

Technology Park

EXPLORE

THE ARTIFACTS IN TECHNOLOGY PARK

1. RADAR ANTENNA AN / FSP 508

Radar is the acronym for RAdio Detection And Ranging. Radar is used to determine the distance of objects by measuring the time required for a radio signal to travel to the target and back again. The AN / FPS-20A was a ground-based search radar widely used by the Canadian and American armed forces during the Cold War.

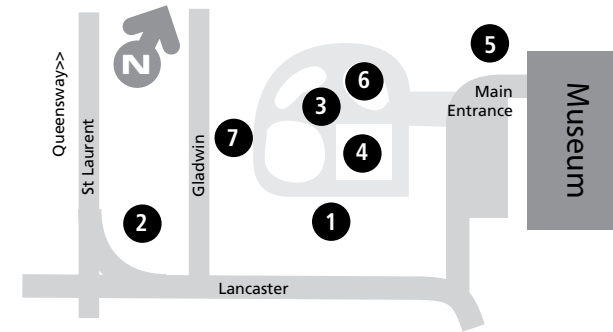
This particular antenna was made by the Northern Electric Company, and was destined for use by the Department of National Defence (DND) in the Barbados, probably for the High Altitude Research Project. The project was cancelled and the antenna, no longer needed by DND, was acquired by the Museum in 1968. CSTM 870957



2. CAPE NORTH LIGHTHOUSE

This lighthouse, erected in 1908 at Cape North, Nova Scotia, is constructed of 32 cast-iron plates joined together with bolts. It stood vigil over the Cabot Strait until 1980 when it was acquired by the Museum and moved to this site. The cast-iron plates of this lighthouse actually date back to 1856, when they were first assembled to serve as the tower of the famous landfall light at Cape Race, Newfoundland. When a larger lighthouse was built at Cape Race in 1908, the old tower was disassembled, taken by ship to Nova Scotia, and reused for the light at Cape North.

The sectional design of the tower was chosen in response to the challenge of constructing a lighthouse in a remote,



3. PUMP JACK

This pump jack was manufactured in California by Pacific Gearworks and was probably used in the exploitation of oil and petroleum in Saskatchewan during the 1950s.

This type of device, which was probably driven by an electric motor, was used to pump oil from the well and to regularize the flow rate when there was insufficient pressure. CSTM 670153

4. CONVAIR ATLAS ROCKET

First flown in June 1957, the Atlas long-range rocket was the type of launch vehicle used during most Project Mercury flights. Except for Alan Shepard's 1961 suborbital flight over the Atlantic, Atlas rockets carried American astronauts, including Lt. Col. John Glenn (Feb. 20 1962), into orbital flight around the Earth in the Mercury spacecraft.

Constructed largely of stainless steel, the Atlas is virtually a "flying" fuel tank which holds the liquid oxygen and kerosene propellants needed for flight. Though smaller than the Atlas rockets used for Project Mercury, the Convair model GCM-16 is 23 m in height, with a diameter of 3 m. At launch, the rocket's weight is 118 000 kg, with a thrust of 1 600 000 N. This rocket is on loan to the Canada Science and Technology Museum from the United States Air Force Museum. CSTM 730673



5. THE 15-INCH TELESCOPE

Research in astrophysics began in Canada with the telescope housed in the Helen Sawyer-Hogg Observatory.

Installed in time for the inauguration of the Dominion Observatory in 1905, it is a 15-inch equatorial refractor. The mount and mechanical components were manufactured by Warner and Swasey of Cleveland, Ohio. The original lens, a 15-inch f/15 doublet, was made by the J.A. Brashear Company of Allegheny, Pennsylvania. In 1958 the lens system was replaced by a three-component apochromat lens made by the Perkin-Elmer Corporation of Norwalk, Connecticut. In 1974 the telescope was moved to the Museum, where it is used for public viewing of the sky, a tradition begun at the Dominion Observatory in 1905. CSTM 740488

6. "BEATTY PUMPER" WINDMILL

This type of windmill – used for pumping water – was manufactured by Beatty Bros. of Fergus, Ontario, during the 1920s and 30s.

Wind causes the fan wheel to rotate, driving a piston pump. If the tail on the head of the windmill is set perpendicular to the blades on the fan, the head turns into the wind and the fan rotates. If the tail is set parallel to the blades on the fan, the head turns out of the wind and the fan stops turning. The hand lever attached to one leg of the tower enabled the windmill operator to move the tail, and turn the windmill on or off, from the ground. This windmill was in use until 1960. CSTM 800318

7. CANADIAN NATIONAL 6200

This steam locomotive was constructed by the Montreal Locomotive Works for the Canadian National Railways in June 1942. The locomotive operated in eastern Canada before being transferred to the Canada Science and Technology Museum in June 1967.

This is an example of a 4-8-4, or Northern, type locomotive used extensively for both passenger and freight train service. Well suited to CN's needs, by 1944 the railway was operating 203 locomotives of this type. This locomotive is 28.9 m long and weighed 302 823 kg in working order. By 1960 steam locomotives were withdrawn from regular service and replaced by diesel-electric locomotives. CSTM 670010

