take notice of them since they would be dressed like everybody else. Maynard and Frank agreed that the rack service was a clever idea, and that American hotels should adopt the concept. The next day, Maynard mentioned to the hotel desk clerk what a clever idea he thought this built-in convenience was. The clerk eyed Maynard quizzically. "The rack behind the doors in the wall of our room," Maynard explained. "Oh," the clerk knowingly replied, "You mean the Shinto Shrine."

One morning, Lieutenant General Kenneth B. Wolfe, commanding general of the Fifth Air Force at Nagoya, Japan, called the hotel where Major White was staying to ask if the major could come down to Nagoya the next day to talk to the Fifth Air Force staff about arctic operations. The general volunteered to send his airplane and crew to pick Major White up at Hanedi Airport. Maynard couldn't think of any reason why not, so he accepted General Wolfe's invitation.

The general's airplane arrived on schedule, the trip to Nagoya was uneventful, and Major White arrived in time to have lunch with General Wolfe and two of his senior officers. After lunch they proceeded to the briefing room where the briefing and question period lasted approximately three hours. It was no small feat for Maynard to talk that long about "arctic operations" without once mentioning any classified "need-to-know" information. Maynard figured the general's staff was either easy to please or very long-suffering.

Following the briefing, General Wolfe asked Major White if he could stay overnight and spend the next day taking a tour that his social secretary had specially arranged for the major. The secretary was a beautiful young Japanese/American lady who spoke Japanese and English fluently. Major White graciously thanked General Wolfe for his kind invitation but explained that he had not come to Nagoya prepared to remain overnight. The general told Major White that it wouldn't be a problem because he would be staying in their "VIP" suite where he would have everything he needed. The general added, "In the morning, my staff car driver and social secretary would pick you up at your quarters at 0830 hours and take you to the Noritake China Factory, where your tour guide will be

the president of Noritake China, who will also be your host at a Japanese/American luncheon in the executive dining room at Noritake.

"Following lunch," the general continued, "my driver and social secretary will take you on a tour of the cultured pearl industry. When you finish your tour, they will drive you to my airplane, where my crew will be standing by to take you to Hanedi Airport. I will arrange for a staff car to meet my airplane at Hanedi and take you to your hotel."

Major White replied, "General, we certainly can't let all that planning go to waste, can we?" The major then thanked the general for the opportunity and privilege to speak to his officers about operations in the Arctic. He then thanked the general for his kind hospitality in arranging what sounded like a fabulous tour the next day. Major White was then taken to his Very Important Person (VIP) suite feeling very much like a very important person.

The next morning, Major White came out of his suite at precisely 8:30 AM, looking like a very important person. (The attendants had laundered his clothes, pressed his uniform and shined his shoes).

At the Noritake China Factory visitor's entrance they were met by the president, who bowed and warmly greeted Major White and the social secretary. The president explained that it was his wish to start the tour in the raw materials storage yard and walk through all the processing areas up to the shipping room, which they did.

At their disposal was a vehicle and a driver who took them around behind the factory and let them out near a rear entrance door very close to a monstrous pile of cattle bones. These bones had been gathered from the Pampas in Argentina where they had lain in the sun until they were bleached snow-white. The bones were brought to Japan a full shipload at a time. The president was asked how many shiploads were in that pile, and his reply was, "many, many shiploads." The other main ingredient was a very special clay.

As they visited the various stages of processing, they came to one where the bones were ground down and added to a liquid that looked like milk. The same was done with the clay. Then the two were blended together (becoming "slip") in a large vat where metallic impurities which would spoil the finished ware were removed by magnets. Then the slip was put through a filter press to squeeze out the water, and from which it emerged through a circular opening as a large soggy "sausage".

In precisely measured amounts the clay was then "thrown" onto revolving wheels and "turned", while being shaped by the hands of the workers into plates of various sizes. Dishes, bowls, saucers and cups were made in the same way. At this stage, there were hundreds of people all doing essentially the same thing. The clay items were then placed on mobile racks which were moved on tracks to drying areas. From the drying areas, these mobile racks were placed in the kiln (or oven) for firing. This was done several times in the manufacturing process. The decorations were all hand-painted, and there were hundreds of women in this stage of production carefully applying dozens of different designs. The decorated pieces were then glazed and fired again.

When they got to the end of the manufacturing process, each and every piece of china was being scrutinized, and if a piece had the slightest imperfection, it was shattered by being thrown into a bin. The bin had wheels so it could be rolled back to the raw materials line, where it could be reground and the process started over. The china, in various-sized sets, was packed into cardboard shipping cartons, making each carton very compact but of considerable weight. Despite the work involved, sets of china were very reasonably priced. For example, a 132-piece set of Noritake bone china could be bought in the Tokyo Post Exchange (PX) for $25.00 American at that time.

After the china factory tour came the Japanese/American luncheon. Major White didn't know what to expect because he had never been a guest at a Japanese lunch before. Perhaps it was for this reason that his stomach had been a little queasy. He felt very out-of-place. To begin with, he was at least twice the size of any other person there. He was six-feet five-inches tall and weighed 240 pounds; none of the Japanese he saw on his tour were over five-feet three or weighed over 110 pounds soaking wet.

Unaccustomed to Japanese customs, Maynard had absolutely no knowledge about how Japanese ate their food, and he knew he wasn't going to blend in with the crowd. Insofar as the chopsticks remained a baffling engineering mystery, the major contented himself with drinking about a half-dozen cups of tea. Not wishing to offend, Maynard finally told the social secretary that he was on a diet. With that, she turned and looked him straight in the eyes. After a short pause, she said, "I can't tell them that. They will convulse with laughter, and then be terribly ashamed of themselves. Here in Japan, they eat all the time. You, a giant, are on a diet? Let me get you a spoon." When the spoon came, it was anything but dainty, but it fit very nicely into the major's mouth.

After the luncheon came the tour of the pearl industry. It was interesting to see how they seeded a live oyster with a grain of sand; as they say, "putting a foreign body within the shell" of a certain mollusk. The vastness of the beds in the sea water was unbelievable. When one stops to consider the harvesting, sorting, matching, drilling, stringing, etc. for marketing the pearls, one can understand why they are so expensive. Upon completion of this tour, Major White was taken back to the general's airplane and flown to Tokyo.

Maynard and Frank spent the next several days using up the Japanese money shopping for cultured pearls; bolts of raw silk; cloisonne, cinnabar and lacquer-ware vases; jewel boxes; black silk kimonos; wooden clogs; several sets of Noritake bone china; tea services; silk table covers and napkins; oil paintings of tigers painted on raw silk; and much more. It took a truck to haul the goods from the hotel to Hanedi Airport, where they filled half a bomb bay in the F-13. Maynard, enroute back to Fairbanks, minus his watch but with a load of merchandise, decided he could tell his wife Beth about the expensive watch he bought at Anchorage after all, and how he met "Peter Lorre" in Tokyo.

# Chapter 42

## Kodiak Bear Hunt

Since Alaska is one of the last frontiers on the North American continent for big game hunting, a tour there presented a unique opportunity for those personnel in the 46th/72nd Squadron stationed at Ladd Field, Alaska to participate in this exclusive big-league sporting adventure.

Maynard White often recalled the time, during World War II, when he was crossing Africa leading a flight of B-25s enroute to India. One leg of the journey took them from Accra on the Gold Coast to Kano, Nigeria, where they landed to spend the night. The next morning, they were taking off at first light just as the sun started to peek over the horizon. Maynard was flying the first aircraft to take off. He was airborne with the wheels coming up just off the end of the runway between 50 and 100 feet above the terrain when he spotted a large male lion walking straight ahead in the same direction as the airplane was headed. He leveled off and flew directly over the lion to get a good look. The lion seemed much larger than Maynard expected with a big, black collar of fur around its neck. As they were about to pass directly over the magnificent beast, it turned its head to glance up at the aircraft as if to say, "Don't mess with me!" It showed no signs of being frightened by the aircraft but continued walking nonchalantly straight ahead.

Maynard had often thought about that big, majestic lion he had seen in Africa and thought what a challenge big-game hunting would be if he ever had the opportunity.

It was obvious to Maynard that being in Alaska presented that opportunity he had so hoped for. When time availed, he went to downtown Fairbanks to talk to the men in the sporting goods store to determine what kind of gun he needed to hunt Kodiak bears. He learned a lot from the man in the store, and wound up buying a .30-06 Remington Model 721 with an Alaskan all-weather 2 1/2 power scope, and a supply of Remington bronze point 180-grain ammunition. Maynard was also told not to even consider hunting Kodiak bears without a guide.

A careful survey of the personnel in the 72nd revealed at least two associates and another experienced hunter assigned to base engineering who might be enthusiastic about big-game hunting. Maynard's assumptions were correct, and the four hunters, McIntyre, Cleland, Barr and White soon got together to plan a Kodiak bear hunting trip down on the Alaskan Peninsula in late May of 1948. Since all had done some hunting before, it seemed like a waste of money to hire a guide, so they didn't.

After assembling their gear, they arranged for transportation a B-17 from Cold Weather Test at Ladd Field, piloted by the commanding officer of that unit, Colonel "Bearpaw" Stewart. The first leg was into Cold Bay, about 900 miles south of Fairbanks and at the beginning of the Aleutian Chain.

At Cold Bay they took up residence in an abandoned quonset hut and hunted for two days around nearby Frosty Peak, but without results. Then they discovered that there was a C-45 on floats posted

at Cold Bay for search and rescue purposes. The aircraft and pilot belonged to a unit of the 5th Search and Rescue Detachment. Major White "prevailed" upon the pilot to fly them across the bay to where there were bears in abundance.

The float plane flew them into a small lake on the north side of Cathedral Mountain on the Alaskan Peninsula. The pilot of the float plane circled the area before landing on the lake and taxiing up to the shore on the southeast end of the lake. As soon as the plane floats touched the shore, three of the four hunters, with big game rifles in hand, hit the ground running across the tundra toward the alderbrush at the base of the mountain, chasing two large Kodiak bears which had just left the shore as the float plane taxied up.

The fourth hunter, B. D. Barr, did all the work of offloading the float plane, carrying all the gear to the camp site, setting up the tents and cooking supper. Barr was nearly twenty years older than any of the other three, but a heck of a lot smarter. The other three came back to camp empty-handed but filled with wild, unbelievable stories about shooting a Kodiak bear in heavy, four-inch diameter alderbrush at short distances with high-powered rifles. The bear had stood up head and shoulders above the alderbrush thicket, the tops of the branches of which they later determined to be about nine feet high.

When the three hunters began relaxing in camp and got calmed down, they realized that their clothing was completely saturated with water as a result of climbing up the side of the mountain in the middle of a stream that cascaded down the rocks. The stream bed had been the only route they could find to get onto and off of the alderbrush-covered mountain. After eating supper, they hung up their clothing near the campfire to dry and crawled into their sleeping bags for a good night's rest.

They got up early the next morning to a beautiful, clear sunshiny day. After breakfast, the intrepid hunters knew the first order of business was to go back up into the alderbrush on the side of the mountain to see if they could make contact with the Kodiak bear they fired upon the night before.

Once they were back up in the alderbrush area, they could again smell the bear. Climbing through the alderbrush was difficult beyond belief. Even though the sun was shining bright, a person could see no further than a few feet because of the density of the alderbrush tangle. It was a tedious process making headway. It took several minutes for them to crawl just a few feet as they followed their noses toward the smell of the bear. The hunters stayed close enough to remain in visual contact with one another as they proceeded through the brush. Gradually the smell turned into a stench just before they got within sight of the bear.

It was obvious that they had killed the bear the night before. It was lying motionless on its stomach. They carefully circled the bear to see if it was dead. In the process they came upon a second bear laying on its side, also recently killed. It became clear that in the confusion the night before, they had shot two bears instead of just one. The smaller of the two bears measured ten-feet four-inches.

This was the point where the excitement ended and the work began. First they had to cut a lot of alderbrush just to get at the bears to begin skinning them. When this job was completed, they had to roll the bears over, skin them and tie each hide into a compact bundle with nylon parachute cord

so that it could be secured to a packboard that a person could carry on his back. This task was accomplished only with great effort. The hides were not only heavy, but they were slippery with bear grease and extremely awkward to contain with the parachute cord. Most difficult of all, however, was cutting trails through the alderbrush to enable a person to carry approximately one hundred twenty-five pounds of bear hide down the mountain through the alderbrush to get back to camp. The project took the entire day.

By the time the hunters got back to camp and cleaned up, it was time to cook supper, eat and crawl back into their sleeping bags for a much-needed rest.

Early the next morning, Barr and White were up, dressed and cooking breakfast while McIntyre and Cleland remained in the sack. Barr and White went ahead and leisurely ate their breakfast, discussing the previous day's activities for about half an hour. They finally decided to go hunting by themselves. They did, however, wake up the other two and tell them what they were planning on doing and asked what McIntyre and Cleland had planned. The two tired ones said they planned to sleep until about noon, then get up and eat, and afterwards to shoot their bear in camp that day. With that amusing sendoff, White and Barr headed off down the wide, open valley with their rifles over their shoulders, their field glasses hanging around their necks, apples in their pockets and smirks on their faces.

It was a beautiful day for hunting. After walking several miles down the valley, all the while scanning the area with binoculars, they waded across three glacial streams knee-deep to hip-deep in swift, cold water, and eventually decided to turn around and head back towards camp. They had struck out that day as far as the bears were concerned.

They got back to camp about 4 PM and noticed a monstrous Kodiak bear resting about one hundred feet from the tent area and ready to pounce on the intruders. The bear's front paws, with four-inch claws, were poised in front of it, and its rear paws were pulled up under its hips. The large bear's head was crouched level with his back. Barr and White stopped in their tracks when they saw the bear and observed it closely with binoculars. Either the bear was transfixed on some prey or it was dead, and most likely the latter as it didn't move the whole time they were watching it. If it were shot by McIntyre and Cleland, it was clear that they had not carried him back to camp, it was just too large. It must have weighed at least a thousand pounds.

When the facts came out, they all had a good laugh. The bear did in fact walk into camp, and Cleland and McIntyre had been there to greet him. Their theatrics were for Barr's and White's benefit. They had propped up the bear's head and rearranged his feet.

It was still two days before the float plane was due to pick them up. Over supper they discussed the next day's activities and decided to relax and take it easy for a change.

The following morning Barr and White took two cameras along with their normal hunting paraphernalia and hiked a couple of miles up the valley, stopping short of the first glacial stream crossing. They crawled up on top of a large, flat rock out in what otherwise appeared to be a meadow that stretched for miles in three directions; the fourth side led up to a tall, steep mountain.

It was another beautiful sunshiny day. They had all their gear up on top of the rock, and there was plenty of room for both of them to stretch out for a snooze. Every half to three-quarters of an hour they would change the guard.

This arrangement had continued for a couple of hours when Barr called to White to sit up and take a look across the meadow. White picked up his binoculars and took a good look. There was what appeared to be one large bear and two little ones. After about ten to fifteen minutes, Barr said it looked like an old sow with two cubs. Another ten or fifteen minutes later, White said that he and Barr had walked through that very area the day before and the grasses were waist high. That wasn't a sow and two cubs, it was two big bears and the grandaddy of all Kodiak bears.

After observing the three bears for another fifteen minutes, Barr said that it would be interesting to have a good look at them from a closer range. That was all it took. They were off that rock enroute toward the bears in a flash.

Barr said that he read in a hunting magazine that if you wanted to get up close to a bear, there were only a couple of things you had to remember. First, you had to be downwind from the bear; and the other was to walk directly toward the bear if you wished to approach it. If there were more than one person, walk one behind the other in single file, with a low profile, and without moving to the right or left. In that way the bear, which has poor eyesight, will not detect any discernible movement.

With White walking up front and Barr directly behind, they walked straight at the big bear until they were less than 100 yards from him. The other two bears had spread out with one on each side when Barr reached out and got ahold of White's belt and started pulling him backwards down into a five-foot depression along a creek bed. They squatted down and whispered about the situation they were in, deciding to continue in reverse until they got back at least another forty or fifty yards.

They discussed the plan of action. The big bear was headed away from them at about a 150-degree angle. It was decided that White would shoot the big bear, and Barr would stand behind and off to the right side with White's 16- millimeter movie camera with color film, and record the episode for posterity.

The first shot hit the bear in the right side just behind the front shoulder. This should have dropped him in his tracks, but it didn't. The bear took off running straight ahead in the direction he was headed. The second shot hit him in the right hip, which changed his direction about twenty degrees further to the right and he continued running at high speed. The third shot hit him in the chest and brought him down. The hunters waited twenty minutes before walking up to the bear to see if it had expired.

When they got up to the bear, they took some more movies. White had laid his rifle across the bear's head to show the animal's massive size. The distance between the bear's ears extended from the rifle's trigger guard to the end of the rifle's forearm, a full nineteen inches.

Barr and White found it impossible to roll the bear over on its back so they could skin it. They finally decided to sound the wilderness emergency alarm for help - three rifle shots in succession, evenly spaced. After about thirty minutes, two hunters arrived on the scene to ask who sounded the

emergency alarm. White and Barr admitted that they did. When asked what the emergency was, White and Barr explained that they needed help rolling the bear over so they could skin it. The two young hunters who had responded to the emergency alarm were not amused, to say the least.

Barr and White paid dearly for that day's events when they finished skinning the bear and tying it to the backpack. When they were finished it was almost dark. By the time they got back to camp it was almost midnight. Both were wet from the waist down from crossing three wide, rushing glacial streams, and were too hot and exhausted to eat. They just took off their wet clothes and crawled into their sleeping bags.

The following day, after returning to Ladd Field, Major White discovered that he had neglected to get permission to bring home a Kodiak bear hide, so Barr got more hides than he had bargained for. Never in the remainder of his tour in Alaska did White consider going back Kodiak bear hunting again to get himself a bear hide.

None of the bears they shot were submitted to the Boone and Crockett Club; they might have made the record book if they had been. However, the man back at the sporting goods store said that three of the four hunters probably set some sort of record. According to him, to hunt without a guide and to survive after venturing into the alderbrush chasing Kodiak bears, these hunters were obviously the luckiest men alive.

# Chapter 43

## The Saga of Peter Duncan

Strategic Air Command has long had the dubious distinction of being the command with the largest number of marital problems in the Air Force. Therefore, it is quite appropriate that Strategic Air Command's first operational unit should set the precedent, as it did with the saga of Staff Sergeant Peter Duncan.

Major White was at his desk adjacent to the orderly room one afternoon when the First Sergeant, Charles B. Douthit, came in and said, "Chief! I have a letter here I would like you to read. Take a look how it's addressed first." It was addressed to "Commanding Officer of S/Sgt. Peter Duncan, 46th Recon Squadron, APO 731", etc. Maynard read the letter to learn that it was from a young girl's mother who was living in the "lower 48", and she was asking many questions about S/Sgt. Duncan, such as: Was he a nice boy? Were his buddies nice boys too? He wasn't the type of boy who would play cards, drink beer and talk dirty, was he? Or the type who would go out with the wrong kinds of girls, was he? Her reason for asking all these questions was that she had just received a letter from her daughter, who worked in Fairbanks, stating that she was dating S/Sgt. Duncan of the 46th Recon Squadron.

Maynard asked Charlie if that was the same S/Sgt. Duncan who worked in the orderly room. Charlie replied that he was the only Sergeant Duncan in the organization. Maynard asked Charlie to bring in Duncan's records. In looking the records over, it was noted that Duncan was already married and his wife lived down in the States. Sitting there thinking about this, Maynard asked Charlie whether or not it was S/Sgt. Duncan who came into his office five or six weeks before dressed up in his "class A" uniform passing out wedding cigars. Charlie answered in the affirmative. Maynard asked if the girl Duncan married a few weeks ago was the same girl whose mother sent this letter? Charlie answered, "I wouldn't want to bet any money on it, but the given names are the same."

After thinking about this for a few minutes, Maynard asked if Sergeant Duncan was at his desk in the orderly room, and if so, to bring him in. Maynard had Duncan's records and the letter in his lap, out of sight, when Charlie returned with S/Sgt. Duncan. Major White first asked First Sergeant Douthit to have a seat and then asked Sergeant Duncan, "Who was [Maynard read the name of the girl in the letter]?" Sergeant Duncan replied with a big smile on his face, "Sir, she is my wife." Maynard then asked if this was the same young lady Sergeant Duncan had married a few weeks ago. With an even bigger smile on his face, Duncan answered, "Yes sir! She is!" Then Maynard asked Duncan, "Who was [reading the woman's name off Duncan's official records]?" Duncan, with a terrible frown on his face, answered, "She is my wife, too, sir, but I am not really married to her." Major White asked, "Why is that?" Sergeant Duncan answered by saying that he was already married to (giving another woman's name) when he married the woman listed on his records. Major White asked, "What about this woman you just married a few weeks ago?" Sgt. Duncan replied, "Oh! That's

different, sir, I love her! Sir, I have been really worried about this situation for a long time and I have wanted to talk to you about it."

Major White said, "Sergeant Duncan, when I send your case over to the base commander, he is going to court martial you and the government is going to put you in Fort Leavenworth penitentiary and throw away the key." Sgt. Duncan said, "Sir, that's the part that worries me." The major, (pulling a tablet out of his desk drawer and with pen in hand) said, "Sergeant Duncan, give me the name and address of the woman you said you were married to when you married the woman listed on your records." Maynard wrote down the woman's name and address and then asked, "How many children do you have by this woman?" Sgt. Duncan replied, "Just one, sir." Maynard then asked the age and sex of the child, which he recorded. Further questioning of Sgt. Duncan revealed that he also had one child by the woman listed on his records, and that the woman he married several weeks earlier was pregnant. Maynard then dismissed S/Sgt. Duncan, stating that he would talk to him again later.

First Sergeant Douthit and Major White discussed Sgt. Duncan's predicament and the ramifications of turning him over to the judge advocate general's office for action. They decided to see if they could help Sgt. Duncan solve his problem instead of throwing him to the wolves. Maynard asked Charlie if Sgt. Duncan had enough money to pay a lawyer if it could be arranged to hire one from downtown Fairbanks to handle Duncan's case quietly. Charlie responded, "I think the answer is yes, but let me check to be sure." Charlie came back into Maynard's office and announced that Duncan had plenty of money to pay a lawyer; in fact, Sgt. Duncan was the 46th's banker to whom all the enlisted men turned when they needed a few dollars to get them through to the next pay day. Maynard asked Charlie to bring Sgt. Duncan back into his office.

Major White asked Sgt. Duncan if he had sufficient money to pay a lawyer if it could be arranged to hire one downtown to handle his legal problem. Sergeant Duncan replied, "Yes sir! I have plenty of money!" Major White then said to Sgt. Duncan that he understood that he (Sgt. Duncan) had considerable amounts of money out on loan to other enlisted men in the 46th, and asked if that was correct. Sergeant Duncan replied, "Yes sir! That is correct!" Major White then asked how much money Sgt. Duncan had on loan in the squadron. Duncan replied, "I don't know exactly, but it is three or four, maybe five thousand dollars." The major asked, "Where did you get all that money?" Duncan answered, "Sir, I would rather not answer that." The major said, "Don't answer it then, but are you sure you can put your hands on enough money to pay a lawyer?" "Oh, yes sir," replied Duncan. The major then dismissed Sgt. Duncan, stating that he would get back to him in a few days.

Major White then called the president of a Fairbanks bank whom he had the pleasure of meeting at a party at Ladd Field about one month earlier. Major White identified himself, explaining where they had met. The banker acknowledged that he remembered, and asked how he could be of help. Major White answered by asking if he could put him in touch with a lawyer in Fairbanks who could handle a rather sensitive problem involving a sergeant in his organization, and not charge the sergeant an arm and a leg. The matter also needed to be handled on a confidential basis. No one wanted the details spread around Ladd Field. The banker's reply was to give him a day or two and he would get back in touch. Shortly thereafter, he came back with a lawyer's name, address and phone number, asking that the sergeant call the lawyer at his earliest opportunity. Duncan called the lawyer immediately, and Major White heard nothing more about the situation for some time.

After several months had gone by, Sgt. Peter Duncan came into Major White's office with First Sergeant Douthit. Duncan was dressed in his "class A" uniform, with a haircut and his shoes sparkling. He had a box of cigars under one arm and a big box of candy under the other, saying, "Major, may I shake your hand? I don't know how to thank you. Would you have a cigar? Take a whole handful." "Thank you very much," replied the major, "but no thank you. I don't smoke." "Well then, have some candy," responded Sgt. Duncan, "Take the whole top layer," he said as he poured it out on the major's desk. "Well, thank you very much, Sergeant Duncan, but I will only have one piece. You can put the rest back in the box. But what is the big occasion?" "Oh, yeah, I forgot," said Duncan, "Do you remember that lawyer you sent me downtown to see several months ago? Well, he got me an annulment from my second wife, a divorce from my first wife, and he got me remarried to my third wife. May I shake your hand again, Major? I don't know how to thank you enough."

"Major," Duncan said matter-of-factly, "you asked me a question the last time I was in your office which I didn't answer at that time, but I want to answer it now." Major White was a little puzzled by Sgt. Duncan's statement because he couldn't recall any question he had asked of Duncan. Sergeant Duncan proceeded to say that his whole family was "just no damn good," and repeated that statement at least two more times. Then Sgt. Duncan went on to say that his mother was a good-looking woman, and in the town where his father and mother lived there was a giant, beautiful factory owned by an extremely wealthy man who had been dating his mother for years and his father didn't know anything about it. He went on to say, "Every time I wrote this man and asked him for money, he would always send it to me." Major White screamed, "DAMMIT, DUNCAN, THAT'S BLACKMAIL!! YOU STOP THAT DAMNED FOOLISHNESS RIGHT NOW! DO YOU UNDERSTAND WHAT I'M SAYING?" "Yes sir," Sgt. Duncan replied, then saluted and departed.

It was many months after Major White had rotated back to the "lower 48" and received his promotion to lieutenant colonel that he and Colonel Joseph J. Preston ferried some B-45s up to Anchorage, Alaska to be picked up by crews stationed in Japan. Since they were going to spend several days in Alaska, they decided to fly up to Fairbanks to visit friends. Colonel Al Pearl met them at their airplane and took them to his quarters for lunch. During the meal, Al told them about the beautiful new baseball park that had just been completed. That afternoon, they were having the dedication ceremony before the first game at the ball park. Al was obligated to go because Brigadier General Dale V. Gaffney was throwing in the first ball, and so Al invited the two of them to be his guests.

They got to the ball park a little late and climbed into the third row of seats on the right side of the bleachers to find that Gen. Gaffney was out on the pitcher's mound with the umpire who was on the loudspeaker system. Just as they got comfortably seated, the umpire's voice came booming across the loudspeaker saying, "Just a moment, sports fans! We are going to have a change in the program. I just saw three officers come into the stands, and one of them was the first commander of the 46th Recon Squadron here at Ladd Field. General, give me the baseball and please take your seat in the stands. Colonel or General Maynard White, whatever your rank is, come on out here to the mound and throw in the first ball. After all, this is the '46th Recon Ball Park'. Maynard White, come on out here."

Maynard did as he was told; and who do you suppose the umpire was? As Maynard got closer, he recognized the beaming face of Peter Duncan*. When Maynard got back to his seat in the bleachers, Al and Joe wanted to know how he had become such a big wheel. Maynard replied, "Do I have a story for you!"

* a pseudonym.

# Chapter 44

## Tundra Survival Movie

During the summer of 1948, the U. S. Air Force was engaged in the making of a training film, "Land and Live on the Arctic Tundra". Once again, the 72nd Recon Squadron was called upon to provide personnel as "actors" and support.

A location had been selected on the tundra near Nome, Alaska, and a base camp was established. The camp was to accommodate not only the USAF people, but also to provide for the support of the Hollywood film crew who were to direct and shoot the training film. The camp facilities were set up to accommodate twenty to thirty people, and consisted of a large steel barge as a mess facility after having been used to bring in all of the physical equipment for the camp, and sleeping and darkroom tents.

The film director was George Seitz, Jr., who would in later years be involved with the TV series "Hopalong Cassidy". The senior cameraman was Walt Lundinn, who had filmed most of the Harold Lloyd movies in the early days of Hollywood. The 72nd Recon Squadron was represented by Sgt. "Bat" Masterson, Sgt. "Smoky" Stover, Lt. Wes Hamilton, Lt. Frank Shaack, Lt. Clark Holland and others. Strategic Air Command was represented by Wally Boffa of the Operations Analysis Directorate who served as technical director and general expert.

It was a cold, rainy and windy day when the film crew and actors left Nome in a boat piloted by an ancient Eskimo whose skill in handling a boat was truly amazing. Alongside an estuary enroute to the base camp location, he put into the bank at a landing by an Eskimo fishing camp. It seemed that some of his family were catching and drying salmon to feed their sled dogs during the winter months. While it was an interesting sight and experience, the fishing camp atmosphere, to say the least, was certainly not like fresh, clean mountain air.

Since the storyline of the film took place in overcast, cold and rainy weather, it required the crew to be on location shooting every time it was cold, wet and windy. The storyline had an Air Force crew crash-landing on a tundra lake, followed by the crew experiences in living off the land by locating and identifying edible plant life. The techniques of plant preparation and trapping small animals and fowl was examined and filmed in great detail.

One scene showed the aircraft immediately after the crash-landing with the copilot laying over the tail section of the aircraft just in front of the rudder. The flight engineer was lifting the copilot off the crashed aircraft into an inflatable raft. Several difficulties had to be surmounted, not the least of which was the temperature. Both the air and water temperatures were close to freezing, and there was a strong wind blowing. The director would start the cameras rolling and then shortly holler, "Cut! Cut!". He would then instruct the copilot "actor" ("Moose" Holland) to stop shivering since

unconscious men don't shiver. The flight engineer, "Bat" Masterson, also had a real problem in that he couldn't lift "Moose" (who weighed 230 pounds) into the raft. So time-out had to be taken to build a small platform under the water alongside the fuselage. This would let Holland push and lift with his legs to help "Bat" get him into the raft. To top it off, all of this activity took up time, and "Moose" and "Bat" started to dry off. So, the assistant director, with great glee, threw buckets of ice-cold water over the two "actors" to keep them in character.

So it went through the summer, June, July, and August; with a trip or two back to Ladd Field to clean up and sleep in where the millions of tundra mosquitoes could not get at them.

The USAF training film was a success and was even entered in the Venice Film Festival in 1949, taking first place in the documentary class. The USAF people who had "acted" in the film were to have been given small individual awards (trophies), but somehow that never happened.

In later years, during the early 1950's, while stationed at Headquarters SAC at Offutt Air Force Base, Captain Holland and Mr. Wally Boffa would respond to requests to view the film, mostly by Scout organizations, and then would answer questions about arctic flying and survival techniques.

Also, General Curtis E. LeMay took the film to Washington, D.C. to present it to the National Geographic Society in Constitution Hall. General LeMay took "Moose" Holland along with him to set up a survival display in the Hall lobby, and be available as an "actor" to answer questions relating to the film and survival in general. As "Moose" later recalls, "To be asked to stand and be introduced to the capacity crowd by General LeMay as one of his combat crew aircraft commanders and survival experts was a thrill that I have savored and remembered over the years."

Tundra Movie actors: (l to r)
"Bat" Masterson, Frank Schaack,
Wes Hamilton, Wally Boffa (SAC HQ.),
Clark Holland.

Tundra Movie - preparing
to shoot at main set.

Tundra Movie -
Tail Boom Set - camera crew
gets ready, summer '48.

# Chapter 45

## Christmas in Alaska

**Dorothye Scrivner**

Until you've seen a Christmas in Alaska, you've never really seen one. I've seen white Christmases before, but there was always discomfort and occasionally a miserable cold wind to push the chill deep into your bones. Needless to say, it was a white Christmas up here. We had heavy snow underfoot, the dry, squeaky, crispy kind as you walked along, with the snow laden tree branches forming a canopy overhead.

The holiday season was opened by a musical program by the grade and high school under the supervision of the musical director of the Fairbanks Public School. It was a wonderful rendition and served well to put the whole community in a real holiday spirit. All the churches had their own programs which added even more to the festivities. The city had a party and movies for the kids, with 800 youngsters present. The base had a party for the military dependent children as well. We took our child to both, and at the latter old Santa arrived by dog sled which excited all of "us kids".

Marvin went out and chopped down two pine trees for us. He waded in waist- deep snow and came back about an hour later as dry as if he'd been walking on the sidewalk, except for the loose snow which fell in the tops of his overshoes and was melted by his body heat.

The few baubles we were able to find here and there, including some items my sister sent to us via airmail, gave us ample decorations for our tree, which we set up about a week before Christmas. Because it dried out rather quickly, we had to replace it on Christmas eve with the second tree Marvin brought in. Lee Ann was fascinated by the "Tis tee" with the "yites", and on Christmas morning was thrilled by her packages and expressed herself very well when she stopped dead in her tracks, put her hands on her knees, and said "Huh!".

We all had a wonderful day. We had baked chicken with all the trimmings and ended the day with a feeling of deep satisfaction; and as we looked out our window at our own real Christmas-card scene, we felt, "What wonders hath God wrought" would really sum up our feelings.

Lester and Peggy Best (Winter of 1947)

Light ice fog at Ladd Field at fifty degrees below zero.

Eskimo ladies viewing the dog sled races at the Winter Carnival in Fairbanks during the spring of 1947.

# Chapter 46

## A Few Memories of Life in Alaska

**Virginia Zwicke**

After a week's delay in Seattle because of the weather in Fairbanks, Pan Am finally phoned me at the New Washington Hotel in Seattle that I could, indeed, board the next flight. I had no way to get in touch with Norbert on such short notice, so I worried that he would not meet me in Fairbanks. However, he had checked daily and was waiting for me on that cold winter night (Dec. 23rd). I have no idea what time it was since it was dark in Alaska any time much after 2 PM. I can't say that there was instant recognition; Norbert was one of several figures all bundled up in arctic gear.

We checked into the Cheechako Hotel (hotel? It was an old barracks-type building intended for construction workers), but we were happy to have the room reservation, thanks to the advice of Marvin and Dottie Greenberg. Dottie had arrived before the cold wave that had delayed my flight. The restaurants seemed to stay open quite late, so no rush was needed to go out and eat. We got settled in our room, and then decided to get cleaned up for our dinner out. Before we went down the hall to our respective bathrooms (one for Ladies, one for Men) for a shower, Norbert put a bottle of wine in between the inner window and the storm window to cool for a welcome toast. We were quite surprised to find that the toast would have to wait since the wine had frozen in such a short time. We bundled up and trekked off to The Wagon Wheel for a lovely steak dinner. I'm sure it blew the budget, but it sure was good.

The rooms in the Cheechako were very small. I heard that one of the fellows (a good-sized football type) could actually reach across the width of the rooms - not too unlikely. We walked into Fairbanks for our meals, but we kept a cache of teabags in our room which worked pretty well in hot tap water. Hot plates were very much in demand, although hard to find, but the resident manager certainly didn't approve of them. Our parents sent us a small hotplate and an electric casserole by air, which were very much appreciated. Supplies were very limited in Fairbanks due to a shipping strike. How we managed with a small hotplate and a limited supply of pans, dishes, etc. I'll never know, but I recall we did have dinner guests in our room one time when we served spaghetti. I'm sure it was no gourmet treat. It was during this time that for thirty days the temperature never got above -55 degrees. The rather long walk into Fairbanks for dinner was a brisk one, that's for sure. When it finally got up to -36 degrees it actually seemed balmy to us.

By April we had had it with the Cheechako and I set out to find a place to rent. In a real estate office the manager told me that we could rent the upper floor of their residence out by the airport if I would babysit for a portion of the rent. I checked it out and it was an improvement over the Cheechako, and Mrs. Smith approved of the arrangement whereby I would care for their children afternoons while she worked in her husband's office, and our rent would only be $40 per month. The large room

contained a bedroom set, a table and nothing else. We purchased a sofa and another chair, a rug or two, and we had a cozy hideaway. There were windows across the front of the room and no shades, so in the summer we found some appropriate "blinders" for our eyes since the sunlight was so bright most of the night.

We arranged some footlockers in the kitchen area so that we could use a hotplate and an electric casserole to do our cooking. We had to fetch our water from the utility room downstairs and share the bathroom. Some of our fisherman friends and hunters supplied us with gourmet foods - salmon, ptarmigan, grayling, caribou (and caribou heart). When Lt. Jackson gave us the latter I had no idea how to cook a heart, but my "Joy of Cooking" had a recipe and it was actually very good. We had Lieutenants Jackson and Warner for a bridge game and dinner, and they agreed that the dinner was a gourmet's treat. Let's face it, we were all young and hungry, and not that discerning.

Our civilian neighbors across the street provided the salmon. I don't know where they went for them, but Mrs. Lauritzen told me "Never again!" The salmon was absolutely delicious, but unfortunately it was also the season for the renowned Alaska mosquitoes, and the family was driven home earlier than planned because of this assault.

The neighbors next door, the Byrds, had a lovely garden and provided us with Swiss chard, carrots, potatoes, etc. They had been in the Territory for quite some time. We never met Mr. Byrd, but Mrs. Byrd and I chatted many times (when she had time from her gardening). Her husband was a truck driver of one of those huge double trucks, and his run was from somewhere in the Yukon Territory. It was apparently hard work but it paid well. She told me his pay was $1,200 a month. We were very impressed since our pay from the Air Force as a Captain on flight pay was $440 per month; so living on the economy in that area wasn't easy.

Cooking experiences were very interesting at first when the canned goods in the commissary were all painted khaki-colored, so unless you remembered exactly the section they came from, or unless they had a name printed on the can you had no way of knowing just what was in the can. If I had opened a can hoping for some tomatos and it turned out to be peaches, that sort of changed the menu. Sometimes you could tell by shaking the can, but you were usually quite surprised to find what was in it.

Mr. Smith was a prospector, a hunter, a territorial commissioner, justice of the peace, and a realtor. He also did a lot of their cooking - his pot of "stuff" on the old cookstove was always very interesting, if completely unappetizing to us. As I said, he was quite a hunter, and the stew pot had quite a variety of things in it. He would throw in a few birds, maybe a rabbit, cabbage, whatever they happened to have. I am sure that at times it contained bits of bear, deer, whatever! At one time he brought home a bear's ear for his little boy.

Mr. Smith's brother had moved to Fairbanks, and I believe he was a construction worker. He asked the Smiths to have his wedding in their home. The Smiths asked me to prepare hors d'oeuvres, and gave me a box of crackers, cheese, and a can or two of sardines. I did the best I could with what I had, and decorated the cheese/crackers with olives, pimentos or whatever else I could dream up. The guests included Sgt. and Mrs. Snider (neighbors) and Norbert and me. Mr. Smith, as justice of the

peace, was to perform the ceremony. Mrs. Smith tried to make the house look pretty, and had turned out the lights in favor of the more flattering light of candles. In the background was a radio program of Irish music, courtesy of Pat & Mike's Cafe, and was much too loud besides being inappropriate.

By the time the ceremony was to start, Mr. Smith had obviously sampled the liquid refreshments. He held a large, heavy book (a Bible?) and, swaying back and forth, proceeded with the ceremony. Then he looked up and glared at his wife and said, "Turn on the damned lights. I can't even see to read the words!" The ceremony proceeded, the groom kissed the bride, the music went on and on, and the refreshments were served. After offering our congratulations and best wishes, we went on up to our room. The party went on and on and eventually the couple were to be escorted to the airport, but before they got out of the yard a fight broke out. I looked out our window after hearing the loud voices and was amazed to see Mr. Smith and the groom really going at it. The ladies broke it up and off they went to the airport. Well, it was a memorable wedding!

By October we were convinced that we could no longer live there. I was expecting in January, and there was no way we could live like that with a baby. So we went house-hunting. We found a home to buy on Noble Street in Fairbanks. It was a nice, very clean little house. The owners were moving "outside" to Washington state, and were selling the house complete with furniture, dishes, pots and pans, cactus plants, bedding, tools, etc. etc. for $10,300. It was a well-built little home with a basement, on the main sewer line (important in Fairbanks), well-insulated and nicely kept. Mrs. Benson had waxed her way out of the kitchen, and everything was just spotless. What a lucky break for us! So, we cashed in our bonds, broke the piggy bank and managed to come up with a down payment.

The wood stove in the kitchen was a nice one, but it took a while to learn how to use it, and a lot of effort to keep it filled with wood, which burned very fast. I had many cakes that rose like a volcano and then erupted until I learned how to judge just how hot the fire was. In later years we have received pictures of the home taken by our friend, Lt. Jackson, who was stationed with us at Ladd Field and later took a trip there from San Jose, California with his wife, India. We also have later pictures taken by friends, and the little house still stands, although it appears that it is now a jewelry store.

Shortly after we moved in, Fairbanks had a large number of earthquakes. I remember well the first one. I was sitting at our kitchen table peeling potatoes for our "stew" when all of a sudden cactus plants and various other little things were tumbling off from a shelf which was above the table. Also, the water on the stove was over the sides of the pan and hissing on the hot cookstove. I had the same dizzy feeling I had experienced during several earthquakes in Los Angeles. The only damage to our home was in our basement where the electric water pump was located. We had many problems with it, and called the Northern Commercial Company in to repair our pump, worrying all the time about the costs. They made several trips out to fix it, but never left a bill. We worried constantly that the bill would really be our undoing. Finally, it seemed that they had fixed it, and surprisingly the bill was very reasonable. They said, "Well, it was our fault we had to make so many trips. We should have fixed it the first time." They also said we could wait and pay at our convenience. Businesses in Fairbanks did not expect to be paid in winter when the people all had extraordinary expenses for heating, warm clothing, etc. The people we met in Fairbanks were all very nice.

Michael Hans Zwicke was born on January 10, 1948, at the base hospital at Ladd Field, Fairbanks, Alaska. Zwick took a month's leave to help me. We had no washing machine, and our water, although good to drink, was full of minerals that made everything orange. Family and friends had sent an airmail baby shower, and most of the lovely things were white. I hated to have orange baby clothes, so we bought water for a while. We had wondered what a large metal holder was for, which, among so many other things, came with the house. We learned that it was a holder for the large bottles of water we purchased. We heated the water on our wood cookstove, then carried it down in the basement to a washtub and Zwick devised a "manual washing machine" - a plumber's helper that was used to plunge the clothes in the washtub!

We had our problems! I can talk about the "good old days" along with people a generation or two older than I. Soon, however, a laundromat opened in Fairbanks. We would load up the baby buggy with the dirty clothes, and one of us would wheel the buggy the twelve blocks or so to wash and dry the clothes. I must admit there were times people would stare at me and wonder why I was pushing a baby buggy in minus fifty-degree temperatures! We attempted to order a washing machine from the Sears Catalog store in Fairbanks, but they were not available. Even if we had it, we would have still had the orange water problem, so the laundromat served us quite nicely.

Our secondhand baby buggy served us well. We could be seen in all kinds of weather walking all over Fairbanks. Many times we took baby covered with my fur parka to go to friends to play bridge. Other times we trudged through the mud, and at times we covered the buggy with the net to keep out the "noseeums" and mosquitoes.

We learned in early 1949 that we would be leaving for Mather AFB, so we put our house up for sale. We sold it as we had purchased it - complete with furniture, dishes, everything; shipped our seven footlockers and a baby bed, and off we went in February. Our Ford, ordered from "The Farthest North Ford Dealer", was waiting for us in Seattle. It was very cold when we boarded our plane in Fairbanks; our cab driver in Seattle complained to us about the cold - there was a light drizzle and temperatures were in the 30's. We didn't say a word!

The Lester and Peggy Best quarters (typical of accomodations available in Fairbanks during 1946-48).

Peggy Best enjoys the coziness of a typical one-room house.

# Chapter 47

## The Moose Hunt

Ladd Field *MIDNIGHT SUN* (September 13, 1947) - "Officers of Recon Bag First Moose of Season".

On 31 August 1947, four intrepid hunters from the 46th Recon Squadron at Ladd Field loaded up their gear to go moose hunting. The big game hunters were Larry Cleland, Emory Ferderber, Dick McIntyre and Maynard White.

The only way the word "light" could apply to the way they traveled would have been to describe the color of the truck they had overloaded with gear. "Be Prepared" was their motto, and prepared they were. They had no less than fifteen 5-gallon jerry cans; ten of which were filled with gasoline for the ten-horse outboard motor, and five more filled with pure, Ladd Field tapwater. In addition, they had four 2-man mountain tents, air mattresses, sleeping bags, a 2-burner Coleman gas stove, two gallons of Coleman fuel, twenty loaves of bread, three pounds of butter, five pounds of bacon, several cases of canned food, extra warm clothing, rain gear, hip boots, fishing rods, dip nets, shotguns, rifles, ammunition, and various and sundry other items that no true woodsman should be without, like strap-on tree climber spikes so the scout could climb trees to search for the elusive Alaskan moose.

At Big Delta on the Tanana River, they located a boat livery, which luckily had a 26-foot boat that could haul the four hunters and all their "essential" gear. Once the boat was loaded, it was obvious that only if they ate most of their stores would there be enough room in the boat to haul back any game on the return trip, so the hunters resolved to live like kings.

The master plan was to bag a moose even if it took staying in the wilds throughout the hunting season, which closed three weeks later on 20 September at sundown. Not to waste any time, the boat had been loaded the day before the season began, so not a minute would be wasted the following morning on September 1st.

Loading the boat provided considerable entertainment for the man at the boat landing, John Hajdukovich. His first question was, "What do you have in all those jerry cans?" When he learned that about one-third of them were filled with drinking water, he was intensely amused, mentioning something about "coals" and "Newcastle." "Just look at that water in the river," he exclaimed, "It's the best drinking water in all of Alaska! That river is all spring-fed up at its source; you can't get better water than that anywhere. Why don't you dump those jerry cans and leave them in your truck so you can save hauling all that bulk weight?"

The four gentlemen hunters didn't want to offend the wizened old fellow, but they loaded their water cans anyway. From that point on, it became obvious that there was a decided difference of opinions regarding what should and should not be taken on a hunting expedition.

Just looking at the old timer, it was obvious that he had a wealth of experience and knowledge on the subject of living and hunting out in the wilds of Alaska. It was also clear that he was intent on passing his wisdom along to these young hunters about to embark on their first moose-hunting trip. Profound as his advice was, the four hunters finished listening long before the elderly man was finished talking. In fact, he was standing on the river bank, still talking, as the four hunters and their boat, piled high with gear, rounded the first bend up the river, and out of sight.

Our determined hunters traveled up the Tanana to the mouth of the Goodpaster River, and then several miles up the Goodpaster before stopping to establish a camp for the night. They set up their tents, cooked their dinner, and organized their activities for the following day, September 1st, when hunting season would begin thirty minutes after sunrise.

Talk about Heaven! This was it! They were on a long-awaited leave, with almost three weeks available to spend in the wilds! No telephones, no people around to clutter up their lives; they didn't have to shave, take a bath, comb their hair, brush their teeth or change their underwear. They thought, "What a vacation; it just doesn't get any better than this!"

The next morning, the big game hunters were up bright and early. They cooked their breakfast, broke camp, cleaned up the site, loaded the "battleship", manned the left front gun turret with Cleland, the right front turret with McIntyre, with White at the helm. Ferderber, the scout, with the tree climbing spikes strapped to his legs and binoculars hanging from his neck, waited in eager anticipation to scurry up the first tree and spot a moose. This procedure they agreed to do approximately every half mile while going up the river.

The "battleship", low in the water, quietly cruised the middle of the stream, making no perceptible noise and no waves. There was no talking; just pantomime to get each other's attention. Approximately every one-half mile, where there was a tall tree along the river bank, the ship would be eased up to the shore, one of the front gunners would hold the boat to the bank, and the stealthy scout would climb a tree, look around, shake his head, and noiselessly return to the boat.

Repeating this procedure every half mile while traveling forty miles upriver took its toll on the scout. Before the morning was over, it became necessary to wake Ferderber up at each stop, which was becoming increasingly difficult to do. By mid-afternoon, he lay spread-eagle on top of the cargo, totally exhausted. He never did spot any game, but at least he got an occasional brief respite. Unfortunately he snored so loud that the others were afraid he would scare the game long before the hunters got within shooting range. But that turned out not to be true either.

Just as the boat rounded a sharp bend in the river, the hunters saw, standing on the left bank, the most majestic and startled moose one could possibly imagine. It was squarely facing the boat, with its front feet spread wide apart and its head up as it browsed among the willows on the riverbank. Rapidly it lowered its antlered head to about two feet from the ground and froze in that position. It gave the

(Front to Back): Ferderber, Cleland and White, as seen from the bridge of the "battleship".

McIntyre in the bow.

appearance of being ready to charge the battleship in the middle of the stream, only a hundred feet away.

The gunners didn't know what it was like to be charged by a 1500-pound moose, and they weren't about to find out. Both turrets fired at the same time, abruptly awaking the scout from his sweet repose. A third shot split the air within a second or two. The moose reared up on his hind legs and turned to his left away from the boat before his legs hit the ground.

The third bullet had hit him squarely in the chest. When his front legs touched down, he made a tremendous leap off the bank out into the river, sinking entirely out of sight. When the commotion was over, three or four inches of one antler was all that was sticking out of the water.

The helmsman maneuvered the front of the boat alongside the moose antler so the gunners could tie a rope around it. The boat was then backed down the river and around the sharp bend, towing the moose up on the sandbar on the inside of the bend. With all four hunters pulling, lifting, tugging and sweating, it was finally decided that they would have to butcher the moose right there on the sandbar in about two to two-and-one-half feet of water.

At that point, the thrilling hunting expedition changed from great fun to back-breaking labor, exhausting beyond belief. Eventually the moose was "disassembled," loaded on the boat and brought back to Ladd Field. It was a tired but more seasoned group of hunters that returned from that expedition.

After the hunt was over, the abundance of moose meat provided a good excuse (if any were needed) to throw a dinner party. Maynard and Beth decided to have a big bash at their quarters at Building 111, apartment #3, and invitations were sent out to other squadron members to share in the spoils of the hunt. It was a fine occasion to have a royal feast, and meat was certainly aplenty.

Beth has always been a gifted cook and talented party-thrower, so she spared no effort to create an epicure's evening to remember. She got out her Peruvian hand-hammered silver hollowware that Maynard had brought her from South America during the war. She also used her new Noritake bone china that Maynard had brought her from Tokyo. The long dining-room table was decorated with her best sterling silver flatware and candelabra. She prepared a dazzling, sumptuous buffet, with an entree of two platters of Swiss steak; a huge one (too large to carry) of moose, and a small platter of beef. There were three large dishes of mashed potatoes, brown gravy, and all the trimmings one could imagine.

That evening, after everyone had finished eating, the table was cleared and everything was put away. As the guests were getting acquainted and generally enjoying themselves, Maynard noticed that the conversation focused on the dinner, with everyone saying how good it was. One lady exclaimed that it was all so good that she thought she would be venturesome and try a little bit of the moose, and it tasted as good as any beef she had ever eaten. Overhearing this comment, Maynard asked her from which platter she got the moose. She replied, "Oh, off the smaller platter beside the large platter of beef." She hesitated, and said, "The beef was on the larger platter, wasn't it?"

All of a sudden the room grew silent with expectation. Everyone was listening to hear the answer to that probing question. Maynard said, "Didn't you know? The small platter was the beef and the large one was moose." A split second later, one of the ladies jumped up, bolted out the front door with her hand over her mouth and forcibly ejected the contents of her stomach into the street. In a couple of minutes she returned with a sheepish grin on her face. "And I had been so careful to avoid eating what I thought was the moose," she said. Everyone had a good laugh. Maynard mentioned that he was flattered. During the war he learned that it was a Chinese custom for guests at a Chinese home for dinner to politely burp after the meal to let the hostess know they enjoyed the meal. But this charming lady had really outdone herself in expressing her appreciation. She declined, however, to take home any of the leftovers.

McIntyre and Cleland after the moose hunt.

# Epilogue

At the time of this writing, recovery operations are underway to restore the "Kee Bird" to flying condition and return it to the United States. There is also some talk about establishing an archives to serve as a repository for countless 46th/72nd documents and photographs to be preserved for posterity and made available for serious study by scholars.

The squadron's greatest tributes, however, may take a while to be fully realized. Certainly, the part the squadron played towards establishing the deterrent capability that kept world peace for almost fifty years should never be underrated. Because of the dedication of airmen like those of the 46th/72nd Recon Squadron, generations of people the world over never had to see the "inevitable" and devastating clash of the superpowers.

Neither should we forget the squadron's achievement of opening up the arctic skies to world aviation. The transpolar routes exist today as a monument to these intrepid airmen.

Of earthshaking significance, however, were the unit's findings that led to the predictions of crustal shift. If their studies succeed in opening this field to serious research so that the effects of global upheaval can be minimized, all of humanity, including generations yet to come, will forever be in debt to this small band of aviation pioneers and scientists. This, perhaps, will be their most enduring legacy.

Land of the midnight sun.

The Canadian Archipelago during the summer.

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# APPENDIX A

POSITION OF THE MAGNETIC NORTH POLE
Reprinted from U. S. Geological Survey chart,
National Geomagnetic Information Center
Box 25046, MS 968, Denver Federal Center,
Denver, CO 80225

| Year | Latitude, degrees N | Longitude, degrees W |
|---|---|---|
| 1831 | 70.1 | 96.9 |
| 1904 | 70.5 | 96.6 |
| 1912 | 70.9 | 96.8 |
| 1922 | 71.4 | 97.2 |
| 1932 | 71.9 | 97.6 |
| 1935 | 70.0 | 97.0 |
| 1940 | 70.7 | 97.0 |
| 1942 | 72.6 | 97.9 |
| 1943 | 70.5 | 95.5 |
| 1945 | 70.5 | 96.0 |
| 1947 | 73.1 | 94.5 |
| 1948 | 73.9 | 100.9 |
| 1950 | 73.0 | 100.0 |
| 1955 | 73.8 | 101.0 |
| 1960 | 74.9 | 101.0 |
| 1962 | 75.1 | 100.8 |
| 1965 | 75.5 | 100.5 |
| 1966 | 75.8 | 100.8 |
| 1970 | 76.2 | 101.0 |
| 1975 | 76.1 | 100.0 |
| 1980 | 78.2 | 102.9 |
| 1980 | 76.8 | 101.5 |
| 1980 | 77.3 | 101.8 |
| 1984 | 77.8 | 102.2 |
| 1985 | 77.4 | 102.7 |
| 1990 | 78.1 | 103.7 |
| 1992 | 78.3 | 104.2 |
| 1993 | 78.5 | 104.5 |

One degree of latitude equals 60 minutes.
Each minute of latitude (northward component) equates to approximately one terrestrial mile.
78.1 degrees equals 78°06' (seventy-eight degrees six minutes)
Between 1975 and 1992, the magnetic pole moved 2.2 degrees (2°12') or 132 miles northward toward the geographic pole.

# APPENDIX B

## A Biography of Maynard E. White

Maynard E. White, first commander of the 46th Recon Squadron and later, the redesignated 72nd Recon Squadron, was born in Cass County, Michigan on June 24, 1918, attended local schools, Tri-State College in Indiana, and received a BGE Degree in General Education from the University of Omaha. His graduate studies in the field of international relations were accomplished at George Washington University, where he specialized in Russian studies.

He enlisted in the Army Air Corps aviation cadet program in February 1941, attended Primary, Basic and Advanced flight training at Parks Air College, Randolph Field and Brooks Field respectively, and received his silver wings and commission as a Second Lieutenant on September 26, 1941.

Maynard White spent the next decade of his career primarily in aerial photo reconnaissance. His first assignment after completing Photo Pilot's School in Denver was photo-mapping Canadian and Alaskan terrain for the construction of the AlCan Highway. He then photographed much of the Aleutian Islands as Photographic Officer for the Alaskan Defense Command, and later led a flight of 24 A-29 Lockheed Hudson photo planes to the Amazon basin in search of rubber trees. Afterwards, in B-25s operating out of India, he photomapped areas of Burma and the "hump" in preparation for deployment of B-29s into China.

Returning stateside, he instructed B-29 pilots in 1944-45, and following World War II, attended Army Command and Staff school at Fort Leavenworth, Kansas. Subsequently, Major White was assigned as Commander, 46th Recon Squadron at Grand Island, Nebraska, where he organized the unit and directed its move to Ladd Field, Fairbanks, Alaska.

After two years with the 46th/72nd Recon Squadron in Alaska, Major White returned to the Zone of the Interior (ZI), and was assigned various duties such as, Air Division and Numbered Air Force Director of Training, Director of Operations, Base Commander and Chief/Airman Personnel Division at SAC Headquarters. After graduating from the National War College in 1961 and chairing a data automation study group, he was assigned Deputy Director of Data Automation, USAF Headquarters, and later, Deputy Chief of Staff/Personnel at Headquarters USAFE in Wiesbaden, Germany. Colonel White retired in May 1967 with 26 years of distinguished service.

In 1941 Maynard married Elizabeth Arline Bates and they have three children, Kathryn Eileen (White) Couture, Kenneth Wayne White and Richard Roy White.

Following retirement, Maynard served as Director of Management Operations, Manned Space Flight Headquarters, NASA, during the earth orbital and lunar landing phases of the space program. Later he became Founder, President and Chief Executive Officer of REMIC Corporation, a manufacturer of automatic, voice-actuated, two-way communications systems in Elkhart, Indiana, where the White's now reside.

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