

HISTORY OF
CANADIAN FORCES STATION CARP
RICHARDSON DETACHMENT

MCPL. PALMER, L. A.
1979

I would like to express my gratitude to those who assisted in making this as complete and true a presentation as possible. Gratitude is extended to: Frank Irvin, L. Patterson, F. Arseneault, R. Ethier, Jim MacDonald, William Close, Bud Larocque, and CWO McKenzie.

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EMPLOYEES WHO HAVE PASSED ON

Bates W.

Cardinal J.

Crawford P.

Delorme R.

Dixon H.O.

German G.

Ingram J.

King A.

Norwood D.

Sheffield R.

Simmons J.

Smith Michael

Smith Murdock

Watson J.

COMMANDERS OF RICHARDSON DETACHMENT

Cpt. Emdin J.	1961 - 1966
WO/Lt Bell	1966 - 1969
Cpt. Mc Elroy R.	1969 - 1971
CWO Mc Kenzie	1971 - 1974
CWO Cameron R.J.	1974 - 1979
CWO Wilson J.	1979 - present

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HISTORY OF
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SITE SELECTION

During the sitting of Parliament in 1956 authorization was given for the construction of bunker-style, underground facilities designed to withstand a nuclear blast. There were to be two units constructed; a main unit at Carp and a second unit to be used as a transmitter site. The selection of the location for the transmitter site was commenced, and a location at Cedar Hill near Pakenham was decided upon. Well-drilling tests were done, from these it was determined that there was sufficient water for the complex and the rock formations seemed to be suitable.

In September of 1959 construction started with the excavation of the hole for the building. By the first of December 1959 the excavation was nearly completed when unstable rock formations were discovered, and the engineers decided to abandon this location.

A second location near Richardson was selected. Well-drilling commenced in the fall of 1959. There was sufficient evidence from the drillings to indicate that the rock formation at this site was suitable, and that there was sufficient water available for the complex when completed.

SITE CONSTRUCTION

In February 1960 the excavation for the hole began. Building materials were moved in and temporary buildings were constructed.

The carpenters' shop was the first building erected on the site. The second building was a garage to house vehicles and to do the maintenance on these vehicles. The third building was a stores' platform. A huge tent covered this platform to protect the materials stored on it.

The next building erected was an administration building for secretaries, surveyors, engineers, designers, and other administrative staff.

There was a building erected for a store room, this is known today as "Dead Stores". There was a building erected for the plumbers shops approximately one hundred feet south of the store room. East of the plumbers shop by approximately fifty feet was the Carpenters' shop. These buildings were used to prepare the materials for the site and for the comfort of the men.

About the beginning of April 1960, excavation of the hole for the building was underway. The rock removed was used to construct roads, parking areas, and, in general, to level the grounds.

POURING THE CONCRETE

By mid-June 1960, pouring of the concrete commenced; however, due to the large quantities of reinforcing steel required to be placed in the forms, the pouring process was very slow. The pouring of the concrete continued until March 1961 when the tunnel floor was poured.

All during the pouring process the concrete was carefully monitored to ensure that it would withstand very high pressure and also pull stresses.

THE BIG POURS

Even though the union was very strong, which held tradesmen to doing their job and labourers to doing theirs and no one doing a job that he was not hired to do, when it came time for the major cement pours, everyone assisted the labourers. This included the electricians, carpenters, plumbers, and riggers. During a big pour the work day commenced at six in the morning and finished at eight in the evening.

During the construction, Mr. Clifford Stafford became proficient in manufacturing reinforcement spacers used throughout the building.

During the winter phases of concrete pouring they used steam heat from a boiler for keeping the area warm. Interlocking tarpaulin that were twenty feet square in size enclosed the heated area.

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LIFE AT THE SITE

Each trades' foreman had his own building for his own administration and there was a building used as a lunch room large enough to accommodate all the workers. There were no coffee breaks during the day.

At noon a vehicle came around so that the men could get hot tea, coffee, and sandwiches.

There were four latrines of the cross-board style where you sat on the board with a bucket below to take any deposits. John Hebert, assisted by Herb Tysick, operated the honey wagon. After the complex was completed all the buildings, except the store room, were destroyed, most by burning.

THE UNION

All labourers permanently employed by Foundation Company of Canada had to belong to a union before they could be hired. This union was "Labourers International Union of North America" (905-16th. Street N. W., Washington, D.C., 20006). Peter Foscus was General

ODDITIES AT T1

Within the main support in the kitchen there is an electric cement packer that disappeared into the cement when a pour came while packing was in progress. Also, in the other main support behind the T. V., there is a bottle of whiskey that was lost to the cement.

OUR GARAGE

An underground parking lot was excavated on the west side of the north entrance to the complex. The structural steel for this was assembled and prepared for the concrete pouring. At this stage, inspectors visited the site and advised that this underground garage was supposed to be at Carp site, not at Richardson. It was all disassembled and moved to Carp. The excavation was filled back in and the tunnel roof put in place.

SAND AND GRAVEL

Lanark Sand and Gravel supplied most of the sand and gravel that was needed. A special cement mixing station was established at the old "Brick Yard" in Perth. This is just east of the Tay River on Highway 43. The first layers of cement were, what was called, pea-stone cement. The first line road was used as the main road between Perth and the site for the trucks hauling cement. The cement inspector, called "Old Brownie", was stuck many times getting samples of cement for tests.

The normal route to work for most employees was via the second line. They parked out near the church and were transported the rest of the way on a wagon pulled by a tractor until such time as a proper road was built.

MANNING OF TI

The building was completed in October 1961, at which time a maintenance crew was hired to maintain the building and equipment. At the same time an operating crew was assembled to supervise the operation of equipment and machinery. A three man shift was established to maintain operations, with shift changes at eight hour intervals. Initially there was no no-break generator for the operators to maintain.

Mr. Clifford Peterson, Professional Engineer, was the site superintendent of maintenance. The Foundation Company of Canada was the building contractor, having subsidiaries FENCO (Foundation Engineering Company) and A. D. Ross Company as the electrical and mechanical contractors.

All employees after 1 November 1961 were responsible to A. D. Ross Company until the first of April 1973; at which time the Construction Engineering Branch of the Federal Civil Service took over the operation. Many of the existing personnel continued on as Civil Servants.

TRANSMITTER EQUIPMENT

The H. S. 51, a high power transmitter made in England by Marconi, was installed for long range communications to England. This piece of equipment was nearly fully automated, requiring minor tuning after automated tuning was completed. This was a huge transmitter, occupying one end wall, with an output of 15,000 watts average. This is in the area of 60,000 watts peak envelope power and required a lot of power to operate it. When arcing in the power supply occurred the diesel generators practically stopped, the generator power would drop enough to cause most of the other transmitters to drop off the air. Prior to 1974 a very high unserviceability percentage existed. This was due to extensive preventive maintenance and operating at near full-rated power. In 1974 a new policy was tried using a lower out-put level and less in-depth preventive maintenance. When Station Manotick was closed we obtained their H. S. 51 as a spare, for parts.

In 1971, E.O. 3 oscillators replaced the original oscillators used with the H. S. 51 drive unit for which crystals were hard to get. A frequency change was made so that the carrier frequency was the assigned frequency. This simplified the selection of upper and lower side bands.

In June 1977 the H. S. 51's were sold for scrap by Crown Assets for \$200.00. The replacement for the H. S. 51 was the solid state, remote controlled, automated and synthesized F.R.T. 510 made by Harris Limited. This transmitter only has an output of 10,000 watts peak envelope power; however, the extremely clean and stable frequency allows us to communicate effectively.

In addition to the H. S. 51 there were FRT 39's, FRT 501's, GPT 750's, and STC 3's.

All the FRT 39's were modified in the fall of 1978. Most of the unnecessary ancillary equipment was removed. The transmitter now uses the Harris R. F. 131 Exciter for excitation. In 1977 testing of the solid state rectifiers proved their worthiness and all the 4B32 tube type rectifiers were replaced. This eliminated an immense amount of problems associated with bad rectifiers.

Prior to 1974 the FRT 501 transmitters were modified to be driven by Khan single side band exciters. These modifications were then removed and the transmitters returned to normal. The exciters were disposed of through supply.

All the FRT 501 H. F. transmitters were sold for scrap by the Crown Assets Division. These occupied the wall from the G.P.T. transmitters to the doorway by the workshop.

The Alert Circuit was taken over from Manotick in 1959. A FRT 39 was installed for this purpose: all our other units are FRT 39A's. At this time all tones for the transmitters came directly from Carp. During the period from 1969 - 1970 there was a change made where the tones received were converted to direct current; this, in turn, is converted to new tones which are fed to the transmitter. The advantage of this is that variation of level received at the transmitter is minimal, where prior to this the variation was great enough to cause the transmitters to go off the air.

The Alert circuit has seen many changes in the period from 1975-1978. The original Double Frequency Shift Keyers were replaced by a Narrow Shift Keyer System; this has since been replaced by a Barry Modem Time Diversity Keyer.

We receive most of our communication on Land Lines with a VHF radio system for a back up. We are anxiously awaiting a new radio link with Carp via microwave; this is anticipated for 1980 -- 1981.

ANTENNA SYSTEMS

Most of the antenna used for the H. F. are of the horizontal log-periodic style. The L.F. are of the umbrella top loaded Hertz style.

Many of the antenna systems were designed and installed by Canadian Marconi and R.C.A. of Canada.

An antenna sharing system was attempted but found to be unsatisfactory for this type of operation; this was replaced by the H. A. 150 Matrix Switch System.

TEST EQUIPMENT

We obtained the Hewlett Packard Spectrum analyzer to replace a T.M.C. Spectrum analyzer that had to operate in conjunction with a Racal receiver, a Racal converter and a Racal counter. Due to the age of the equipment and the fact that it used tubes we were forever having to repair this equipment. We also received a second Hewlett Packard Spectrum analyzer to replace the T.M.C. analyzer that was in the mobile test rack, this unit is wheeled from transmitter to transmitter to do monthly maintenance. It is also used to do investigative maintenance analysis and has to be used on the R.F. 131 for some of the set-up procedures. This unit was on loan to Carp for a short period of time and certainly was missed.

EXCITING MOMENTS

There have been some exciting moments at Richardson Detachment. One such event was when the no-break generator caught on fire. This happened when repair men working in the furnace area created sparks while welding, these sparks were drawn into the no-break and caused some of the accumulated lint and other debris to ignite. This occurred in 1970.

There was an occasion when lightning struck the incoming power lines and caused the bus-bar to melt. Another time lightning hit the incoming power lines and melted the power line, it also turned the protective sand to glass. Lightning has also caused problems in the transmitter hall. The low frequency transmitters are usually hit, this tends to burn out the tuning plug-in boards.

Another exciting event that occurred several times was flooding of the site. In the spring, melting snow would follow the road down the tunnel and there would be more water come in than the drains could handle. Not having an automatic sump-pump system at that time, the water would accumulate and come in under the entrance doors. On occasion, the outer door was opened to investigate the water level, and there would be an inrush of water; this, in turn, would find its way to the lower levels via the stair well and the access for the chain lift. When this happened prior to getting the no-break, it was not too serious; however with the no-break in place, the water dripping down splashed on the no-break and this was serious. An automatic start sump pump system has been installed that should take care of this problem in the future. Also, a mound of asphalt has been placed across the top of the

tunnel which diverts some of the water.

We had another bit of excitement when the no-break relay broke in 1976. This left the transmitter hall without power until the fault was repaired. This took about two hours.

SITE NAMES

Canadian Forces Detachment Richardson was known as Diefenbaker Cage, Diefenbaker Bunker, The Hole, and The Foundation.

There are several myths associated with T1. One such myth is the underground tunnel with high speed electric cars that connects T1 to Ottawa and Carp. The size of the building varies, the largest size that I have heard is the size of the inner compound; there are rumors that there are twenty floors in T1.

CIVILIAN PERSONNEL WHO HAVE BEEN EMPLOYED AT RICHARDSON DETACHMENT

Arseneault J.A.	C/MRO	1973 - present	
Aubrey A.	S. Sup	1961	
Bates W	C/MRO	1975-1978	Deceased
Blair W.	Trades helper		
Bowes A.	Driver	1976 - present	
Bulley W.C.	Trades Helper	1979 - 1981	Deceased Skiing at Malone
Bradley L	MRO	pre 1968	
Brennan C	CRO	1961 - 1973	Transferred to Carp
Cardinal Jerry	Kitchen help	1963-1973	Deceased
Carr J	CRO	1961 - 1973	Retired
Close W.J.	C/MRO	1973 - present	
Crawford Paul	Carpenter, C/MRO	1961 - 1976	Deceased
Delaney J.	E. Engineer	1965	
Delorme R.	MRO	1961 - 1974	Deceased
Desjardine J.A.	Outside help	19 - 1981	Resigned
Dixon H.O.	Kitchen help	1963 - 1978	Deceased
Dugdale J.	Trades help	1976 - 1978	Resigned moved to Almont (taxi driver)
Dunnigan H.	MRO	pre 1968 - 1973	Resigned moved to Ottawa
Dunnung W.	S. Sup	1961	
Egan M.	Outside help	1960 - 1961	
Ethier R.	C/MRO	1961 - present	
Ferro W.	Kitchen help	1963 - 1974	
Mc Dermott-Fox T.	Supt	1963 - 1966	
Francis Bob	Outside stores		
Frizell L.	Cleaner	1979 - present	
Garret E.	Outside help		
German G.	Outside stores		
Gilbert R.H.	Millwright	1976 - 1982	Deceased
Graham N.	Land Surveyor	1961 -	
Graham W.J.S.	Outside Stores		
Hagan N.	Rodman	1960 - 1961	
Halleran E.	Painter		
Haughian Leo		1960 - 1961	
Hebert	Outside help		
Ingram J	Operator	1962 - 1974	Deceased
Irvin F.	C/MRO	1959 - 1981	Retired
Kaipainen J.E.	C/MRO	1977 - present	
Kerr E (Pat)	Electrician		
King A.	Kitchen	1966 - 1971	Deceased
Krushelniski T.	Trades helper	1974 - 1975	Transferred to Carp
Lancaster D.	MRO	pre 1968 - 1973	Resigned
Larocque K.	Cleaner	1961 - 1978	Retired - Lanark
Larocque L	Trades helper		
Lavalee R.	C/MRO	1961 - present	
Legacy J.	Millwright	1961 - 1973	Retired - Cornwall
Lott A.S.	S.Supt	1961	
Lowe I.	C/MRO	1966 - 1982	Medical Retirement
Mackie A	Plumber	1961 - 1971	Laid off
	Electrician	1973 - present	

Mayer P.	C/MRO	1974 - present	
Mc Donald J.D.	C/MRO	1961 - 1961	
Mc Donald J.D.	C/MRO	1966 - 1973	
Mc Donald J.D.	C/MRO	1976 - present	
Mc Laughlin	Operator		
Mc Lean K.	Welder	1961 1974	Retired - Smiths Falls
Mc Intosh	Inside help		
Mc Neely	Clerk		
Mc Watty J.	Electrician	1966 - 1973	
Millotte E.	C/MRO	1976 - 1977	Transferred to Carp.
Moodie W.	MRO	pre 1966 - 1974	Resigned - Lombardy
Moore C	S.Supt	1961 -	
Norwood D	Kitchen	1963 - 1966	
O'Hara F	MRO	1961 -	Transferred to Carp
Patterson L	C/MRO	1969 - present	
Paul W.	Trades Helper	1961 - present	
Peterson C	S.S.Supt.	1961	
Plouffe M.	S.Supt	1973 - 1973	Resigned - Point Gatineau
Powers C.	CRO	1961 - 1970	
Rattray W.	Outside help	1976 - present	
Ritchie E	Driver		1981 Medical retirement
	Outside help	1959 -	
Robertson R.	C/MRO	- 1973	
Robertson R.	S.Supt	1962 - 1965	Resigned
Sadler D	CRO	- 1973	
Sheffield	MRO	1961 - 1967	Deceased
Simmons J.	S.Supt	1961	Deceased
Smith M.	Labourer	- 1974	Deceased
Smith M	CRO	1961 - 1974	Deceased
Stafford C	Inside helper	1959 -	1982 deceased
Stanyar S.	C/MRO	1974 - 1976	Transferred to Carp
Suppa V.	C/MRO	1974 - 1976	Resigned - Swastika Ont.
Tysick D	C/MRO	- present	
Tysick E.	Carpenters help	1960 - 1961	
Tysick Herb	Outside help	1960 - 1961	
Tysick John	Carpenters help	1960 - 1961	
Virgin J.	Outside help	1961 - 1973	
Wallace W.	Clerk		
Watson J.	CRO	1961	
Wilson R	MRO	pre 1968 - 1973	Retired - North Gower

MILITARY PERSONEL WHO HAVE BEEN EMPLOYED AT RICHARDSON DETACHMENT

Anderson	Sgt.		
Anderson T.G.	Sgt.	1979 - 1981	Retired to Smiths Falls
Arsoneault J.A.	Sgt.	1969 - 1973	Retired - Smiths Falls
Beaudine M.	Pvt.	- 1973	Retired - Ottawa - D.O.C.
Berriere J	Sgt.	1976 - 1979	Retired Crosby Ont.
Boardman G.	M/Cpl.	1974 - present	
Bolduc P.	Pvt.	1978 - 1978	posted to Carp
Bolton H.	Sgt.	1980 - present	
Bolton L.	Cpl. Supply	1980 - present	
Bonneau M.	Sgt.		Retired - Smiths Falls
Boyer	Cpl. Supply	1967 --1969	
Brottill L.	Sgt.		
Bukowski E.	M/Cpl.	1972 - 1977	Posted to Europe
Bulley W.	Sgt.	1973 - 1978	Retired - Perth
Butterworth A.	Pvt. Driver		
Calbek W.	WO C.E.	1980 - 1982	Posted to Sioux Lookout
Campbell A.	Cpl. Provost		
Campbell B.	W.O. C.E.		
Campbell V.	Sgt.		
Cameron R.J.	C.W.O.	1974 - 1979	Retired - Cobden Ont.
Cardinal O.D.			
Cardinal O.D.	M/Cpl.	1977 - present	
Carkner D.	Cpl.		
Carson W.F.	M/CPL.	1974 - 1978	Transferred to Leitrum
Carter M.	Sgt.		
Champagne J.C.	W.O.	1978 - present	

Chema B.	Cpl.	1978 - 1980	Posted to Masset
Cole R.A.	Cpl. Tole Tech	1979 - present	
Collard J.	Cpl.		
Corbett D.	Pvt.	1979 - 1979	
Cullen J.	Sgt.	1973 - 1977	Retired - Trenton (xtal lab)
Defalco E.	Sgt.		
Donaldson E.	Cpl.		
Dorcey R.	Sgt.	- 1973	
Duff D.	Cpl. Driver	1973 - 1978	Posted to Ottawa S
Duff J.	Sgt.	1975 - 1978	Posted to North Bay
Faulkner D.	Cpl.		
Feiser E.	Pvt.		
Fields H.			
Fitzgerald C	Cpl.	1970 - 1971	
Fowler F.	Sgt.	1971 - 1976	Posted -
Gillett J.	M/CPL.	1977 - 1978	Posted - Carp
Hamilton V			Posted - Kingston
Hindle R.	C.W.O. C.E.	- 1969	Retired - Kemptville
Howe C.	Sgt.		
Hurd	W.O.	1971 - 1972	
Ingerfield L.	Sgt.	1969 - 1973	
Isabell R.	W.O.	1969 - 1970	Posted - Ottawa
Jacus R.J.			
Jacus R.J.	Cpl.	1977 - 1979	Posted - Ottawa (French Course)
Jacus R.J.	Cpl.	1980 - 1982	Posted to Europe then Kingston
Johnson K.	Sgt.	1975 - 1977	Posted - Pettawawa

Jolliffe

Kane R.	Sgt.	1962 - 1964	Deceased
Kendall D.	Cpl.	1969 - 1973	
Kennedy	Cpl.	1979 - present	
Kutrowski S.	W.O. C.E.	1974 - 1978	Posted - Lowther
La Chapell R.	Cpl.		Posted - Europe
Laister V.	C.W.O.	1969	
Laramet J.	Cpl. 1969 - 1974	1969 - 1974	Posted - Greenwood
Laroque D.	Cpl.	1971 - 1977	Posted - Debert
La Rick	Pvt.	1978 - 1978	was here on t.d. from Carp.
Lawson	Pvt.		
Leroux Roy.	Cpl.		
Letourneau J.	Cpl.		
Lowden L.R.	M/CPL. Supply	1977 - 1980	Working at Carp more than here
Lowe D.	Sgt.	- 1968	
Loyst M.B.	W.O. C.E.	1978 - 1980	Posted - Moose Jaw
MacLean G.	Sgt.	1973 - 1976	Posted to North Bay
Mc Kenzie	C.W.O.	1970 - 1974	Posted to Bermuda
Mannary Russ.	Cpl.	1977 - 1977	Released - Inuvic with R.C.M.P.
McEachern J.	Sgt.	1976 - 1978	Posted - Ottawa
McEachern J.	Sgt.	1980 - present	
McLellan	Sgt.		
Mc Taggart L.			
Manard P.	M/CPL.	1969 - 1974	Posted
Michaud	Cpl. Cook	- 1973	Posted - Pettawawa
Millar D.	Cpl.	- 1973	Retired - B.C.
Miller F.	Cpl. Driver	1978 - present	
Molton J.	Sgt.	1973 - 1976	Retired - NFLD.

Mc Intosh Lee			
Moore B.L.	Cpl.	1976 - 1980	Posted - Charlottown P.E.I.
Morgan	Cpl. Cook	1969 -	
Noseworthy S.	Cpl. Cook		
O'connor	Cpl. Prevost		
Palmer A.R.	W.O.		
Palmer L.A.	M/Cpl.	1974 -	Retired as a Sgt. 1982
Parker	Cpl. Cook	1963 -	
Parsons Slim			
Pascal E.	Cpl. Cook	1969 - 1973	
Patterson M.	Cpl. Prevost		
Plewis			D.C.E.T.S. Ottawa
Randal C.	W.O.	1971 - 1976	Posted - Ottawa
Ripmeester B	Cpl.		Retired - Ottawa - T.M.C.
Rousseau R.	Cpl. Cook		
Russell W.	Cpl. Supply	1975 - 1977	Posted - Sheerwater
Sampson L.	M/Cpl.	1976 - 1978	Posted - Kingston
Simmonds A.	Cpl.		
Smith	Sgt.	1973 - 1977	Retired - Winchester
Soon Al.	Sgt.	1969 - 1973	Retired
St. Gelais J.J.	Sgt.	1979 - present	
Thomas J.	Cpl. Driver		
Tuttelberg P.	Sgt.	1978 - 1980	Posted - Trenton
Van Dongen T.	Pvt. Driver		
Vermander E.L.	W.O.		
Warner E.	Sgt.	1965 - 1972	Retired
Warner L.	Cpl.		

Willets L.	W.O.	1976 - 1978	Posted - Trenton
Wilson J.	C.W.O.	1979 - present	
Woodward M.	Cpl. Prevost	1981 Retired and went to Ottawa	
Woolier	Sgt.		
Wright P.	M/Cpl.	1968 - 1974	Posted Cold Lake
Young J.	Cpl. Supply Tech	1970 - 1975	Posted - Ottawa

