

Construction at Palmer Station

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The task of building a permanent antarctic research station on Anvers Island, near the tip of the Antarctic Peninsula, was assigned to Naval Construction Battalion Unit (NCBU) 201 in the spring of 1966. To be constructed in two phases, the new facilities are scheduled to be placed in operation near the end of *Deep Freeze 68* as a replacement for the temporary station that was commissioned in February 1965. Such replacement had been considered for several years as part of the U.S. long-range plan. The current Palmer Station essentially consists of a pre-fabricated metal-panel building and a converted British hut that was built in 1955.

During *Deep Freeze 66*, a representative from the Naval Facilities Engineering Command visited Anvers Island and selected a site approximately 1½ miles from the existing station. Design of the permanent station was started at once. It will consist of a main building housing a complete biological laboratory and other facilities, two welded steel fuel tanks, and a metal-and-rock wharf for the research vessel now under construction for the National Science Foundation.²

The *Deep Freeze 67* phase of the construction program included the receipt of all construction materials, erection of the fuel tanks, installation of as much fuel piping as possible, construction of the wharf, blasting of a trench for the saltwater intake, and preparation of the site for the main building.

Special Platoon Formed

Twenty-five members of NCBU 201 were selected to perform the Palmer construction. The group was designated Construction Platoon Alpha, and Chief G. J. Kelley was appointed Chief-Petty-Officer-in-Charge. In October 1966, Lt. Walter B. Garrott, CEC, USNR, was assigned as Officer-in-Charge of

the platoon. When the main body of NCBU 201 deployed to McMurdo Station in mid-October 1966, the 26-man platoon remained at Davisville, Rhode Island, for later deployment.

January 1, 1967, was deployment day for Platoon Alpha. The planning and training for the project had been completed, and the platoon departed Quonset Point Naval Air Station in a Military Airlift Command C-130. Flying by way of Louisiana, Panama, and Santiago, the plane delivered the group to Chabunco Airport in Punta Arenas, Chile. Waiting at Punta Arenas to embark the platoon was the Coast Guard icebreaker *Westwind*. In addition to transporting the Seabees to Palmer, *Westwind* would support the construction effort with her boats (see article on page 154), helicopters, and personnel. *Westwind* sailed from Punta Arenas on January 3 and delivered the Seabees to Palmer Station on the 8th. Lieutenant Garrott and Chief Kelley were flown to the construction site by helicopter for their first look at the area. The ground upon which the new facilities were to be built was solid rock. Adjoining it on one side were the water and ice of Arthur Harbor, and on the other sides was a large ice and snow field.

As a preliminary to the construction program, the cargo brought by *Westwind* had to be unloaded, a temporary camp set up for the use of the Seabees, a small-boat landing site prepared on the beach, and a John Deere 1010 tractor brought from Palmer Station to the new site. (There was some doubt that the little tractor could adequately serve as the principal mover of materials, but it proved to be a valuable and vital piece of equipment.) To carry out an around-the-clock working schedule, the platoon was divided into two sections on 12-hour shifts. Air compressors, rock drills, explosives, and the materials for the construction camp were quickly moved ashore. Four Jamesway huts were set up to provide berthing and messing, and the boat ramp and a storage area were prepared for the arrival of USNS *Wyandot*, which would bring more than 750 tons of cargo, including a Northwest 25 crane, a Universal rock crusher, two 955 Traxcavators, and the station building materials. A small dam was constructed to hold glacial meltwater, creating a pond about 3 feet deep, 40 feet wide, and 60 feet long. The pond was more than sufficient for the camp's needs, so the Seabees were able to provide fresh water to the icebreaker, which was having problems with its evaporators at this time.

Drilling for the blasting operations was soon commenced. The first blast was set off to aid in the building of a roadway from the boat ramp to the construction site. That detonation was the start of

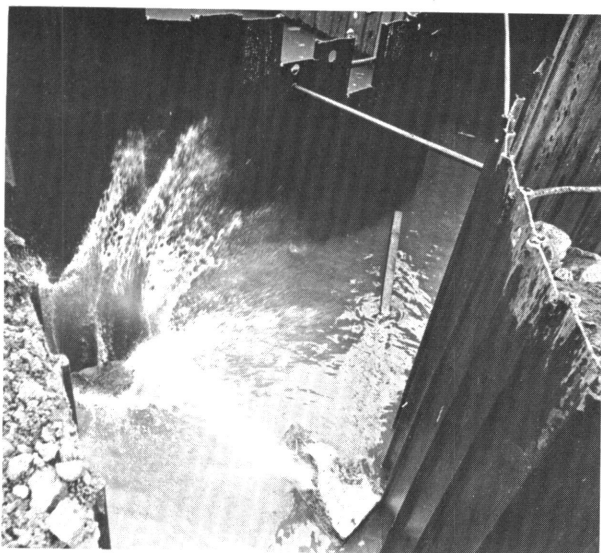
¹ Now on the staff of the Commander, U.S. Naval Construction Battalions, Atlantic Fleet.

² Station and research-vessel design are illustrated on p. 80 and 81, *Antarctic Journal*, Vol. I, No. 3.



(U.S. Coast Guard Photo)

Construction required divers to set underwater charges.



(U.S. Coast Guard Photo)

Cells of wharf in different stages of filling. Distance to water is 20 feet.

an intensive program of blasting and quarrying, and from that day on, there were from one to five blasts each day. The underwater trench for the base of the wharf was blasted with special explosives procured from the Jet-Set Corporation. After the initial blast, bangalore torpedos were used to clear the loose rock. Although assisted by divers from *Westwind*, two Seabee divers, CES3 James F. Vaughn and BUL3 Larry R. Parker, spent as many as 7 hours a day in the water. During this operation, the divers had a steady audience of seals who seemed to be very interested in the humans' activities.

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With the boat ramp, access road, and building site levelled, the next task was to prepare the site for the two fuel storage tanks. The pads, which were to be 20 feet larger in diameter than the 37-foot diameter of the tanks, had to be blasted out of the rock surface. This task was prolonged by high winds from the south which stopped all work for nearly 24 hours.

Wyandot Brings Supplies

USNS *Wyandot* arrived early on January 28. Unloading commenced at once and went rather smoothly, considering that the procedure was entirely dependent upon the small boats. The rock crusher went into operation as soon as it came ashore. Unloaded in six days, *Wyandot* departed for McMurdo on February 4. The erection of the fuel tanks and the construction of the wharf were now in full swing. As the days became noticeably shorter and the weather colder and stormier, an additional effort was expended by the entire crew.

Wind and wave action made construction of the wharf extremely difficult and hazardous. The project required construction in the water of three cylindrical cells of sheet steel—each about 27 feet in diameter—arranged in a triangular pattern. These cells were to be connected with more sheet steel to form a round-cornered triangle, its apex pointed toward the shoreline and its base parallel to it. The cells were then to be filled with rock and connected to the shore by a 20-foot-wide ramp so as to form a durable pier. The third cell was nearly finished three times, but wind and rough water interfered with the use of a template to position the pilings, and icebergs knocked the supports from under the template. Fortunately, the fourth effort was successful, and the filling of the cells and construction of a fender system to protect the research vessel could proceed.

By March 15, the wharf had been completed, the fuel tanks erected and painted, and some of the fuel distribution pipeline installed. The final blasting at the 128- by 100-foot building site was completed in time to allow erection of the building's foundation and subflooring. The entire area was cleaned up, construction materials rearranged and inventoried, and on March 20, a tired but proud crew of Seabees embarked on *Westwind* for the trip to Punta Arenas. From Punta Arenas, an Air Force plane flew the Seabees to Quonset Point, Rhode Island, where they arrived on March 27.

The first phase of the construction of the permanent Palmer Station was completed on schedule, in keeping with the Seabees' succinct motto: *Can Do*.