deep freeze - '65

OPERATION DEEP FREEZE '65

"Ten Years of Progress"

Editorial Credits

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Dedicated to
REAR ADMIRAL JAMES R. REEDY, USN
Commander, U. S. Naval Support Force, Antarctica
U. S. Antarctic Projects Officer
November 1962 to April 1965

Rear Admiral James R. Reedy reported to Operation DEEP FREEZE in September 1962, coming from his command as COMCARDIV 20. Admiral Reedy relieved Rear Admiral David M. Tyree on November 1962 in a unique change of command ceremony conducted at the South Pole itself, in temperatures of -27 degrees Fahrenheit. On June 6, 1963 he relieved RADM Tyree as U. S. Antarctic Projects Officer.

A graduate of the Class of '33 of the U. S. Naval Academy, Rear Admiral Reedy has had 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 II. For his performance while commanding the Antarctic Support Force, RADM Reedy was awarded the Legion of Merit.

On September 30, 1963 RADM Reedy led a flight of two Lockheed Hercules aircraft from Cape Town, South Africa via the South Pole to McMurdo Station in Antarctica, crossing by air for the first time the turbulent Antarctic seas between the two continents and flying over 4,700 miles. Much of the portion of the Antarctic Continent this flight traversed had never been seen before. On February 9, 1964, RADM Reedy led an exploratory flight from McMurdo Station across the South Pole into North West Antarctica to investigate heavy radar returns seen on a similar flight in 1963. A hitherto unreported group of mountain peaks were found in the vicinity of latitude 80 degrees 30 minutes South, longitude 23 degrees West.

On October 1, 1964 RADM Reedy landed at Byrd Station, Antarctica after completing history's first flight from the Australian continent to Antarctica, flying more than 4,400 miles. The flight, which crossed the South Magnetic and Geographic South Poles and air-dropped the first mail of the season to the Pole, marked the first time that an inland research station had greeted the season's first aircraft. A day later, RADM Reedy landed at his ice-bound headquarters at McMurdo Station to join aircraft arriving from New Zealand and Chile in forming a three-pronged assault on the icy continent.

Rear Admiral Reedy was relieved as COMNAVSUPPFOR Antarctica in April 1965 by Rear Admiral Fred E. Bakutis in ceremonies at the Naval Station in Washington, D.C. Admiral Reedy reported to the Pacific Coast to assume command as Commander, Carrier Division 5. The Admiral is married to the former Eugenia Canaday of San Antonio, Texas. The Reedys have five children.

Left, Rear Admiral Reedy at the controls of a C-130 Hercules enroute from Cape Town, South Africa to McMurdo Station, Antarctica during 4,700 mile non-stop polar flight. *Right,* Rear Admiral Reedy surfaces from under the ice of McMurdo Sound, Antarctica.

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LT T. Nagel, MC, USNR
OinC, Hallett Station

R. D. Lyon, HMC, USN
OinC, Eights Station

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CDR N. E. Nickerson, USN
CO, USS Edisto (AGB-2)

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CO, USS Mills (DER-383)

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 rechecking 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

Upper left, RADM Richard E. Byrd takes a last look around the site of Little America I & II where his 1928 and 1930-35 expeditions camped. *Lower left,* Captain Finn Ronne, early Commanding Officer of Ellsworth Station in the Weddell Sea area, Antarctica. *Upper right,* Sir Edmond Hillary is greeted by RADM George Dufek, CTF43, prior to Hillary's crossing of the Antarctic Continent in 1957. *Lower right,* RADM David Tyree welcomes RADM James Reedy prior to their change of command in 1962.

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.

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 at the main U. S. station at McMurdo Sound now produces a more economical form of power to heat and light the isolated base. This peaceful use of atomic energy

Upper right, dog team trail party leaving McMurdo Sound for reconnaissance trip in 1955. *Middle,* "Que Sera Sera" the first aircraft to land at the South Pole in October 1956, now residing in the Smithsonian Institute in Washington, D.C. *Lower right,* massive tractor train traversing the heart of Marie Byrd Land enroute to establish Byrd Station in 1956.

is scheduled to power a potable water distillation plant in the future.

During the Deep Freeze '64 winter season, a daring mid-winter fly-in from New Zealand to the dark shrouded McMurdo Station evacuated a critically injured seabee and marked the first austral mid-winter penetration to the isolated continent.

Today, 125 years after Wilkes, exploration continues. Each new discovery and achievement serves to fill another square in this vast continental checkerboard of unknowns. This exploration, though costly in lives, dollars, and time, may someday prove Antarctica 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.

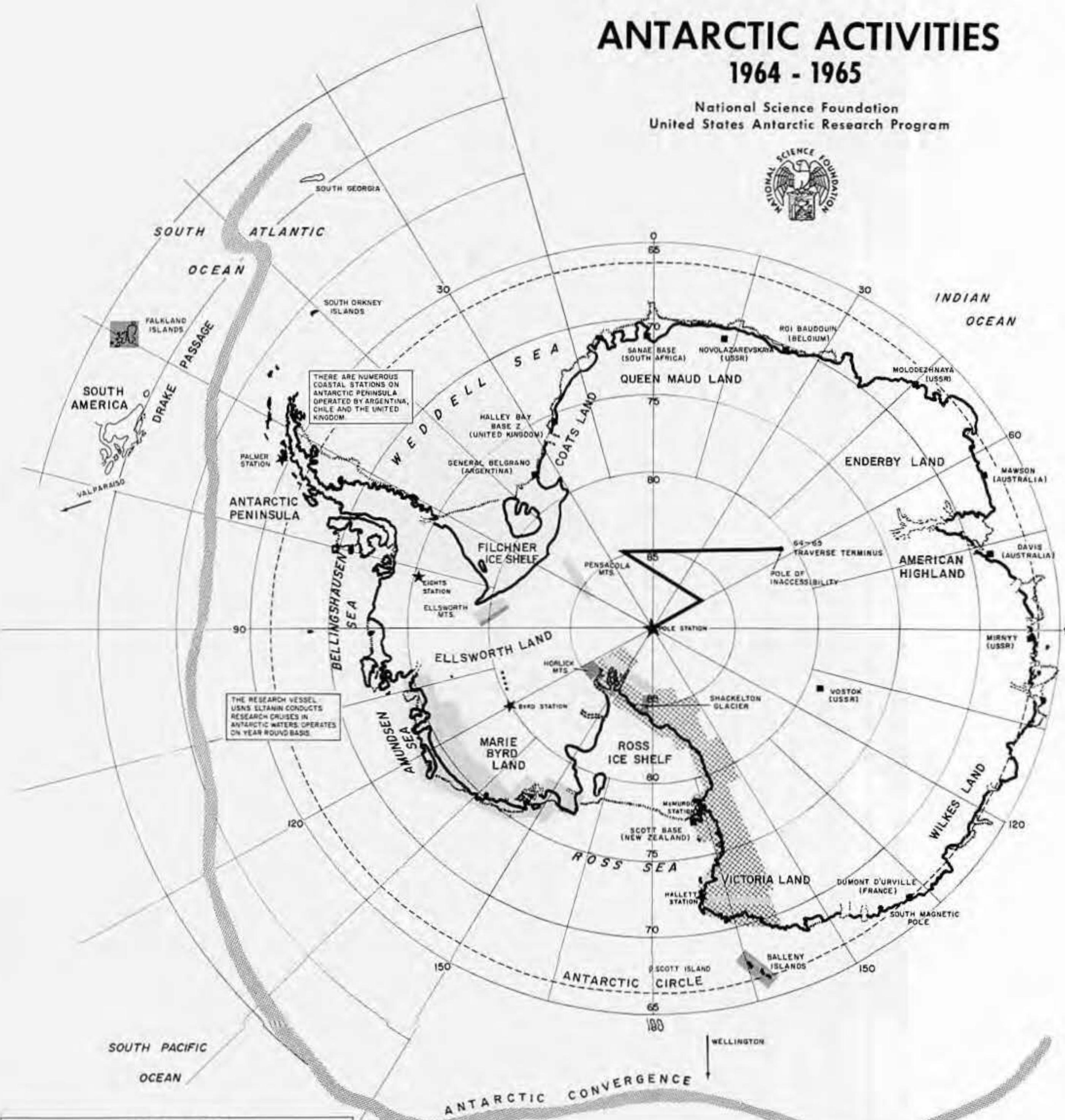
Navy ships and planes haul the scientists, their instruments, and everything with which they need to live and work in the Antarctic. In doing this, the Navy maintains the world's longest logistic network in advancing the cause of science. American scientists in Antarctica are not hindered by performing 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.

Lower left, P2V refueling directly from *USS Glacier* in 1956. *Upper right,* Injured Seabee being removed from helicopter in preparation for return to Christchurch, New Zealand during first mid-winter fly-in occurring in Winter of 1964. *Lower,* crew members of VX-6 relax during first fly-in from Australia in 1965.

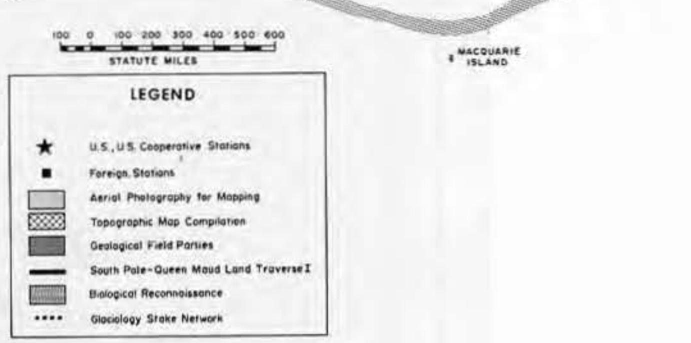
ANTARCTIC ACTIVITIES
1964 - 1965

National Science Foundation
United States Antarctic Research Program



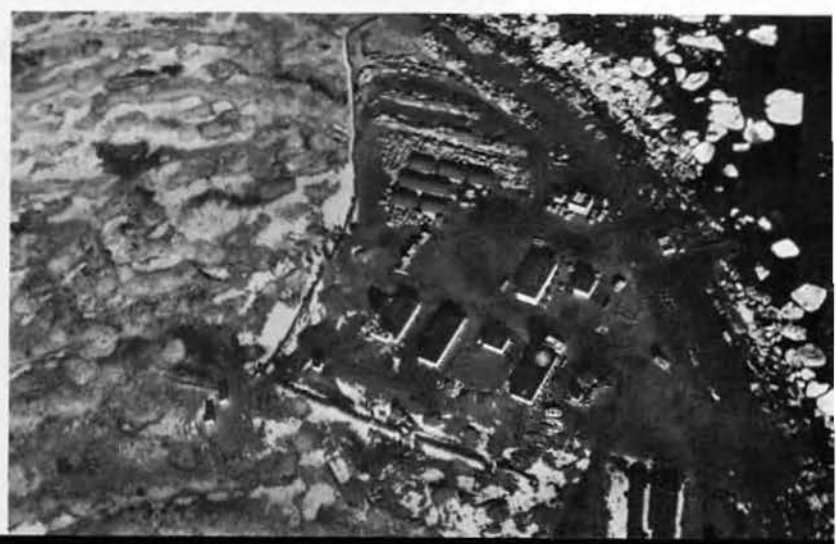
STATION DESCRIPTION

	BYRD	EIGHTS	HALLETT (U.S.-NEW ZEALAND)	McMURDO	PALMER	POLE	USNS ELTANIN
LOCATION	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
FEET ABOVE SEA LEVEL	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	—
ESTABLISHED	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
TERRAIN	ON INLAND ICE	ON INLAND ICE	ON GLACIAL MORAINE	ON VOLCANIC ASH	ON BEDROCK	ON INLAND ICE	—
METHOD OF SUPPLY	AIR	AIR	AIR SEA	AIR SEA	SEA	AIR	—
NUMBER OF BUILDINGS	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	—
MEAN ANNUAL TEMPERATURE (F)	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	—
MEAN TEMP (F) DEC. JAN. FEB.	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	—
APPROXIMATE WINTER PERSONNEL (SCIENTISTS) (NAVY)	[illegible]	[illegible]	SUMMER STATION ONLY	[illegible]	[illegible]	[illegible]	[illegible]
AIR DISTANCE FROM McMURDO (STATUTE MILES)	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	—



America's early Antarctic stations

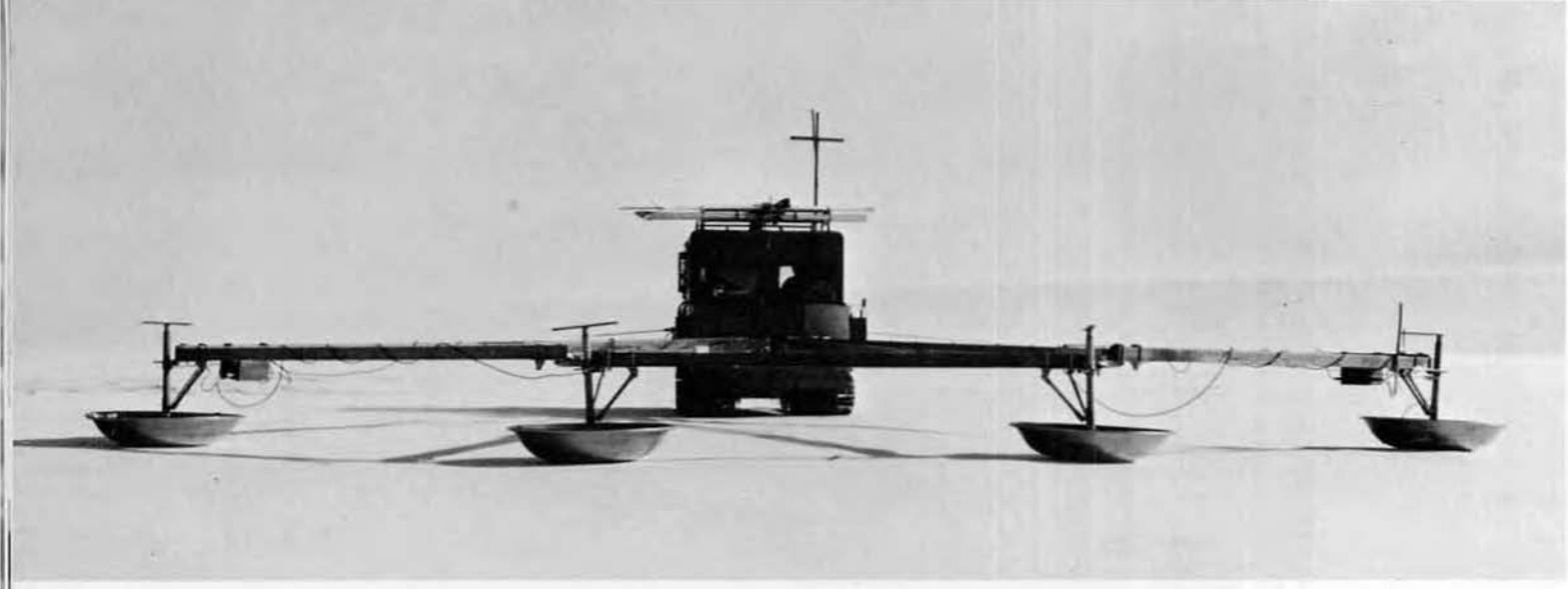
Top to bottom, Little America Five, Wilkes Station, Beardmore Weather Station, and Ellsworth Station.



Upper left, Little Rockford Weather Station. *Middle left,* Painting depicting unloading of material at Little America V. *Lower left,* Little Jeana Weather Station. *Top to bottom,* Eights Station; Resupplying operations at Hallett; Aerial view of Hallett Station.

South Pole Station

Top left, pole traverse tractors pass the geographic South Pole. *Lower far left,* mileage sign at South Pole Station. *Close left,* "Mom" John Spanley CS1, the station cook, spices up station life. *Upper right,* C-130 Hercules taxies prior to unloading vital fuel load. *Lower left,* first D8 tractor ever assembled at South Pole.



Byrd Station

Top left, Snow Crevasse detector used in Byrd traverse; *Middle left,* First Byrd Station, eventually abandoned after snow accumulation caused buildings to collapse. *Lower left,* men of VX-6 Byrd Station detachment prepare JATO on aircraft used to support field parties. *Top right,* A cold Snow Miller operator; *Middle,* one of the storage areas in tunnel at Byrd; *Lower right,* Peter Snow Miller carves out deep trench in ice which will be covered over with aluminum arching forming a tunnel.

Palmer, a New Station

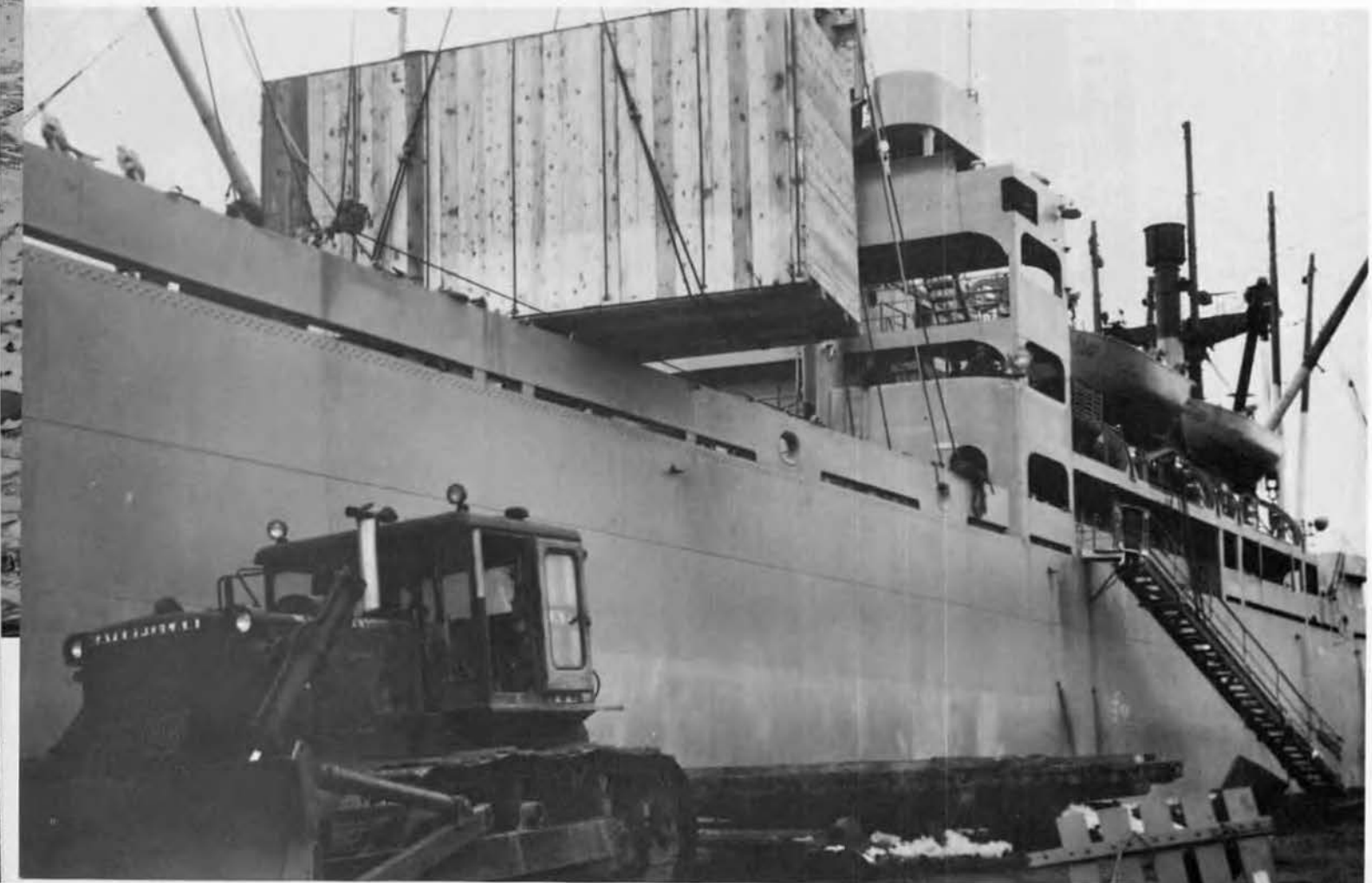
DEEP FREEZE '65 saw construction of the sixth U. S. Antarctic station. The base was located on Anvers Island off the coast of the Antarctic Peninsula. The station was built on the site of a former British station utilizing an existing building for shelter during the construction phase of Palmer Station. Navy Seabees working from the *USS Edisto* finished the station in ample time for the wintering-over party to take charge and begin winter preparations. The base will be used to study biological and glaciological sciences.

McMurdo Station

Left, paintings depict early establishment and supply of McMurdo Station in 1956. *Top right,* early view of McMurdo Station, then called Advance Air Operating Facility, Ross Island, in January 1956; *Middle,* official dedication of McMurdo Station in January 1957 by RADM Dufek; *Lower right,* McMurdo Station as it looked upon dedication.

McMurdo Station as it looked prior to *(left)* and following *(above)* the Summer operating season of DEEP FREEZE '65. The men from Antarctic Support Activities, who are responsible for the upkeep of U. S. stations on the continent, have exhibited a high degree of skill and resourcefulness in station maintenance.

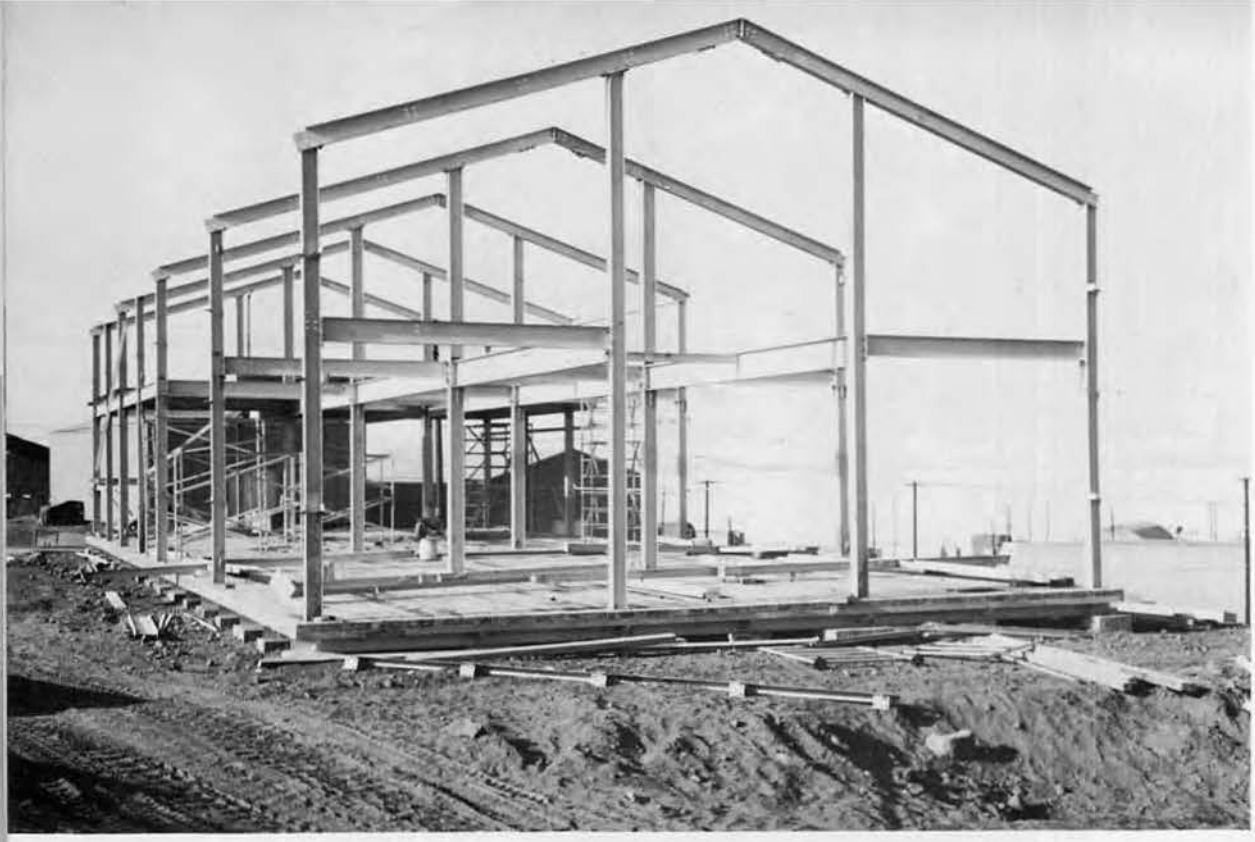
MSTS ships join in the re-supplying of McMurdo Station.

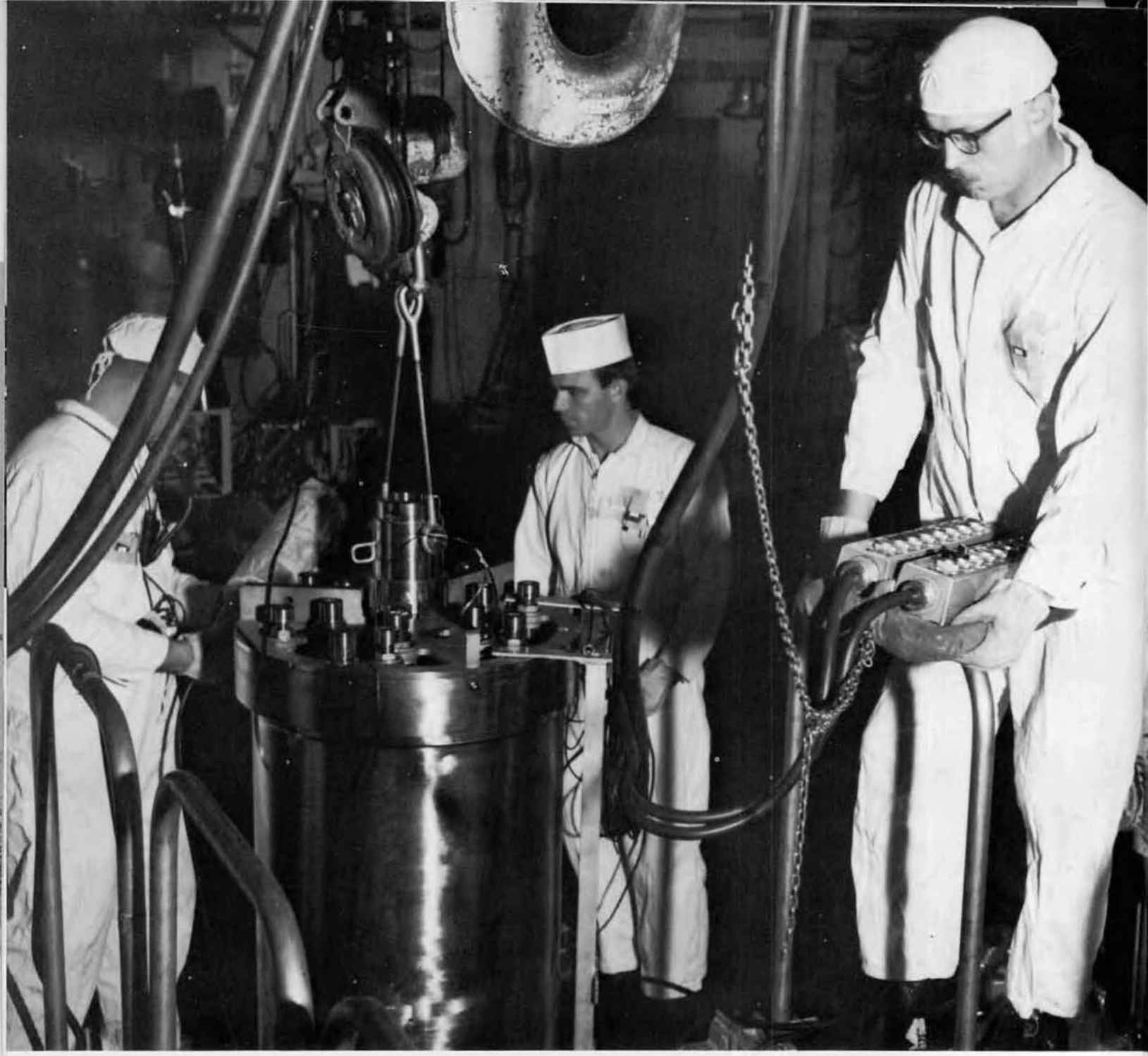


Cargo Handling Battalion ONE assists in unloading the major portion of Antarctica's ship cargo.

Lower left, backloading of aircraft aboard *USNS Wyandot.* This picture was taken prior to a severe ice break-out which caused an emergency move of Williams Field complex in DEEP FREEZE '65.

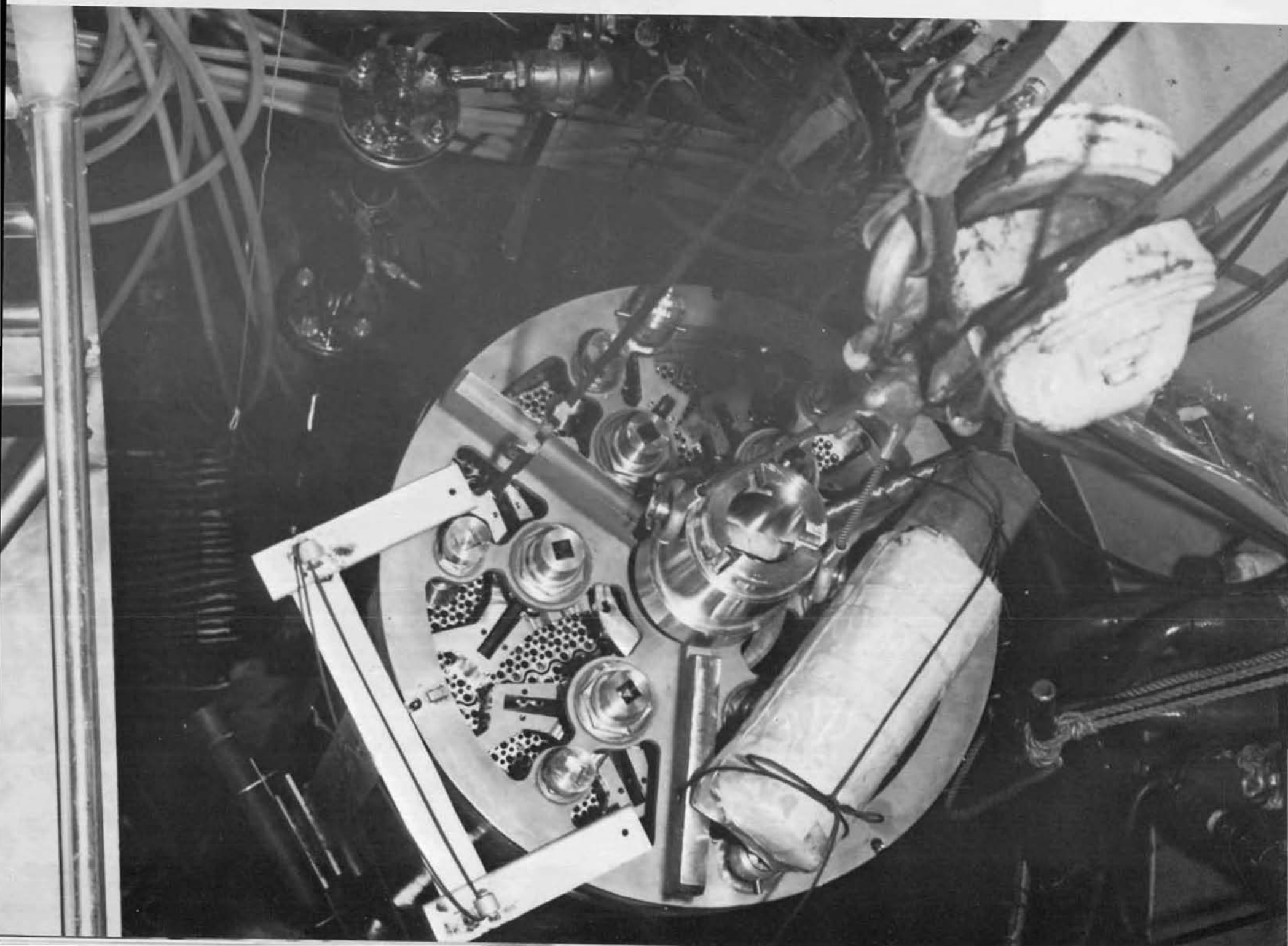
Navy Seabees work around the clock to complete the first Antarctic highway. Blasting, bulldozing fill dirt, crushing rock and grading for the creation of "Antarctic 6" was a full season chore completed with pride by the men of Mobile Construction Battalion SIX. Building roads was only one of the tasks assumed by the Seabees. Construction of a diesel generator building and installation of four generators; installation of a petroleum pipeline; construction of a warehouse and dispensary; and completing final stages of a salt water distillation plant were just a few of the numerous chores accomplished by these eager and professional sailors.

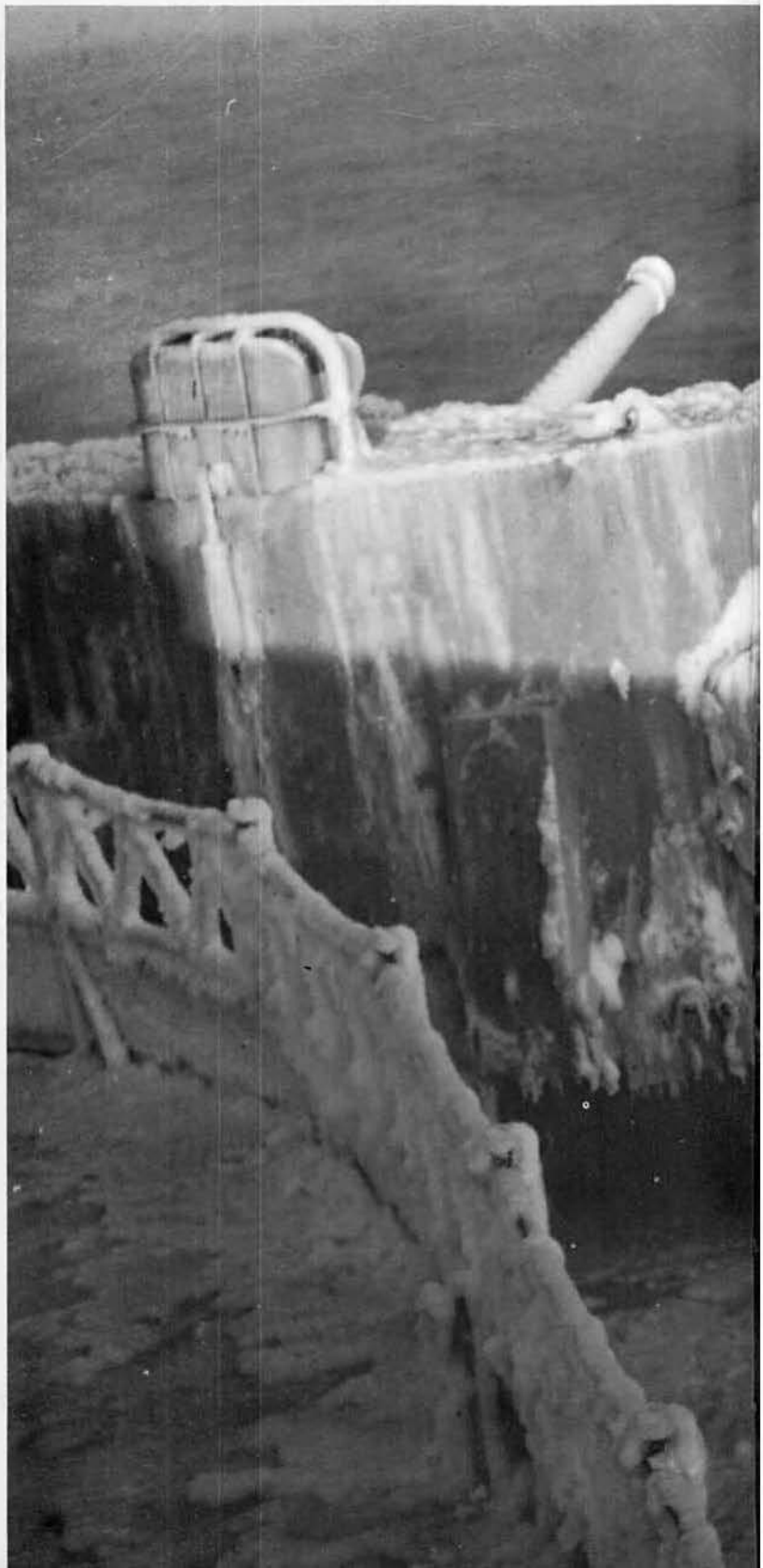





U.S. NAVY
88
MARTIN
PM 3A
AEC-USN
SITE OF THE FIRST
NUCLEAR
POWER PLANT
ON THE ANTARCTIC CONTINENT

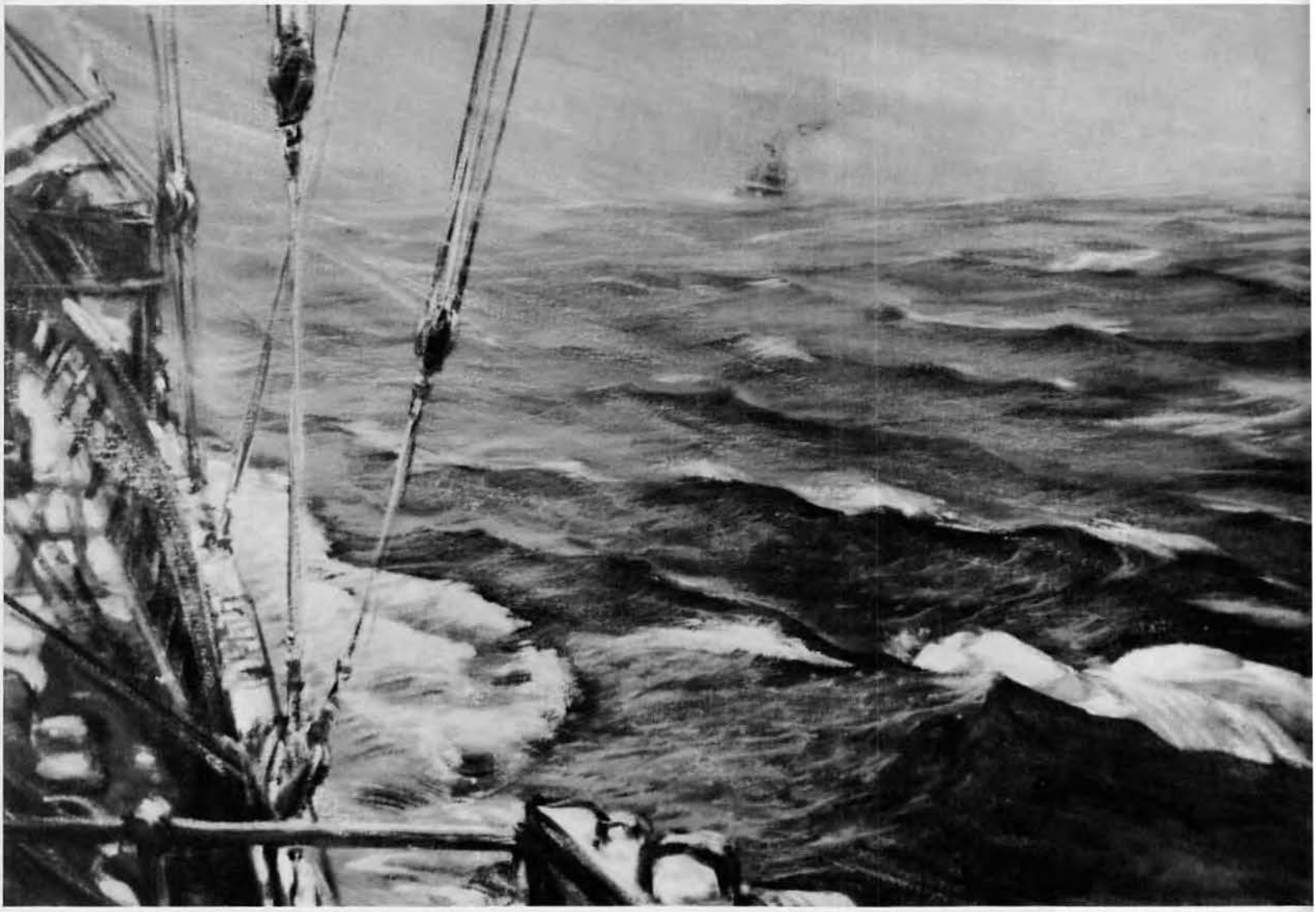
The Navy's Nuclear Power Plant at McMurdo Station was a source of bustling activity as the Navy and Army specialists tackled the exacting and vital chore of refueling the PM-3A nuclear reactor. Early in the season LT Charles Fegley was relieved by LCDR Will Shafer as OinC of this modern power plant.





Ship Operations

The fulfillment of the support requirements for Operation DEEP FREEZE would fall way short were it not for the working elements of the U. S. Navy, Military Sea Transport Service, U. S. Coast Guard, and Royal New Zealand Navy. The icebreakers, cargo ships, tankers, and radar and weather pickets have the vital mission of Antarctic support by sea.



The herculean chore of carving the necessary channel to the logistic headquarters at McMurdo fell to the powerful icebreakers, *USS Glacier, USS Staten Island* and *USCGC Eastwind.* The ice-free channel to newly constructed Elliott Quay was completed in history-making time. The *USS Mills* and *HMNZS Pukaki* shared the tedious duty of weather reporting, braving 85 knot winds, 20 foot seas and dodging a checkerboard sea of ice. The three to four week rotating duty which consists of collecting weather data and providing the information to the pilot flying the 2,200 mile stretch between Christchurch, New Zealand and McMurdo Station, Antarctica is a most valuable but lonely assignment.


AV 4

Upper left, the early years of DEEP FREEZE saw as many as eight ships converge at one time at the supply headquarters at McMurdo Sound. *Middle left,* the *USS Curtis* moored to the ice shelf at McMurdo Sound, Antarctica. *Lower left,* YOG-34 and YOG-70 as they appeared following the Winter of 1956 when they were used for fuel storage at McMurdo. *Right,* the playful Adelie Penquins showed no concern for the *USS Arneb* undergoing hull repairs in 1957.


GB 5

Left, Navy's *USS Staten Island, AGB-5. Right,* the Coast Guard icebreaker *Eastwind* is shown pushing a 25 square mile ice flow which threatened to close the channel leading to McMurdo Station.

USS Glacier, AGB-4


GB 4

USS Edisto, AGB-2

USNS Wyandot & USS Edisto

USS Mills, DER-383

USNS Chattanoochee

Fifty crewmembers of the *USS Staten Island* haul a damaged LH-34D helicopter across three miles of fast ice to the ship where it will be on-loaded.

The Navy icebreaker *USS Staten Island* completes a unique salvage operation as it retrieves the damaged helicopter three miles from where it has made an emergency landing on Erebus Bay, several miles from McMurdo Station.

Air Operations

Upper left, Williams Field as seen in 1956; *Lower left,* the P2V Neptune was a common sight to the Air Facility at what is now Williams Field. *Upper right,* early means of inland station re-supply was by air drop from Air Force C-119's. *Lower right,* 1961 saw the first Navy C-130 ski-equipped Hercules arrive at Williams Field. These aircraft soon changed the method of inland station re-supply.

Williams Field from the very first year of Antarctic operations has been the hub of aircraft activity. Aircraft of Air Development Squadron SIX (VX-6) were responsible for a major percentage of inland station fuel, cargo, and food re-supply. It is the C-121 Super Constellation which bears the brunt of most passenger transport from Christchurch to McMurdo. The LC-130F Hercules can truly be called the work-horse of the Operation. The ageless R4D's continue their reliable field party support missions.

The versatile UH-1B Army helicopters enabled the scientists to accomplish in a few weeks' time what in years past had taken months. The ability to transport scientists and their equipment to distant locations and return in a matter of hours has been an achievement much heralded by the men working with the U. S. Antarctic Research Program.

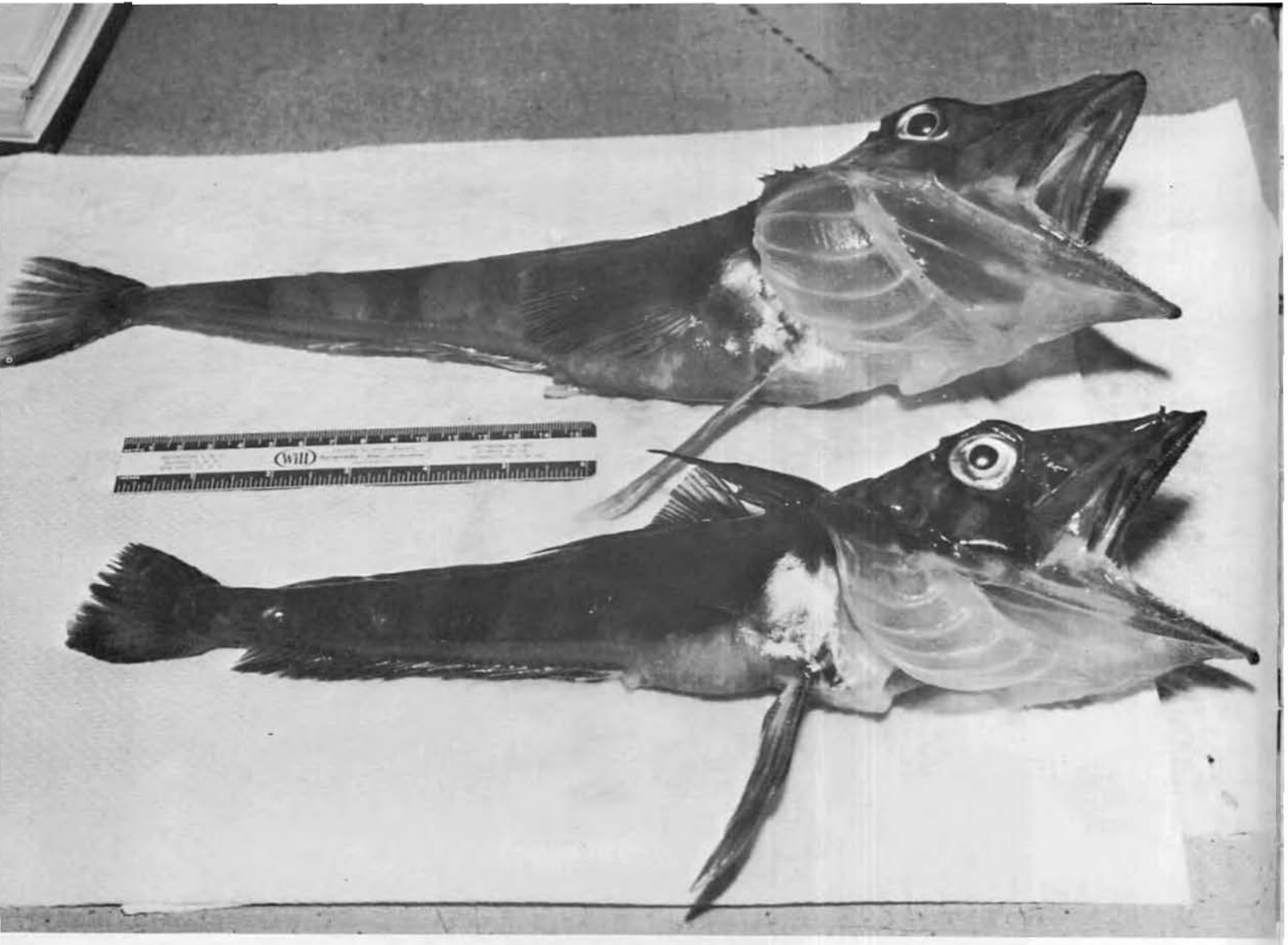

20


10
18

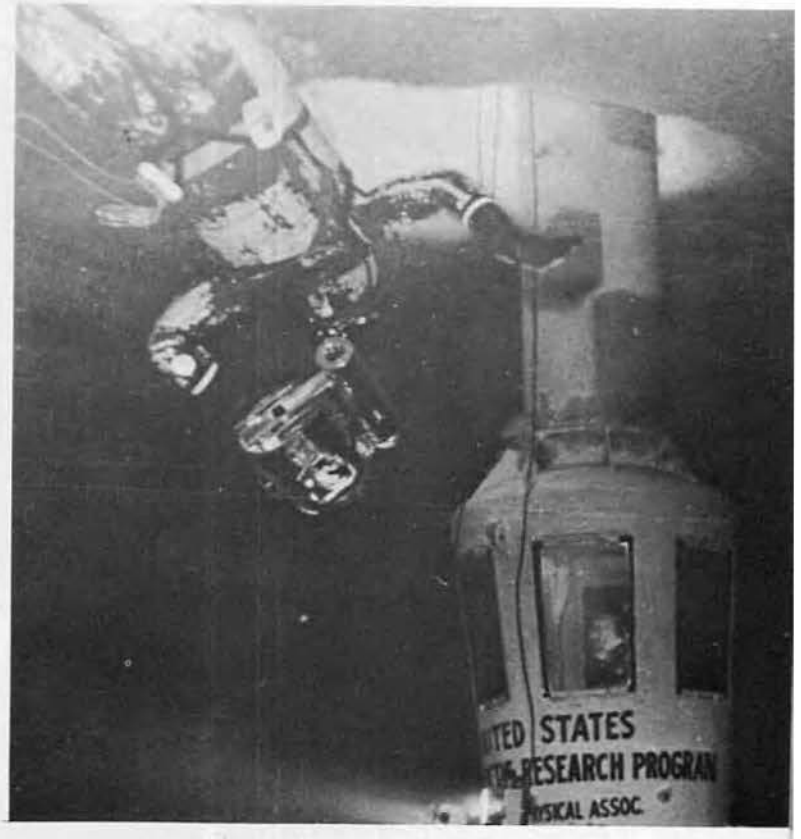
The Air Force wheeled C-130's carried essential early season cargo in numerous turn-around flights from Christchurch to McMurdo. An Air Force 124 hauled the Army UH-1B's to the ice in its cavernous interior.

Another multi-purpose aircraft is the DeHaviland U-1B Otter. This plane is used for low level ice survey and short-range supply flights as well as photo reconnaissance. The LH-34 helicopter provides local and short-range scientific support.


UNITED STATES NAVY
20



USARP Activities



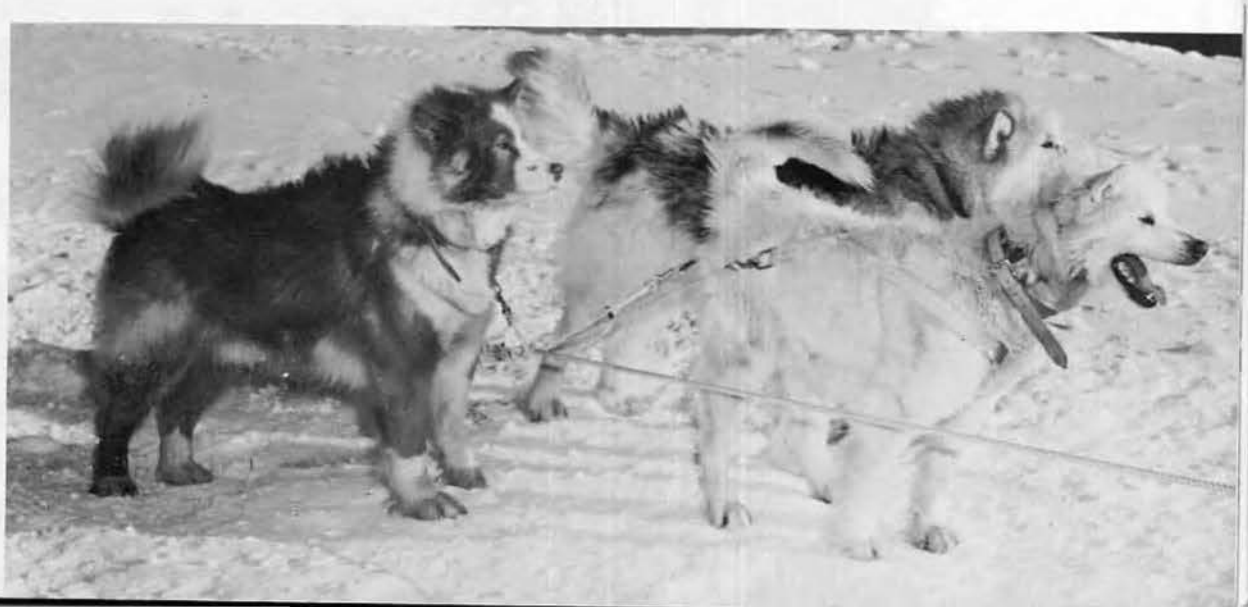
Upper left, fish taken from Antarctic waters by scientists aboard the *USS Glacier*. *Lower left,* a U. S. scientific field party camp site near Shackleton Glacier. *Upper right,* scientists made use of an observation chamber sunk some eight feet below the ice, for the study of the Weddell Seal. *Lower right,* divers were a common sight in the study of underwater biological phenomena.

Reedy Glacier

Antarctica: An Icebound Frontier

Antarctic Wildlife

Although Antarctica has no native animal life, the Summer season provides the men of Operation DEEP FREEZE with many pleasant moments as they survey the summer antarctic wildlife inhabitants. *Upper left,* sometimes called the eagle of the Antarctic, the Skua Gull is the Antarctic scavenger. *Left center,* the stately and dignified manner of the Emperor Penguin creates a feeling of majesty. *Far left,* an Antarctic porpoise carries the apt name of "Killer Whale" because of its predatory habits. *Lower left,* the Weddell Seal is subject of many scientific studies. *Upper right,* the comical Adelie Penguin seems to be almost human in its humorous antics. *Lower right,* the Huskies of the New Zealand dog teams provide historic color to the modern-day trail parties.

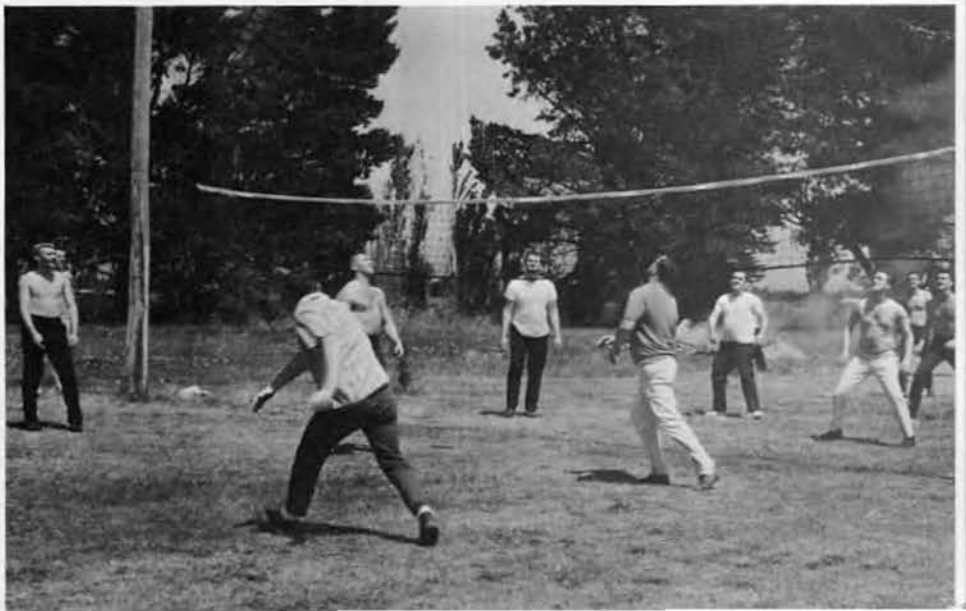


Highlights

Upper left, some of the distinguished visitors to Antarctica in DEEP FREEZE '65 included: Mr. George Wallace of the Explorers Club, Senator Frank Moss of Utah, Senator Ernest Gruening of Alaska and RADM Richard Black of Byrd's early expedition; *Left,* Sir Charles Wright, the scientist who discovered Scott's body in 1912. *Lower left,* U. S. Ambassador to New Zealand, the Honorable Herbert Powell. *Upper right,* Dr. P. G. Law, Director of Antarctic Division, Department of External Affairs in Australia. *Lower center,* scientists set out to catch a number of Adelie Penguins during a visit to the Russian Mirnyy Station. *Lower right,* Admiral Reedy welcomes his relief-to-be, Rear Admiral Fred E. Bakutis to the CTF-43 "summer abode".

Inspections, cricket games, an Open House, Maori Dancers, and miscellaneous athletic activities provide a mere glimpse of Christchurch life.

New Zealand



U. S. NAVAL MOBILE CONSTRUCTION BATTALION SIX

DEEP FREEZE 65 was *MCB Six's* first deployment to Antarctica. The battalion's mission was to provide construction support to Task Force 43 which it did in no less than six different locations on the continent. The Seabees of *Six* were deployed to McMurdo, Byrd, Pole, Hallett, Eights and Palmer Stations.

The construction accomplished during DF 65 was significant. The scope was large and its complexity great, but this alone is not why DF 65 was a most successful deployment. Construction under such hostile and adverse conditions is unknown anywhere else in the entire world. The men of *Six* knew the intense and ever-present cold as they worked seven days a week, 12 to 18 hours a day during the five-month operation. They became even more skilled in Seabee ingenuity in order to overcome the multitude of construction obstacles. They adapted themselves to a life devoid of normal comforts. It was this environment which gave a true test of the mettle of each SEABEE. The challenge was accepted, met and surpassed.

At the completion of DF 65 Rear Admiral J. R. Reedy, USN, sent the following recognition:

> "As you leave Antarctica, you can be proud of the work you have done. You have, through your extraordinary efforts, made significant contributions toward improving our capacity for supporting science and our way of life here. The program you completed was an ambitious one. In addition, in the best tradition of the Seabee motto, when called upon, you have cheerfully given help to other units in completion of their tasks. By working long and hard with great skill, you have set an example of accomplishment in DEEP FREEZE 65 which will be hard to match, WELL DONE."

On the Antarctic Service Medal appear three words, enscribed over an outline of the Antarctic continent, which fully apply to the SEABEES of *Six:*

COURAGE - SACRIFICE - DEVOTION

LCDR Henry A. Tombari, CEC, USN

LCDR John C. Sweeney, CEC, USN

OFFICERS

LT W. R. Ledder, CEC, USN

LT C. V. Ripa, CEC, USN

LT K. A. Vaughn, CEC, USN

LT T. P. Quinn, CEC, USN

LT T. E. Diener, SC, USN

LTJG R. J. Starr, CEC, USNR

LTJG D. H. Ross, CEC, USN.

ENS J. D. Ramsey, CEC, USNR

ENS J. R. Lutz, CEC, USN

CHIEFS

H. P. Barnes, EOCM

P. DuBois, EACS

L. B. Tharp, CMCS

R. T. Blaine, CECS

T. N. Jones, BUC

K. R. Powell, SKC

A. J. Davidson, CMC

J. D. Finch, BUC

P. Lambdin, EOC

S. E. Godwin, BUC

J. W. Robertson, SWC

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