



1843-801.67

1843.67

CJCM JIM STARR, USN/RET PO BOX 9, HAMMOND, OREGON
STARR LAKE, STARR NANUTAK 97121-0009

LIBRARY CBC
DAVISVILLE, R. I.

FOR REFERENCE ONLY

OPERATION DEEP FREEZE '64

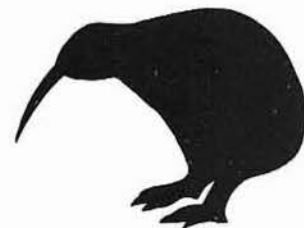


table of contents

dedication.....	3
commander's message..	10
unit commanders.....	13
africa to antarctica.....	16
the stations.....	25
projects.....	48
ship ops.....	54
air ops.....	63
highlights.....	69
the admiral travels.....	72
visitors.....	74
kiwiland.....	76
unit supplement.....	81

“deep freeze '64” editorial staff

managing editor	LCDR D. W. Madison
layout editor	LTJG C. L. Hawkins
copy and photo editor	P. E. Zetterholm JO2
over-all coordinator	LTJG J. R. Shackleton
copy assistant	E. A. Shackelford JO1
photo assistants	LCDR D. G. Miller
	J. R. Berryman PH1
	M. Bilante PH1
	K. K. Thornsley PH2
	J. Mitchell PH2
	All photographer's mates of ASA, VX-6, and
	MCB-8; USS Atka; USS Glacier; USS Burton
	Island; USS Hissem; National Science Foun-
	dation

“deep freeze '64” was printed by Burdette & Company, Inc. in Boston, Mass., with non-appropriated funds in accordance with NavExos P-35.



dedication

The conquest of Antarctica is a goal held by many... men who come to the ice in pursuit of scientific truth. Their work is made possible in a large measure through the support they receive from men of the United States Navy...it is to these men of the Navy that "Deep Freeze '64" is dedicated.

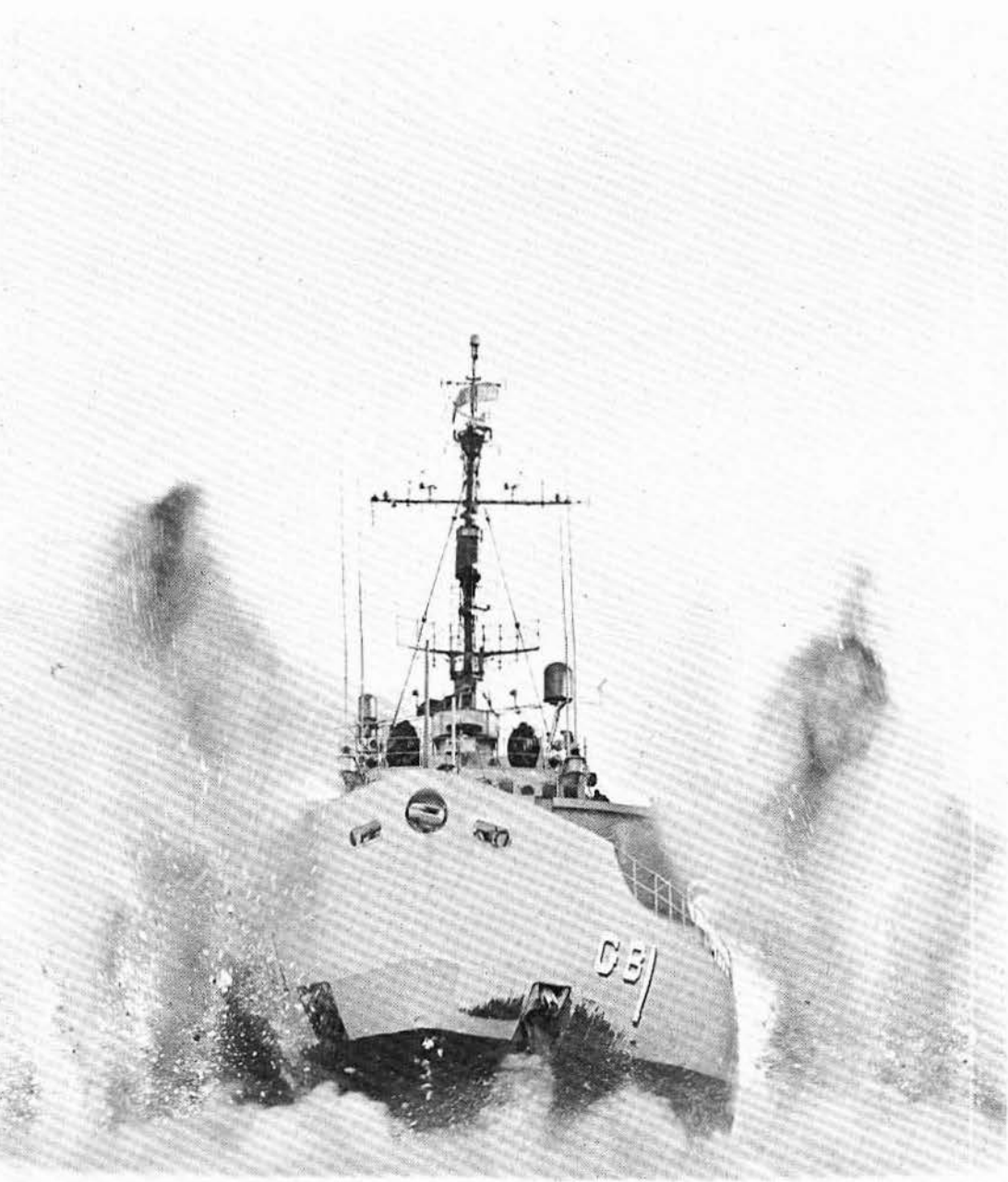
this is the story of

deep freeze '64

o
n

t
h
e

s
e
a





. . .in the air



. . .and on the ice

the human drama of men



who serve —




supporting science



message from the Commander



I want to convey my most hearty congratulations to every officer and man who has participated in the overall highly successful "Operation DEEP FREEZE 64". Each unit of the Task Force has performed so well that it is impossible to single out in this message any one group for special commendation. The base management, clean-up, and maintenance by Antarctic Support Activities, the air transportation and resupply effort by Air Development Squadron SIX, the U. S. Air Force units, and the U. S. Army helo detachment, the difficult antennae construction work of Mobile Construction Battalion EIGHT under most severe conditions; the icebreakers, the seamanship and cargo handling of the resupply ships; these and all other tasks have been accomplished with the efficiency, enthusiasm and skill that are in the highest traditions of the United States Armed Services. To the entire summer support group, I say "Well Done".



Commander, Naval Support Force, Antarctica



Rear Admiral James R. Reedy, USN

Rear Admiral James R. Reedy became Commander, Naval Support Force, Antarctica on 26 November, 1962, in change-of-command ceremonies at the South Pole, in a temperature of -27 F. A graduate of the class of '33 of the U. S. Naval Academy, Rear Admiral Reedy has a varied and distinguished career as a Naval aviator. He was awarded the Distinguished Flying Cross, Air Medal, Bronze Star Medal and the British Distinguished Flying Cross for combat operations during World War Two. The Admiral is married to the former Eugenia Canaday of San Antonio, Texas. The Reedys have five children.



Captain M. W. Nicholson, USN
Deputy Commander and Chief of Staff



Captain M. A. Holzrichter, USN
Assistant Chief of Staff for Operations

Unit Commanders



Capt. J. B. Elliott, Jr.
Commander,
Antarctic Support Activities



Cdr. J. L. Reilly
OinC, Det. ALFA
Antarctic Support Activities



Lt. W. E. McLean
OinC, Pole Station



Lt. C. H. Andrus
OinC, Byrd Station



Lt. H. A. King, Jr.
OinC, Hallett Station

Picture
Not
Available

F. C. Boyer, HMC
Oinc, Eights Station



Lcdr. J. A. Morton, Jr.
OinC, VX-6,
Det. ALFA, McMurdo



Cdr. G. R. Kelly
Commanding Officer
AirDevRon SIX



Lcdr. C. O. Roberts
OinC, VX-6, Det. BRAVO
Christchurch

unit commanders

Ship Group

Captain Price Lewis



Ship Group Commander



Cdr. G. H. Lewis
CO, USS Burton Island
(AGB-1)



Cdr. V. J. Vaughan
CO, USS Glacier
(ABG-4)



Cdr. J. J. Judith
CO, USS Atka
(AGB-3)



Capt. B. R. Henry, USCG
CO, USCGC Eastwind
(WAGB-279)

MCB-8



Cdr. G. R. Hoffman
CO, Mobile Construction
Btn. EIGHT

Station Ship



Lcdr. R. K. Fontaine
CO, USS Hissem
(DER-400)

Det One



Cdr. W. H. Withrow
OinC, Naval Support Force
Antarctica, Det. ONE

the season begins



To the men who have spent as many as eight months isolated from the outside world in this land of ice, the first plane of the operating season with its mail, fresh provisions, and personnel replacements is a welcome sight. Most of the men and cargo follow the normal route to Antarctica from Washington D. C., Quonset Point, and Davisville, R. I., via San Francisco, Hawaii and New Zealand...





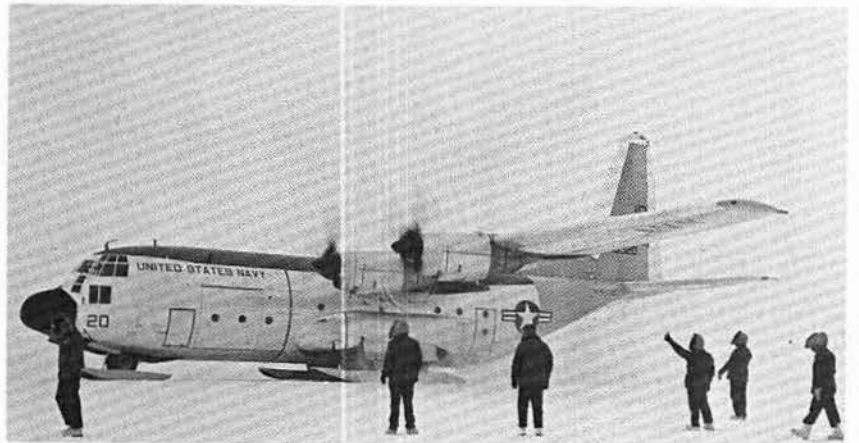
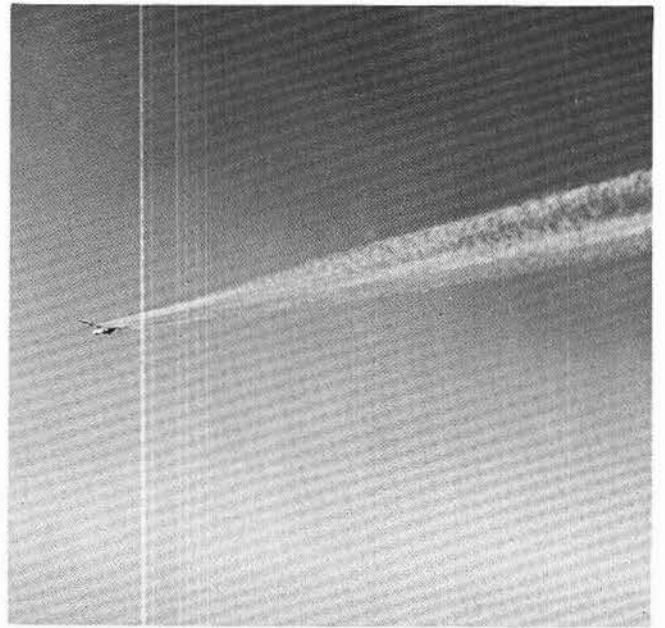
africa to antarctica

...this year, however, Rear Admiral Reedy with several members of his staff and guests made the trip via Capetown, South Africa and then non-stop to McMurdo across the South Pole.



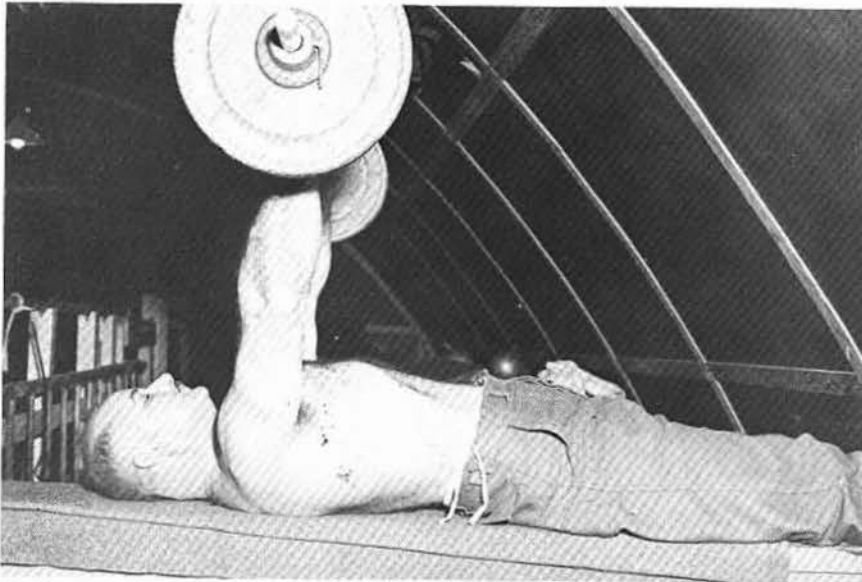
the start of deep freeze '64

This flight was an historical first and opened many new possibilities for travel routes to the ice. With the arrival of the Admiral at McMurdo, the 1964 season of Operation Deep Freeze was officially underway.





d f panorama '64





conquest of Antarctica. . .

The ancient Greeks believed there was a great southern continent, and the New Zealand Maoris had legends telling of a great white land to the south. It took a U. S. Navy expedition, under the command of Lieutenant Charles Wilkes, however, to return to tell the world of the massive Antarctic continent in 1839.

Next to Wilkes' great surprise at sighting the continent was the almost ghost-like appearance of two ships under the command of Captain Dumont d'Urville of the French Navy. These ships which had left France almost three years previously, returned home after charting a large portion of the coastline. Thousands of penguins and many square miles of ice and snow still bear the name of d'Urville's wife Adelie.

Wilkes' and d'Urville's reports of exploration had a great effect on the exploratory tactics of the British Navy's James Clark Ross. Using ice-strengthened ships, Ross plunged boldly ahead into the ice pack. He didn't stop until he reached the giant cliffs of the vast ice shelf which today bears his name. He also sighted 13,000 foot Mt. Erebus, the world's southernmost active volcano, just a short distance from where the Deep Freeze capitol, McMurdo Station, now stands.

More than 50 years of inactivity preceded the expeditions of de Gerlache and Borchgrevink. A Belgian, Lieutenant Adrien de Gerlache's party was the first to winter in the Antarctic when his ship became frozen fast in the ice pack. The ship was floated free when the summer sun returned. A British expedition led by a man with the unlikely name of C. E. Borchgrevink, became the first to winter-over on the Antarctic continent. They made their landfall at Cape Adare at the western entrance to the Ross Sea. There they built a hut, and were picked up the following summer upon the return of the ship.

In 1901, German, Swedish, and British expeditions took to the field. All had their exciting times. The Germans' ship was frozen in the ice within sight of their goal and drifted with the pack for a year. The Swedes, on the other hand, made shore, but their relief ship was crushed, leaving both the wintering-over party and the ship's company to make out as best they could. These men proved it was possible to live from what they could find in the Antarctic. A diet of seal and penguin, however, soon became monotonous. They remained in the area for two years until an Argentine naval vessel came to their rescue.

The most far-reaching of the early scientific probings in Antarctica was that of the British National Antarctic Expedition of 1901-04. Commanded by Captain Robert Falcon Scott, they built a base at Hut Point, McMurdo Sound. Their hut stands today, adjacent to the Navy's McMurdo Station. By the time Captain Scott left the area in 1904, his scientists, together with those from Germany and Sweden, had collected enough information to put Antarctic studies on a sound basis.

Whaling and exploration have kept the Antarctic supplied with visitors yearly since 1901. The

Scots set up a weather station on sub-Antarctic Laurie Island which was later turned over to Argentina; the French, Germans and Japanese explored the Palmer Peninsula area; the Norwegians introduced the first whaling factory ship to the Antarctic.

Also during this period Lt. Ernest Shackleton led a British team on an assault of the South Pole itself. They crossed the great Ross Ice shelf, climbed the mighty glaciers, forged over the Polar Plateau, and reached a point about 100 miles from the geographic South Pole, before they were forced to return in the face of the on-coming winter.

Both victory and tragedy marked the race to the South Pole between Norway's Roald Amundsen and Britain's Captain Scott. Amundsen launched his assault from the Bay of Whales at the Eastern side of the Ross Ice Shelf. His reliance on time-tested sled dogs enabled him to reach the geographic South Pole within two months. Final victory occurred on December 14, 1911. After three days of checking and re-checking his position, Amundsen returned to the Bay of Whales and sailed for Norway.

Captain Scott, however, was not so fortunate. After an abortive attempt at mechanized transport, he resigned his fate to a team of Siberian ponies. One by one the ponies died, and Scott's men were forced to take on the additional burden. Scott reached the Pole only a month after the Norwegian, and was stunned to find Amundsen's flag flying above the spot he had struggled so long to attain. On the return trip to their McMurdo camp, they grew weaker each day. One of Scott's party, feeling himself too weak to keep up, wandered out into a blizzard and died alone. Captain Scott and his two remaining men were found by a relief party in the spring, huddled in death amid their papers and rock samples. Despite cold, hunger and weakness they elected to carry these scientific observations to their death. Scott's second expedition had followed in the tradition of his first...a triumph for science.

Douglas Mawson of Australia, meanwhile, was setting up bases in West Antarctica. Between 1911-14 he set up two bases on the George V Coast in what is perhaps the windiest spot in the world. He there reported gusts of over 200 miles per hour, and sustained winds of over 100 miles per hour were frequent.

In 1914 Sir Ernest Shackleton returned to Antarctica to attempt the most ambitious exploratory venture in history. He was to cross the continent from the Weddell Sea to the Ross Sea by way of the South Pole. A support party would lay supply depots of food and fuel across the 400 miles of the Ross Ice Shelf.

Crushed by the icepack before reaching the continent, Shackleton's ship sank and the crew took to the pack. The supply party ship drifted away from the Ross Sea party leaving those men to carry out their task under great difficulty. Shackleton's party came through their two-year struggle without a single casualty, though the support party suffered three losses before they were rescued. This story of adventure ranks with the all-time heroic stories of Antarctic exploration.

story of exploration

The first aircraft used in Antarctica was flown by members of an Australian expedition, but it was U. S. Navy Rear Admiral Richard E. Byrd who made the most wide-spread use of the airplane as a tool of exploration.

During the period 1928-1955 Admiral Byrd's expeditions dominated the Antarctic scene. His first in 1928-30 included the first flight over the South Pole. During his second expedition (1933-35) he wintered-over alone, farther south than any man had ever wintered before.

In 1939 the government set up the United States Antarctic Service under Admiral Byrd's command. Two bases were set up along the coast. These camps were used as launching points for parties advancing into the field for scientific study. World War II forced abandonment of these bases however, and it was not until Operation HIJUMP in 1946 that the U. S. returned to the icy continent.

With the overall leadership of Admiral Byrd, and Rear Admiral R. H. Cruzen as Task Force Commander, Operation HIJUMP remains the largest of any expedition ever sent to the Antarctic. Thirteen ships, 4,000 men, and a dozen aircraft participated in this venture which discovered and photographed more of Antarctica than all other expeditions combined.

Early in 1950 the French returned to the Adelie Coast for the first time since its discovery by Captain Dumont d'Urville more than a century before. They carried on scientific activities and studied Emperor penguins more thoroughly than anyone had ever done before.

In preparation for the International Geophysical Year (IGY), the icebreaker USS *Atka* surveyed sites for stations in 1954. In the fall of 1955 construction got underway on two Operation Deep Freeze stations, McMurdo Station on Ross Island, and Little America V at Kainan Bay. Here the materials were stored for the next year's assault on the South Pole and Marie Byrd Land where two more IGY stations would be erected. During this season, designated Deep Freeze I, aircraft took off from New Zealand and landed on the ice of McMurdo Sound, more than 2300 miles away. This was the first flight from a land mass to the south polar continent.

Early the following season the two inland stations were started. A massive tractor train traversed the snow and ice between Little America V and the heart of Marie Byrd Land where Byrd Station was constructed. On October 31, 1956 Rear Admiral George J. Dufek landed at the Geographic South Pole in a Douglas Dakota (C-47) to mark the first time man had penetrated to the pole since Scott and Amundsen over fifty years before. The flag was planted, and a radar reflector erected, before Admiral Dufek returned to McMurdo to plan for the building of the station at the bottom of the world.

While these men were busily at work on the plateau, Navy ships and construction crews set up three other stations. One was at Cape Hallett on the coast of the Ross Sea which was set up as a joint U. S. - New Zealand scientific venture. Another was

established in the area first sighted by Wilkes in 1839, and today bears his name. The final construction of the "seven cities of Antarctica" took place on the shores of the Weddell Sea and was named for Lincoln Ellsworth, a modern American explorer.

Deep Freeze III was primarily an operation of resupply and relief. New groups of scientists, technicians, and support personnel arrived to replace those who had already spent a year in Antarctica. It was a year, however, that was primarily dominated by the culmination of Shackleton's dream - the crossing of the entire continent overland. Sir Vivian Fuchs led the British Commonwealth Trans-Antarctic Expedition from the Weddell Sea to McMurdo Sound, with Sir Edmund Hillary leading a party which laid supply depots from McMurdo to the South Pole. Hillary's arrival at the Pole marked the first overland penetration to the Pole since the days of Amundsen and Scott.

The next year's operation was to have ended the effort at most stations, but Deep Freeze IV saw new groups of scientists and maintenance men arrive to continue the work. An era of permanent occupation of many parts of the continent was beginning.

The U. S. closed Little America V and turned over the stations at Ellsworth and Wilkes to Argentina and Australia. Poland was to utilize one of the Russian stations, and South Africa took over the Norwegian base. Everyone was tightening their belt in order to continue their studies on a more permanent scale.

Since the end of the IGY and the inception of the Antarctic Treaty, scientific research has continued. New stations are being built and old ones made permanent. The U. S. established a "trailer village", near the base of the Palmer Peninsula, which will study magnetic lines of force and auroral phenomena. It was named Eights Station, honoring James Eights, the first American to do scientific work in the Antarctic.

Byrd Station was abandoned when drifting snow crushed the weakened structures. It was rebuilt, several miles away, in the same manner as the U. S. base at Camp Century, Greenland. A series of tunnels were dredged and covered with metal arches. The housing and laboratory structures were built inside the tunnels, and it became a veritable "city under the snow".

A nuclear power plant under tests at the main U. S. station at McMurdo Sound will soon produce a more economical form of power for the isolated base. Power to heat, light, and produce a high purity supply of drinking water, will be generated by this example of the peaceful use of atomic energy.

Today, 125 years after Wilkes, exploration continues. Each new discovery serves to fill another square in this vast checkerboard of a continent. This exploration, though costly in lives, dollars, and time, may someday prove the Antarctic to be the greatest bargain since Manhattan Island was bought for \$24 worth of jewelry.

conquest of Antarctica. . .

Unlike the early explorers who devoted their efforts unilaterally and often competitively to geographic exploration of the continent, the modern scientist-explorer in Antarctica understands the rewards that can be gained from cooperation and mutual assistance. It takes the financial resources, the trained manpower, the equipment, and the know-how of many nations working together to cover the Antarctic region with the network of observation points necessary to make certain data meaningful.

The International Geophysical Year (IGY) in 1957-58 proved so successful in terms of data acquired and international relations experimentation, that the United States hosted a conference of 12 nations in late 1959 out of which came a truly unique document - The Antarctic Treaty. Along with the other nations, Argentina, Australia, Belgium, Chile, France, Japan, New Zealand, Norway, the Union of South Africa, the Union of Soviet Socialist Republics, and the United Kingdom, the U. S. ratified the final version on June 13, 1961.

Under the terms of the treaty, all territorial

claims are to be set aside for a period of thirty years; nations may not use the Antarctic for weapons testing or nuclear explosions; nor may it serve as a disposal area for radioactive waste material. Finally, the treaty sets forth guide-lines by which the signatory parties may implement this program of international cooperation.

The United States Antarctic Research Program, (USARP) under the National Science Foundation, was conceived to function and serve as an expression of the U. S. intent to further international scientific cooperation. The work of USARP encompasses field investigations on the Antarctic Continent, in adjacent waters, on peripheral islands, and in laboratories at home. It covers a wide range of scientific disciplines - the biological and medical sciences, the earth sciences, and the atmospheric sciences - in fact, any field of research for which Antarctica can serve as a natural laboratory. To handle the massive logistic requirements of such an undertaking, the U. S. Navy was charged with the responsibility of support.



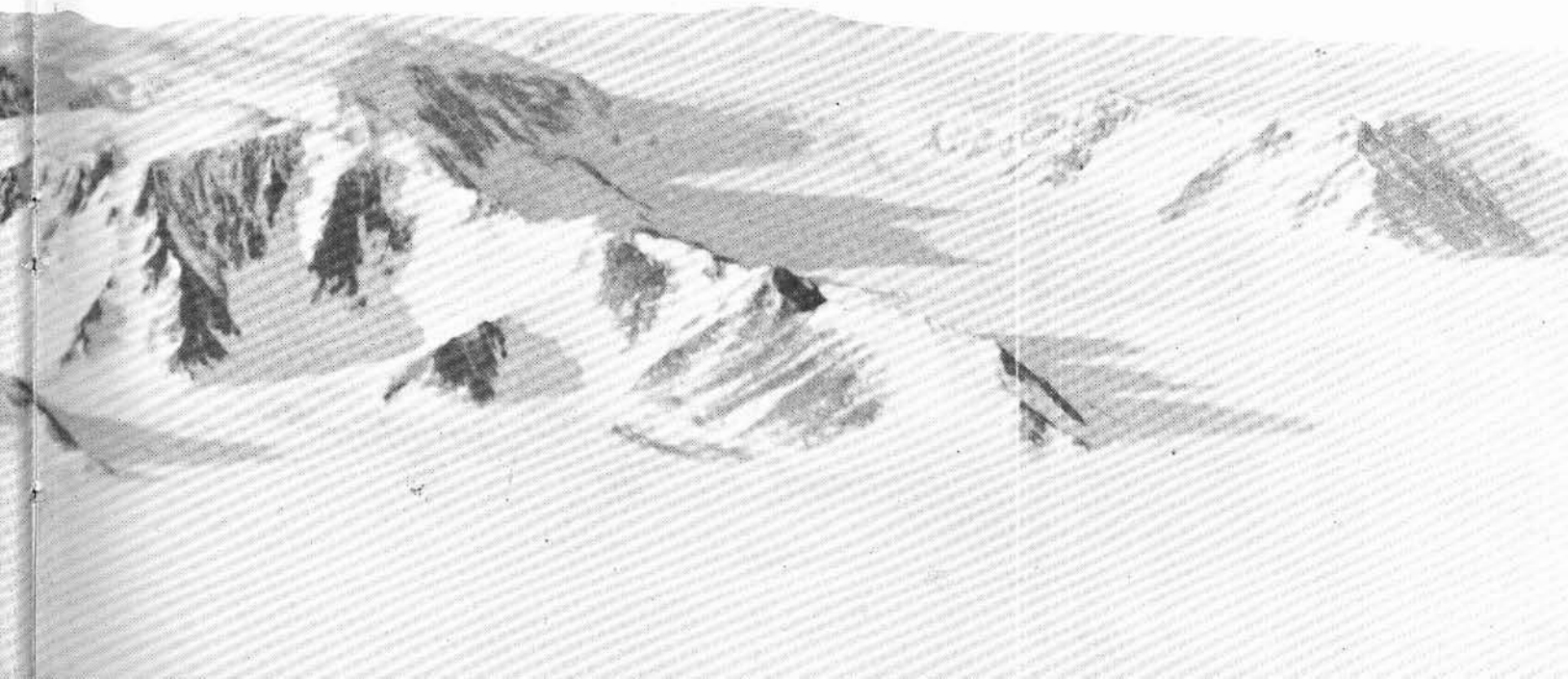
the support of research

Within the National Science Foundation, administration of the U. S. Antarctic Research Program is assigned to the Office of Antarctic Programs. Foremost among the responsibilities of this office is annual program planning. In addition to receiving, reviewing, and recommending scientific proposals for research, the office translates into a balanced and comprehensive form the logistic requirements of each individually approved research proposal. The composite of these requirements is forwarded to the Commander, U. S. Naval Support Force Antarctica. Such a review and summary of area requirements is essential to the U. S. Navy's development of the logistic operational plan for each area activity. By this method, it is possible to present to the Navy a single package of requirements, thus avoiding the confusion that would result if each research institution made its own arrangements with the naval task force.

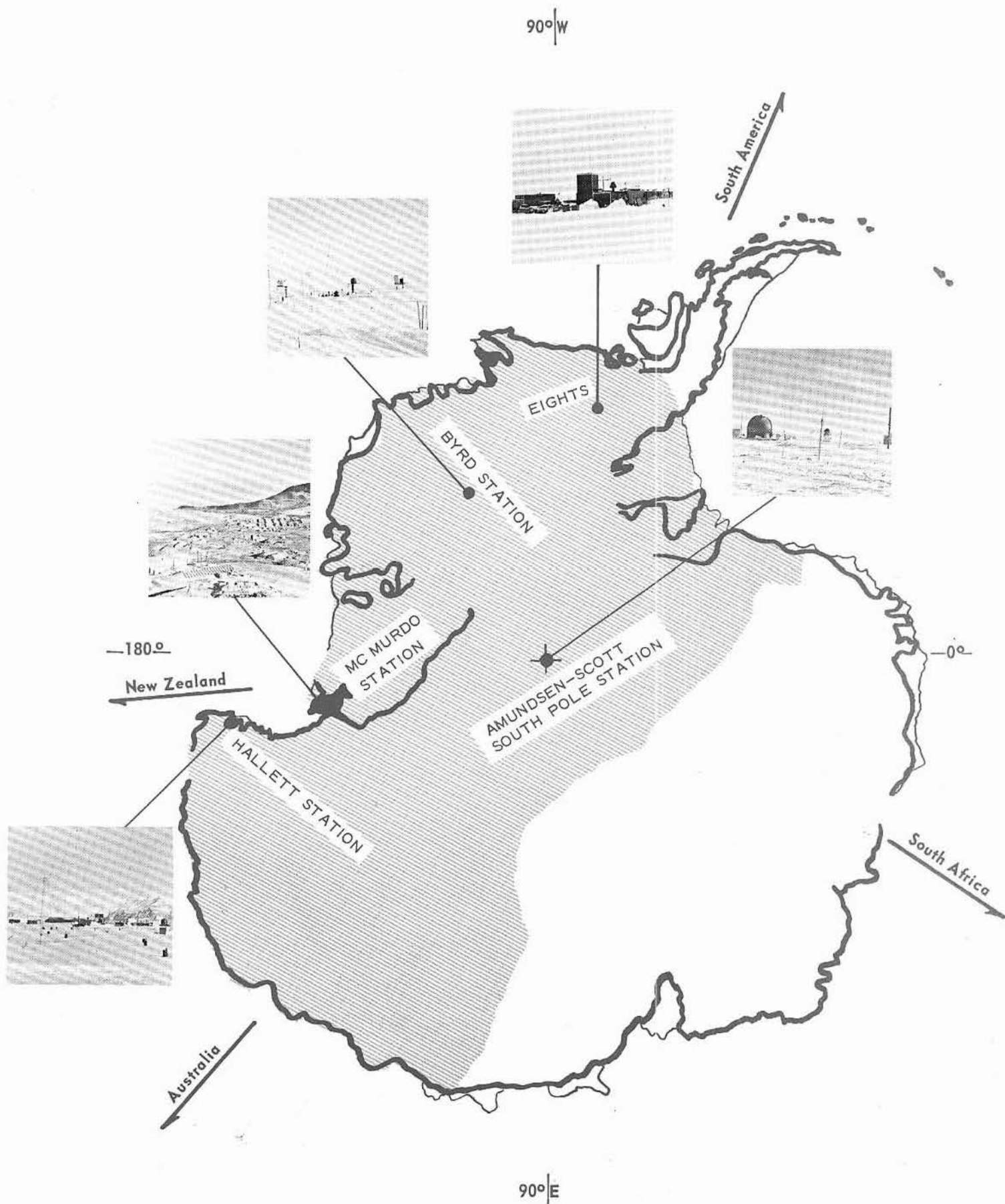
Navy ships and planes haul the scientists, their instruments, and everything with which they need to live and work in the Antarctic. In doing this, the

Navy maintains the world's longest logistic network in advancing the cause of science. American scientists in Antarctica are not hindered by performing even the simplest tasks of survival, which might handicap them in their research. The naval task force provides heat for comfort and survival; electrical energy for light and power; and such basic needs as water and food.

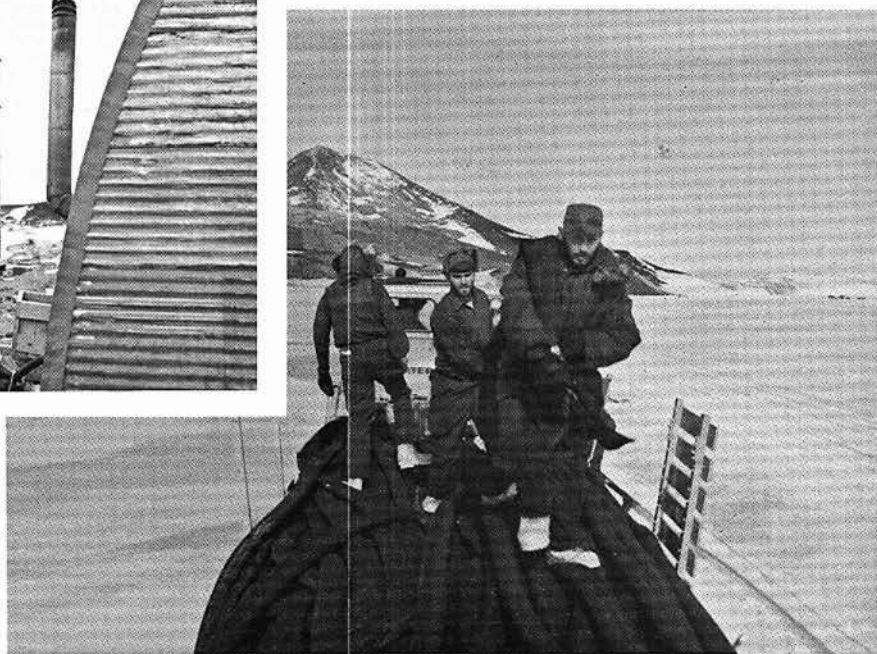
As exploration increases and the scientists of USARP extend their efforts to other areas of the continent, new stations and temporary camps will be set up, and new and more challenging logistic requirements will be presented to the naval task force. The United States Antarctic Research Program and the United States Navy have combined forces to fulfill one of man's most basic needs—the need to know. Navymen and scientists in the Antarctic are working around-the-clock, digging out frozen secrets, analyzing the results, and putting them to work in building a better world through research.



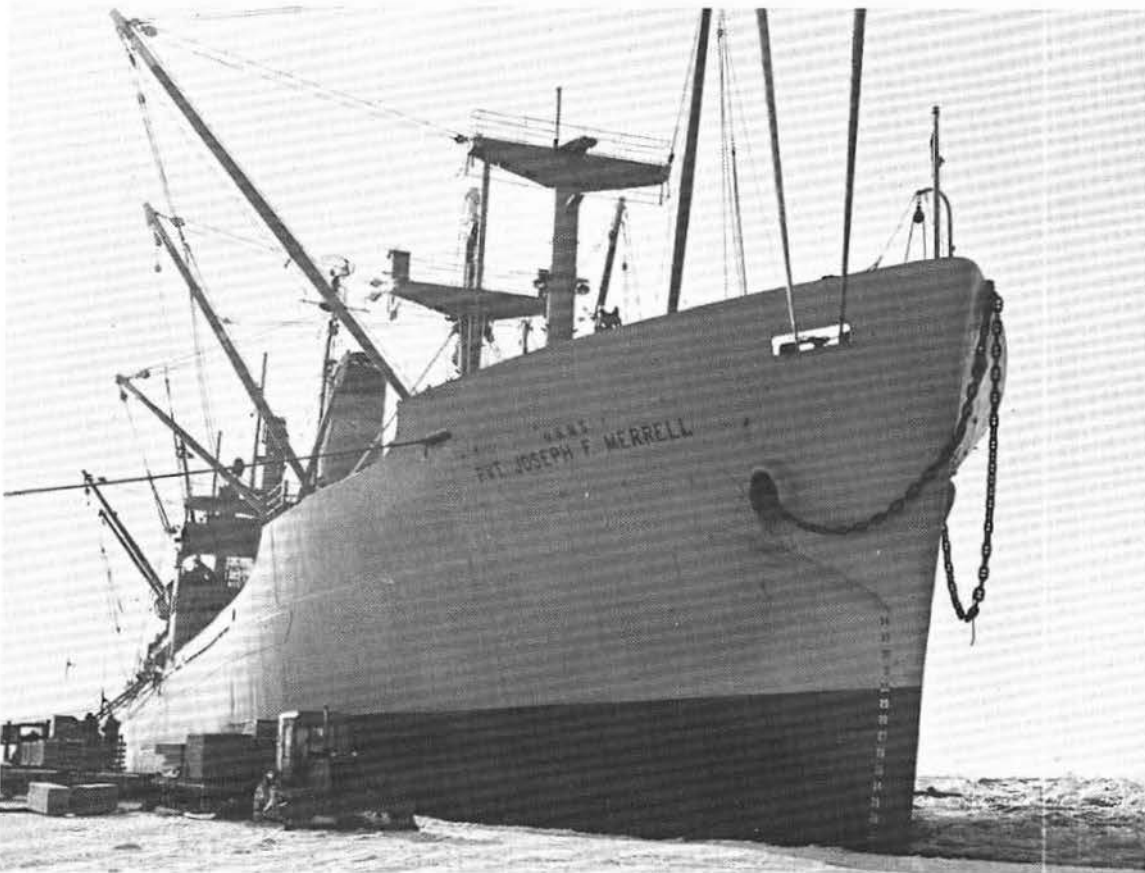
the stations



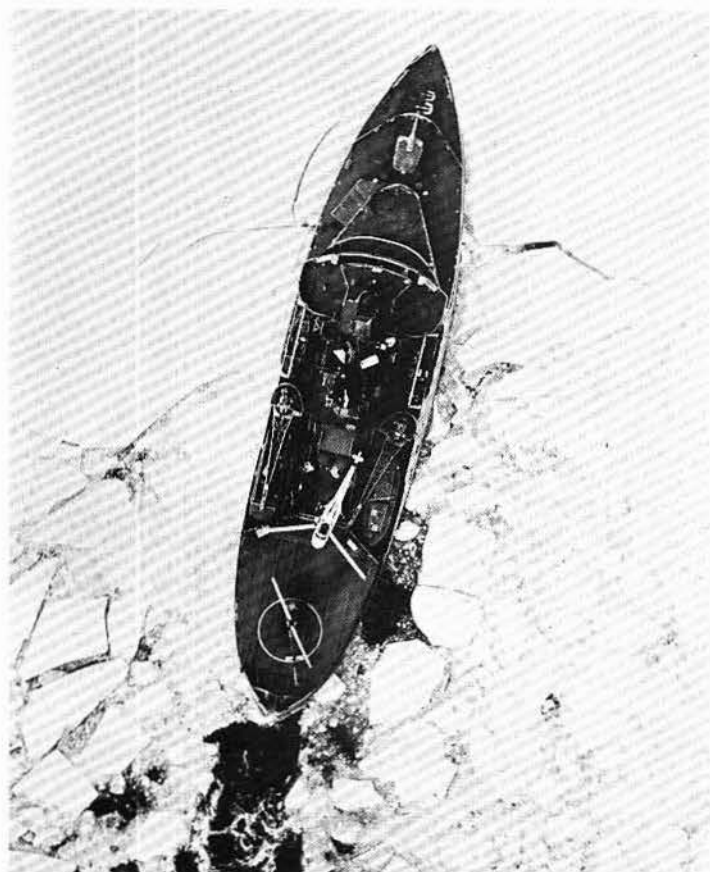
mc murdo



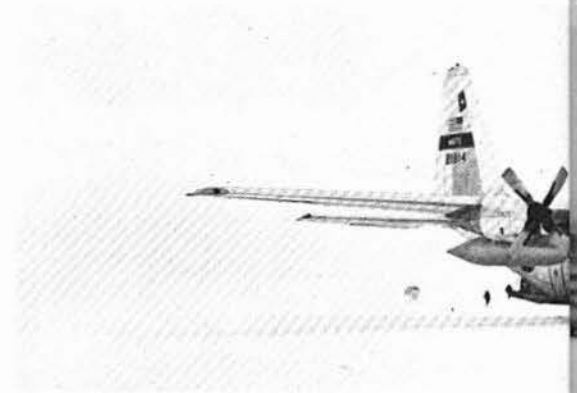
mc murdo



The months of November and December saw the arrival of three Navy icebreakers—*USS Glacier*, *USS Burton Island*, and *USS Atka*—at McMurdo Station, the hub of the United States' Antarctic activity. During the summer season, McMurdo is the home for nearly 1,000 Navymen and scientists, and the scene of ceaseless activity. In addition, cargo ships and tankers from MSTS brought food, fuel and supplies to the wintering-over men and newly arrived summer support personnel.



mc murdo



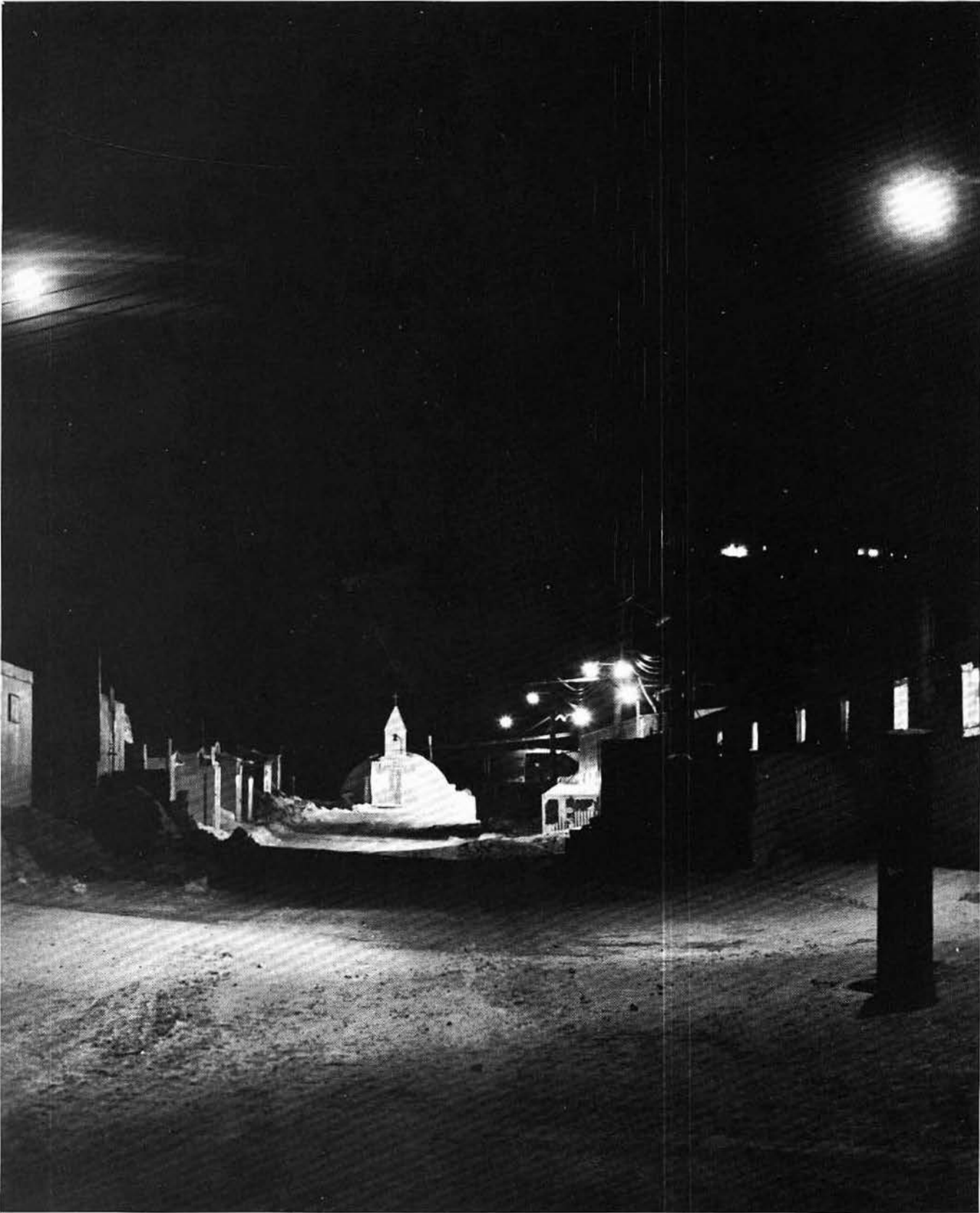
The massive resupply effort in the Antarctic is one of the jobs of the Navy's Air Development Squadron Six (VX-6) and the mighty Lockheed C-130 Hercules aircraft. Flown by veteran polar aviators, these giant ski-equipped cargo planes carry thousands of tons of supplies and equipment to the four inland stations and to numerous field parties. With

williams field

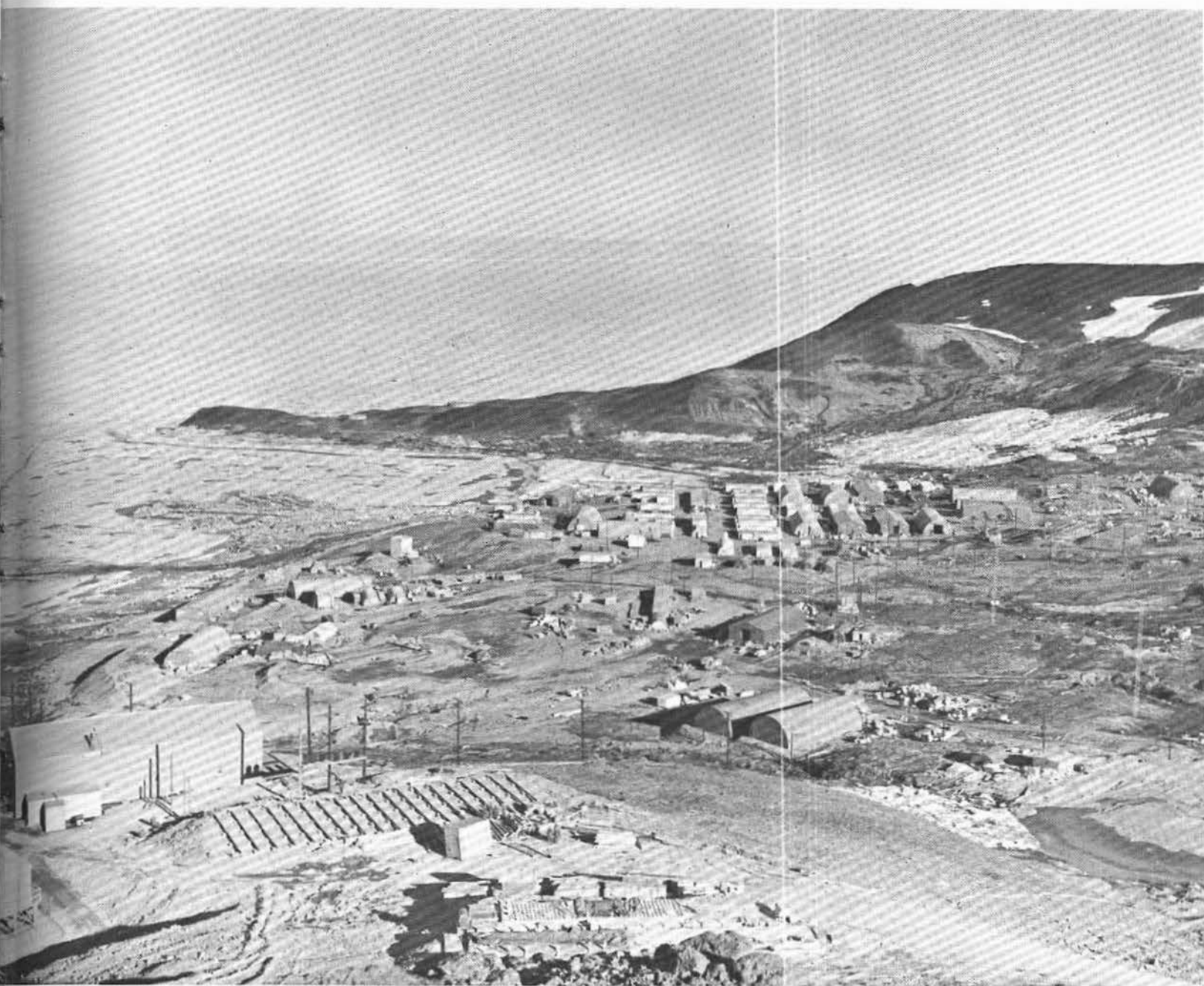
the assistance of the U. S. Air Force, AirDevRonSix performs a most valuable service for the scientists and support personnel in the frozen land. Williams Field is part of the huge McMurdo complex, and is the largest airfield in Antarctica.

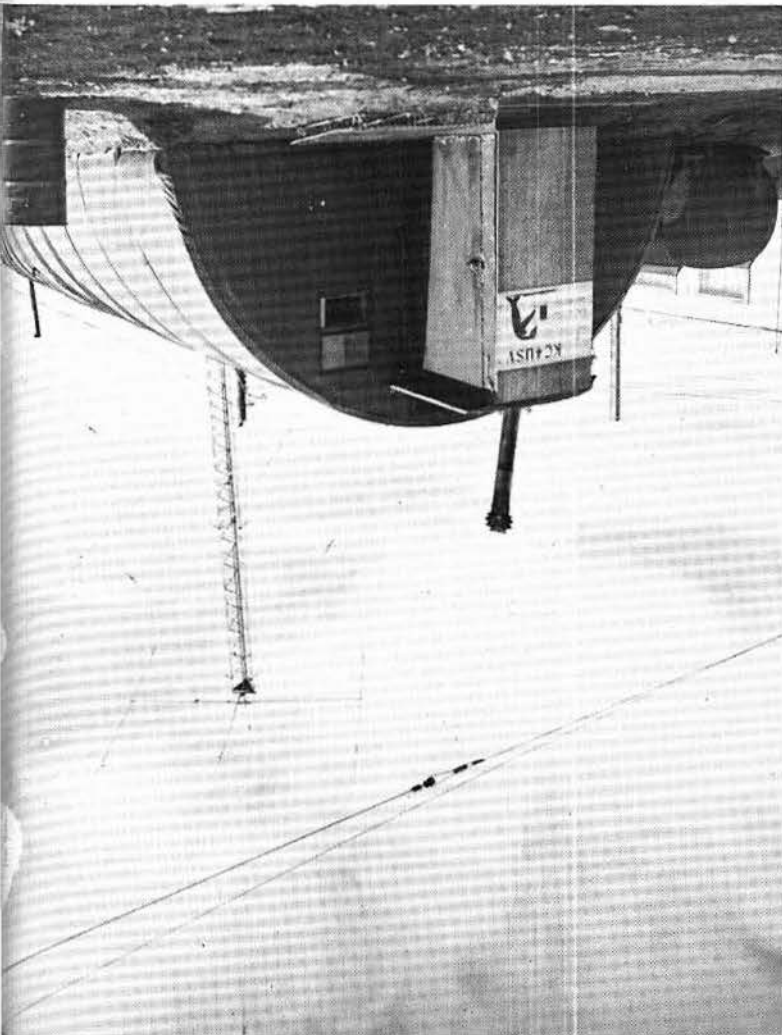
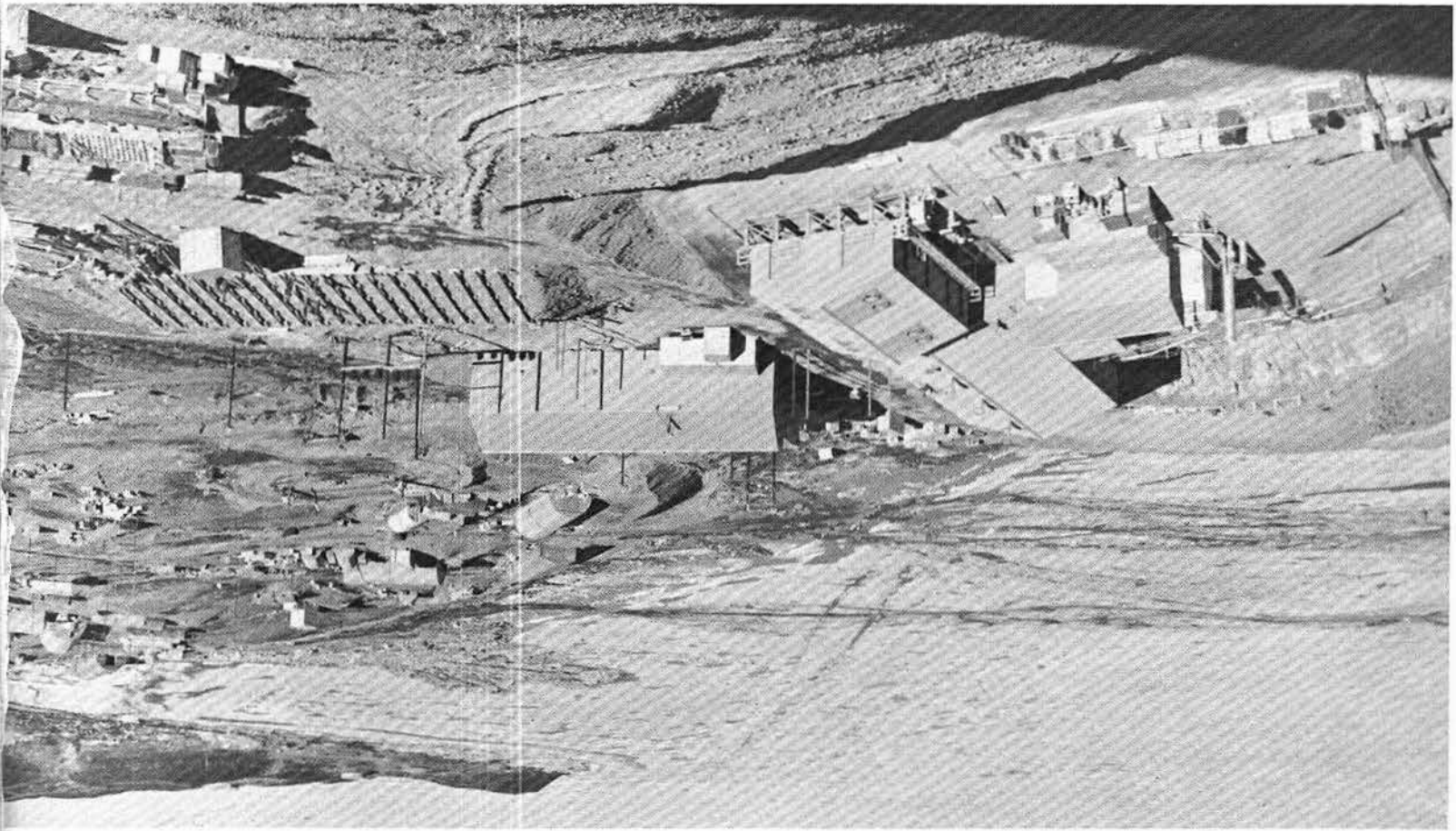


mc murdo



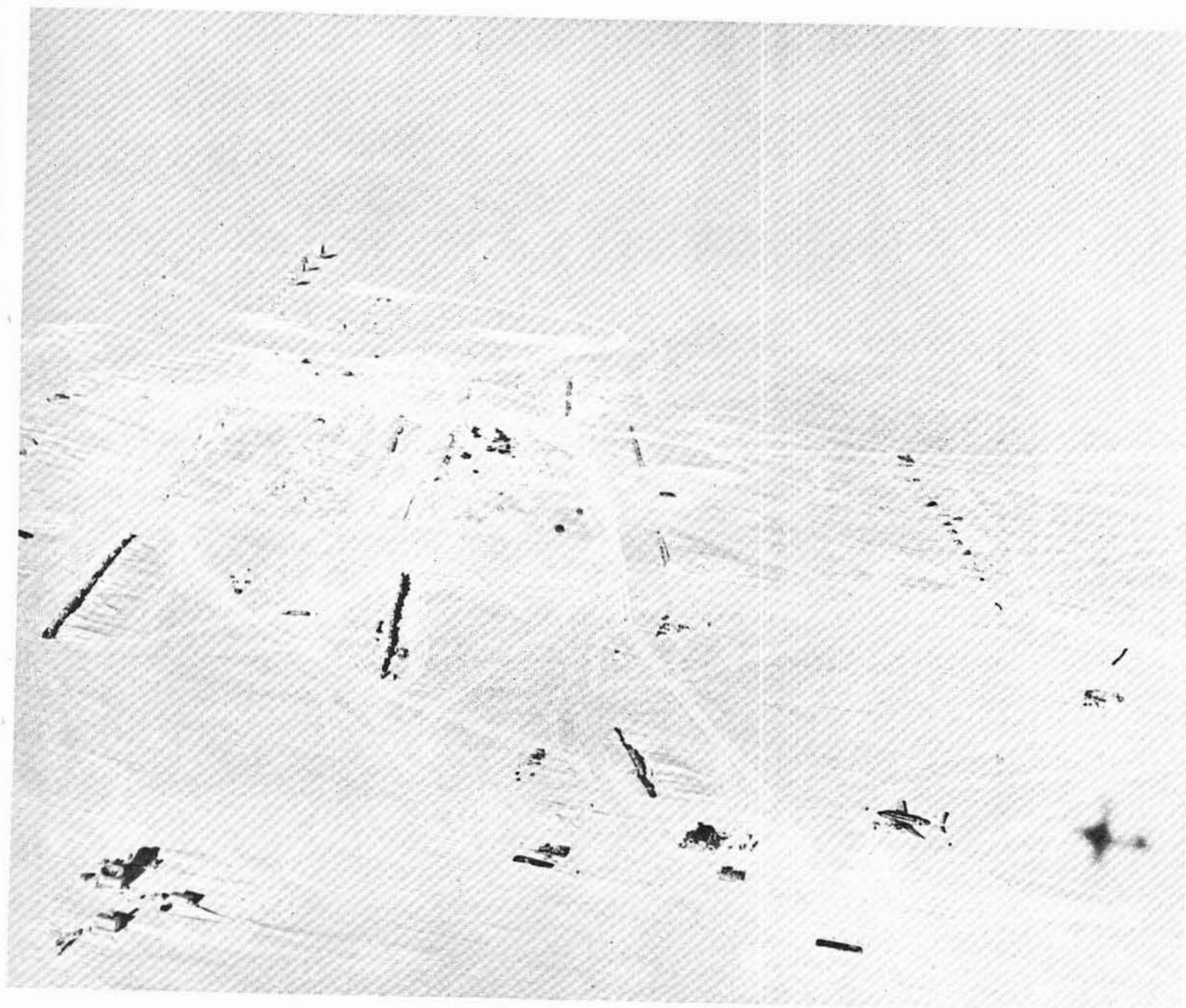
mc murdo





mc mundo

byrd



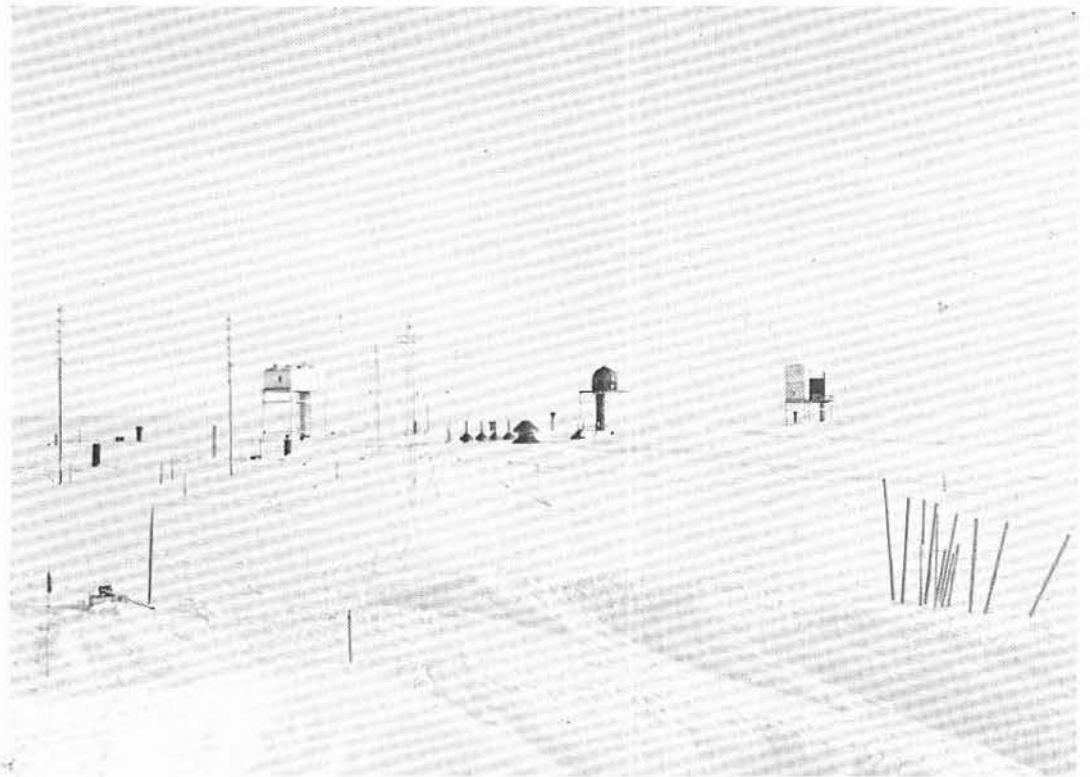
byrd

Completed just 224 days after construction began in November, 1960, New Byrd Station is truly a modern "city beneath the ice". Literally carved out of ice and snow, it is an out-growth of old Byrd Station which had become the victim of crushing snow.



a city

below

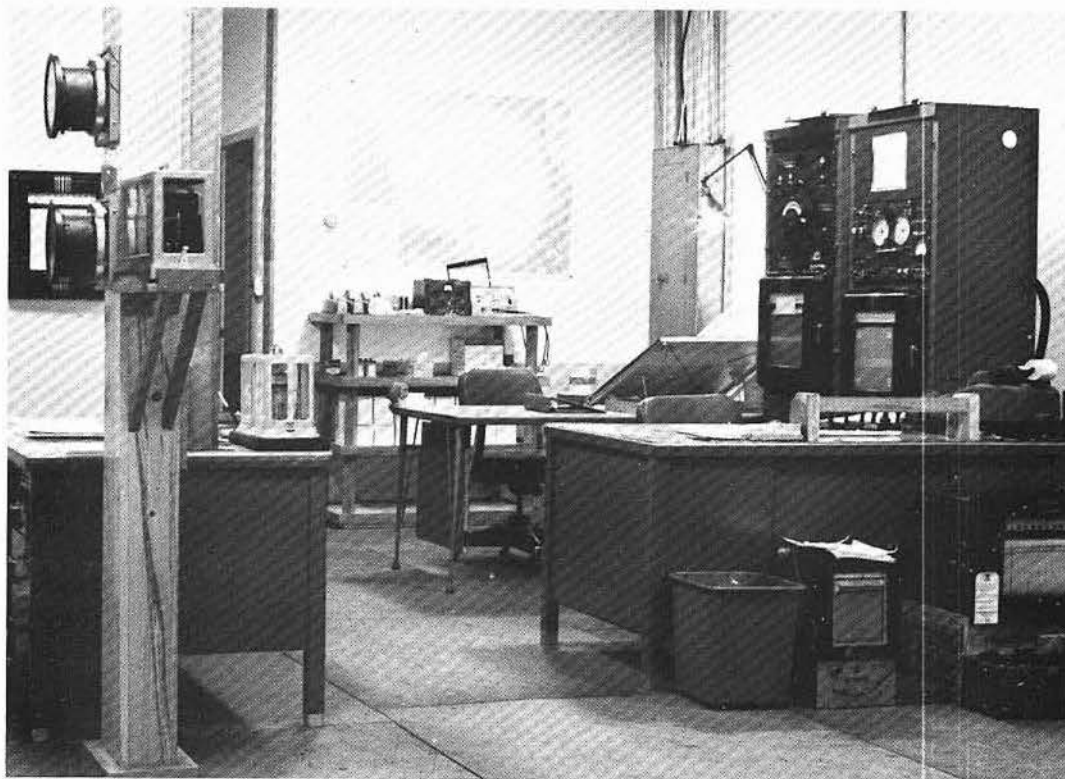


byrd

Construction here in Deep Freeze '64 included renovations of tunnels and buildings and the erection of an antenna for the upper atmosphere physics program.



the ice





at 90° south



pole

Amundsen-Scott South Pole Station is an undersnow city only yards from the geographic bottom of the earth. It is the scene of the goal which touched off the dramatic race by Norway's Roald Amundsen and Britain's Captain Robert Falcon Scott. Rear Admiral George Dufek became the first man to set foot at the spot since these early explorers, when he landed to survey the site in 1956. The station was dedicated on 23 January 1957. Scientists participated in the International Geophysical Year studies that austral winter. The almost 10,000-foot altitude of the Polar Plateau sometimes makes breathing difficult for newcomers, but they soon become acclimated in the submarine-like environs of the station.

the bottom of the world

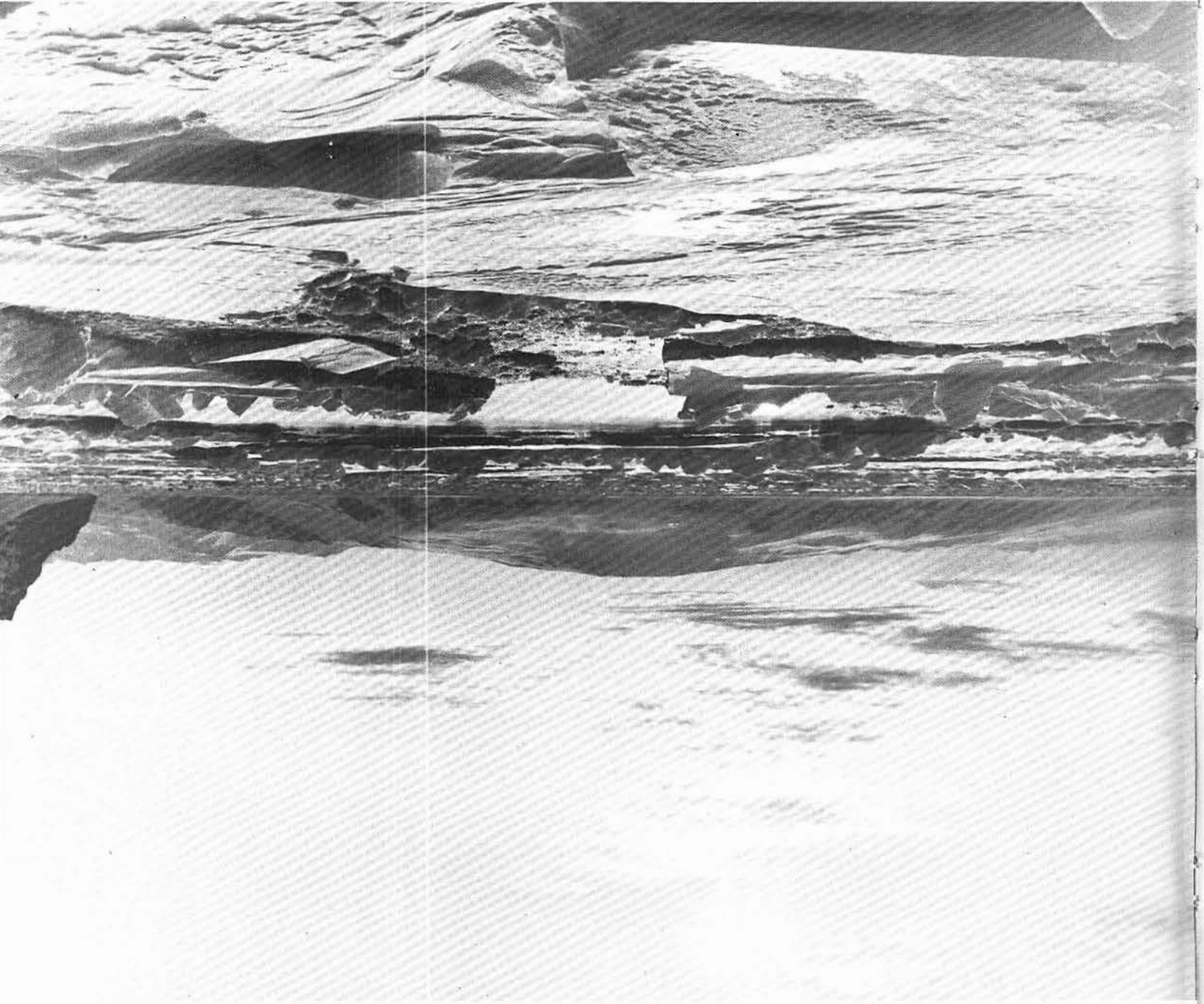


hallett

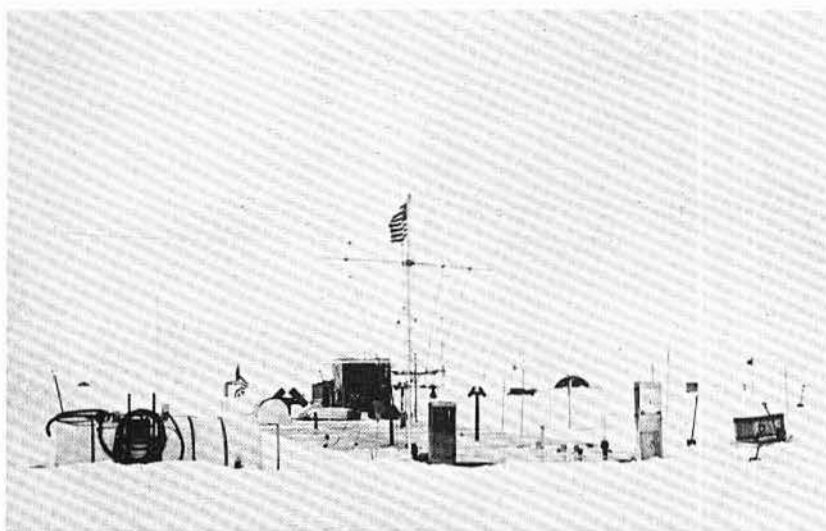


Jointly owned and operated by the United States and New Zealand, Hallett Station is accessible by both sea and air. Hallett is a small station — larger only than Eights Station — and is the scene of geomagnetic and cosmic ray studies and the whistler and earth current programs.

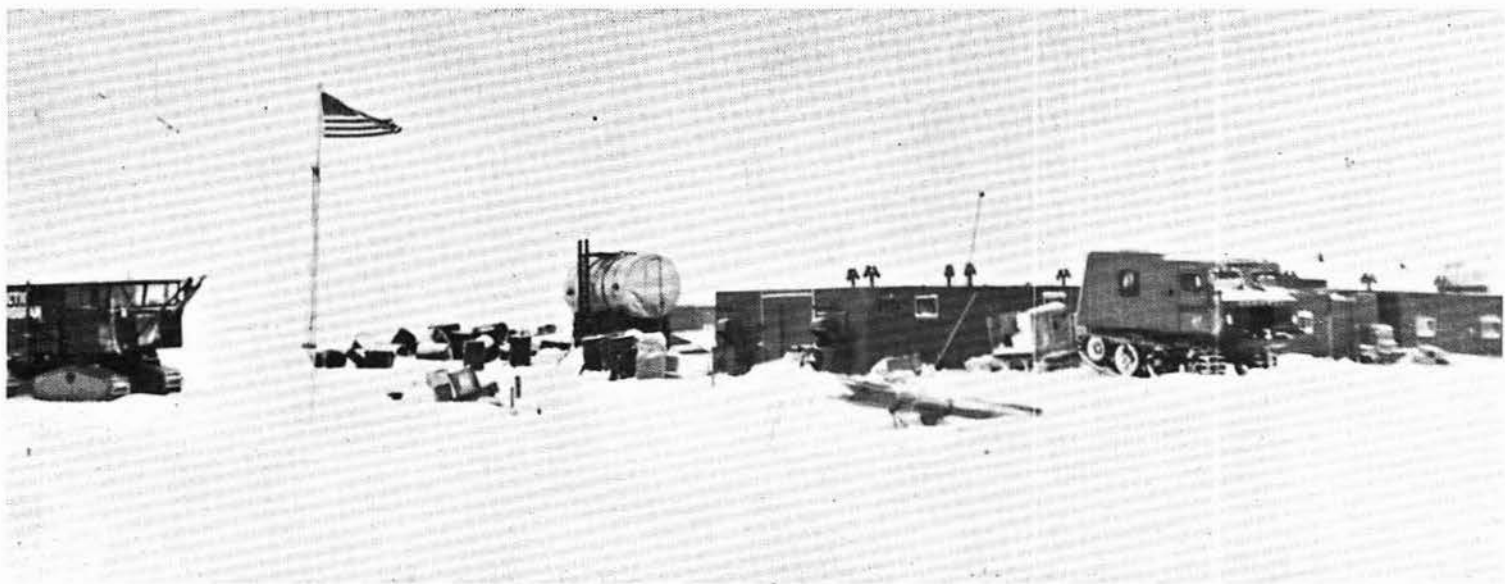




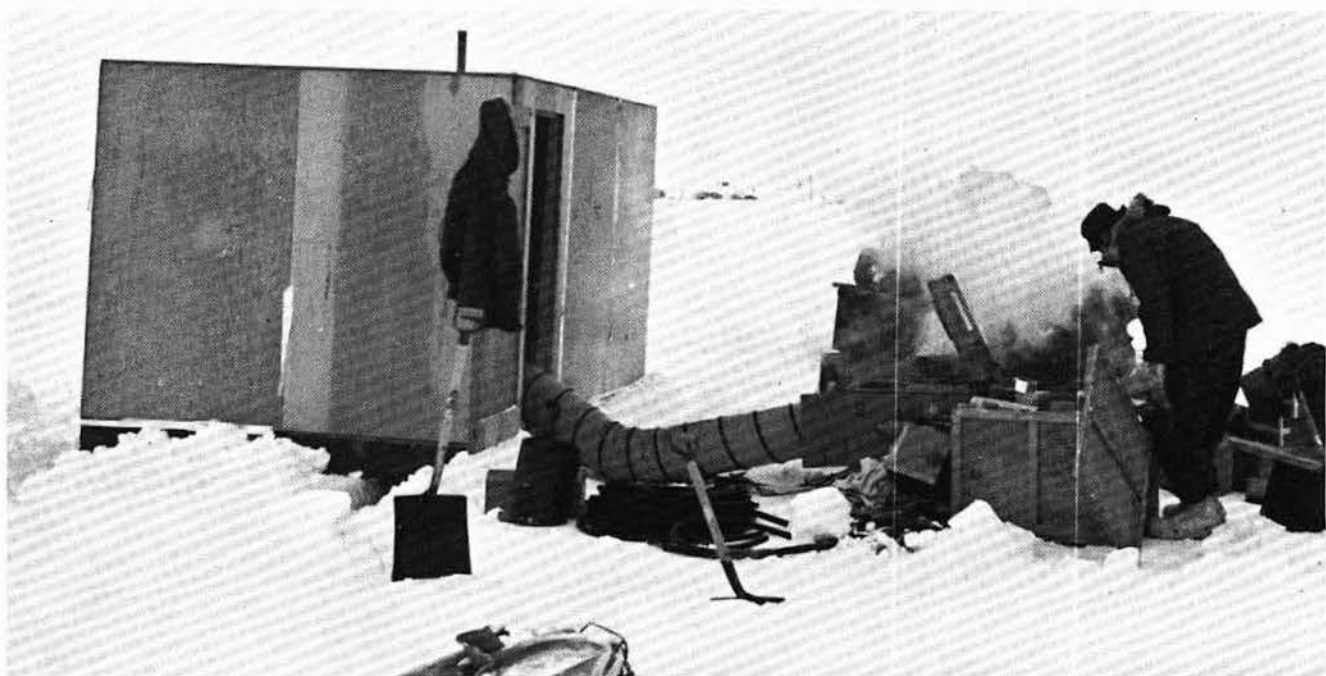
eights



Eights Station is the newest and smallest of the U. S. Antarctic stations, and is also the only portable station. If desired, the entire complex can be air-lifted to another site. Eights maintains only 11 men in the wintering-over party, and is unique in that it is the only station that has an enlisted man as its Officer-in-Charge—a chief hospital corpsman.



beardmore and little rockford



Activated only during the austral summer, Beardmore Station and Little Rockford Station are manned by three and five men respectively. Beardmore, on the edge of Beardmore Glacier, provides weather data 24 hours a day to pilots flying the hazardous air route from McMurdo to Pole Station. Little Rockford provides the same service for aircraft flying from McMurdo to Byrd Station.

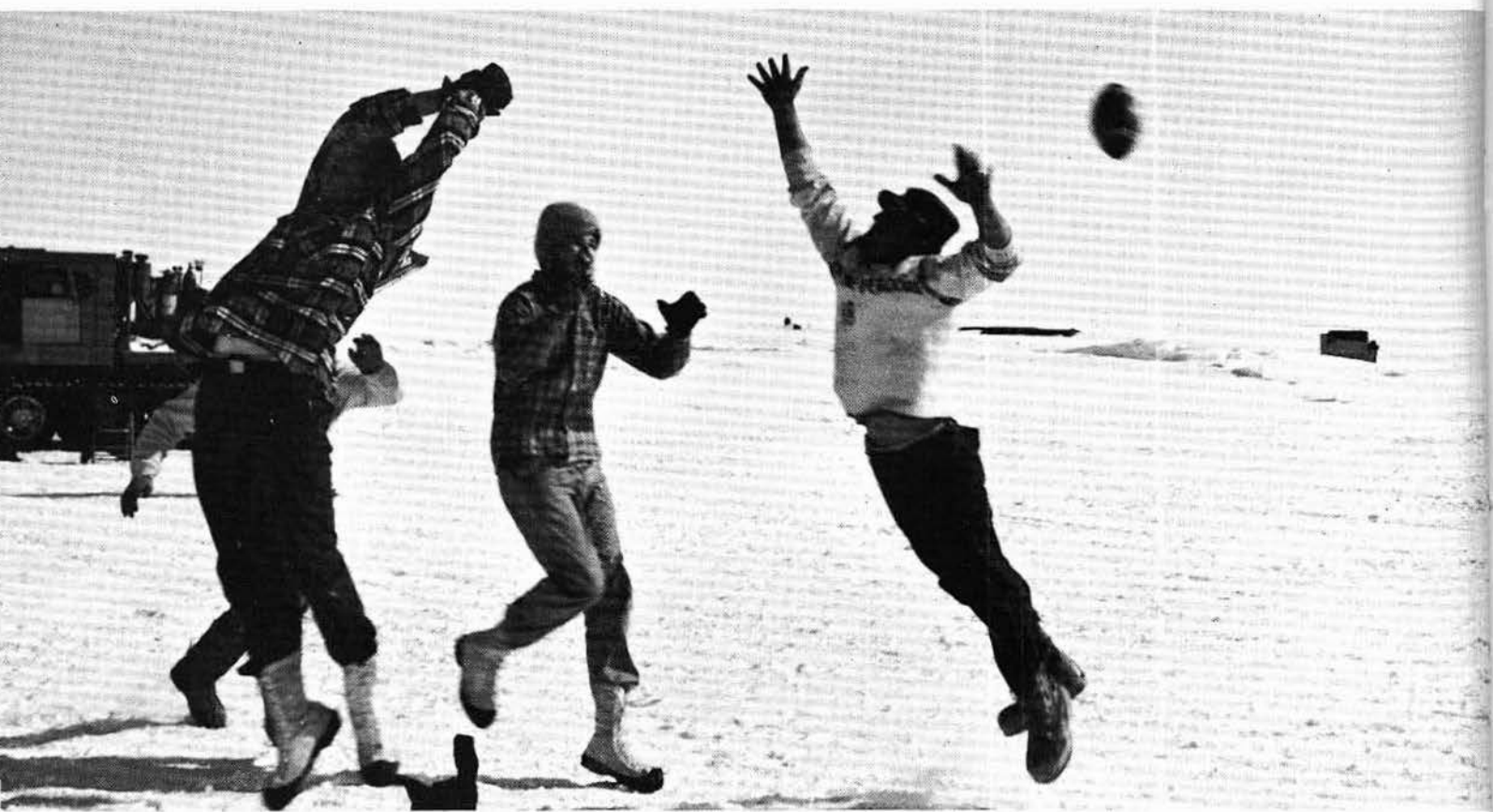


navyman on the ice



at work. . .





or play. . .

alone. . .



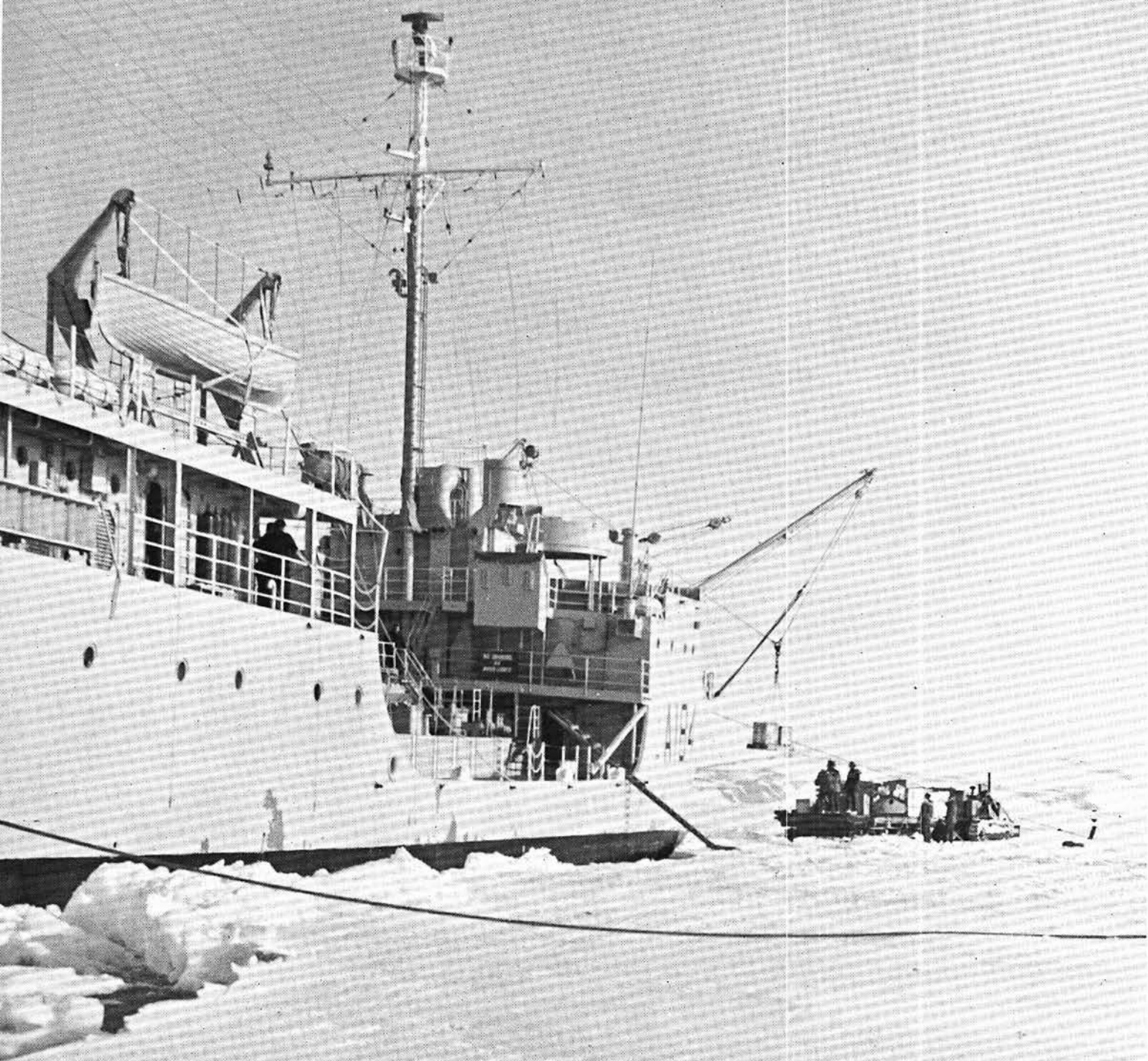


or together. . .





with friends



projects

projects



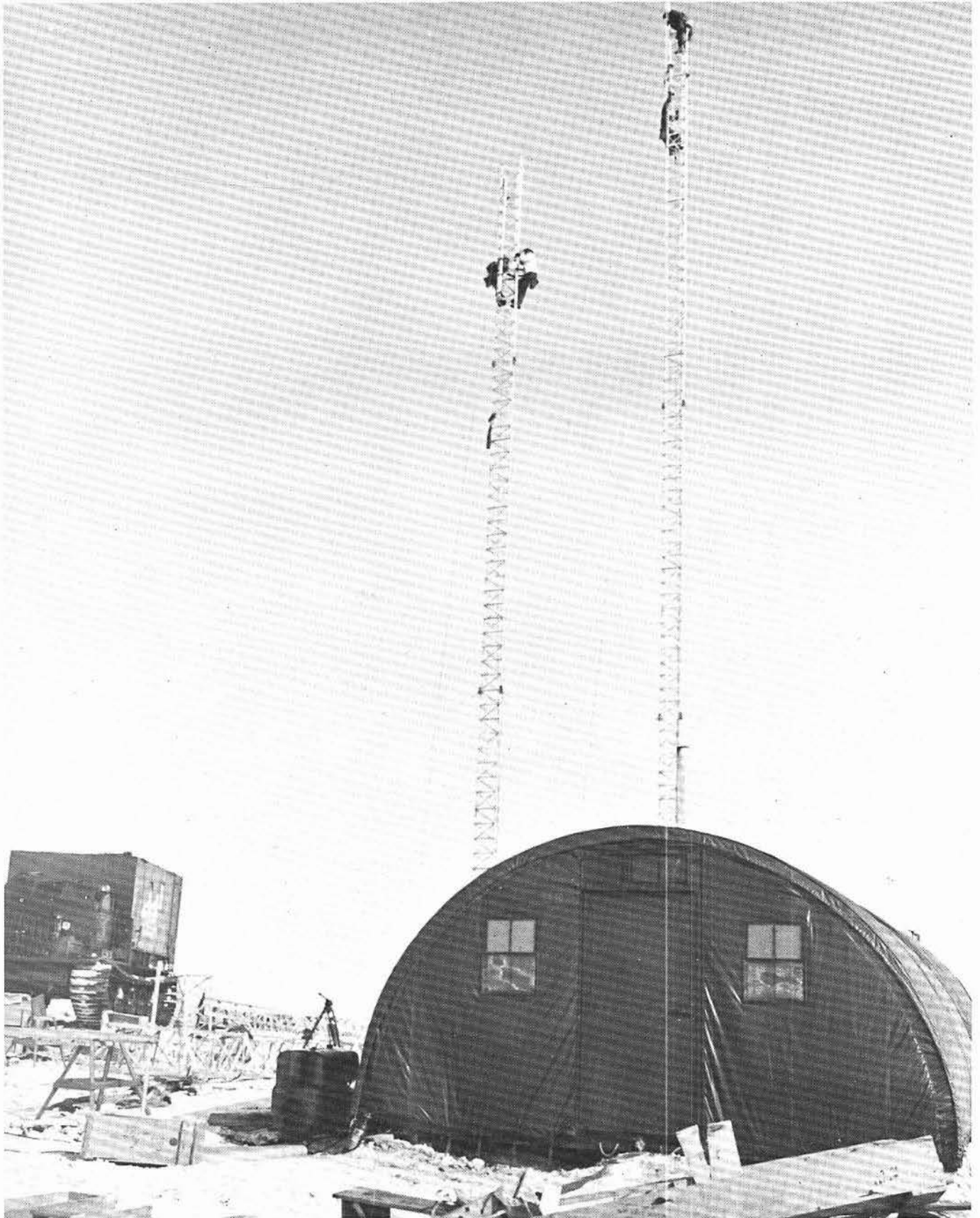
clean-up

resupply. . .



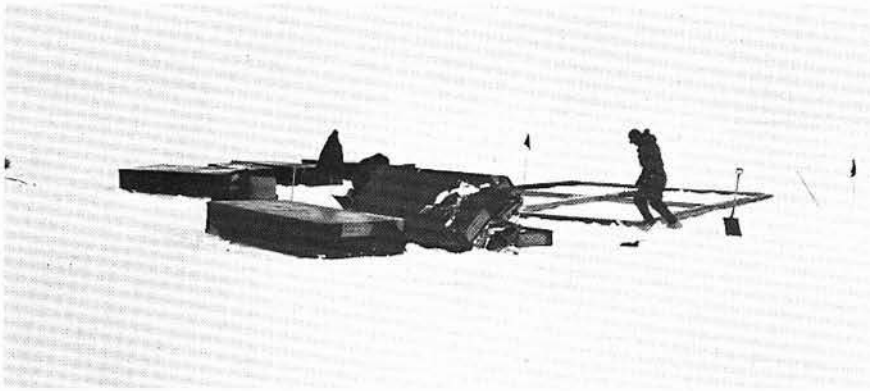
providing relief from a long winter's night



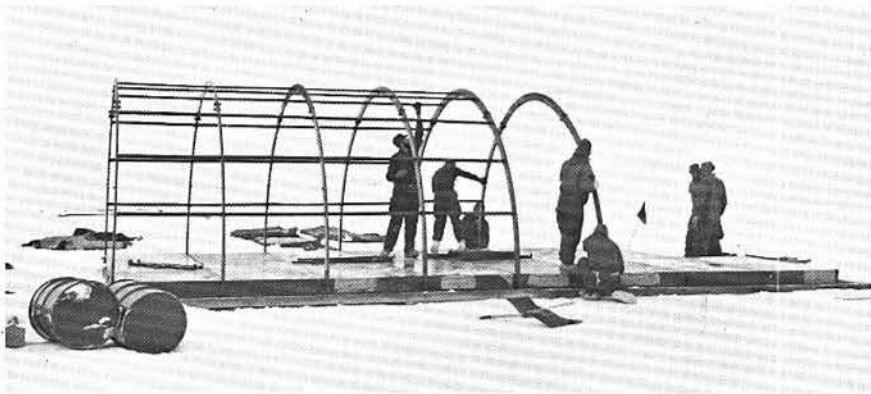


construction

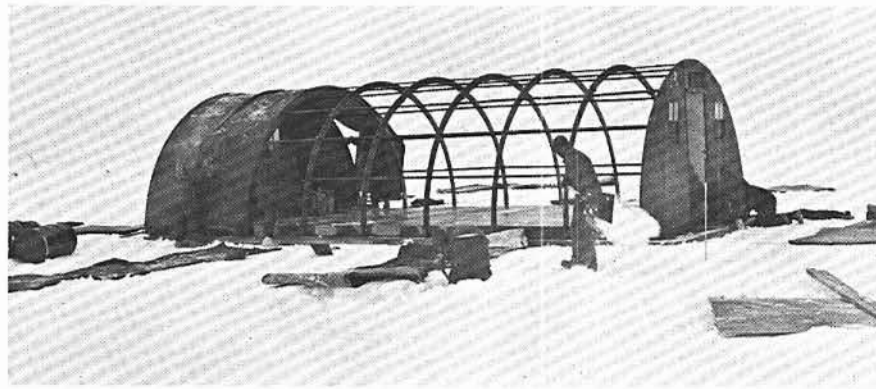
construction



Working at a feverish pitch in two 12-hour shifts a day, seven days a week, the men of Mobile Construction Battalion Eight (MCB-8) and Antarctic Support Activities (ASA), constructed the buildings and antennae essential to the success of the Antarctic science program.



'round the
clock



This sequence shows the U. S. Navy "Seabees" constructing a Jamesway Hut at Beardmore weather outpost. This hut is used by the three men stationed at Beardmore as living quarters.



field parties



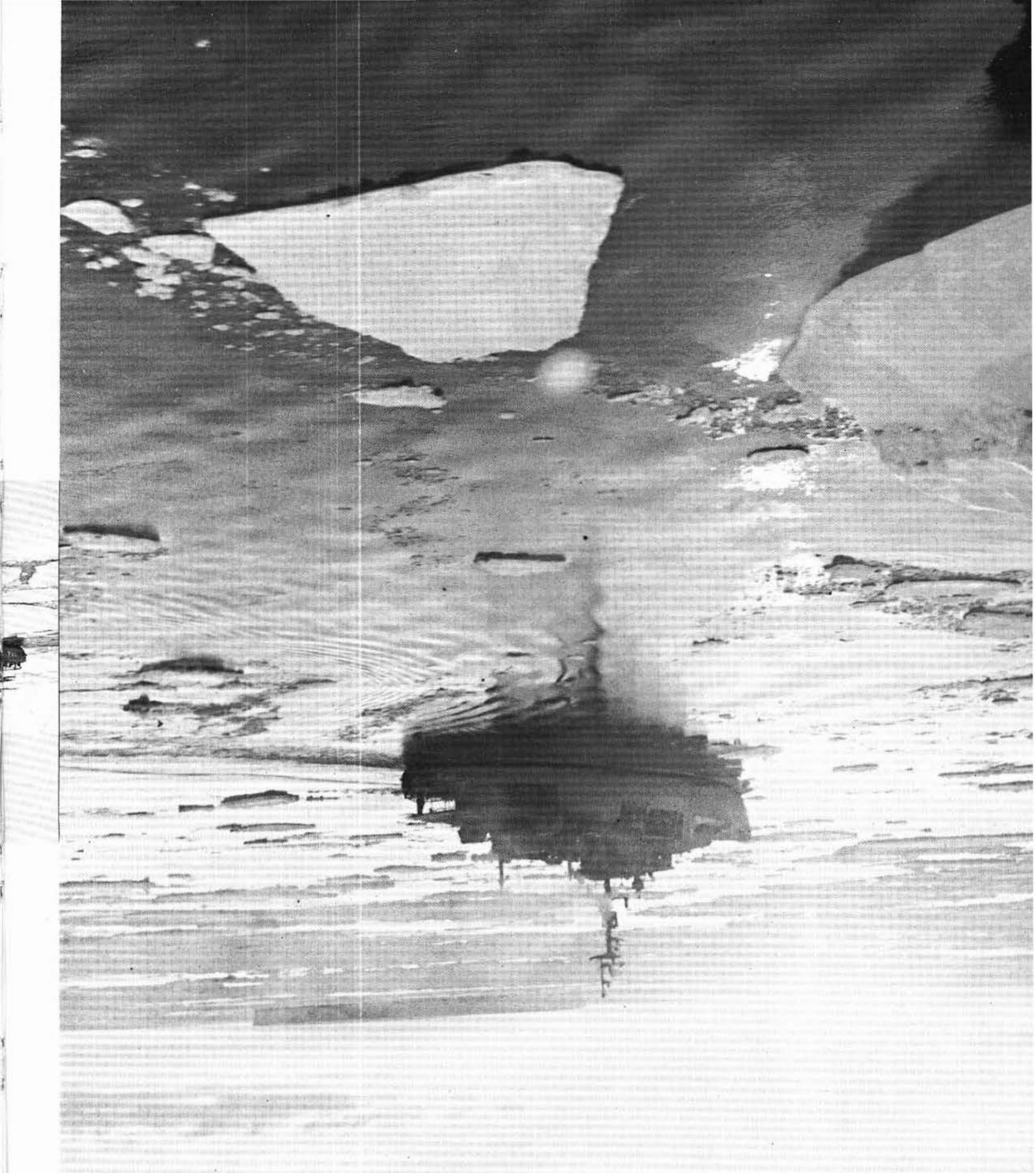
ship ops



The Antarctic support mission could not be completed without the joint contributions of U. S. Navy, Military Sea Transport Service, U. S. Coast Guard, and Royal New Zealand Navy ships. Icebreakers, cargo ships, tankers, and radar pickets worked together in many varied assignments during Deep Freeze '64.

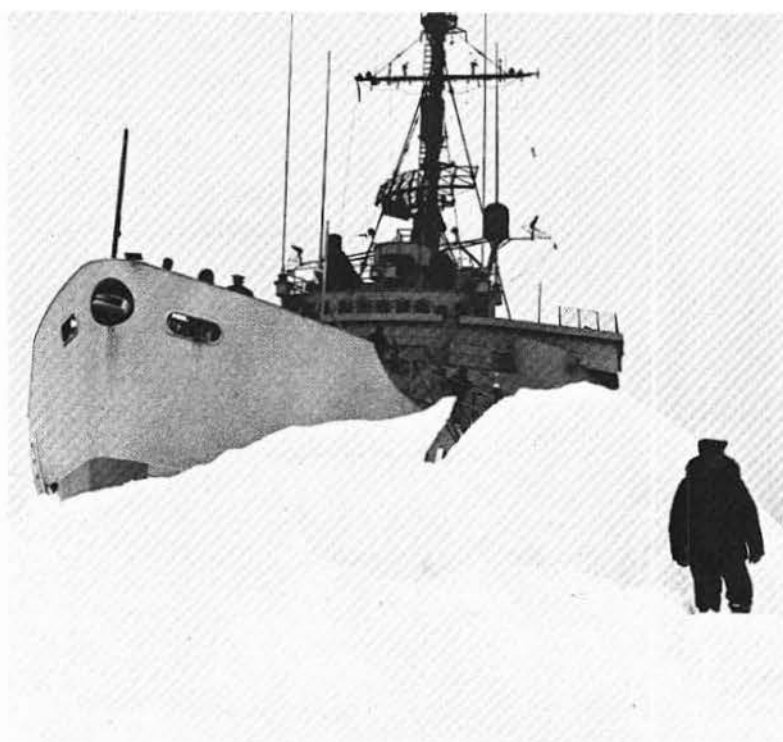
chronology — ship operations

- 29 September 1963 — USS Hissem began ocean station duties.
- 11 October 1963 — HMNZS Rotoiti began ocean station duties.
- 6 November 1963 — USS Atka departed Lyttelton, New Zealand flying CTG 43.1's pennant.
- 10 November 1963 — Seaman D. J. Lory, RNZN, was transferred to the USS Glacier from HMNZS Rotoiti for an appendectomy operation.
- 20 November 1963 — USS Glacier, USS Atka, and USS Burton Island began breaking ice in the channel to McMurdo Station.
- 23 November 1963 — Seaman J. R. Rees, RNZN, was transferred to the USS Hissem from HMNZS Rotoiti for an appendectomy operation.
- 28 November 1963 — A helicopter from USS Atka crashed enroute from the ship to McMurdo Station. There were no casualties.
- 31 November 1963 — USS Atka lost her port propeller and shaft and headed back to New Zealand for repairs.
- 10 December 1963 — USNS Chattahoochee began off-loading fuel at McMurdo.
- 15 December 1963 — HMNZS Endeavour began off-loading at McMurdo.
- 21 December 1963 — USNS Towle began off-loading at McMurdo.
- 25 December 1963 — Francis Cardinal Spellman celebrated Christmas mass aboard the USS Glacier.
- 8-11 January 1964 — USS Atka conducted sounding surveys near Tent and Inaccessible Islands.
- 15 January 1964 — USNS Merrell began off-loading at McMurdo.
- 4-28 February 1964 — USS Atka conducted oceanographic surveys in Ross Sea.
- 7 February 1964 — USNS Wyandot began off-loading at Hallett.
- 18 February 1964 — USNS Wyandot began off-loading at McMurdo.
- 22 February 1964 — HMNZS Pukaki began ocean station duties.
- 6 March 1964 — USS Glacier answered call for help at Hallett Station when fire struck just after the station had buttoned up for the winter.

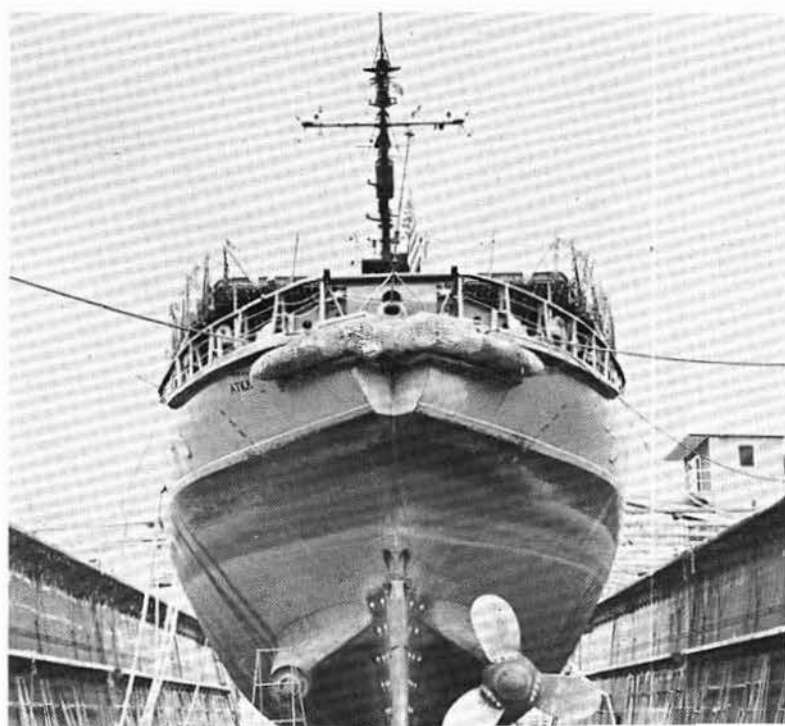


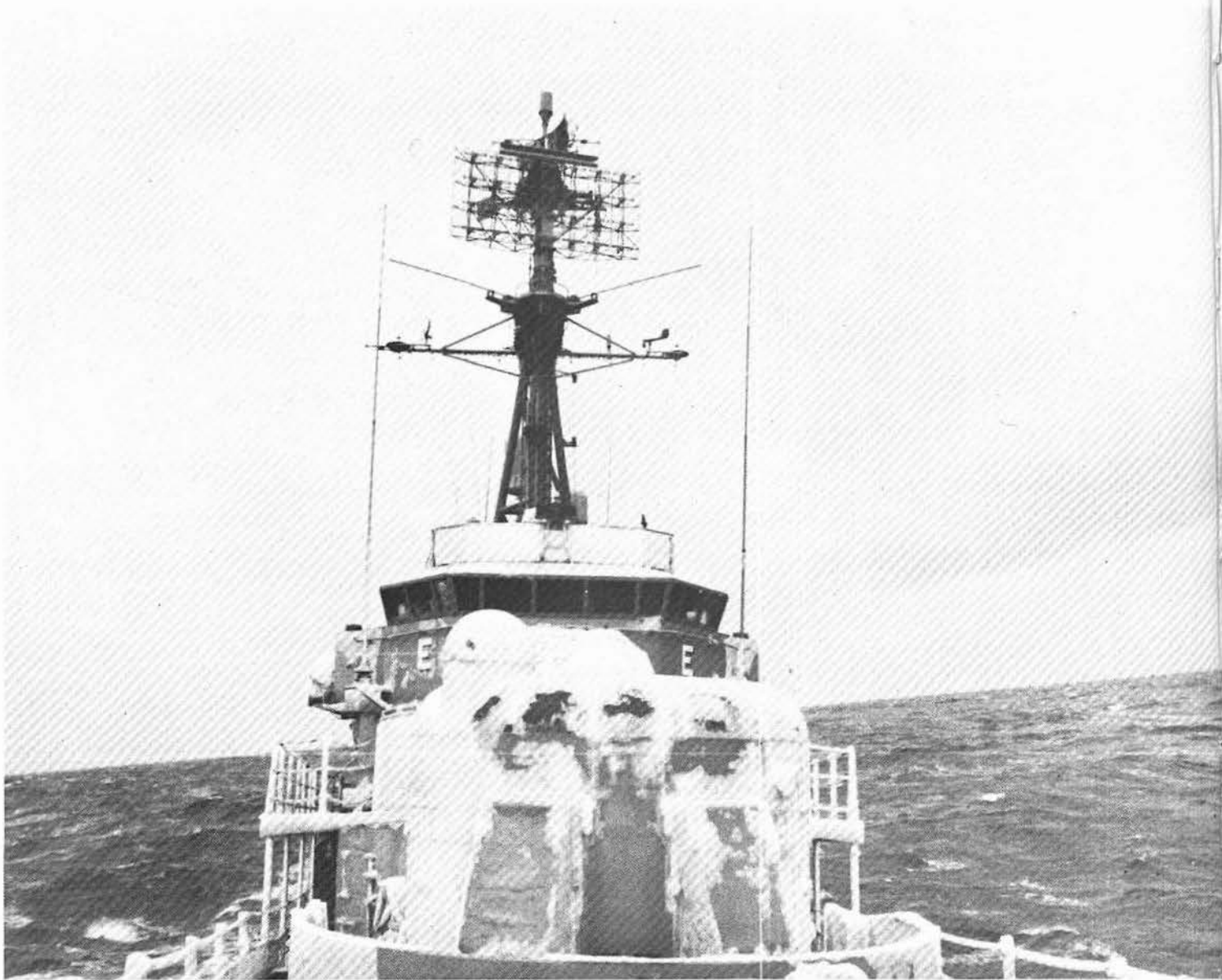
sdo diys

ship ops



the
mighty
breakers



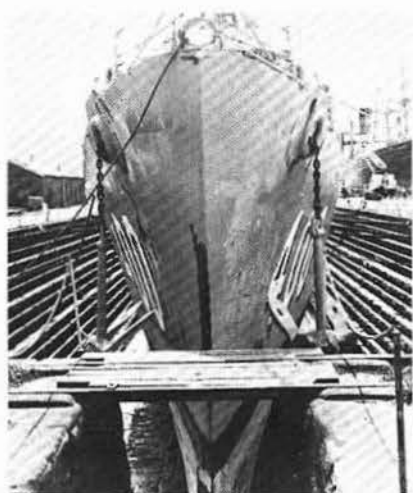


ocean station ships

Of all the units attached to Deep Freeze '64, the ocean station ships have perhaps the most tedious duty. Gathering weather data at 60 S Latitude, midway between New Zealand and Antarctica, the USS Hissem, HMNZS Rotoiti, and HMNZS Pukaki braved 85-knot winds and 20-foot seas in one of the loneliest assignments in the Navy. On station for about three weeks at a stretch, the station ships provide some of the most valuable weather data of the operation—the data used by the pilots flying the 2300-mile lifeline route between Christchurch, New Zealand and McMurdo Station.



ship ops



upkeep and

preparations



ship ops



One of the Antarctic's firsts was performed by two Deep Freeze '64 ships, when the USS Hissem was refueled on ocean station by the USS Atka. The evolution was attempted underway on the night of 14 December, 1963, but rough seas caused the refueling hose to part twice. On the next day the two ships were able to lay-to as a hose was passed from Atka to Hissem. This is the first account on record of an underway replenishment under such hazardous conditions.

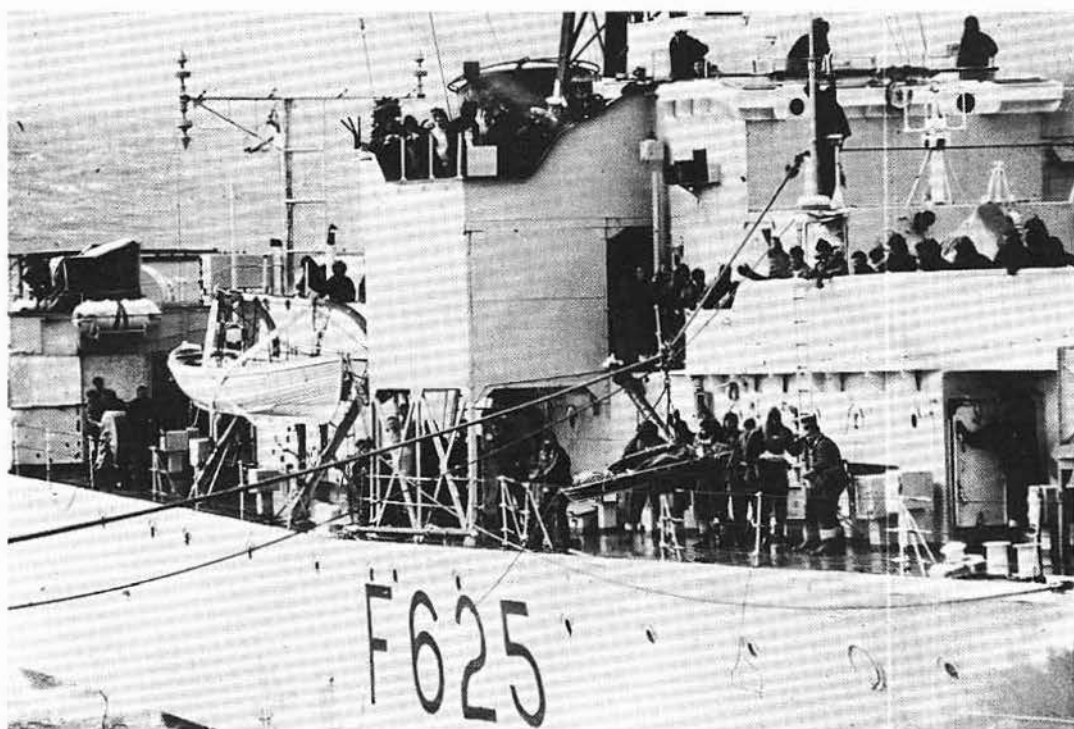


highlights

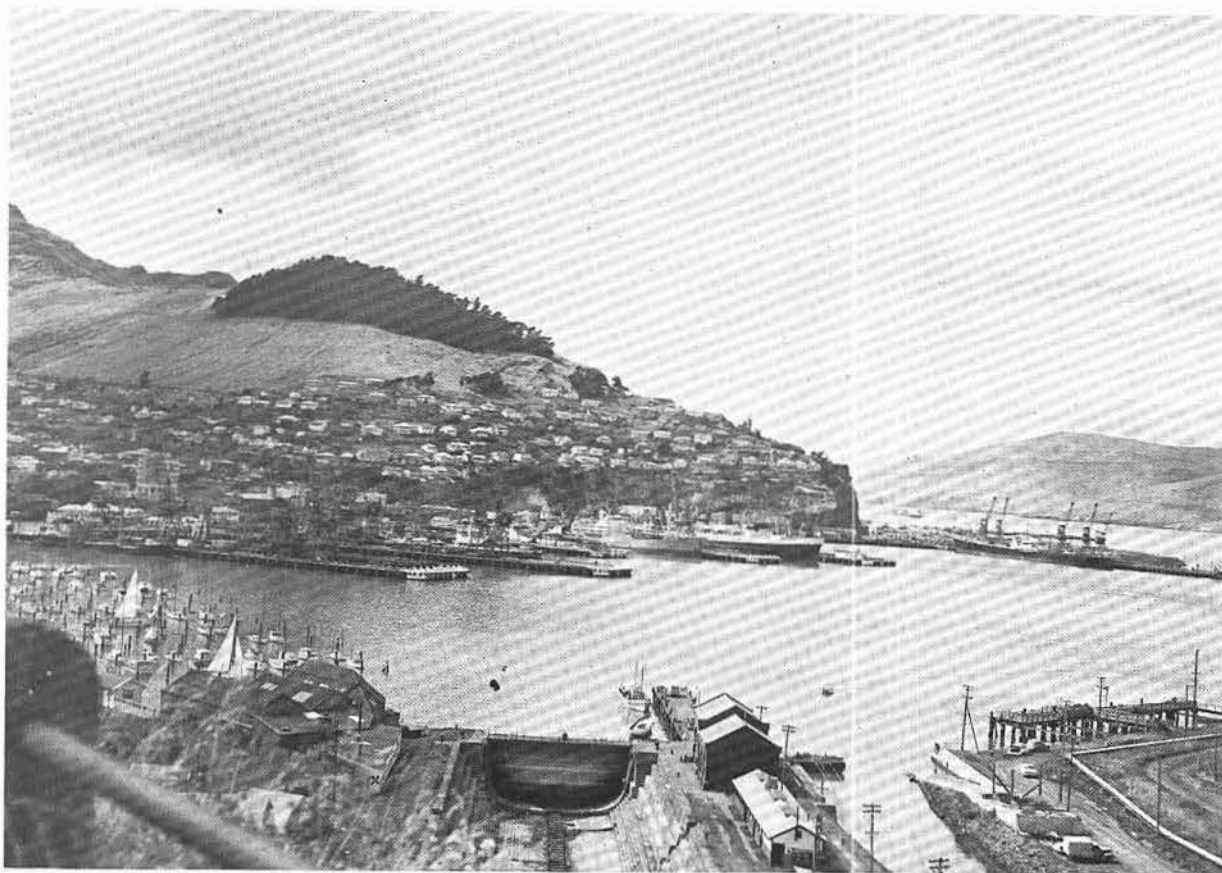




Another ocean station "first" was the high-line transfer of a critically ill New Zealand seaman from the HMNZS Rotoiti to the USS Hissem. While Hissem was enroute to relieve Rotoiti on station she was informed that Rotoiti had a sailor with acute appendicitis on board. After consultation it was decided to transfer the 16-year-old seaman to Hissem for surgery. The transfer and operation were both performed successfully and the sailor recovered completely.



ship ops



ports of call

air operations



air ops

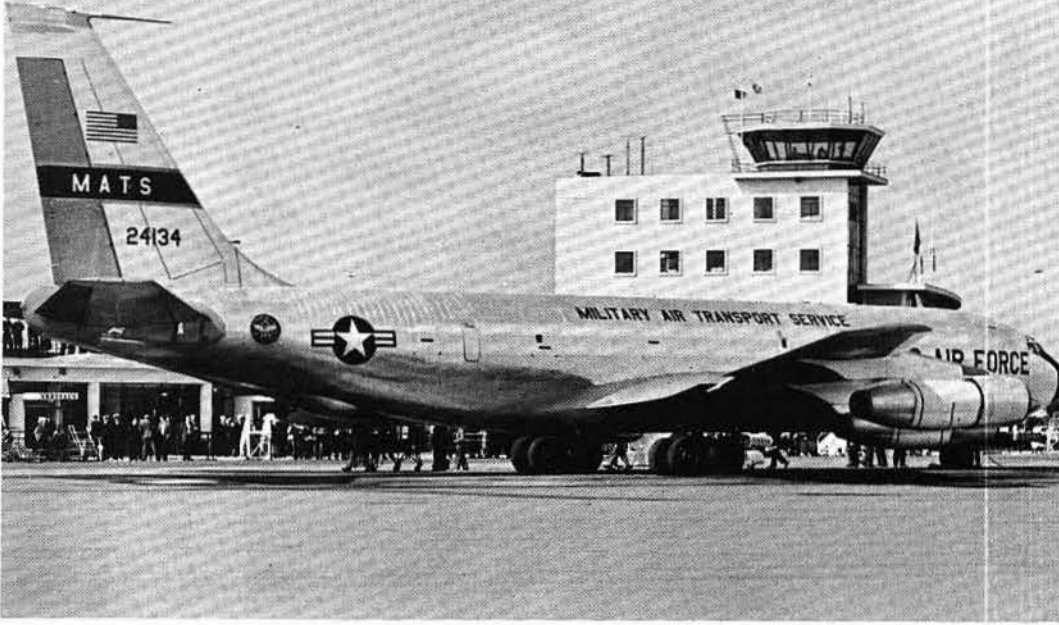


The LC-130F Hercules of Air Development Squadron SIX (VX-6) bore the brunt of the airlift and resupply mission in Deep Freeze '64. Carrying supplies and equipment to the four inland stations and the various field parties, these ski-equipped aircraft were truly the "workhouse" aircraft of the season.



d f

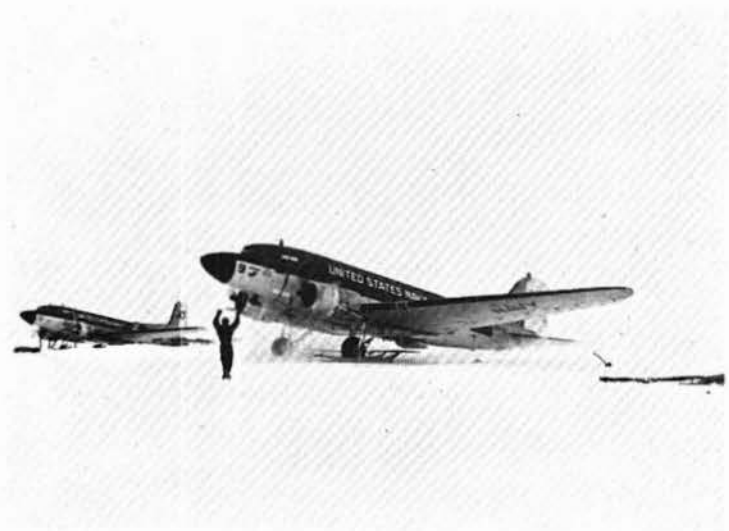
air ops



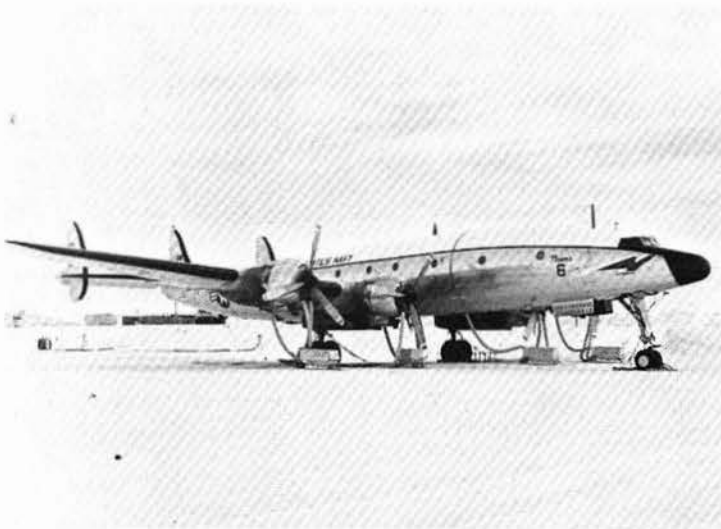
Most of the airlift between the continent of the United States and New Zealand is performed by the C-135 Stratolifter operated by the Military Air Transport Service under contract to the Navy. Pictured below is the Navy's CH-19E helicopter used extensively in Antarctic operations and operated from the "flight decks" of the icebreakers.



air ops



Other aircraft important in the Deep Freeze '64 mission included the C-54Q Rescuemaster used for Search and Rescue; a C-47 Dakota used as a general all-purpose aircraft; the C-121J Super Constellation used for photographic mapping and personnel transport; and the UH-1 Otter, used for reconnaissance flights. All are very important members of the Antarctic aviation team.





Another important member of this unique team is the Army's HU1-B helicopter. The choppers this year — among other missions — gave logistical support to the scientists of the University of Minnesota at Camp Gould in the Pensacola Mountains. Deep Freeze '64 is the third season that a detachment of the 62nd Transport Corps has assisted in Antarctic operations.

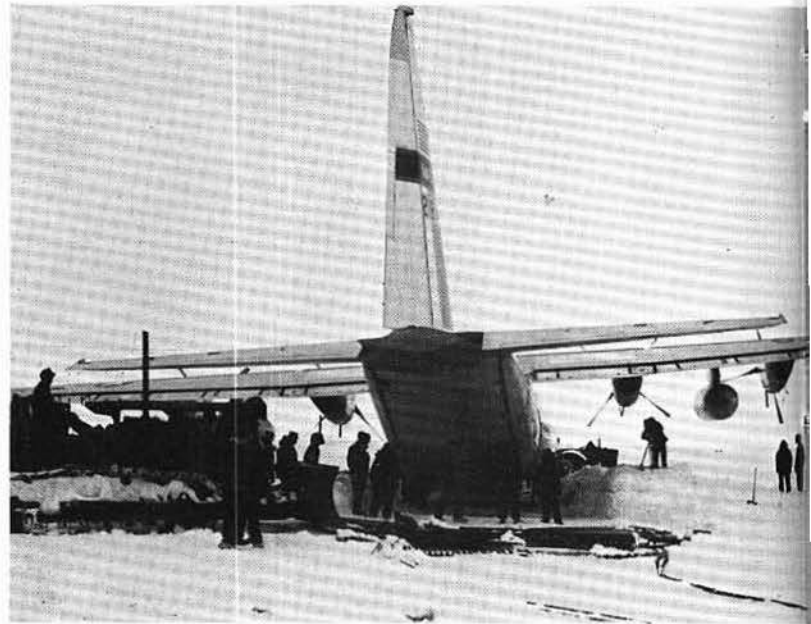


air ops

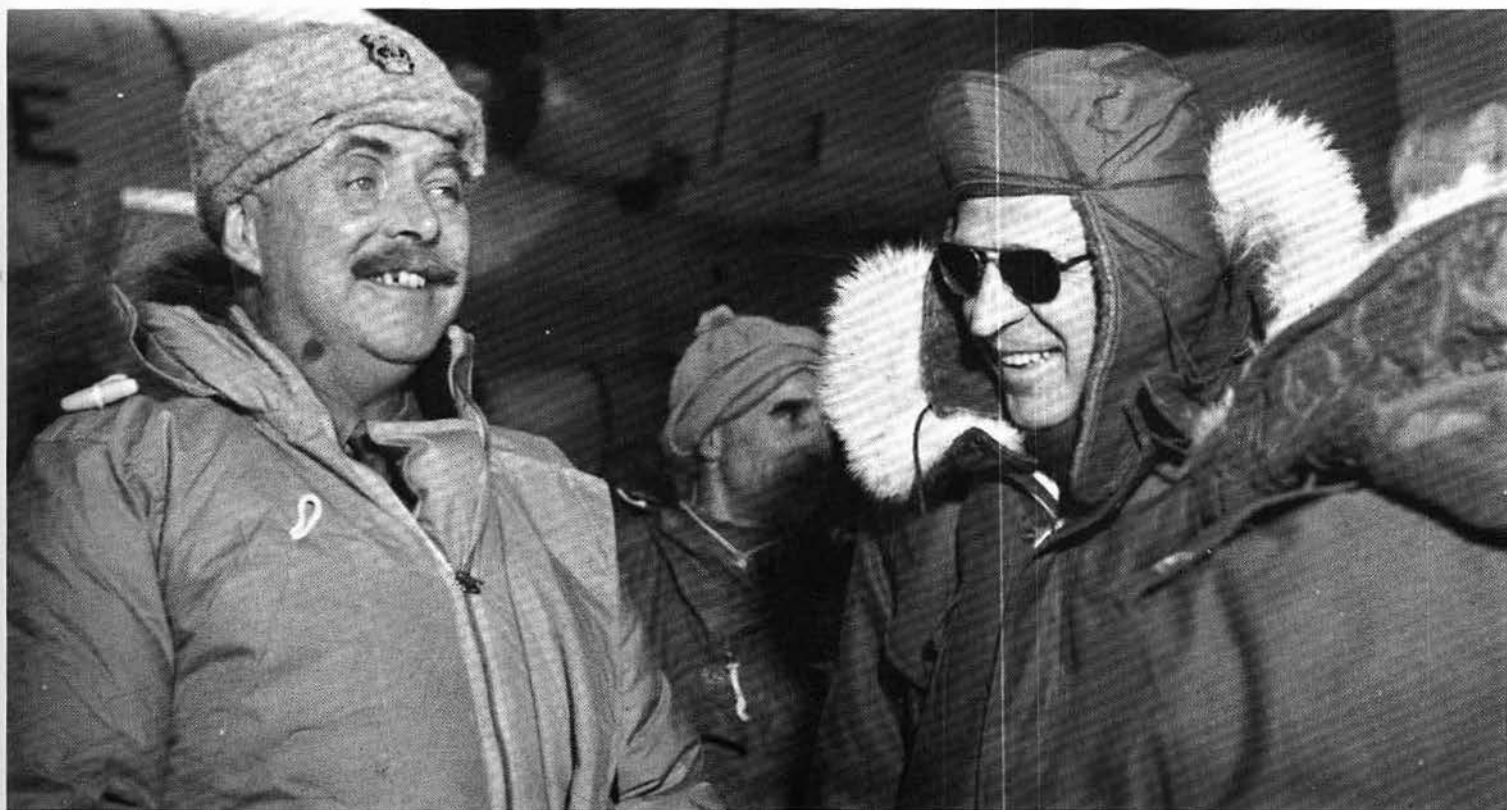
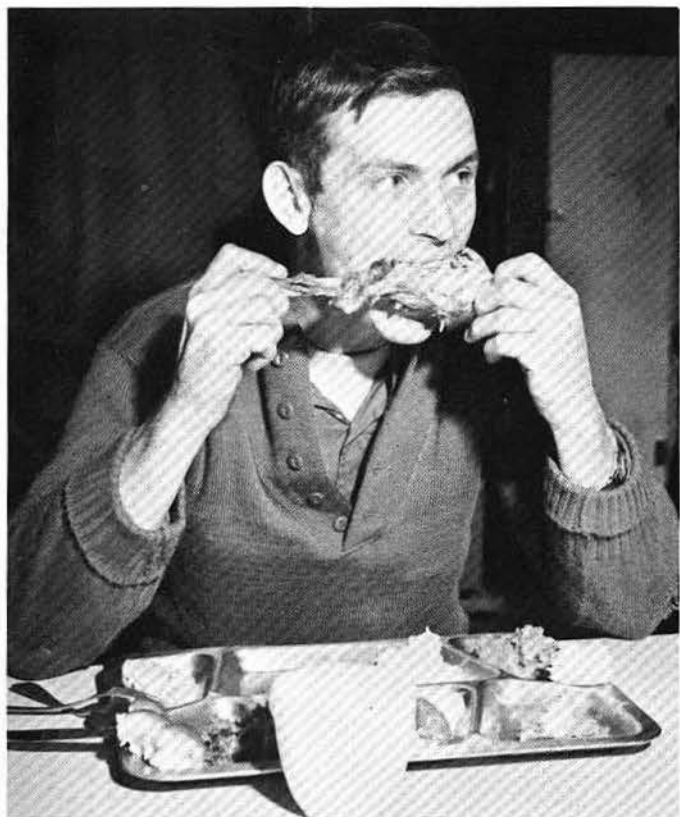


a near tragedy

A near tragedy occurred on December 13, 1963 when an Air Force C-130E, making its final turn-around of the season, made an emergency landing at Williams Field, McMurdo. A half hour before the plane reached the ice, the weather turned poor and visibility was reduced to zero. The aircraft commander circled the field for 4½ hours waiting for the weather to clear, before making the emergency landing when he ran low on fuel. Fortunately there were no casualties and only minimal damage to the aircraft.



highlights



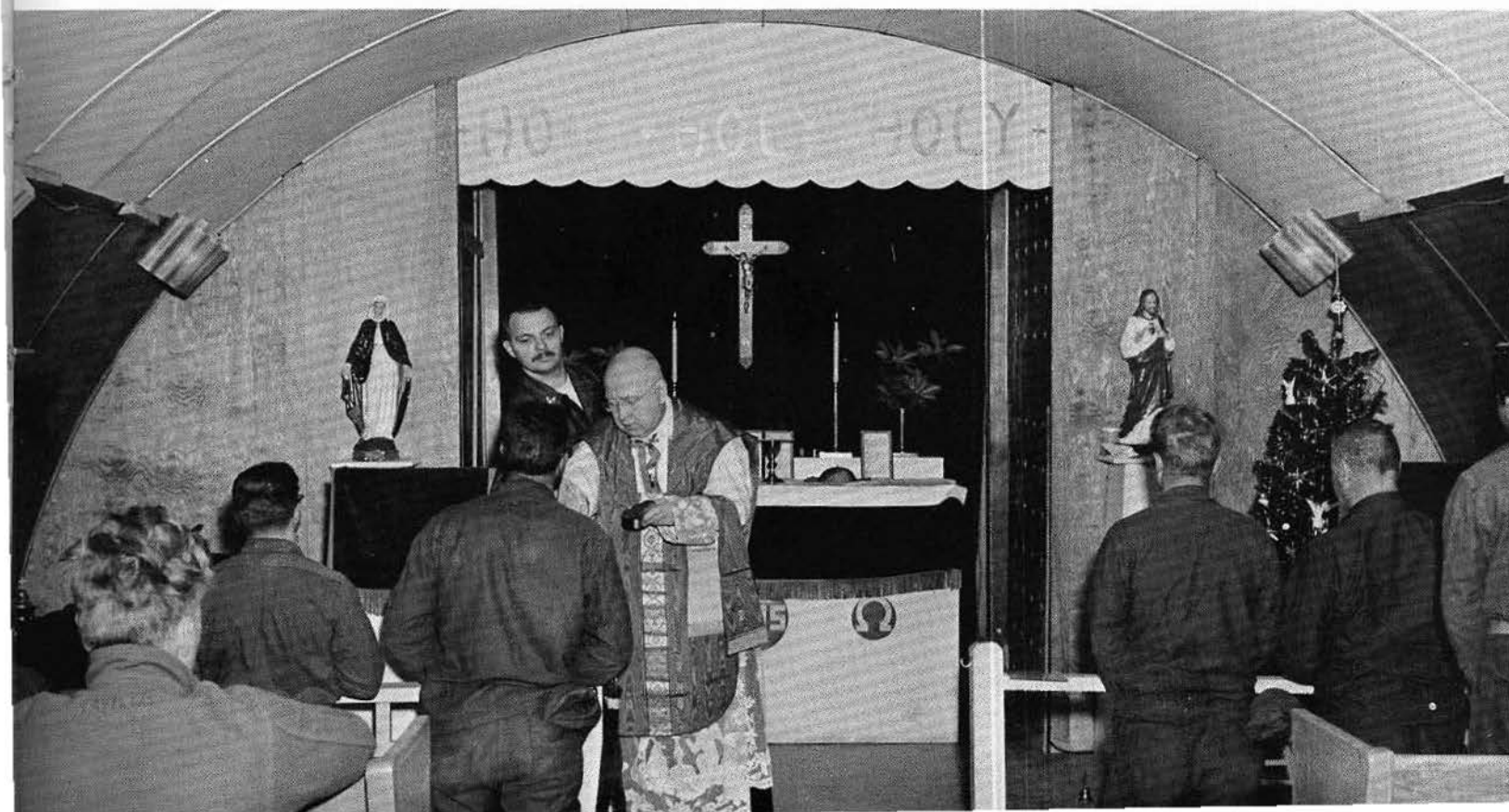
highlights



The men of Operation Deep Freeze received a treat this season at Christmas time when several stations were visited by Francis Cardinal Spellman, military vicar to the Armed Forces, and Rear Admiral Floyd Dreith, the Chief of Navy Chaplains. Both men performed Christmas services at McMurdo, Byrd and Pole Stations and aboard the USS Burton Island. All services were performed on Christmas Day due to the change in time zones.



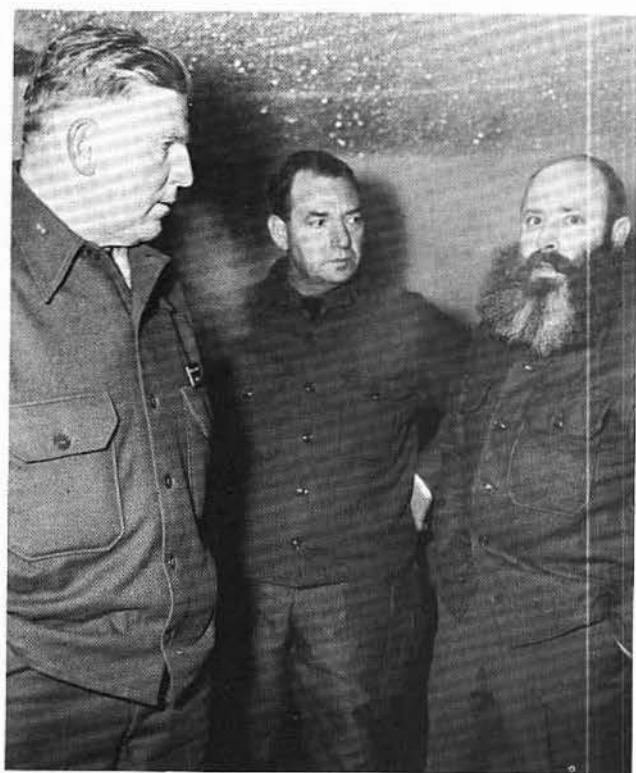
highlights





the admiral travels

As Commander of Naval Support Force, Antarctica, Rear Admiral Reedy's duties took him on extensive travels throughout the globe. From Washington, D. C. to the South Pole, the Admiral and his staff visited isolated stations on the ice and busy metropolitan areas around the world. Places visited included: Cape Town, South Africa; Melbourne, Australia; Sydney, Australia; Christchurch and Wellington, New Zealand; all of the U. S. Antarctic stations; the Soviet Union's Mirny Station; Papeete, Tahiti; Christmas Island; Honolulu, Hawaii; San Francisco; Davisville, R. I.; and Washington, D. C.



visitors



Visitors watch a seal on the sea ice near
McMurdo.



RADM Reedy and Sir Bernard Fergusson,
Governor General of New Zealand, arrive at
McMurdo.



Dr. S. M. Naude, Rt. Hon. Walter Nash and
Mr. Peter Van Vuuren at Scott's Hut

visitors



One of two IL 18 aircraft at Williams Field, McMurdo Station carrying 99 Russians enroute to Mirny.

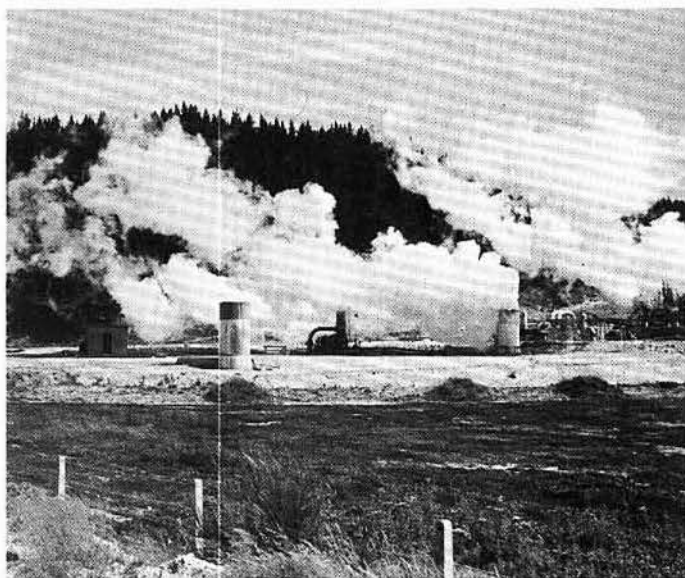
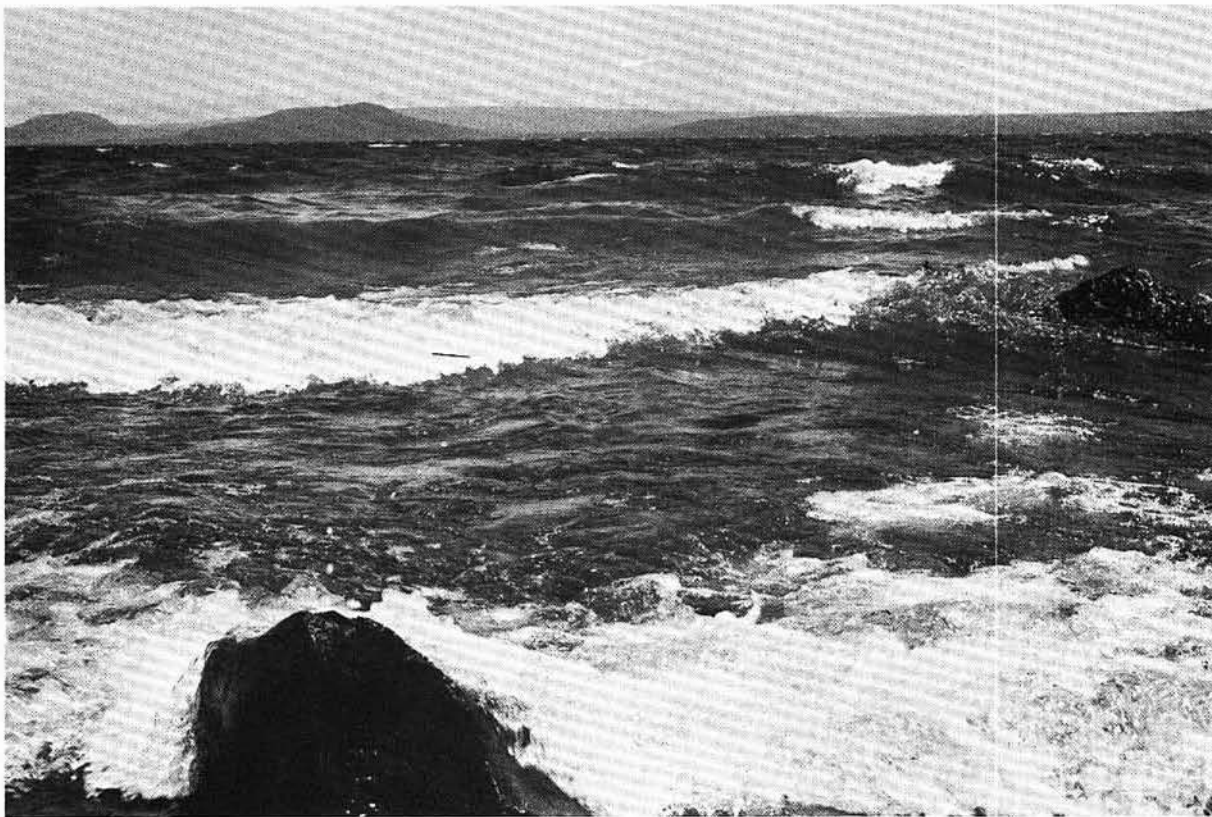


Hon. H. B. Powell, the American Ambassador to New Zealand, and Mrs. Powell come aboard.



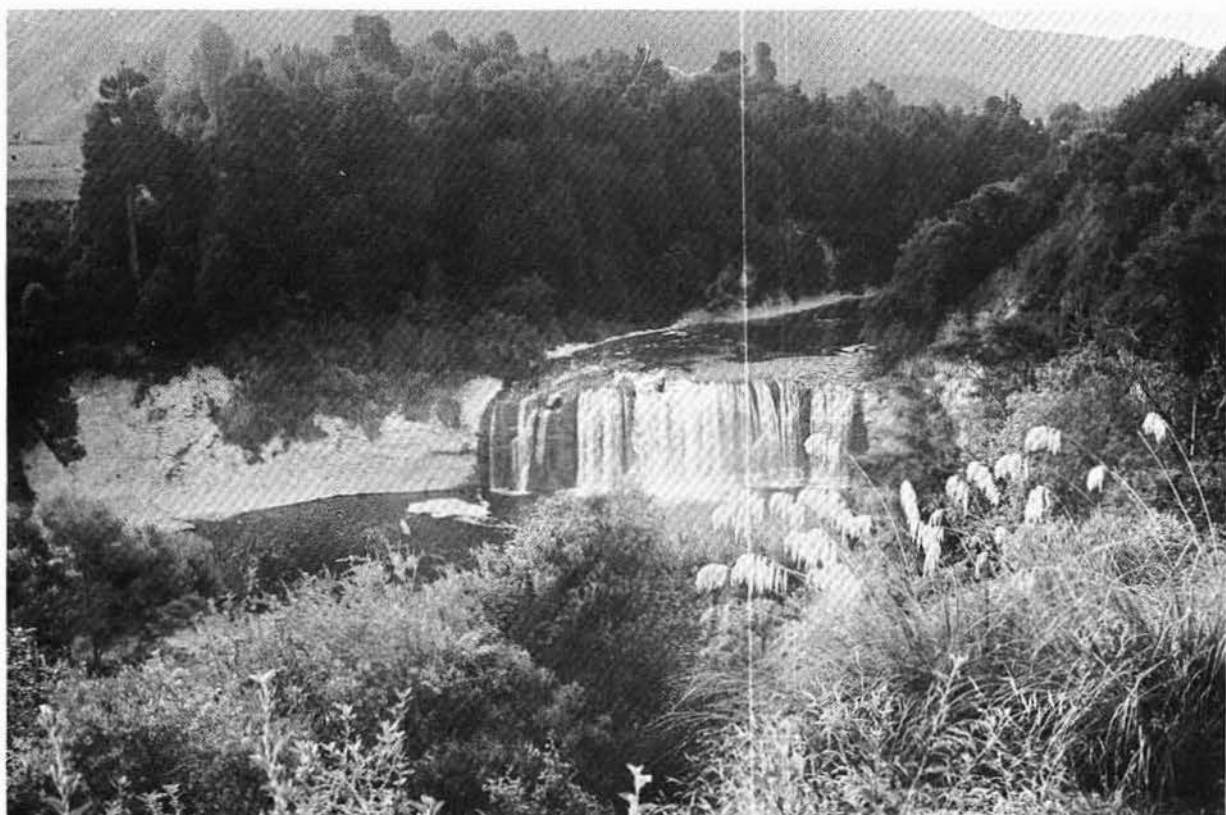
COMSERVLANT with CO of USS Atka aboard Atka in McMurdo Sound.

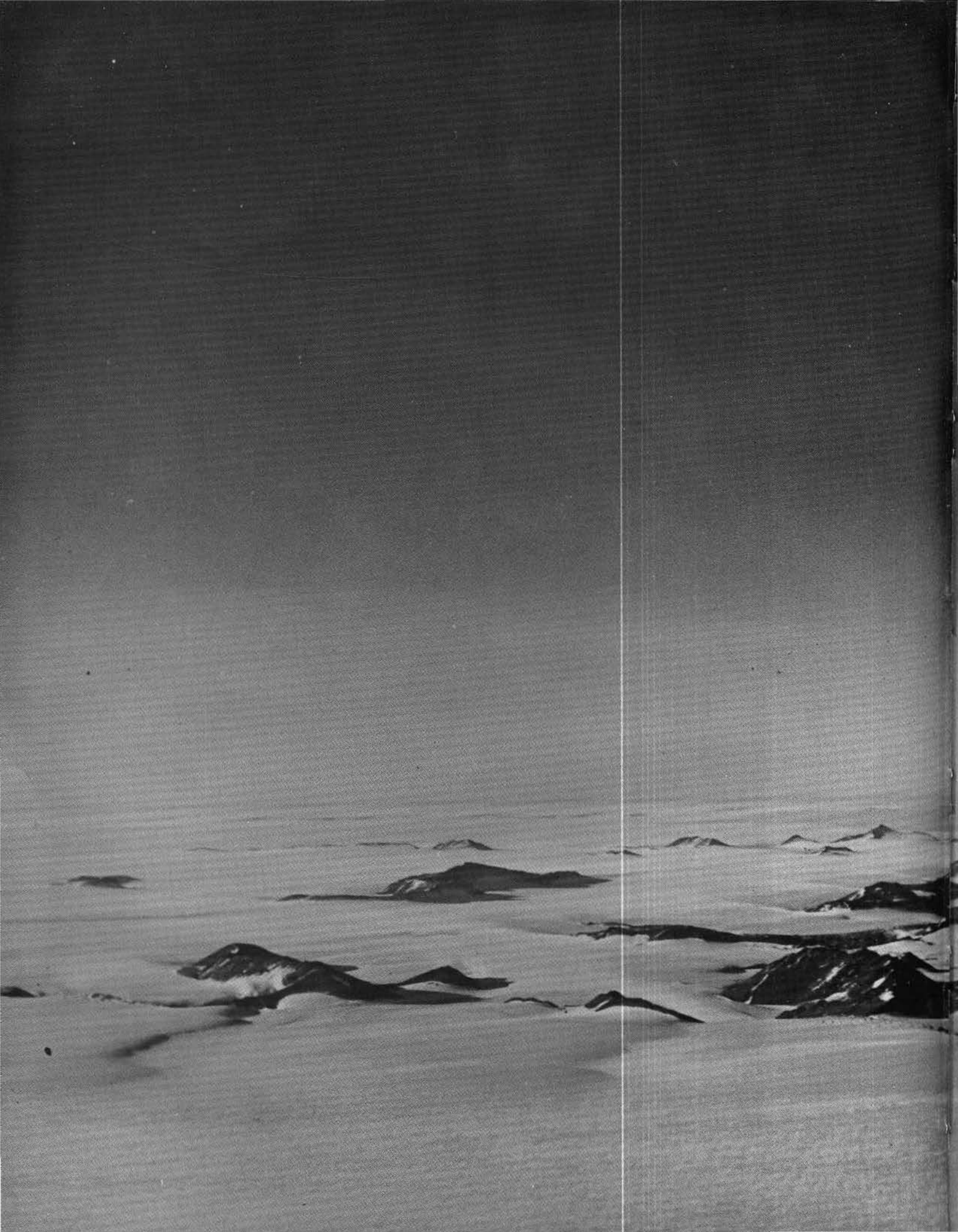
kiwiland

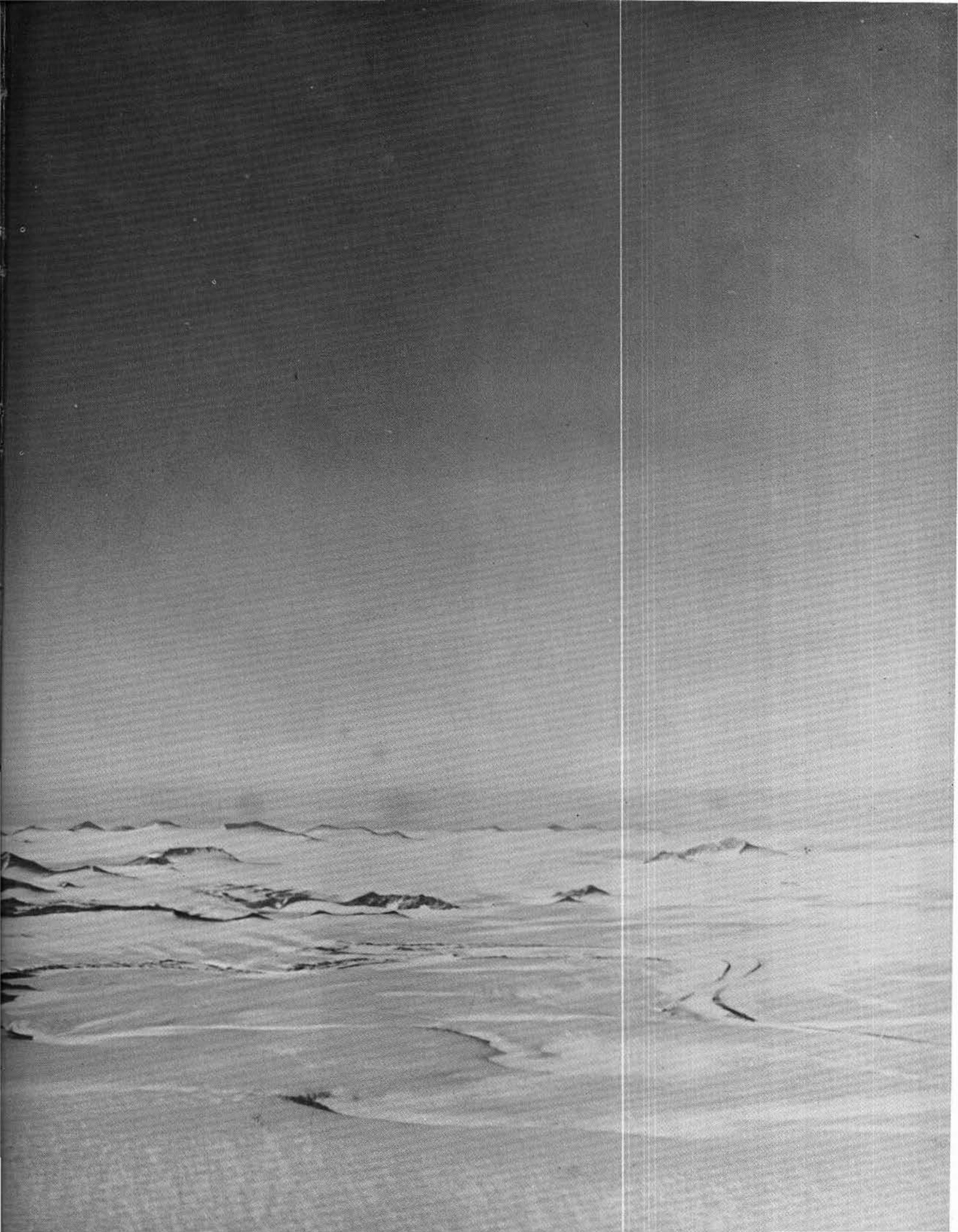


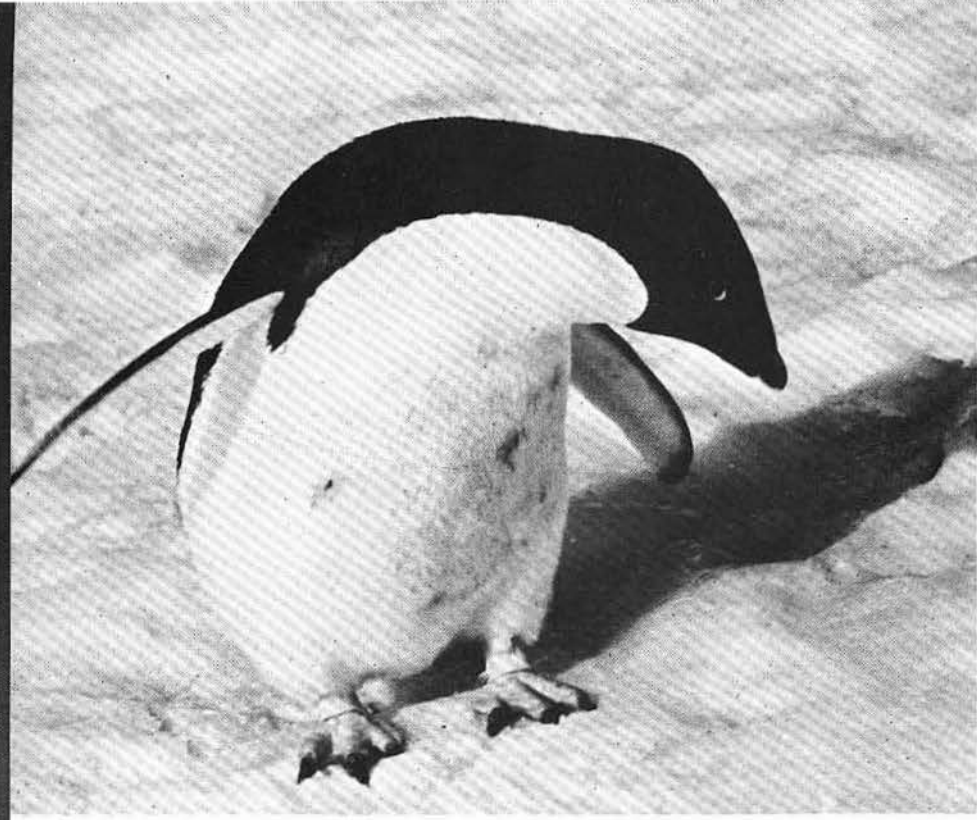
With Advance Headquarters in Christchurch, New Zealand for the past nine seasons, the men of Operation Deep Freeze have truly become a part of New Zealand. One of the most scenic countries in the world, New Zealand offers both the casual tourist and photographic bug alike, a wealth of natural beauty.

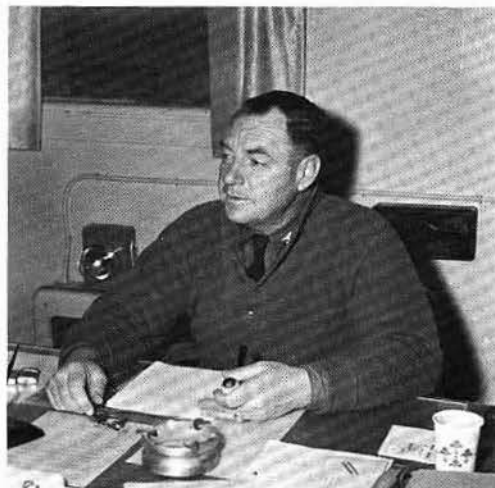
kiwiland











CAPT James B. Elliott Jr USN
Commander Antarctic Support Activities

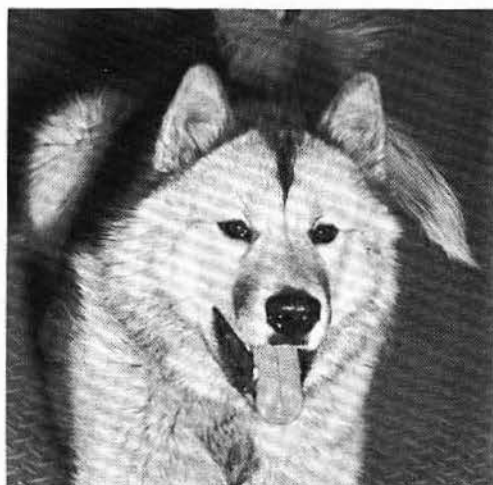


CDR Corwin A. Olds USN
Executive Officer

ASA DEEP FREEZE '64

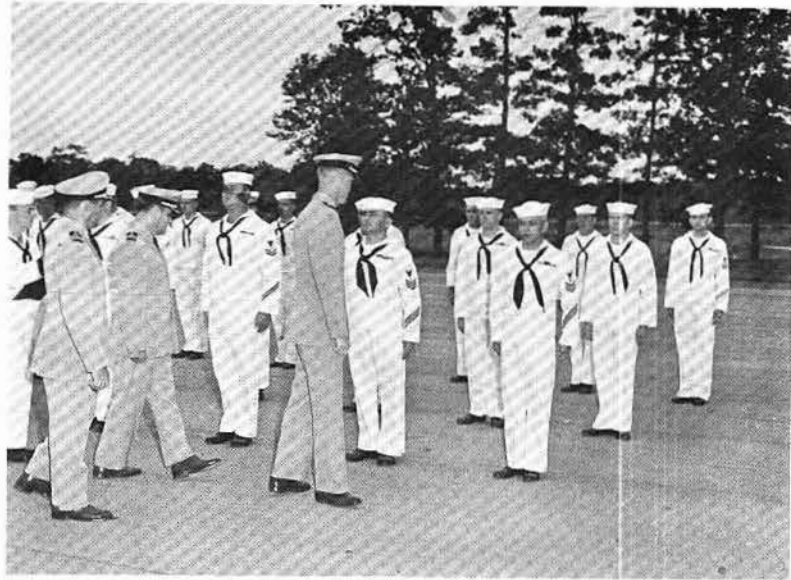


CDR Joseph L. Reilly USN
Commanding Officer ASA Det ALFA



"Boots" Station Mascot

At Davisville We. . .



Formed



Worked



Practiced



Learned

And We . . .



Competed



Won



Bragged



Celebrated

Then We. . .



Advanced



Said Goodbye



And Departed

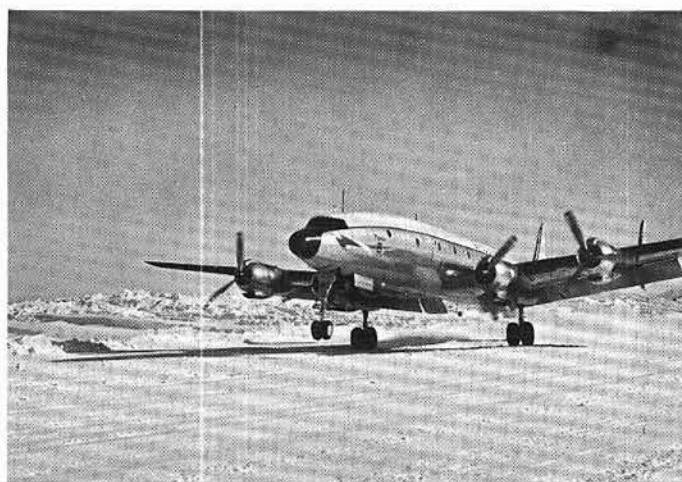
Our Trip To the "ICE"



To New Zealand by jet



"Airborne"



At last . . .McMurdo



Some of us stayed for a year

CASA CHANGE OF COMMAND CEREMONY



RADM JAMES R. REEDY USN
ComNavSuppFor Antarctica



CDR R. K. McGregor USN being
relieved

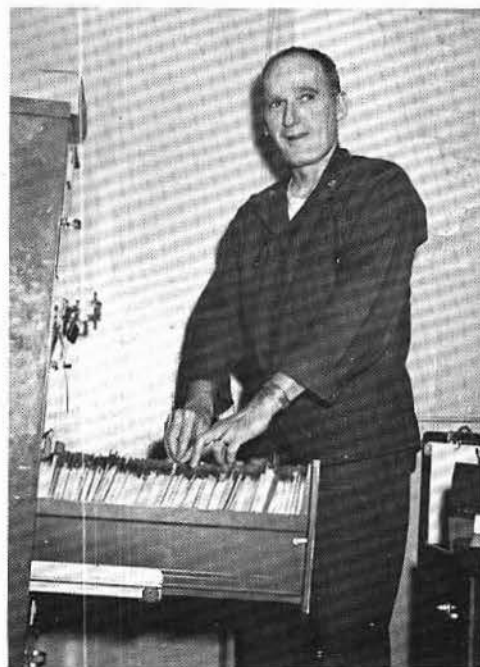


CAPT James B. Elliott Jr USN
assuming command

PERSONNEL AND ADMINISTRATIVE DEPARTMENTS



Decisions. . .Decisions



Chief Roach YNC



Please LT Pope. . . .
No Southard you cannot wear
whites



Chiefs Watson, Olson and Boots



I'm sorry Chaplain. . . . The water is too cold for total immersion



Right here in the BuPers Manual



"OAE"s

You two guys sure look silly

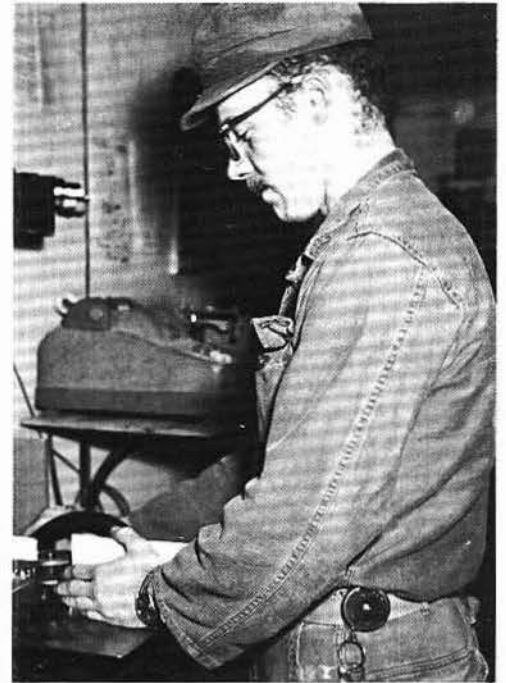




Half Mast for the late
President Kennedy

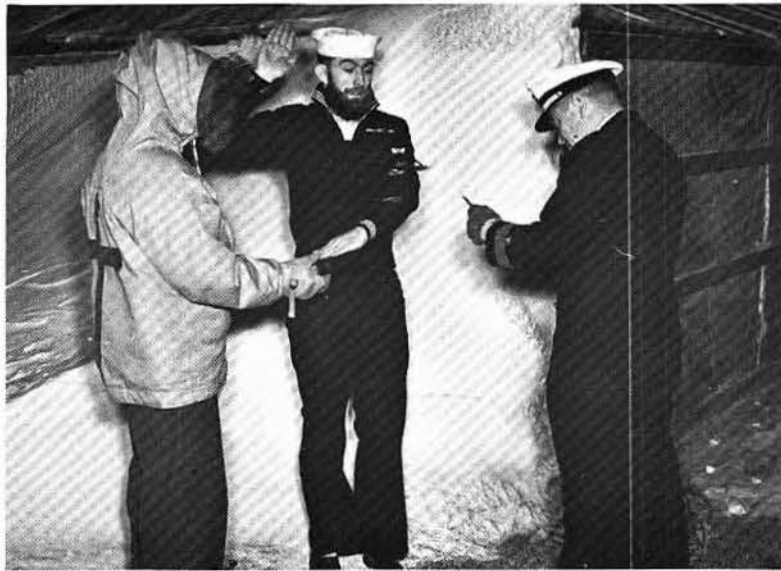


Pass along to ten other readers



The mailman Roisler





Shipping over at historic "Hut Point"

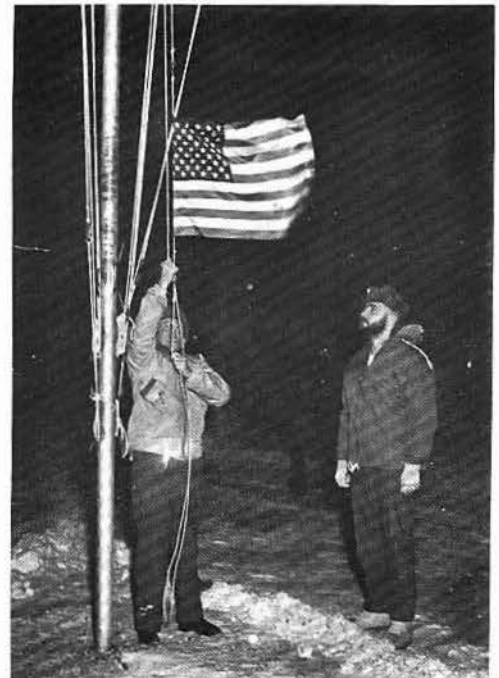
"Tex" the winter Deputy



Chief Wosick the winter Sheriff



Summer season Sheriff and Deputy



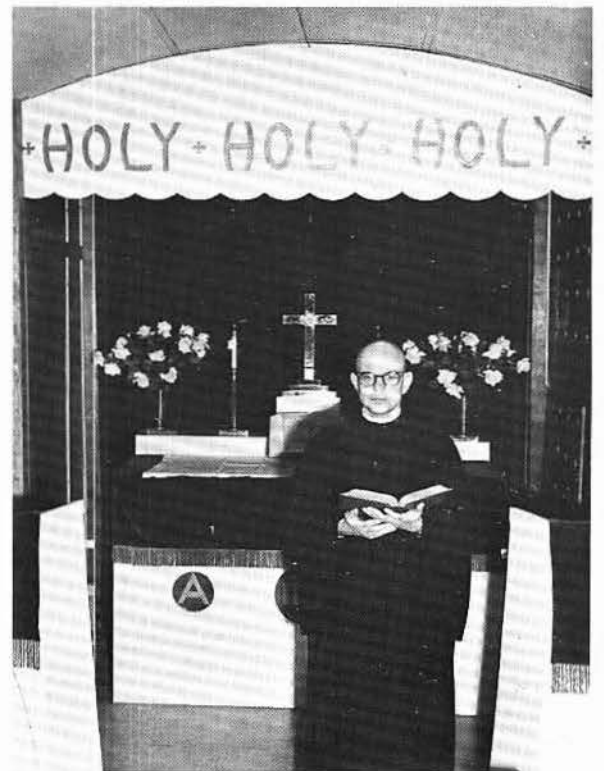
Sunset 21 April 1964



Cardinal Spellman conducts Mass



"Guide and protect us"



Chaplain William C. Fuller
LCDR (CHC) USN



Chapel choir

CHAPEL OF THE SNOWS

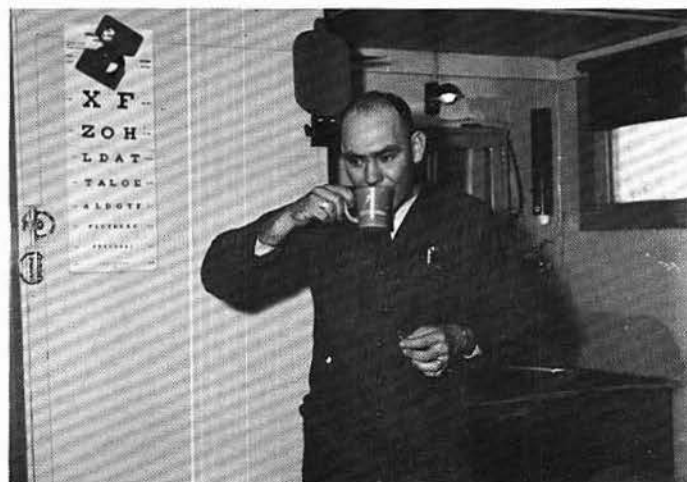
MEDICAL DEPT



Dr. Thomas R. Bates, LT (MC) USNR
Haseley Ruda French Staples



Patient greatly improved



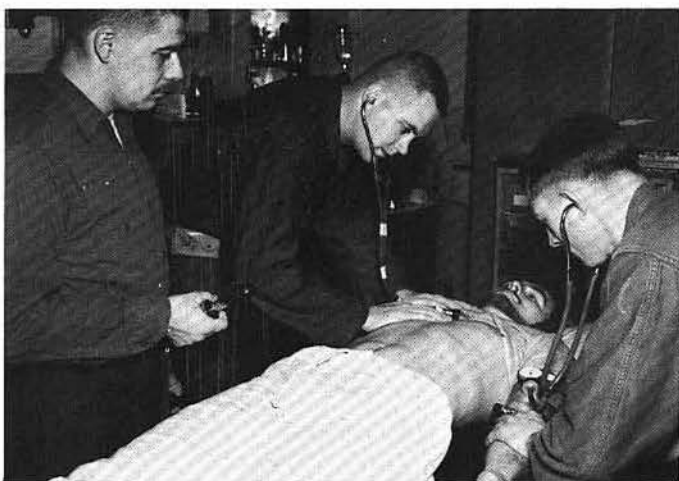
"Sippin" coffee, James?



More medical reports



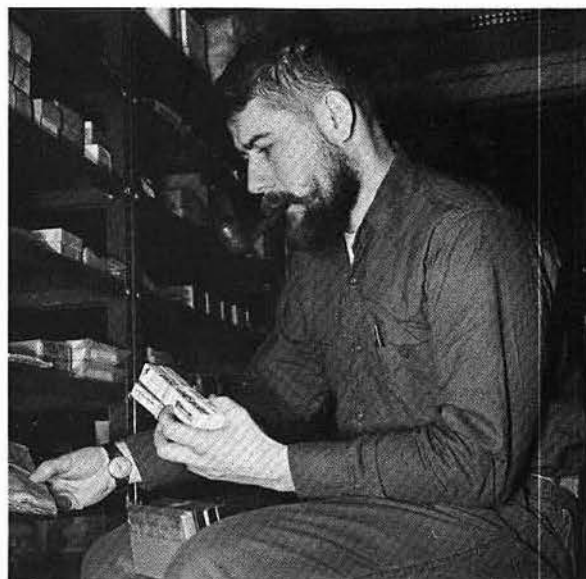
Sanitation Inspection



Gee whiz, it's empty



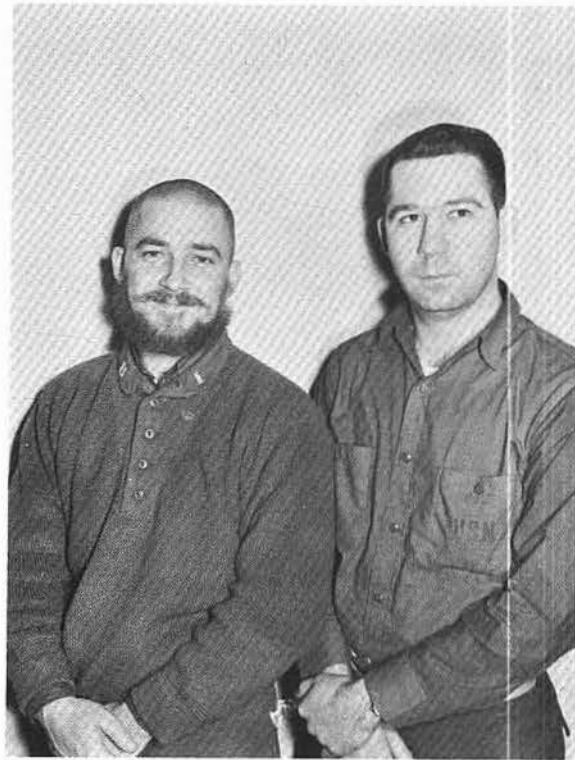
Down to business



Ted in the new storeroom

DENTAL

DEPT



Dr George A. Bloch LT (DC) USN

Donald E. Barker DT1

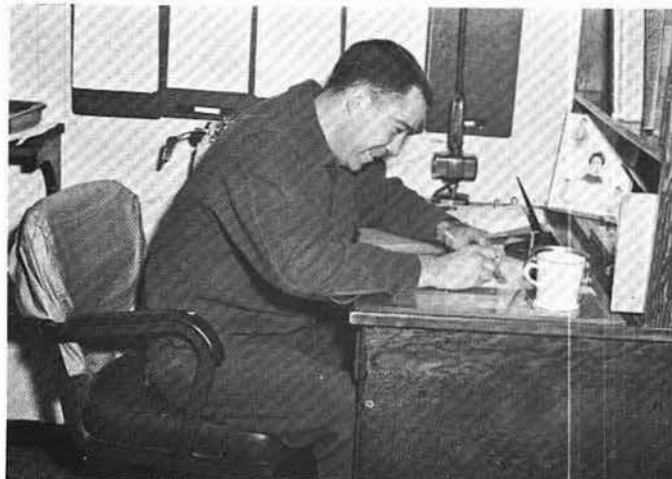


Open wide please



Help!!!

Tell us another, Don.

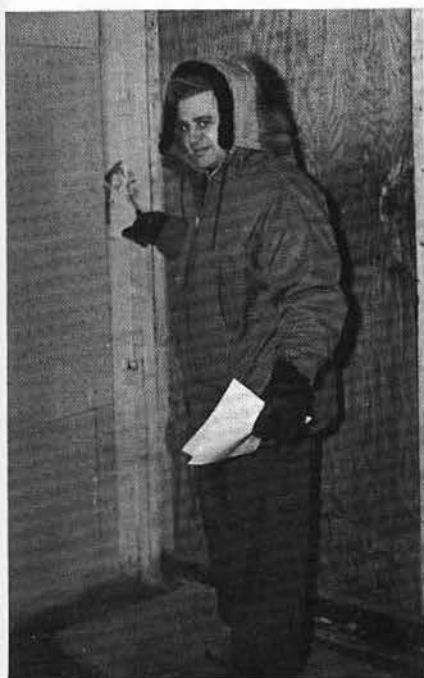




LCDR William G. Hunter USN



We wintered over



"Sam"

OPERATIONS DEPT



Cleared to tower frequency



The first aircraft is inbound



LCDR Orndorff and Masco



Norm at Williams Field radar



Larry in the Oceanic Control Center

METEOROLOGY DEPT



Winter over crew



LTJG Lawrence L. Libby USN



Dennis the "Grasshopper" man



Tom, Wally and Jerry

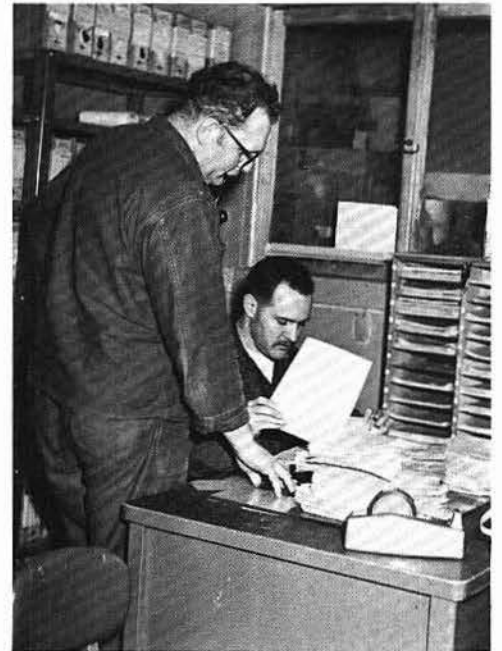
COMMUNICATIONS DEPT



RM's . . . ET's and Liz

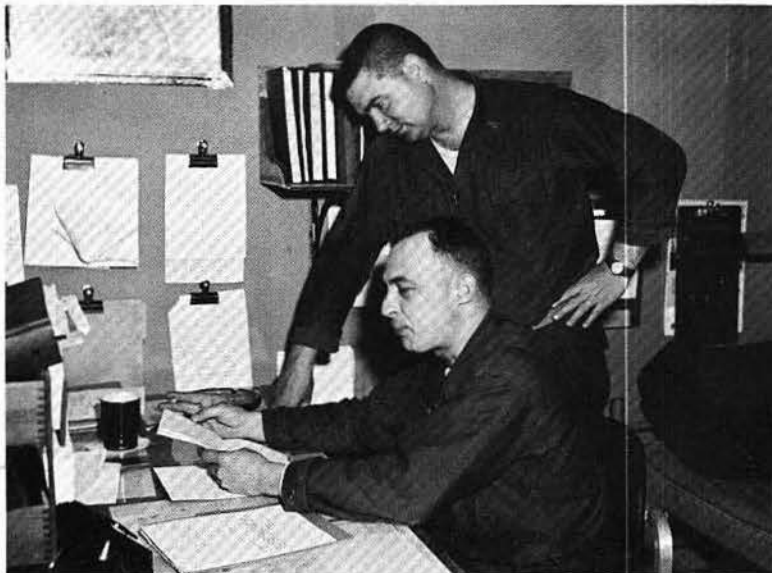


Faster, Bob



LT Faris and Chief Wells

Tiny and John





Gold crew



Blue crew



How does this thing work ?



Aagh. . . Such modulation

ELECTRONICS



The ET gang



But we fixed it yesterday !!!



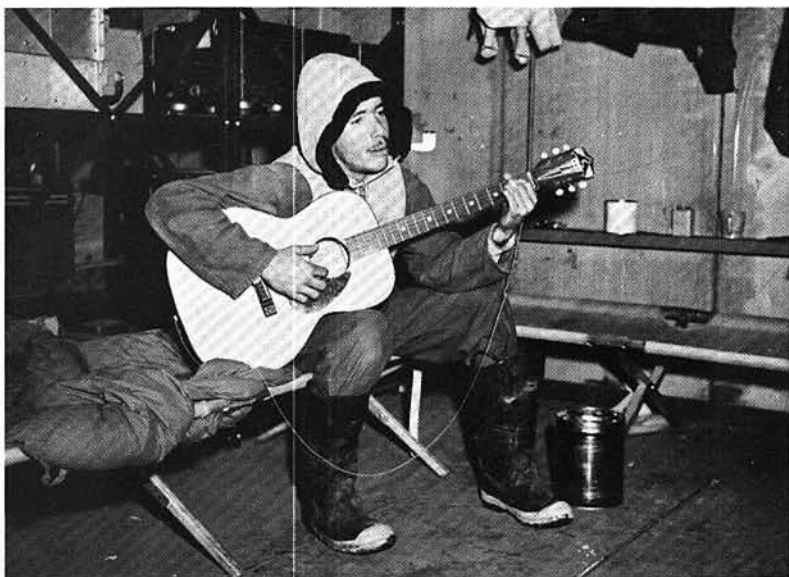
Nope, it will never work



What a mess, Frank



By Monday? . . . You're kidding



Sing it pretty, Agnew



Taking "inventory"



Electronic supply

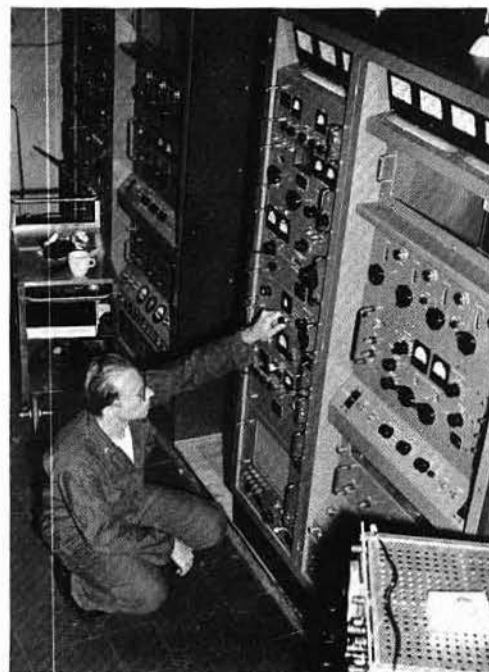
TRANSMITTERS



The winter crew

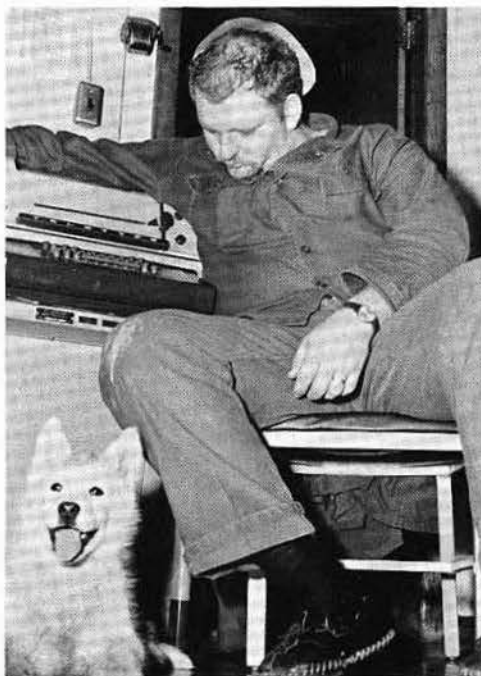


Chief Foster



Chief Scheine

"Liz" standing a taut watch





Break. . .Break. . .Break. . .

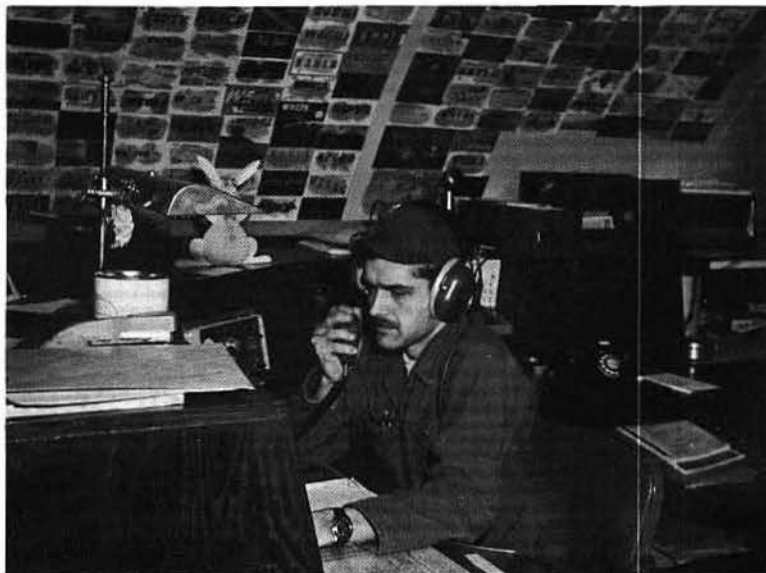
McMURDO
AMATEUR
RADIO
STATION
"KC4USV"



Bob Dworschak



Bob Bachand



Wayne Moore

SUPPLY

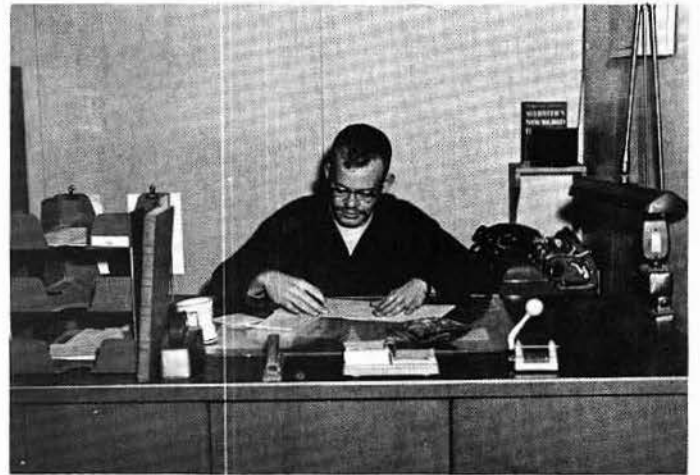
DEPT



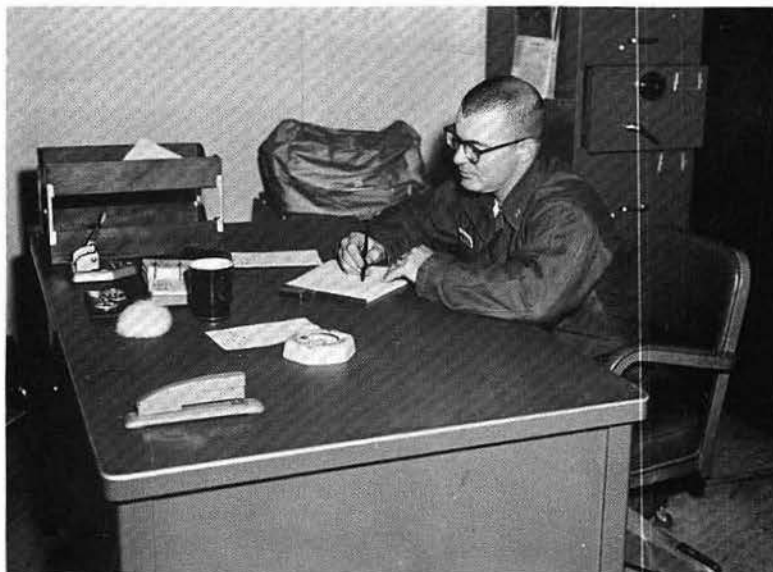
Winter over crew



Tim Truesdell



"Nick" Nichols



LT Roger C. Erickson (SC) USN
Supply Officer

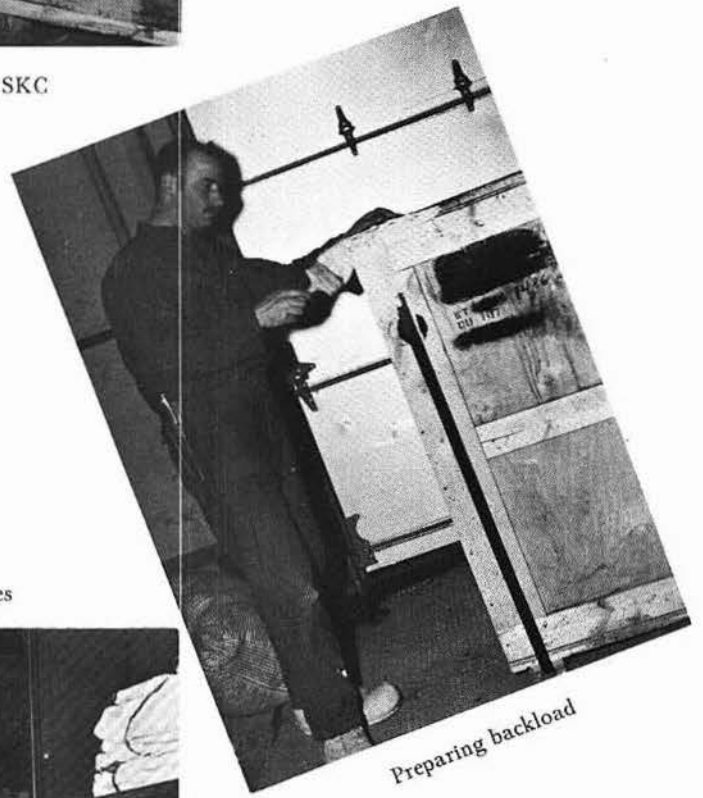


"Pappy" Phelps, SKC



Hundreds of requisitions

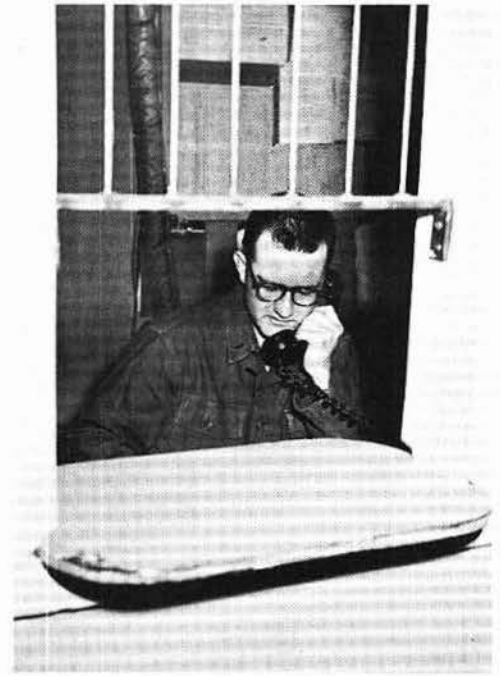
Stocking stores



Preparing backload



"Mac" McDonald SH1



LTJG Walter C. Sellers, SC, USNR
Disbursing Officer



"B.D." Martin SH2



The Disbursing clerks



Winter over DK. .CS's and SH's



Bob Knowlton re-enlisting



McMurdo friendly laundry



Food breakout



Re-provisioning



Variety and flavor

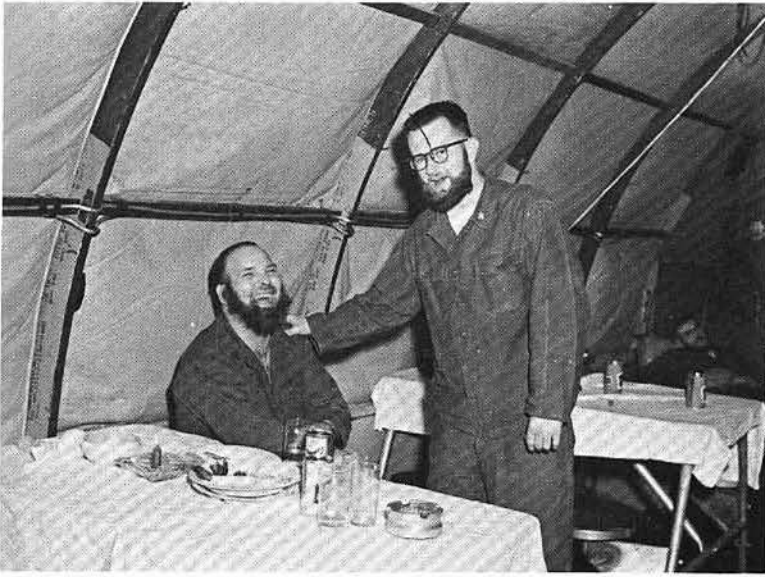


Flowers. . .A touch of home



Fresh bread in the making

SUPPLY TAKES A SHORT BREATH



LT Sellers and Mac



"Lucky". . .supplies' own "OAE"



"Big Daddy" and "Pappy"



Where did they get those table-
cloths???

PUBLIC WORKS DEPT

ENGINEERING

AND ADMINISTRATION



LT George E. Held (CEC) USN
and Aides



But sir, this is only my fourth
coffee break this morning



Draftsman Sumney?

TRANSPORTATION



The equipment operators



Hah Hah. . .tell me another



Sorry lady, we don't drive to the South Pole



Looking up part numbers

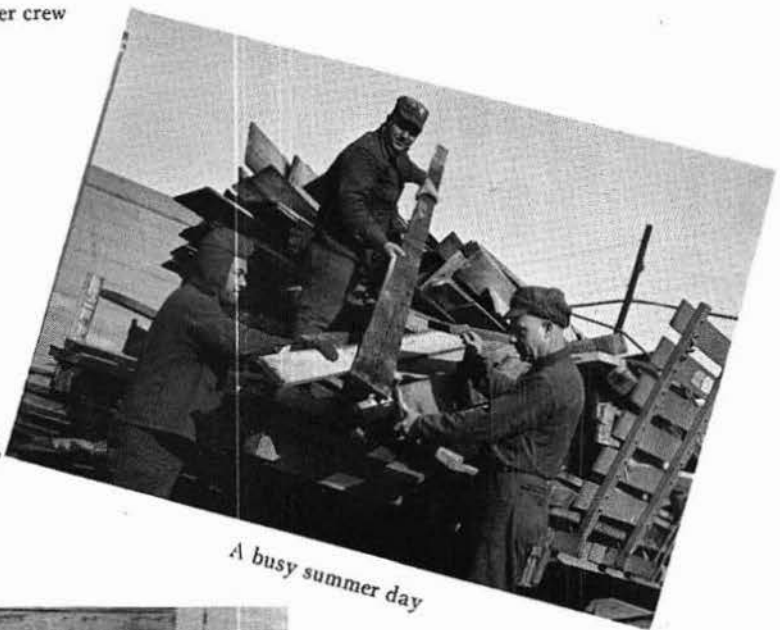
BUILDER SHOP



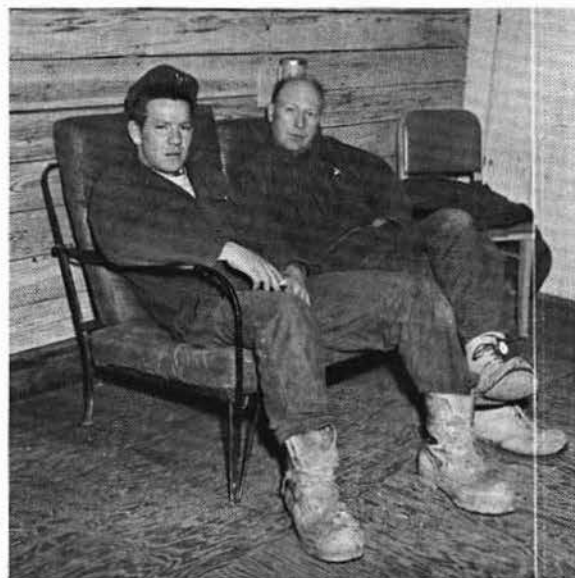
Winter crew



They build unusual things



A busy summer day



A well-deserved rest

UTILITIES SHOP



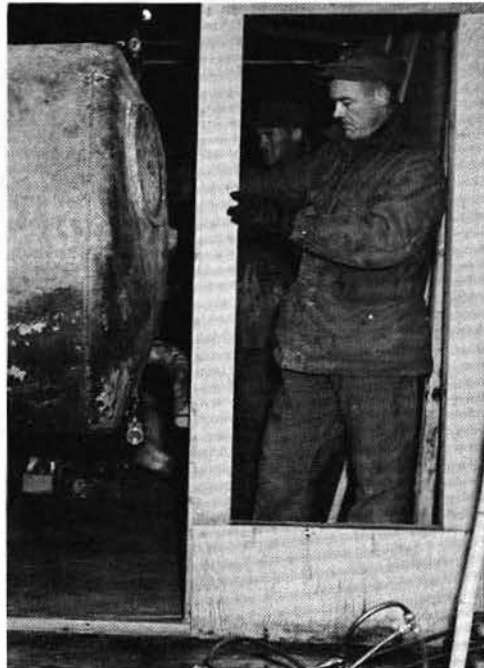
Winter over UT's



How far do we have to go?



"Tea time"



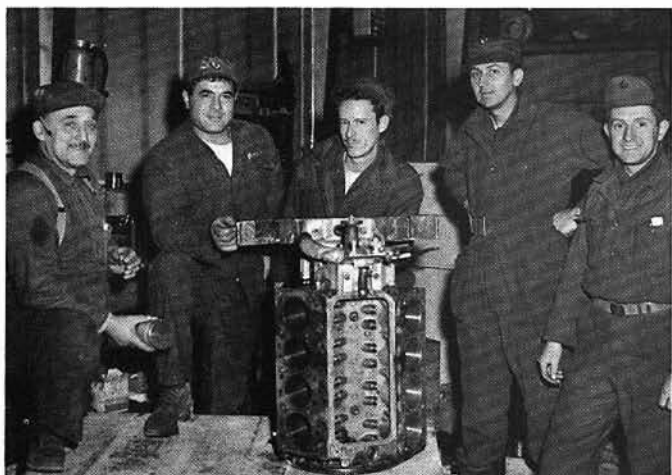
Aw shucks. . . it won't fit!!

GAS



SHOP

The winter over crew



What, no pistons left in stock?



The problem? Out of gas !!

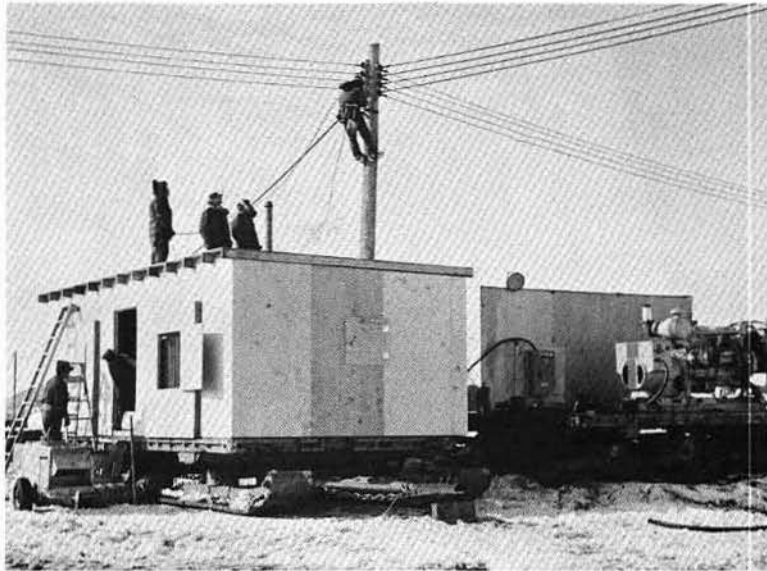


It's all right. . . I've got nine fingers left

ELECTRIC SHOP



Winter electricians



Power installation

Look this way, please



RIGGING AND GROUNDS MAINTENANCE



They wintered



Ease 'er down, Fleig



Joey "D"

Sanitation discussion



FUELS CREW



Chief Warrant Officer Tye
Fuels Officer



Mac . "Fuel King"



Summer support



Winter over crew

FIRE HOUSE



We received "Outstanding" at inspection



Winter over firemen



Do it right next time, Swede !!



Practice makes perfect

U. S. ANTARCTIC RESEARCH PROGRAM



U S A R P S



USARP Headquarters

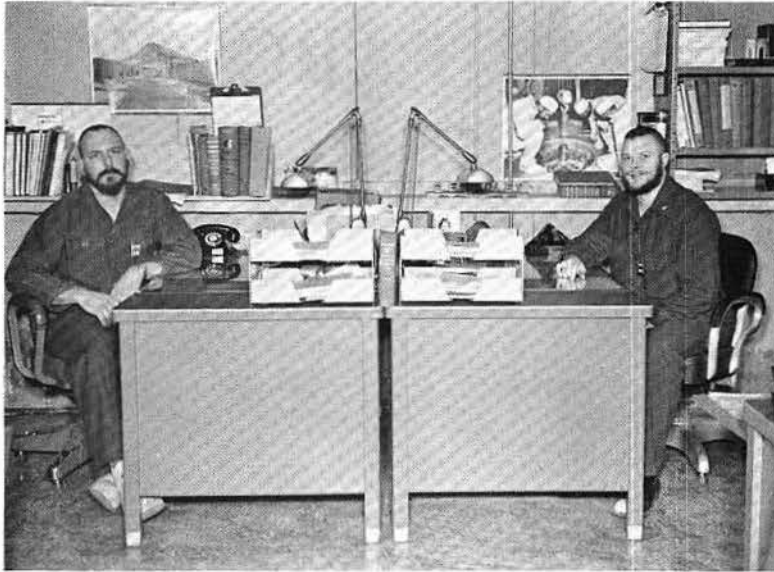


Diving for algae



Data gathering

NUCLEAR POWER PLANT

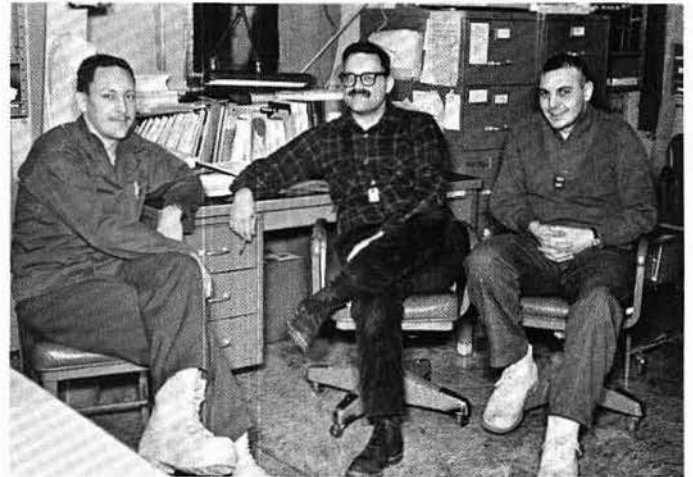


LTJG R. G. Bates CEC USN
Superintendent

LT C. E. Fegley III CEC USN
Officer-in-Charge



Distinguished Visitors Day



Martin Company Representatives
Scott, Sieg, Calderazzo



"The Maze"



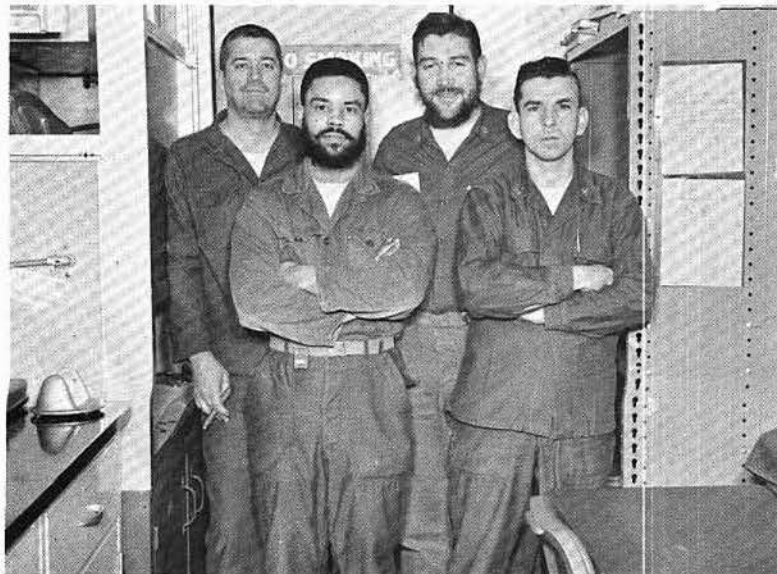
PM3A Operator Crew



Maintenance crew



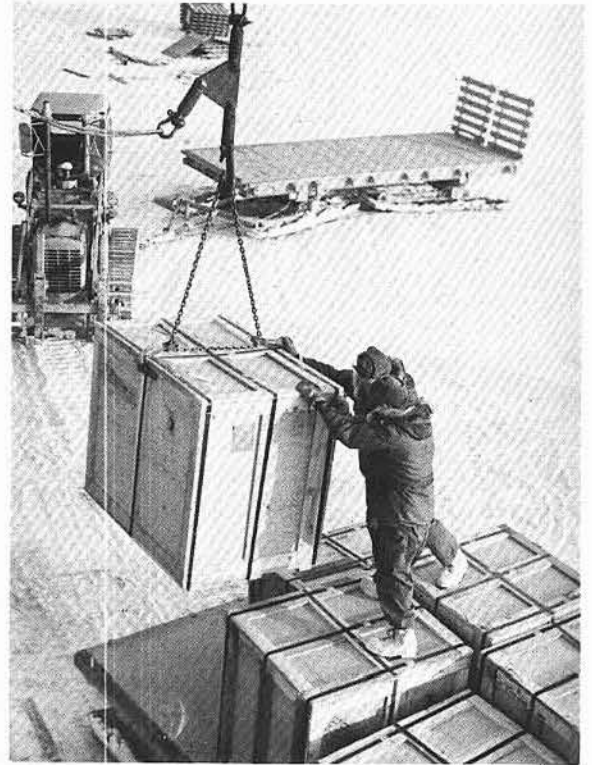
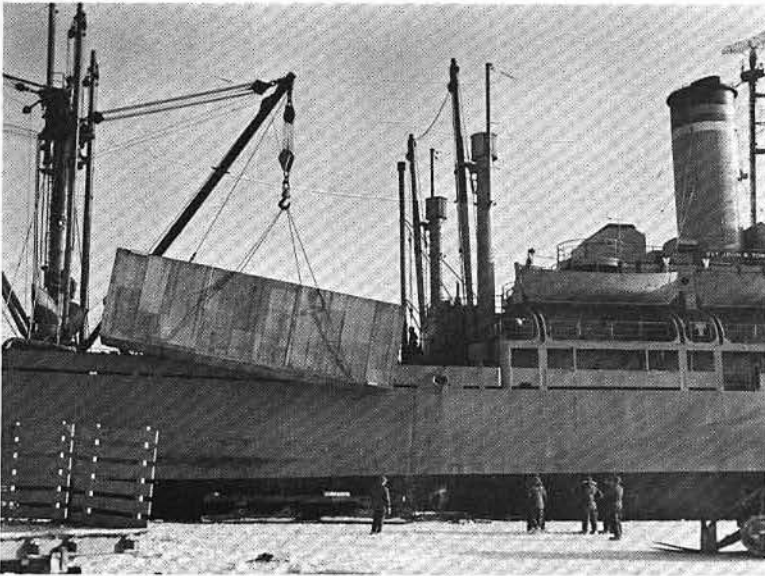
Public Health Service



Health Physics, Radiation and
Process Control

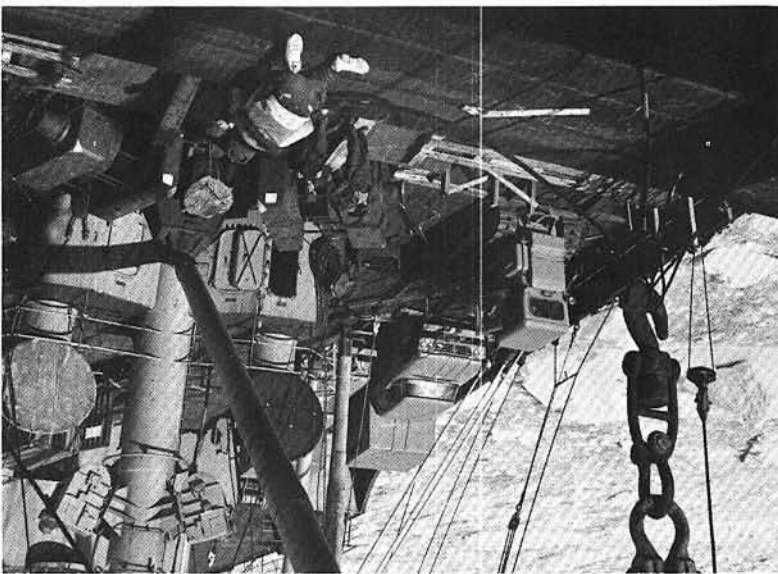
CARGO HANDLING

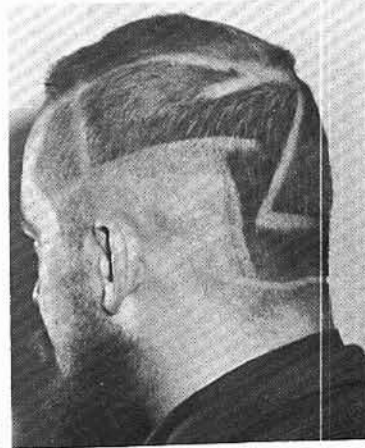
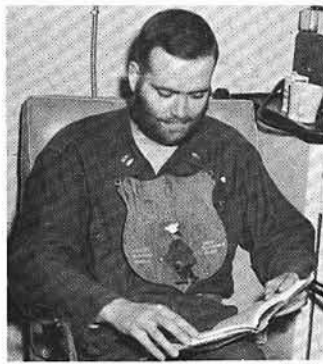
BATTALION ONE



Ship unloading at McMurdo.
Dockside is the Ross Ice Shelf

Unloading of heavy equipment and
area cleanup upon completion

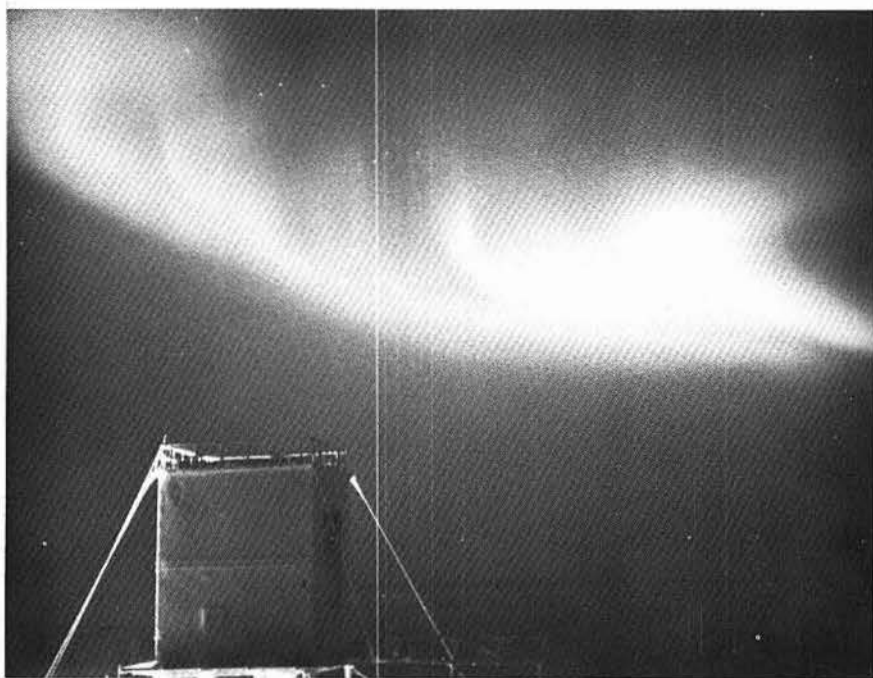






Byrd Station

The Aurora on a July night.



Midnight in October





Our front door.

Christmas visitors, RADM Reedy and Cardinal Spellman

. . . was plowed out after many a storm





So, you think you got troubles!



Please, one more marshmallow

Turning to



Ben Ignatov, Russian exchange scientist





Ski and Harmdierks at Acey Ducey



Byrd's Beatles

BYRD MEN AT PLAY

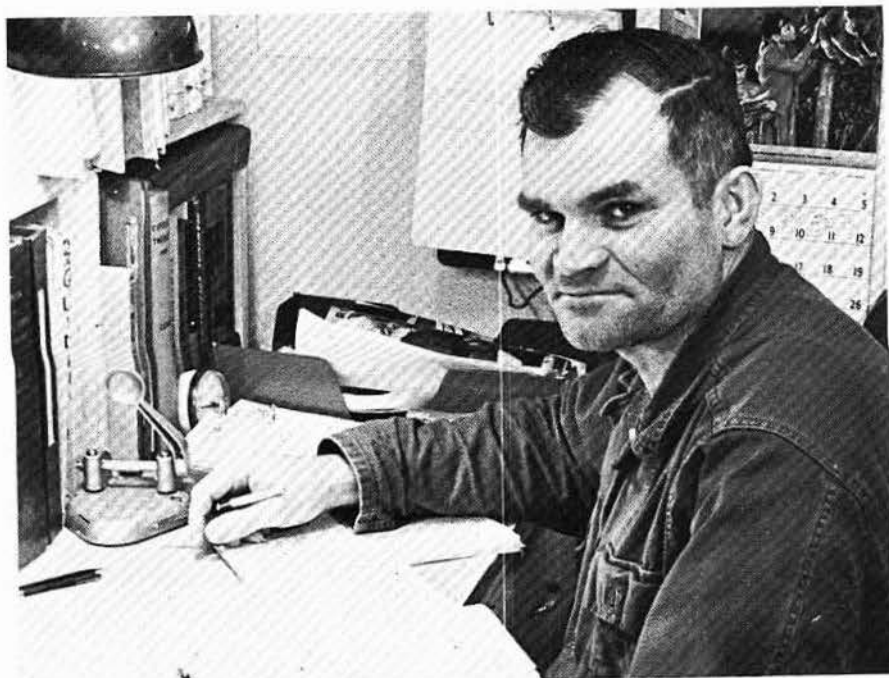
Just ask how much I painted



News of the topless bathing suit reaches Byrd.

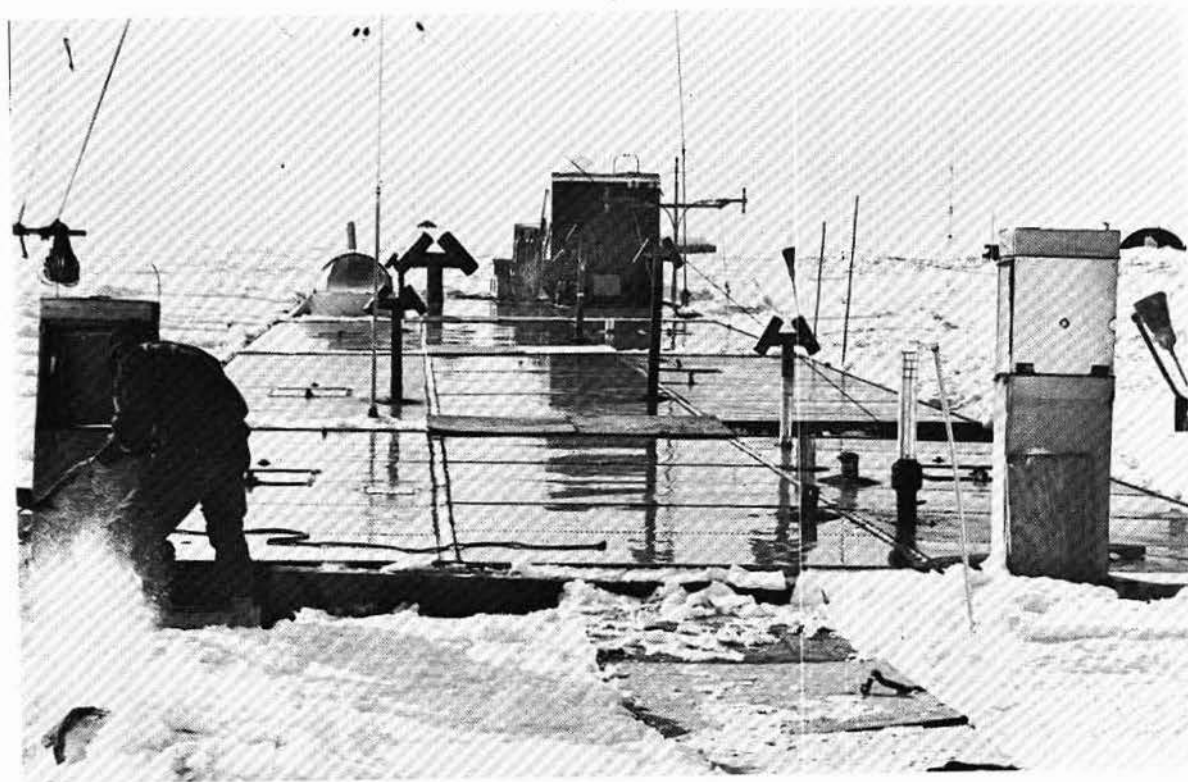


Eights Station



Chief Hospitalman Francis Boyer,
USN, CPO in Charge
Poplar Bluff, Missouri

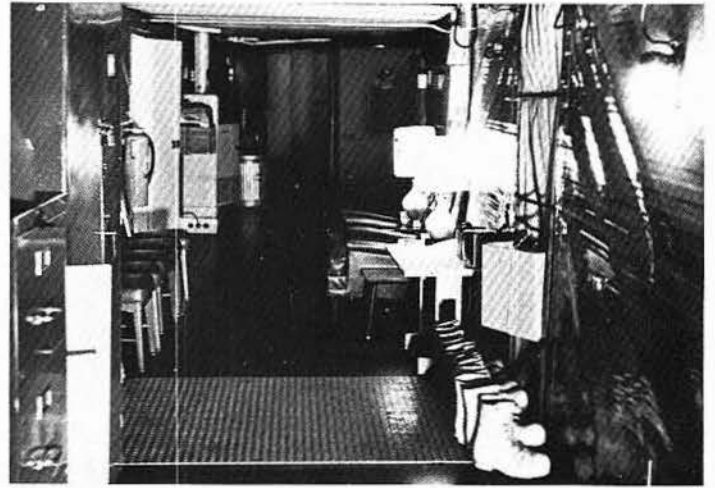
Roof of trailers in Summer



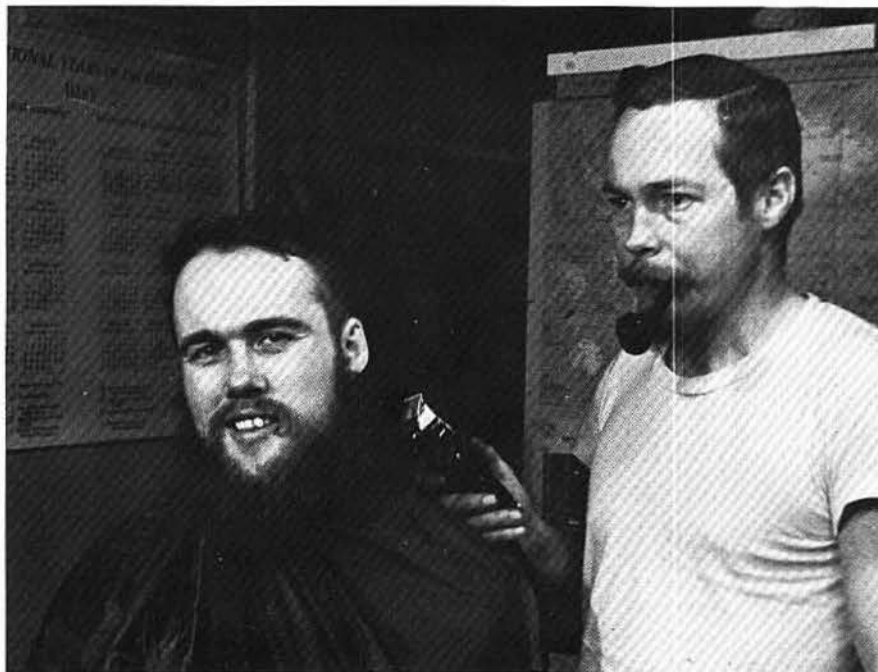


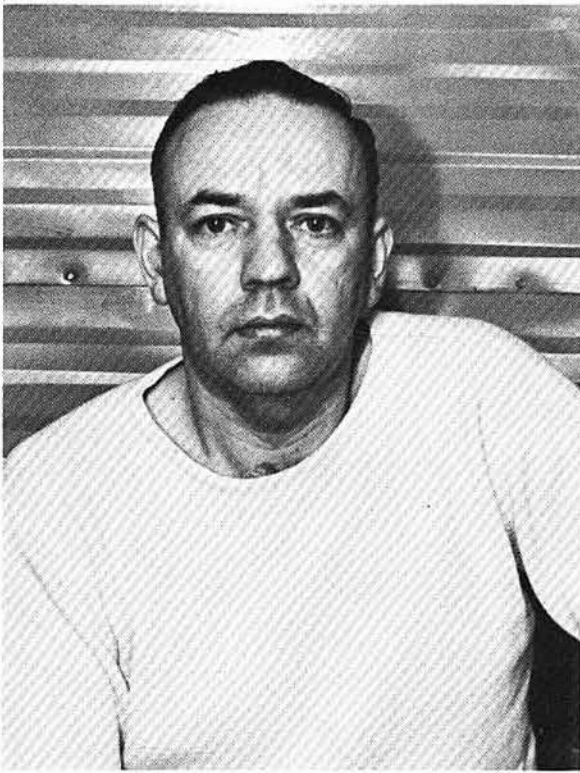
Wesley Morris, Station Science
Leader, Sault St. Marie, Michigan

Eights Lounge

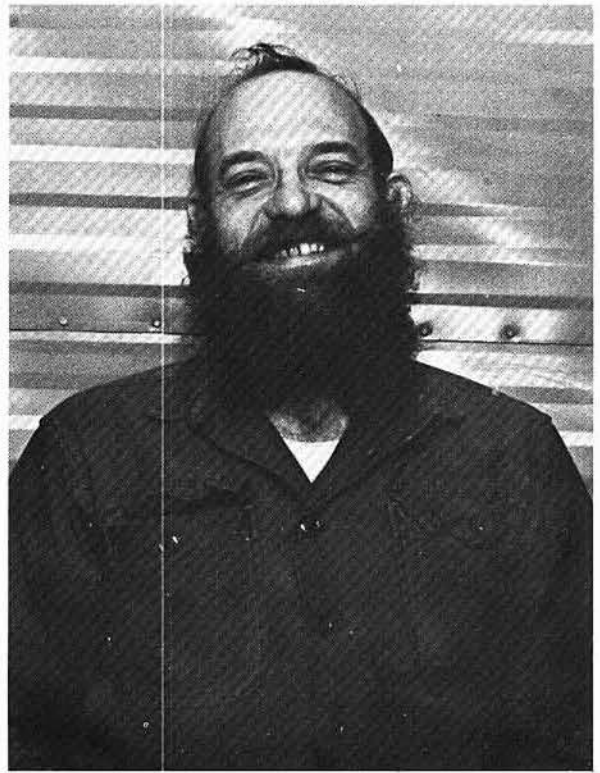


Station Barber at work





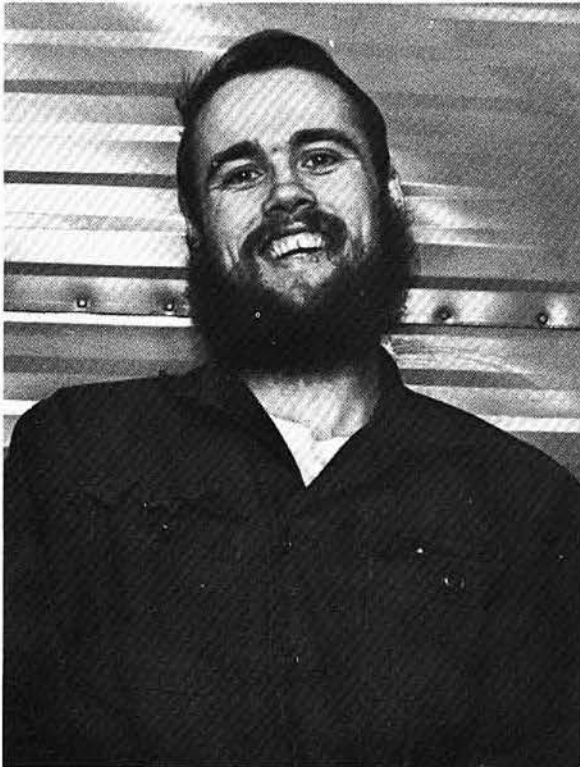
William Morgan, CS1, Warren, R.I.



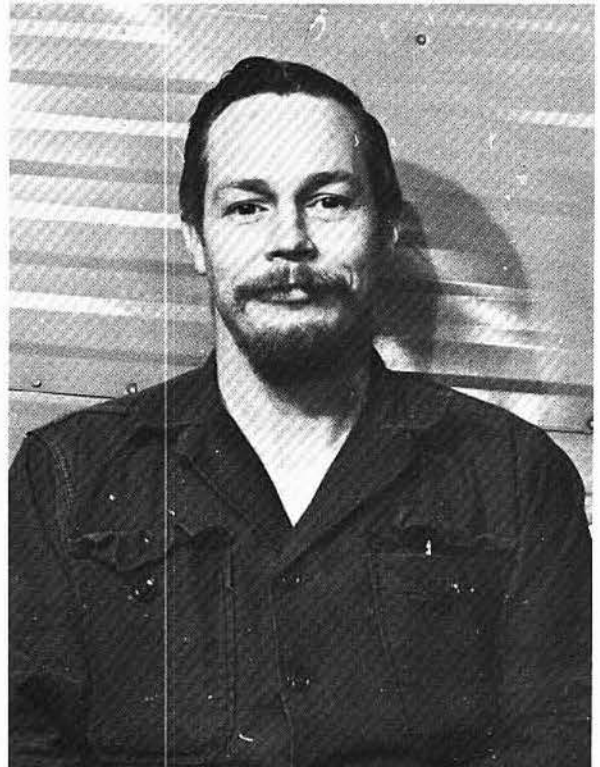
Paul Witte, CM1, St. Louis, Missouri

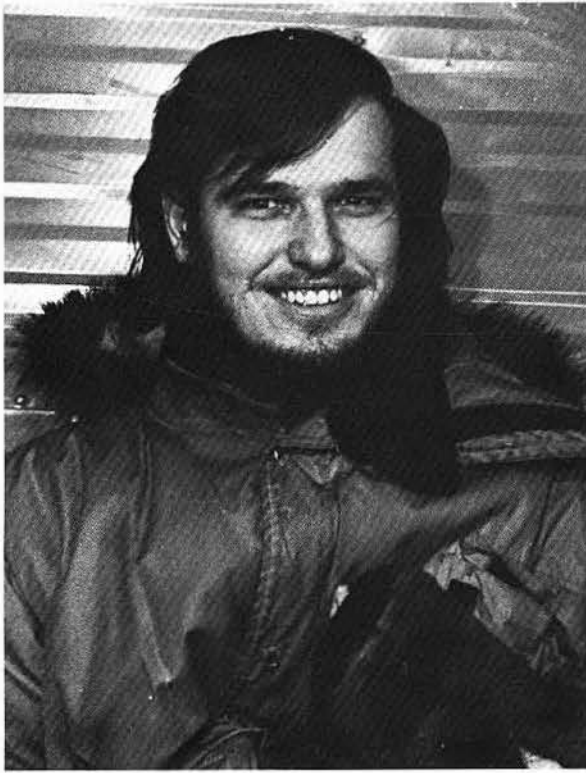
USN

Henry Anderson, ET2, Port Angeles, Wash.

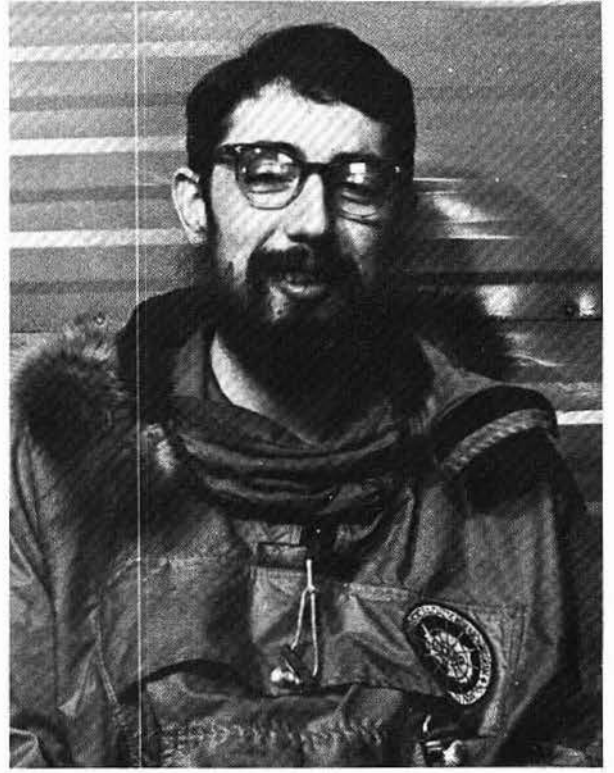


Willard Shelton, EM1, Gate City, Va.





Charles Anderson "Geo-Mag", Washington, D.C.



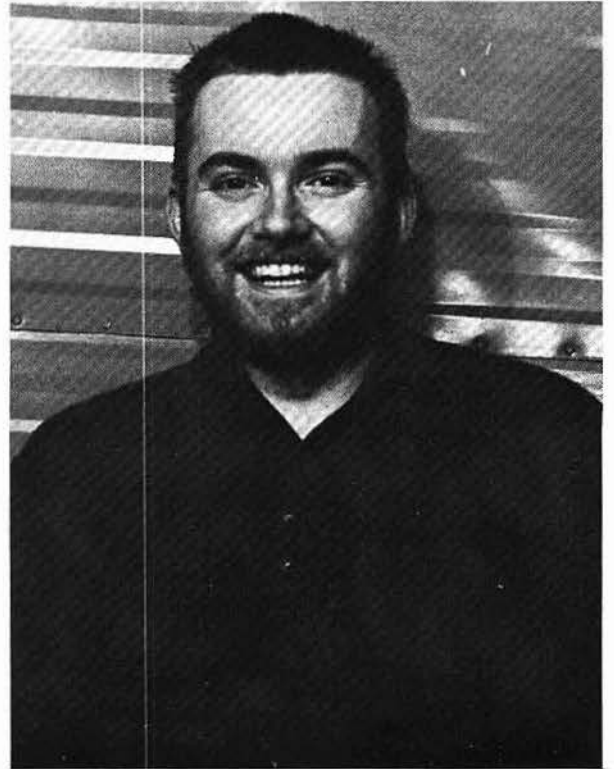
Steve Maagoe, VLF, Copenhagen, Denmark

USARP

John Janke, RM2, USN, Newburgh, N.Y.



John Eaton, "Aurora", Ferguson, Missouri



South Pole Station



Back row, left to right: William B. Mull, CS1; Donald "Doc" Strange, HMI; James C. Peterson, EON2; Harold Gatlin, USARP, USWB; Harold "Tad" Sargent, USARP, NBS; Robert MacLaughlin, EN1; Joe Sumner, UT1; Richard Sage, BUC; Robert "Ah Gee" Tate, USARP, USC&CS; Third row: Irwin Lampert, SK3; Larry Cox, RM2; Paul Lambole, RM1; Robert Judd, USARP, USWB (MIC); Second row: William "Chip" Wiest, USARP, NBS; H. Scott Kane, USARP, Bartol Research; Arthur Rath, ET1, Robert Crass, USARP, USWB; Henry Schroeder, USARP, USWB; Henn Oona, USARP, AINA; Alan Kane, CMA2; Front row: William McClean, LT, MC, OIC.; Harold McCrillis, CEC.



Donald "Sweets" Strange, HM1 and
LT William E. McLean, MC, Officer-in-Charge.



Robert "Ah Gee" Tate, U. S. Coast and Geodetic
Surveyor, Senior Scientific Leader

Our many thanks to Betty, W6QPI, and all the many other "Hams"
who gave so willingly of their time and energy that we might have contact
with our loved ones.





Art Rath, ET1; Paul Lamboley, RM1; Larry Cox, RM2



Robert Judd, Meteorologist in charge, U. S. Weather Bureau; Robert Grass, Senior Physicist, U. S. Weather Bureau, Hank Schroeder, Electronics Technician, U. S. Weather Bureau; Harold Gatlin, Met Technician, U. S. Weather Bureau.

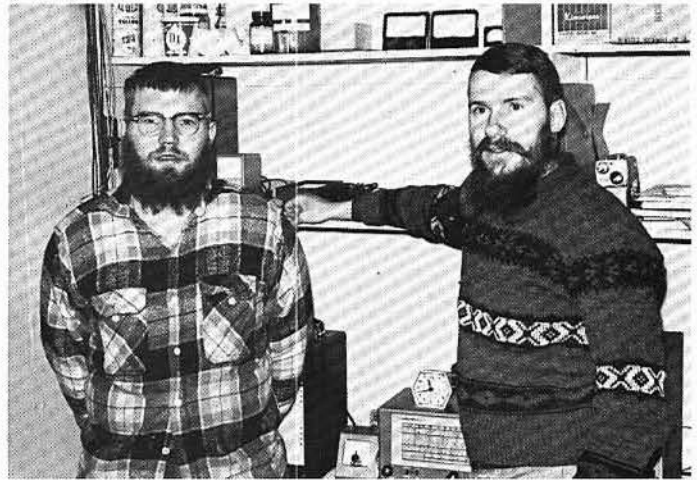
Harold G. McCrillis, CEC and Richard Sage, BUC.

Howard "Tad" Sargent, Ionospheric Sounder, National Bureau of Standards and William "Chip" Wiest, VLF, Stanford University and Riometer, National Bureau of Standards.





James C. Peterson, EON2 and Allan Kane CMA2.



Henn Oona, Aurora, Arctic Institute of North America and H. Scott Kane, Cosmic Ray, Bartol Research Foundation and Forward Scatter, Bartol Research Foundation

Robert "Boats" MacLaughlin, EN1 and Joe Sumner, UT1.



William B. Mull, Jr., CS1 and Ronald I. Lampert, SK3



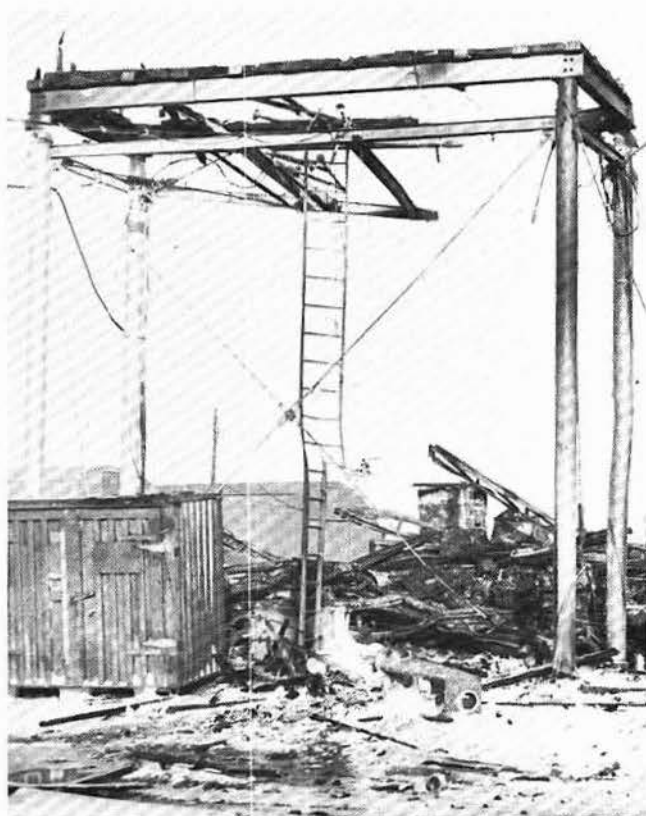
Hallett Station

Front: B. Dawson, LT H. A. King Jr., C. Bell, D. Cochrane, G. H. Smith. Back: J. Sweeney, R. R. Lann, H. Crofoot, K. Wilson, C. Hicock, N. Ridgway (New Zealand Scientific Leader), Des Rowles, NZARP, Crouch.

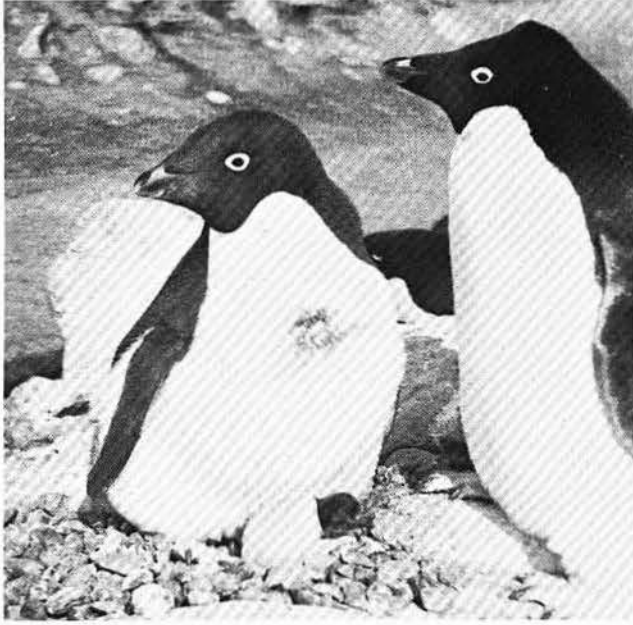




Main Street, Hallett Station



Fire destroyed the science building, March 7, 1964



Adelie Penguins
Hallett's Natives



In Memoriam
Laura: Born 1963
Died Sept 7, 1964

