No. 2 Construction Battalion

Upon the outbreak of WWI there were a number of black citizens of Canada who wanted to join the Army and fight for "king and Country". Initially they were turned down due to racially discriminatory government policies.

An intensive lobbying program was initiated and eventually on 5 July 1916, authority was granted for the establishment of an all black unit, with white officers, named No. 2 Construction Battalion. The unit was given basic military training and was sent to France as a labour battalion. They were attached to the Canadian Forestry Corps and employed primarily in the production of timber for use by the allied armies. Members of the unit had hoped to be able to take part in the action of the trenches, but were denied that role.

After intense artillery action and construction of defensive works during the first three years of the war, the front lines had been converted to a sea of mud. To move supplies forward it was necessary to construct timber roads. The construction of extensive tunnels and defensive works also required vast quantities of timber shoring. So critical was the need for timber that the Canadian Army employed 17,751 soldiers on the task in 1918. The timber produced by these units made a significant contribution to the success of the Canadian Corps in the latter stages of the war. The timber cut in theatre also resulted in a saving of four million tons of shipping in 1918 alone.

No. 2 Construction Battalion was one of the units involved in this exercise and they made a major contribution to the war effort. Canada owes them a hearty vote of thanks for their perseverance and patriotic spirit.

Happy Birthday 3rd Field Engineer Squadron

3rd Field Engineer Squadron was established as No. 3 (Ottawa) Field Company on 1 July 1902. In its early years the unit helped Ottawa deal with emergencies and stage public ceremonies. The Militia was not mobilized during the First World War, so the Company did not itself join the Canadian Expeditionary Force; however, 181 of its members did, and received 26 decorations. The Company spent the war turning out Engineer officers at an Ontario provincial training school.

On the outbreak of the Second World War, 3 Field Company was mobilized as part of the First Canadian Division Engineers. In December 1939, it embarked for Scotland, where it trained for combined operations.

3 Field Company, Royal Canadian Engineers, made its operational debut in a 1941 demolition operation in Spitzbergen and began its main war effort with the invasion of Sicily in July 1943. As the Canadians fought through Sicily, Italy, France and Holland, the Engineers reconnoitered the ground over which the armies advanced, crossed rivers, built roads and bridges, located and disarmed mines, and built communications networks.

3 Field is especially proud of its actions south of the town of Leonforte in July 1943. In the dark, under heavy German shelling, the unit assembled a Bailey bridge to span a 50-foot gap, the first time such a feat was accomplished. For this battle, decorations went to five Sappers, including the commanding officer, Major K.I. Southern, who received the Distinguished Service Order for holding the German forces at bay with a small reconnaissance party and taking 20 prisoners while waiting for reinforcements. By YE Day, 290 men had served overseas with 3 Field Company and earned 18 decorations.

3 Field Company became 3 Field Engineer Squadron, Royal Canadian Engineers, in 1947. In peacetime, it focuses on demolitions, water supply, bridging, route maintenance, obstacle emplacement and mine awareness. It also performs road and bridging operations for the Ontario Ministry of Transportation and Ontario Hydro, and' land-management tasks such as the environmental clean-up of Upper Duck island in the Rideau River. The Squadron does not limit itself to construction; it also blows things up - a wall at Kingston Penitentiary, the Gloucester Water Tower and, to prevent flooding, beaver dams.

Today, 3 Field Engineer Squadron provides 33 Canadian Brigade Group with military engineering advice and services. Sappers have also served in United Nations missions around the globe, most recently in the Iraq-Kuwait border area, Somalia, Bosnia and Cambodia, Cyprus and the Golan Heights, where they help rid the land of its burden of unexploded munitions.

3 Field Engineer Squadron received the Freedom of the City of Ottawa in 1977. To celebrate their Centennial, they will be exercising their Freedom of the City downtown on 14 September and there will be an open house at the unit armoury on 15 September. Click here for more details.

DÉBARCADÈRE SUR LE WEST ARM.

Des membres du 44th Field Engineers rassemblent les pontons du côté nord du West Arm mardi après avoir terminé leurs exercices d'entraînement.

- PHOTO BOB HALL

Le 44th Field Engineers pratique sur le lac Kootenay

PAR BOB HALL, NELSON DAILY NEWS

Le West Arm a été transformé en une zone sinistrée plus tôt cette semaine alors que le 44th Field Engineers se lançait dans les eaux glacées du lac Kootenay.

De lundi matin jusqu'à mardi après-midi, les équipes de la Réserve de la région de Trail ont pratiqué la construction d'un traversier et le transport de gros camions sur les eaux houleuses du West Arm.

« Une partie de notre travail est de pratiquer pour des situations possibles de sinistre » a indiqué le major Brent Warne.

Les 30 hommes et femmes du 44th Field Engineers ont relié des pontons et construit des traversiers en utilisant de l'équipement d'une valeur de 4 millions $ amené spécialement aux Kootenays de la base militaire de Wainwright, Alberta. L'équipement a été tout récemment utilisé par les militaires lors des inondations du Manitoba à la fin des années 1990 pour aider aux efforts de sauvetage et de reconstruction au cours de ce désastre naturel dévastateur.

Les réservistes locaux ont débuté sur les eaux relativement calmes du lac Kootenay et se sont dirigés aujourd'hui vers la rivière Colombia près de Castlegar. Ils termineront avec les eaux les plus difficiles de la région plus tard cette semaine alors qu'ils descendront la rivière Columbia juste au sud de Trail.

C'est la première fois que ce type d'exercice est effectué dans les Kootenays depuis 1992.

« Nous devons nous entraîner à ceci sur une base régulière au cas où le besoin surviendrait au cours d'une situation d'urgence » a indiqué Warne en ajoutant que si l'équipement était nécessaire dans les Kootenays, il serait opérationnel dans les 24 heures.

Bien que l'idée n'était pas de pratiquer pendant une tempête de neige, Warne a indiqué que la météo de mardi ajoutait à l'adversité qu'il pourrait devoir affronter dans une situation réelle.

Il a mentionné que « La météo a été un défi supplémentaire ». L'équipement ne s'assemble pas bien dans ce type de froid. Mais si vous pouvez le faire dans ces conditions, vous pouvez le faire en tout temps. »

Cet été, le 44th Field Engineers accueillera des soldats des Etats-Unis et de l'Angleterre pour un exercice beaucoup plus important qui fera usage des pontons.

WEST ARM LANDING. Members of the 44th Field Engineers tied off the pontoon on the north side of the West Arm Tuesday after finishing training exercises.

— BOB HALL PHOTO

44th Field Engineers practice on Kootenay Lake

BY BOB HALL, NELSON DAILY NEWS STAFF

The West Arm was transformed into a mock disaster area early this week as the 44th Field Engineers took to the frigid waters of Kootenay Lake.

From Monday morning until Tuesday afternoon, the Trail-based crew of reserves practiced building a ferry and transporting large trucks over the choppy West Arm waters.

"Part of our job is to practice for potential disaster situations," said Major Brent Warne.

The 30 men and women of the 44th Field Engineers linked pontoons and built ferries using $4 million worth of equipment specially brought to the Kootenays from the military base in Wainwright, Alberta. The equipment was most recently used by the military in the Manitoba floods in the late-1990s to help in the rescue and rebuilding efforts during that devastating natural disaster.

The local reserves started on the relatively calm waters of Kootenay Lake and today moved onto the Columbia River near Castlegar. They will finish with the roughest waters in the area later this week when they move down the Columbia River just south of Trail.

It's the first time this type of exercise has been carried out in the Kootenays since 1992.

"You need to practice this on a regular basis in case the need arises in an emergency," said Warne, adding that if the equipment was needed in the Kootenays they would be operational within 24 hours.

Though the idea was not to practice during a snow storm, Warne said Tuesday's weather added to the adversity they may face in a real situation.

"The weather was a bit of a challenge," he said. "The equipment doesn't go together well in this type of cold. But, if you can do it under these conditions you can do it anytime."

This summer the 44th Field Engineers will host troops from the United States and Britain for a much larger exercise using the pontoons.

AN ENGINEER SOLVES A DIEPPE PROBLEM

An analysis of the Dieppe raid indicated a need for protection of engineer demolition parties during operations of this nature. It was decided that the Engineers should have tanks. The problem was given to the Tank Design Division.

Within eight days Lt. J.J.Denovan RCE, a liaison officer with the Division, produced rough drawings and specifications, based on a Churchill Tank, for a vehicle to provide protection for engineers. His concept was supported, but due to a lack of resources could not be pursued at that time.

Lt. Denovan then "acquired" a tank and, quite illegally, tore it apart to make the changes he had proposed. The gun was replaced with a Petard that would project a 40 pound demolition charge about 150 yards, and the co-drivers seat was removed to make way for Engineer stores. 1st Mechanical Equipment Company RCE carried out the necessary work and a satisfactory demonstration was completed on 14 January 1944.

Development of the new armoured vehicle was authorized, much to Lt. Denovan's relief, and additional versions were designed including some with dozed blades, assault bridges, cranes, flails, and numerous other devices. The vehicle became known as the Armoured Vehicle Royal Engineers (AVRE). A total of 574 were produced and appeared in engineer units as early as April 1944.

On the 12 May 1953, the United Kingdom Royal Commission on Awards to Inventors awarded Major J.J.Denovan 1500 pounds for his part in the development of the AVRE. Below are some photos of modern armoured engineer equipment used by the Canadian Forces.

ENGINEERS COME TO THE AID OF THE BOY SCOUTS

In 1981 the Newfoundland Provincial Council of the Boy Scouts needed a bridge over the Northwest River to their camp near Port Blandford. They requested the assistance of 56 Field Engineer Squadron from St. John's to install a Bailey bridge, supplied by the Scouts, on existing abutments and piers. The squadron agreed to carry out the task on the weekend of 23-25 Oct 1981.

Upon arrival at the site the sappers found additional problems. Firstly the river was in flood and had eroded the banks and the abutments were in fact piers. As a result it was necessary to carry out a quarrying operation to provide rock fill for the approaches. Secondly, the piers were too narrow for the Bailey bridge. It was decided, after consultation with the Scouts, that the transoms would be modified to enable the construction of a narrower bridge to fit the existing piers. The bridge would still be wide enough to accommodate the buses used by the Scouts.

The unit began the project Saturday morning and worked all night, during a rainstorm, to complete the bridge by noon on Sunday. This is but another example of the ingenuity of the military engineer and the flexibility of the Bailey bridge. In 1984 the squadron returned to upgrade the approach road to the bridge by installing culverts and blasting rock outcrops.

This type of service to the community is always a satisfying project for the sappers involved and the Boy Scouts were overjoyed at the results.

AIRFIELDS FOR THE NORTH

The vast area of Northern Canada presented major problems for the provision of administrative and health services to the many isolated communities. Traditional transportation by dog team and the occasional bush plane no longer met the needs of the aboriginal population in the current age.

In 1970 National Defence, the Department of Transportation, and the Department of Indian Affairs and Northern Development implemented a program to develop a series of airstrips, capable of handling Hercules aircraft, at isolated communities. 1 Construction Engineering Unit was tasked to oversee the planning and construction of these airstrips.

Each project would normally involve a two-year program. In the first year the design work was completed, equipment was deployed to the site, and a source for local materials was located. A typical site needed about 160,000 cubic yards of granular fill to complete a 4400-foot runway and parking aprons. Gravel supply was a major problem in the arctic and involved finding a suitable esker or blasting out rock from a quarry. The labour was "recruited " from Field Engineering units of the CME and from the local Inuit. The latter were involved in increasing numbers as the program developed.

Between 1970 and 1979, when the program was terminated airstrips were built at Pangnurtung, Whale Cove, Cape Dorset, Eskimo Point, Pond Inlet, and Spence Bay.

These airstrips have served to relieve much of the isolation at these locations and greatly improved the quality of life for the inhabitants. The dedicated efforts and skills of the Canadian Military Engineers was a major factor in the successful completion of this program.

Northern Airfield construction at Cape Dorset, N.W.T., 1975. (Canadian Forces Photo Unit / ISC 75-1047)

Reconstructed RCAF facilities at Resolute, N.W.T., April 1952. (Canadian Forces Photo Unit / PL54024)

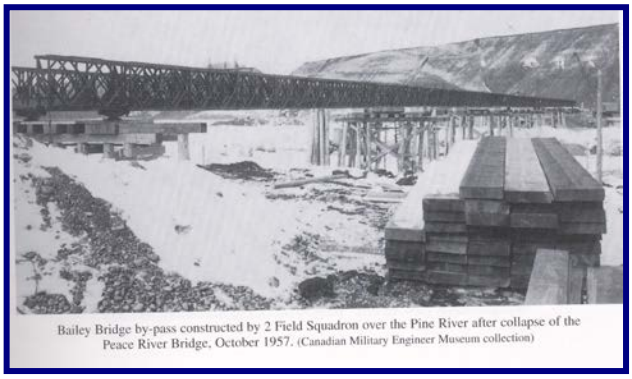
Winding in and winding out the Alaska Highway

In 1942, in response to threat of invasion, an epic construction project was launched to build an overland route to Alaska. Spearheaded by the US Army Engineers a tote road was completed by 20 Nov 1942. On 1 April 1946 the responsibility was handed over to the Canadian Army represented by the Royal Canadian Engineers.

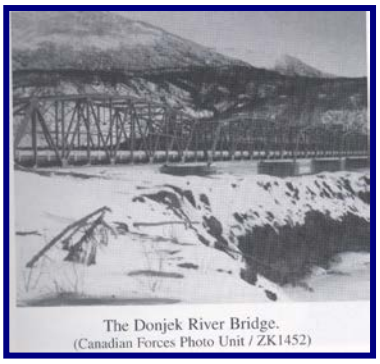
The military engineers transformed the road from a rudimentary route open only to military style vehicles to a first class gravel road. Major bridges were constructed over the Donjek, Slims, and Duke Rivers, 28 minor bridges were built and the road was widened to 24 feet. Maintenance crews, based approximately 50 miles apart, constantly patrolled the road and often rescued travellers in trouble.

The engineering staff learned to cope with permafrost, floods, avalanches, nalyeds, landslides, forest fires and a multitude of other problems. The collapse of the Peace River Bridge on 16 Oct 1957 was a major blow, but quick reaction by the engineers minimized the effects to the travelling public.

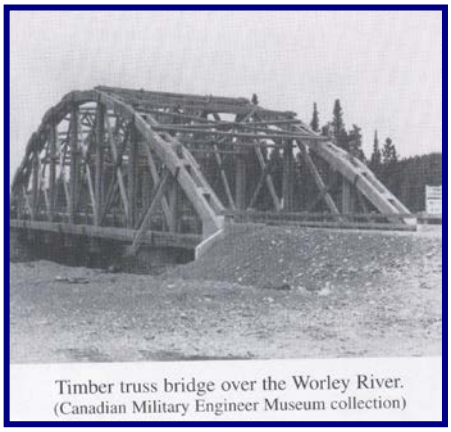
It was a sad day for the military engineers when the responsibility was transferred to the Department of Public Works on 1 April 1964, exactly 18 years after they had taken ownership of the original primitive road. Today the highway is paved and tourists in RVs travel over the bridges and roadbeds laid by Canadian Military Engineers.



Bailey Bridge by-pass constructed by 2 Field Squadron over the Pine River after collapse of the Peace River Bridge, October 1957. (Canadian Military Engineer Museum collection)



The Donjek River Bridge.
(Canadian Forces Photo Unit / ZK1452)



Timber truss bridge over the Worley River.
(Canadian Military Engineer Museum collection)

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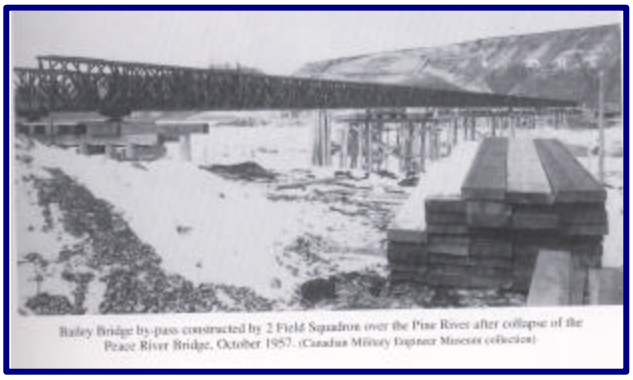

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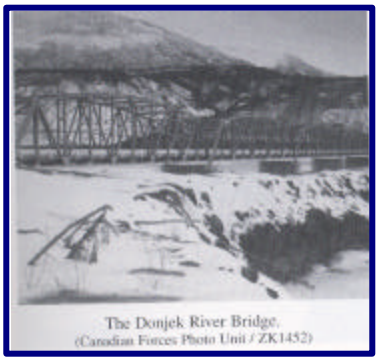

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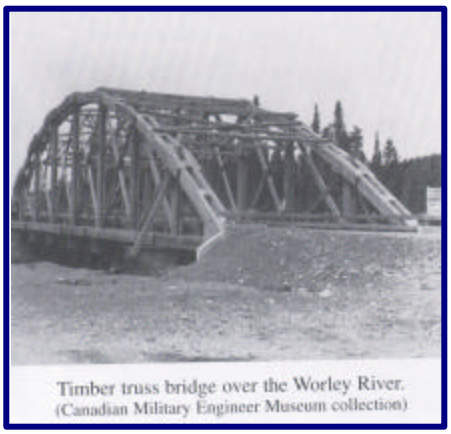


Timber truss bridge over the Worley River.
(Canadian Military Engineer Museum collection)

BAILEY BRIDGE RETIRED

After 50 years of service the main stay of the Military Engineers has earned a retirement with full military honours. It was in Tunisia in 1942 that the Royal Engineers first used the Bailey Bridge in an operational theatre. In Italy there were some 2500 Bailey bridges constructed to overcome the various obstacles encountered. Later during the Normandy landings, the Bailey Bridge, by now in use with all the Allied Armies, was essential in the advance to the Rhine.

After the war the Bailey remained in service and was adopted by the civilian sector. It saw service in many emergency situations in all parts of Canada, and was used by several government departments. The sight of Bailey bridges became common to the travelling public.

But age is as much an enemy of steel bridge members as it is with the sappers who built them. New technological developments superseded the Bailey and it was reborn as the Acrow bridge. This bridge employed the same principles as the Bailey but had some design improvements that made it more efficient.

There is one major difference. The Acrow bridge is designed for erection by mechanical means. The carrying handle is no longer an associated part of the bridging kit. In an emergency it can be built by hand but it requires a larger crew due to the heavier bridges components.

We salute this stalwart veteran, and all the sappers who built the bridge, which truly lived up the Military Engineer motto “UBIQUE”.

Figure 1 – ACROW under construction using heavy equipment.

Figure 2 - Bailey Bridge being decked manually.

THE BAILEY BRIDGE GETS A LIFT

The advent of winter in 1944 found the 21st Army Group and the 1st Canadian Army in particular, fighting amid the waterways of the lower Rhine. A multitude of bridges and rafts were required to provide a network of roads to supply the front line troops. The majority of these were floating bridges, which were now threatened by ice on the rivers and canals. Semi-permanent high level bridges were extremely expensive in both man- power and materials.

The area had a well-developed canal system for water born traffic moving bulk supplies. It was essential to restore this method to move the huge quantities of material needed by the Allied Armies. Low-level bridges and floating bridges were an obstacle to this form of transport. It was very cumbersome to break a floating bridge, let barge traffic pass, and to then reassemble the bridge.

As another option on 27 December 1944, the 20th Field Company RCE was ordered to construct Bailey Lift Bridges over canals at Turnhout and Bursee. The field company experimented with two different designs known as the “Jones” and “Tatham”, for 30 foot spans. On the 18 January 1945, the two were given an official test. The total time to raise and lower the spans was similar but construction factors favoured the “Jones” design. These bascule bridges, once built, were handed over to the Inland Water Transport RE for operation.

This is another example of the Canadian Engineers being used to develop new procedures to solve a problem.

ENGINEERS ON THE BATTLE RIVER

One of the characteristics of any engineer, and Military Engineers are no exception, is to take pride in the fruits of his labours. Thus when 1 Combat Engineer Regiment was asked to provide a temporary replacement bridge across the Battle River, near Wainwright, in February 1997, there was great anticipation in the unit.

A 200 foot bridge at Auburndale had been destroyed and it was decided to replace it with an Acrow 700 series bridge until a permanent structure was erected. It was planned that the operation would be conducted as a military exercise and work carried out on a 24 hour a day basis.

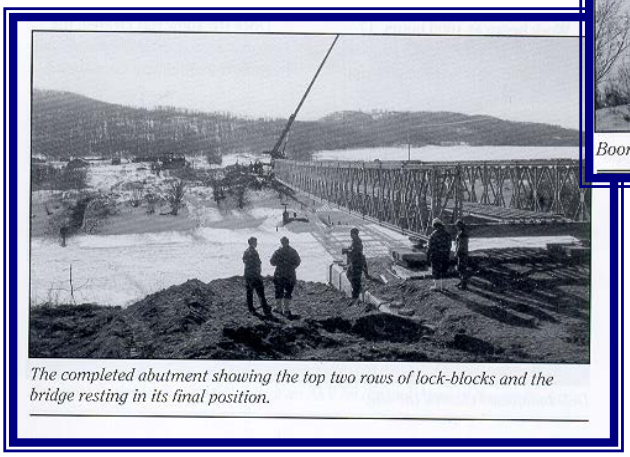
The first task was to remove the damaged steel structure. This was accomplished by cutting the steel into manageable size pieces and hauling it away. To accommodate the planned 60 metre Acrow bridge it was necessary to construct a new abutment on the north side. An interlocking concrete block system was used. Each block weighed two tonnes and was placed by a crane. The abutment was back filled with compacted soil.

The bridge was assembled on the south bank and launched using a D-7 dozer due to the weight of the structure. After jacking down and decking, a wearing surface and end dams were installed. Total elapsed time was 120 hours.

The bridge was handed over to a grateful Municipality of Wainwright. The unit packed up its equipment and proceeded back to base having left behind another example of the professionalism of the Canadian Military Engineers.

Manpower is often the most effective method, modern equipment notwithstanding.

Booming the bridge.



The completed abutment showing the top two rows of lock-blocks and the bridge resting in its final position.

LES INGÉNIEURS SUR LA BATTLE RIVER

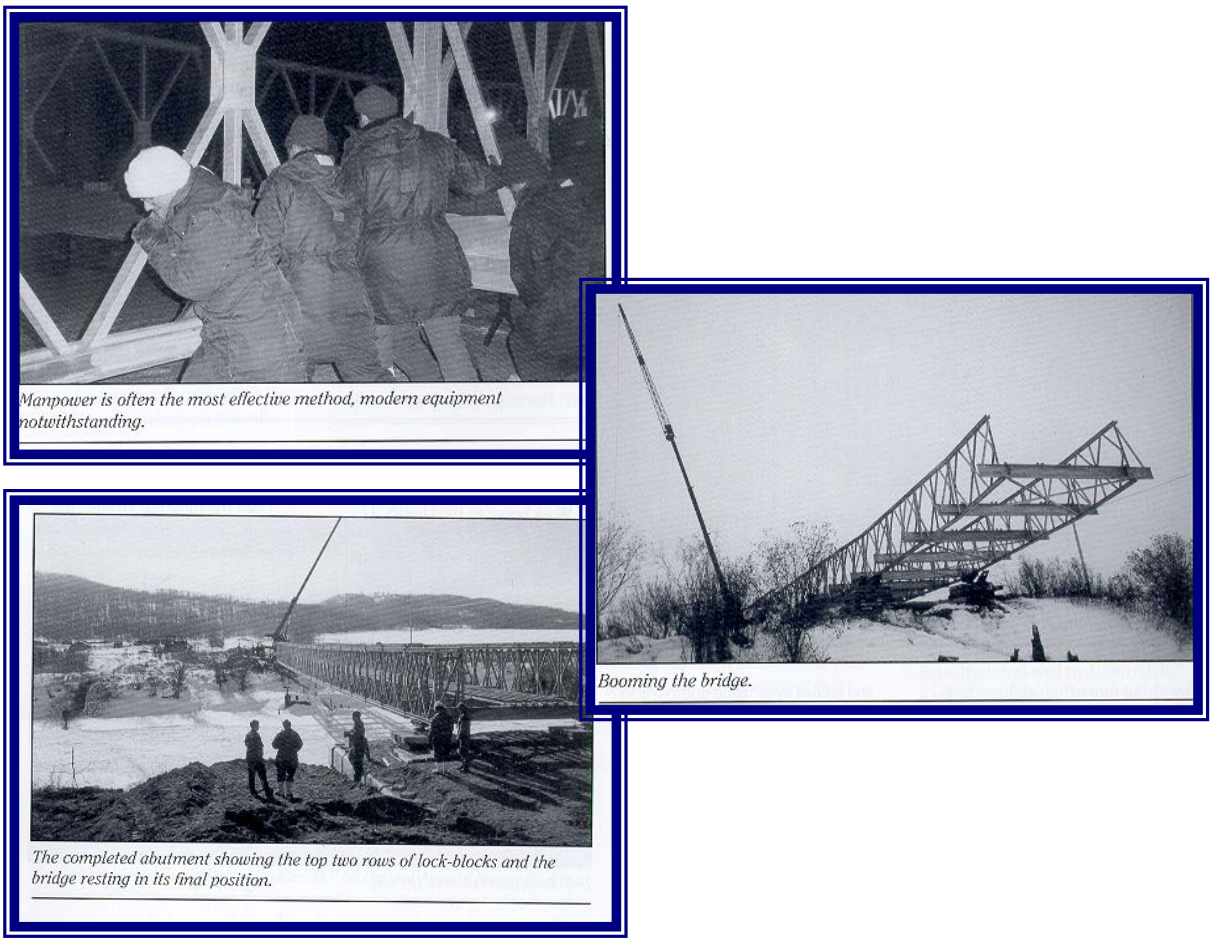
Un des traits caractéristiques de tout ingénieur, et les ingénieurs militaires ne font pas exception, est d'être fier des fruits de son travail. Ainsi, quand le 1er Régiment du Génie de combat reçu ordre de fournir un pont de remplacement temporaire sur la Battle River, près de Wainwright, en février 1997, ce fut un merveilleux cadeau pour l'unité.

Un pont de 200 pieds à Auburndale avait été détruit et il avait été décidé de le remplacer par un pont de série Acrow 700 jusqu'à ce qu'une structure permanente soit érigée. On prévoyait que l'opération serait conduite comme un exercice militaire et que le travail serait effectué 24 heures sur 24.

La première tâche fut d'enlever la structure d'acier endommagée. Ceci fut accompli en coupant l'acier en pièces de dimension raisonnable et en les enlevant une à une. Pour accommoder le pont Acrow prévu de 60 mètres, il était nécessaire de construire une nouvelle culée sur la rive nord. Un système de blocs de béton autobloquants fut utilisé. Chaque bloc pesait deux tonnes et fut posé par une grue. La culée fut remplie de terre compactée.

Le pont fut assemblé sur la rive sud et lancé à l'aide d'un bulldozer D-7 à cause de la masse de la structure. Après la descente au vérin et le surfaçage, une surface de finition et des butées de bout furent installées. Temps total écoulé : 120 heures.

Le pont fut remis à une municipalité de Wainwright reconnaissante. L'unité emballa son équipement et retourna à sa base en laissant derrière un autre exemple du professionnalisme du Génie militaire canadien.



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The completed abutment showing the top two rows of lock-blocks and the bridge resting in its final position.

BLACKFRIARS- LONGEST BAILEY BRIDGE IN THE WORLD

In March 1945 the Allied advance into Germany was in need of high capacity bridges to cross the Rhine. On March 25th, 2nd Canadian Corps Troop Engineers moved into position to construct Blackfriars bridge, a class 40 Bailey Pontoon Bridge at Rees.

Construction of 825 meters of new road was started immediately. Construction of the bridge began about noon on the 26th and was delayed due to slow delivery of stores and heavy fog. The length of the bridge was 1814 feet (558 m) including the ramps at each end. The 110 foot (34 m) landing bays were constructed to class 70 standard and the end floating bays were double single* to provide extra strength. The full floating section comprised 34 spans of 42 -foot length and 1 span of 32- foot length.

The home bank was assigned to 30th Field Company while the far bank was the responsibility of 29th Field Company. 31st Field Company was tasked with the construction of the floating bays. Each company was augmented by British pioneers. All told some 227 lorries of stores were man-handled and a total of 9242 man-hours were employed in constructing the bridge. The bridge was opened for traffic about noon on 28 March 1945, only two days after construction began.

The officer in charge of construction of Blackfriars bridge was Lt. W. F. Brunit from 30th Field company. He was awarded the Military Cross for his courage and leadership from the earliest reconnaissance until completion of the task.

*Note: Bailey bridge is constructed of panels each measuring approximately 10 ft in length. Double-single refers to the construction technique of putting two panels side by side to reinforce the bridge. A double-double configuration is also possible when four panels are used - two side by side stacked on another set of two. Bailey bridge is very versatile, the length of the gap and the loading requirements determine the bridge design.

Military Engineers Open Blue Heron Bridges

Abbotsford's hometown team of military engineers are celebrating the end of a delicate construction job as they officially opened two new bridges August 15th in the Great Blue Heron Nature Reserve.

The pair of 18-metre free-span bridges will close the loop on two sections of the Trans-Canada Trail that traverse the environmentally sensitive reserve. The 130-hectare site is home to over 90 Great Blue Heron nests, a variety of other wildlife and an interpretive centre. For the last 10 weeks, it's also been home to small groups of Abbotsford's military reservists working on behalf of the City of Chilliwack.

"We've gotten to know this beautiful area very well, and now with these bridges complete a lot more people should get the chance to see it too," says Capt. Dale Thingvold. Thingvold commands the 192 Airfield Engineering Flight, a team of 50 part-time military engineers headquartered in Abbotsford. He says working in the area's delicate ecosystem was one of his unit's more demanding assignments.

"We were overseen through the entire process by Scott Environmental Consultants, because we didn't want to put a foot wrong," Thingvold says. "The result, we think, is some of the most environmentally responsible construction anywhere."

Thingvold says his team remained in groups of six to eight in order to reduce their impact on the area. None of his engineers were allowed in the water, complicating the task of laying the huge bridges. Springtime flooding also delayed the project by several weeks, but Thingvold says the project was well worth it.

"Projects of this nature are what engineers are all about," Thingvold says. "It's good training for us, so when the Canadian Forces needs us we'll be ready. It also lets us give something back to the community, and that's another big part of why we're here."

The engineering flight is one of four such Air Reserve units in Canada. They are fully deployable military units, able to support Canadian Forces air operations anywhere in the world. In addition to construction, the AEF is trained to provide fresh water, utilities and explosive ordinance disposal. When not deployed, the units maintain their skills by providing free labour to local non-profit organizations.

BRIDGING THE GAP

Photo 1 - Engineers lifting a log into place much like ancient military engineers must have done

The military engineer has always been very much involved in bridging the gap. Throughout the course of history, armies have been faced with the problem of overcoming physical obstacles as they moved about. In the earliest instances they used stones placed in a stream, fallen logs, vines and locally available materials to provide a crossing.

With the advent of large armies, such as the Roman Legions, it became necessary for the engineers to construct more sophisticated structures. As armies began to employ more equipment and supplies the need for bridging of all types escalated. The military engineer has always been expert in rapidly deployable bridging. The speed with which a force advances, or retreats, is often a direct result of the ability of its military engineers to keep the crossings open. This was particularly evident in World War II.

Photo 2 - Medium girder bridge spanning a bombed section

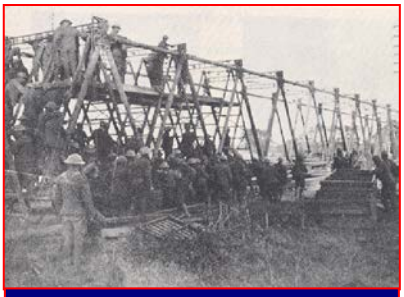


Photo 4 - Inglis bridge under construction, World War I

Military engineers have always been in the forefront of the development and use of new and better bridging equipment. The Inglis Bridge was a major innovation in World War I, but was inadequate for the heavier loads of mechanized equipment 30 years later. It was replaced by the Bailey Bridge in 1942. This equipment became one of the best known bridging systems in the world, due to its flexibility and ease of construction. Bailey bridges are not restricted to military uses.

Photo 3 - Bailey bridge deployed in the Former Republic of Yugoslavia

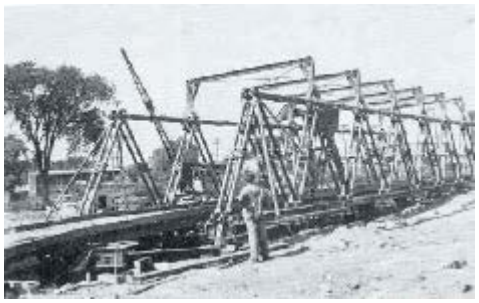
They have been used by highway authorities, forestry services and private contractors. Almost everyone has crossed a bailey bridge at some point on the Canadian highway system. Bailey has been used world wide by military engineers and for civilian emergency bridging. Unchanged for many years the Canadian Forces has now replaced the Bailey with a similar type of bridging made by Acrow.

Photo 5 - ACROW bridge under construction

Today's military engineer is trained in the use of all types of expedient bridging from simple wooden footbridges to equipment bridging designed to support today's heavy military vehicles. There is no task that is met with more enthusiasm by a military engineer than a request to "Bridge that Gap!"

BRIDGING TYPES EMPLOYED BY MILITARY ENGINEERS

1. Bailey- many references in the history to various types such as pontoon, suspension. lift, pile piers, semi-permanent, rafts, etc.Replaced by Accrow Ser 700



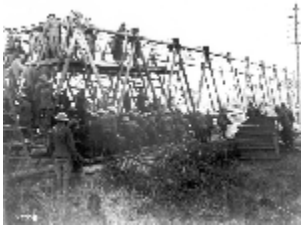
2.-Inglis- World War I bridging capable of 100 foot gaps using 12 foot sections. Limited in load capacity due to cumbersome upgrades.

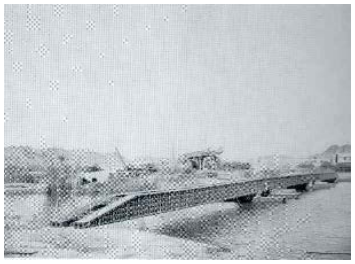
3- Folding Boat- light bridging for foot and loads up to class 9

4.- Infantry Assault- a floating bridge for foot traffic only. Used various median for floats such as kapok, folding boats etc.

5.- Box Girder- Built up members developed prior to WW II. Flag pole at Chilliwack used a girder from this bridge. Not widely used after Bailey developed.

6.-Olafson- locally developed bridge from welded pipe capable of carrying troops and jeep traffic in Italian sector.





7.-Light Alloy Assault Bridge- A magnesium / aluminum sectional bridge that could be used as a foot bridge or jeep traffic developed in Canada but never put into production due to the end of the war.

8.-Canadian Universal trestle-A Canadian development that was used to support floating Bailey when water levels were too low for pontoons. Came in 40 and 70 ton models. Used on the Rhine.

9.-Weldon Trestle-Used in WW I.

10.-Improvised Timber- Used timber, including pile piers, and bents combined with wooden or steel stringers. Larger bridges used wooden trusses.

11.- Steel trusses- Permanent bridges with concrete piers and steel trusses have been constructed on the Alaska highway, Donjek was largest, Dempster Highway etc.

12.-Reinforced Concrete- Used for short span bridges on the Alaska Highway.

13.- Multi-plate Arch Culverts- Used on Alaska Highway where high fill was needed to maintain the grade.

14. MGB (Medium Girder Bridge) – Equipment bridge quickly and easily deployed and disassembled.

15.-Expedient bridges- Use of oil drums, and other locally available materials to provide a bridge or causeway over a gap.

16. NSB (Non Standard Bridge) – Bridge constructed of steel stringers and timber with timber piers.

17. AVLB (Armoured Vehicle Light Bridge) – Bridge carried on a Leopard tank used for short temporary gaps.

18. Floating Bridge – various types have been used over the years and pontoons have varied. These bridges may be used as rafts to ferry vehicles across rivers or they may be anchored to both shores in a bridge configuration.

BRITISH COMMONWEALTH AIR TRAINING PLAN

Prior to the outbreak of WW II the British Government decided it needed facilities for the training of aircrew outside the United Kingdom. Canada, with its large land areas and clear weather conditions was the ideal location. A small group of pilots was dispatched to train in Canada.

The outbreak of the war in 1939 resulted in a decision to make Canada the location for all British Commonwealth aircrew training. The British Commonwealth Air Training Plan was signed in December 1939. The initial program called for the construction of 60 new sites and the expansion of 20 other locations. This was eventually expanded to some 230 sites, including 100 new airfields, 8300 buildings, 100 sewage treatment plants, 200 miles of electrical distribution, 80,000 horsepower of steam generation, and 300 miles of water lines.

The task of delivering this program fell on the Construction Engineering staff of the RCAF. Standard designs were prepared for hangars, barrack blocks and all other facilities. Construction was accomplished using civilian contractors supervised by Construction Engineering personnel. Following the completion of a station the contractors were then responsible for the maintenance of all the plant.

British Commonwealth Air Training Plan preparations in the Air Force Headquarters drafting room, 28 June 1940. (Canadian Forces Photo Unit / PMR79-133)

RCAF Station Dartmouth, September 1943. (Canadian Forces Photo Unit / REA132-53)

Many of the sites developed under this program became permanent Canadian Forces Bases or part of the network of commercial airports in Canada. In Prince Edward Island stations were established at Charlottetown, Summerside, and Mount Pleasant. The station at Summerside was retained by the RCAF after the war and remained in service until the 1990s. Charlottetown was transferred to the Department of Transport for use as a municipal airport.

The overall program was a great success and an outstanding example of the resourcefulness and skill of the Military Engineer.

The CD has found it's way around the world. Here are some of the comments we received:

from Afghanistan:

An American USO show was being held, and as has happened in the past some of the performers got to know and really enjoyed our fine Canadian engineers over there. So our guys took the copy of the Chimo CD and made a special request that some of it be played during the show (cause the boys over there are quite impressed) so it was, and the Engineers sung along loudly. It was the only "favour" of this sort done during the show!

"I RECEIVED THE CD - THANKS CHIMO! I LISTENED TO IT, THEN LISTENED TO IT AGAIN AND AGAIN. IT IS JUST EXCELLENT!"

Col Johan Van Der Colf of the South African National Defence Force

"It made me feel like marching around my office!"

Honourable W.M. Kelly, Canadian Senator

I received a copy of the CHIMO! music CD today from Ottawa. It's very well done. I'm impressed. ..... I took particular note of the inside back cover of the booklet accompanying the CD. A really nice display of badges representing the Engineers of all three former services. Very well balanced. ....

CWO Thivierge, CME

We hope that you enjoy the product selection that is currently available. If there is an item that you would like to see, for example ball caps, please e-mail us from the *Contact Us* portion of the site. Centennial memorabilia will be expanded based upon your input. Any other comments are also welcome.

CHIMO!

Nanette Fliesser
CME 2003 Communications Officer

NEW NEIGHBORS IN NEW BRUNSWICK

The advent of the Korean War, and the Cold War in Europe, resulted in a major change in the government's plans for National Defence. It would be necessary to maintain a much larger armed force than previously envisaged. This decision had a major impact on the Military Engineers.

The wartime camps with their spartan facilities would no longer suffice. Permanent buildings and accommodation for families were critical for a peacetime force. A major construction program was initiated to upgrade facilities to house the increased numbers. In many cases this also resulted in an expansion of an adjacent civilian community and there was often an integration of the two communities. In most cases there was a significant boost to the local economy when a Canadian Forces Base moved in.

There was a need for an additional base in the Maritimes. The ideal site would have a large training area with terrain similar to Europe and access to an ice free port. Gagetown, New Brunswick was selected as the site of the largest training area in the British Commonwealth.

Even the best run project is not without mishap

The Military Engineers became involved in all aspects of the development of the base. They were responsible for purchasing the land, designing the buildings and utilities, integrating the housing area into the town of Oromocto, constructing all the facilities, developing the training area (which included protection of civilian cemeteries), and forest management.

Gagetown, as with other bases across the country, became a major economic boost to the local area and has been fully integrated into the surrounding community.

The Canadian Forces School of Military Engineering is at it again!

This time the bridge builders are heading for Prince Edward Island to upgrade an old stone and steel railway bridge on the Trans Canada Trail. The engineers will arrive on 26 August and expect to be completed by 1500 hrs 29 August – at least that is when the BBQ is scheduled.

The upgrades to the bridge in Melville will allow the trail to extend between Wood Island and Uigg. The engineers will be using this project as a training exercise for students at the school. In the last year students from the School of Military Engineering have also built bridges in Guysborough County, NS and upgraded railway bridges in Cape Breton. This spring the staff of the school constructed a challenging equipment bridge at the Canso Canal in Nova Scotia. The school is living up to the engineer motto "UBIQUE" meaning everywhere.

Chimo!

Challenging A Ghost
CFSME Builds a Complex CME 2003 Bridge

From 13-17 May 02, staff from Field Engineer Training Squadron of Canadian Forces School of Military Engineering (FETS CFSME) took on a monumental task of constructing a 105ft manufactured steel girder modular bridge at Ghost Beach in Cape Breton, NS. This project was done as part of the Bridges for Canada initiative commemorating the Canadian Military Engineers Centennial celebration.

The construction of this bridge was considered by the Nova Scotia Trails Association as a cornerstone in the completion of the trail system within Cape Breton. Located at the mouth of Cape Breton Island, directly behind the Canso Canal/Coast Guard Complex, this site was not readily accessible to any type of large construction equipment with no land access to the far side at all. After efforts to have local contractors take on the project were unsuccessful, the provincial coordinator for the trails system contacted CFSME for assistance.

In May 2001, WO Michael McInnis conducted an initial recce of the proposed site and determined that the undertaking of this project would certainly be a challenge. Considering the restricted access to the site, he devised a very ingenious plan to construct the bridge in an alternate easily accessible location. A Medium Raft (barge) would be built and the bridge loaded onto it. The bridge would then be floated to the gap and lifted into place with 2 x 25 ton field cranes, one at each end of the bridge. Sounds simple, but when you factor in the weather and tidal action of the Atlantic Ocean for the Straight of Canso, putting the plan into action would be difficult.

On 13 May 02, 16 staff members of FETS deployed to Cape Breton under the command of OC FETS, Maj Paul Davies. Upon arrival, Project Coordinator WO McInnis gave them a walk through of the site along with a detailed brief on the concept of the project. The troops were shown the bridge for the first time; it had just been delivered from the company in Barrie, Ont. Day 2 started with assembly of the bridge along the Canso Canal located about 1 km from its actual final resting place. The weather seemed to start out nicely enough with the sun beaming down, but by mid morning it had taken a dramatic turn. Heavy rain poured down, the winds grew to gale force strength and the air became unbearably cold. Freezing rain, sleet and snow were next on the menu. All the elements for good bridging weather were present. This was our first taste of Murphy's Law and certainly would not be our last during the project.

Day 3 saw the construction of the Medium Raft and landing of the far bank crane. The bridge was then loaded onto the Raft ready for transport to the gap. Timing was critical to the operation. The Canal loading site could only be used between vessel crossings. This meant a minimum amount of time had to be taken in loading the bridge on the raft. The final positioning

of the bridge was dependant upon the tidal flow. The bridge had to be put in position during a 30-minute window to take advantage of the neutral tide. A current speed of 3-7 m/s made work in the gap impractical at any other time. After a few tense moments, the raft was maneuvered into place and the bridge was lifted off it with the two cranes. It was then slowly and carefully swung over the abutments and lowered down into place. The crane was recovered from the far side and the Medium Raft was removed from the water, while the home side crane placed the deck modules. By early evening, the bridge was completed. Maj Davies and WO McInnis could finally breathe a sigh of relief for both had gained a few gray hairs since the start of this project.

This is the 16th bridge, totaling over 1200 ft that CFSME has completed along the Trans Canada Trail as part of its contribution to the CME 2003 initiative. Looking forward, several more bridges in PEI and NS are scheduled for the fall timeframe.

CHIMO!!!

ENGINEERS AND ALL SAINT'S CHURCH

The arrival of large numbers of troops in the United Kingdom, during the first years of World War II created a crisis in accommodation and training facilities. The Canadian Engineers found themselves involved in constructing barracks, training areas, roads and airfields. Even the divisional engineers, whose primary activity was training for operations, were tasked with the construction of their own barracks and other facilities.

Some of the specific tasks involving Canadian Engineer units included: construction of coastal defences; reassembling wooden assault landing craft shipped from Canada in sections; erecting camouflage nets to cover flotillas of small craft; construction of an anti-tank range; constructing a replica of German defensive works for demolition training; building roads in an artillery camp in Wales; conversion of a camp for hospital use and the erection of many barracks.

In keeping with the tradition of the Military Engineers to help others in need, a detachment of 1st Canadian Troops RCE undertook the reconstruction of All Saint's Church, South Merstham, near Redhill. The church had been destroyed by bombing. The sappers salvaged the stones and timbers from the original church and built a new one. The church was dedicated by the Bishop of Southwark on 25 April 1943.

This is but one of many similar projects undertaken by our engineers that earned the goodwill of the local populace. The staff had become very adept at cutting red tape to enable these projects to proceed. The public relations fall out was very positive and our sappers were held in high esteem locally.

Engineering Closure of Camp Normandy

By MCpl Jackie Wall (1 SET)

Late this summer 1 Specialist Engineering Team (1 SET) from 1 Construction Engineering Unit (1 CEU) was tasked to manage the decommissioning of Camp Normandy in Bosnia. While dismantling a camp can appear to be an easy task, doing so safely and cheaply while salvaging materials is more complicated.

On arrival the Camp appeared to be inhabited by more personnel and equipment than expected, and torrential downpours made us question our project schedule. The next days reassured us that personnel numbers were in fact dwindling and with the arrival of the Naval Construction Troop from Halifax on 12 September the weather took a turn for the better.

This Construction Engineering troop was the "prime contractor." Their sweat would ensure the timely completion of the project while 1 SET coordinated contracts and support. Planning and diligence paid off as we quickly got ahead of schedule. The Camp mostly consisted of ISO Containers – 350 total. As the NCT swept through dismantling roofs, walkways, electrical and plumbing services, these containers were transported to a storage area 3 hours north.

With only heavy equipment work remaining, the NCT departed 18 October. Days later the perimeter defensive works were leveled and the SET left for home. The dismantling of Camp Normandy was a success due to the hard work and dedication of all of the members of the TAV.

Camp Normandy (Photographer unknown)

Soil Removal from the TDM (Photographer WO Connolly, 1 CEU)

Dismantling of the Maintenance Building (Photographer, WO Demeria, 1 CEU)

Medals Parade with TFBH Comd and RSM (Photographer unknown)

MILITARY ENGINEERS AT THE THROTTLE

In 1943 the United Kingdom renewed its request for Canadian Railroaders . The request was fulfilled when No ! Railway Operating Group RCE was established on 19 Mar 1943. The units were formed mainly from employees with the Canadian Pacific and Canadian National Railways. The unit embarked for England on 23 July 1943.

The tasks of the group covered all aspects of railway operation from constructing and maintaining rail roads, operating trains, controlling scheduling and signaling, repairing and rebuilding rolling stock. As the equipment they were expected to operate was of British manufacture, the initial stage of their employment was to learn the technical aspects of railroading in England . □□□ÕThis included learning to hand stoke the fire box of a locomotive as most Canadian equipment had automatic stokers.

The first elements of the unit arrived in France on 2 Sept 1944. They moved forward with the advance creating a reliable operating rail system to supply the mass of stores needed to support the Allied Armies. Local French, Belgian, and after the cease fire,German railroaders were pressed into service as the rail lines extended eastward into Germany. The Railway Workshop Company had assembled 6000 railway wagons when they ceased operation on 31 Aug 1945.

The group became involved in the move of thousands of displaced persons following the cessation of hostilities.

The magnificent effort in support of the Allied Armies ended on 13 Oct 1945 when the group was disbanded. To commemorate their role a stained glass window was unveiled in the Garrison Church at Longmoor in 1948.

Picture page 491 Vol II The History of the Corp of Royal Canadian Engineers

CMU TURNS SIXTY / 1 CEU TURNS FORTY

The Canadian Military Engineers have historically been known for their ability to perform under diverse and difficult conditions in support of all branches of service, their country, the commonwealth and more recently in United Nations and NATO operations. 1 Construction Engineering Unit (1CEU) which in 1962 succeeded the Construction & Maintenance Units (CMU) which at one time numbered ten and consisted of more than 7000 members is one of the distinct and noteworthy units of the CME branch. This unit has excelled in providing such support preserving a proud tradition of technical and operational excellence and dependability.

As a result of downsizing of units and personnel following World War II, 2 CMU remained the one and only such unit by the end of 1949. While still headquartered in Calgary the unit's emphasis remained on the implementation of construction and rehabilitation projects. By 1960 this function did not fit then current and future RCAF construction engineering requirements. Once again this resulted in another reorganization and functional change in construction capability in the engineering field. As a result, effective 1 Apr 1962, and in keeping with its new role the name of the unit was changed to 1 Construction Engineering Unit. The unit was moved to Winnipeg in 1964 where it remained as a lodger unit to CFB Winnipeg until 1995. Once again it grew itchy feet as so many of its members do and moved to its present home at Garrison Moncton a detachment of CFB Gagetown.

A national level operational field unit in the DCDS Group under functional control of J3 Engr, 1 CEUs mission is to provide specialist and general engineering support to the Canadian Forces and Canada anywhere in the world. The year 2002 will mark the 40th anniversary of 1 CEU and the 60th anniversary of the first CMU, which was stood up 9 Nov 1942. The unit is presently planning anniversary celebrations to commemorate this date and extends an open invitation to all fellow CME family, previous unit and associated honoured members to join in the celebrations.

Details of all planned and scheduled activities follow:

8 November 2002

Moncton Freedom of the City Parade and Medals Presentation.

BBQ at the Beaver Curling Club. Cost $5.00 per person.

Curling Sports Afternoon. Cost $5.00 per person.

Meet and Greet at the Beaver Curling Club. Cost $10.00 per person.

9 November 2002

Riverview Freedom of the City Parade.

Dieppe Freedom of the City Parade.

Static Displays at 1 CEU, Building 47, Moncton Detachment.

Dinner & Dance at the Howard Johnson, Moncton. Cost $30.00 per person.

10 November 2002

Family Brunch at Annex, Moncton Detachment. Cost $5.00 per person.

FOR MORE INFORMATION:

Mail: 1 CEU 60th Anniversary Committee
1 Construction Engineering Unit
PO Box 6100, Stn LCD 1
Moncton, NB
E1C 9L4

Web Site: http://personal.nbnet.nb.ca/ppleput
Telephone: CWO Denis Durand at (506) 851-0550 Ext. 0440
or Sgt Michel Jaillet at Ext. 0425.

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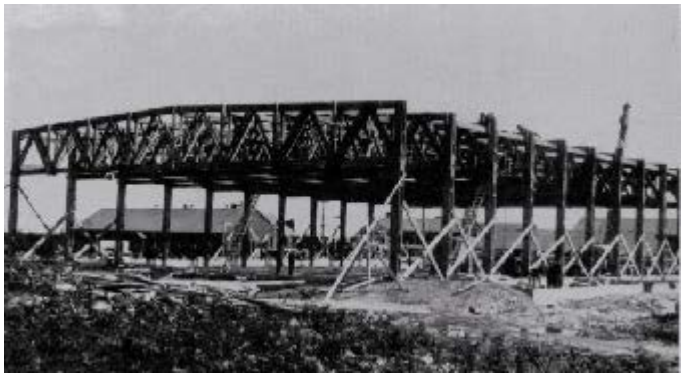
Chimo !!!

RCAF Engineer Contributions on the Homefront

Wartime expansion for the Royal Canadian Air Force took place at a pace and scale that is difficult to imagine today. At the start of the war, there were only six operational air stations to support the large number of Home War Establishment units that had to be rapidly expanded and mobilized. There was, therefore, a huge requirement to quickly complete land and seaplane hangars, runways, ammunition depots and other essential facilities on both coasts. In Eastern Area Command, for example, the only operational base was a seaplane base near Dartmouth yet, in less than three years, 133 hangars had been constructed in this area, alone.



Constructing a Hangar for the Air Commonwealth Training Plan

No one envisioned the incredible scale of construction that was required to fulfil Canada's contribution to the British Commonwealth Air Training Plan. The initial agreement called for 74 schools that would be capable of turning out 21,500 aircrew every four weeks. These facilities were required by the end of April 1940, less than four months after the formal signing of the agreement. From 1939 to 1944, more than 100 new airfields and 8,300 buildings were erected. As the result of this incredible effort, the construction of entire aerodromes, including buildings and hard surfaced runways, was often completed within eight weeks of arrival at a virgin site. Due to wartime restrictions on the use of steel, many of the structures were built with non-reinforced concrete columns and wooden trusses. Considered to be temporary wartime construction with a planned life expectancy of only five years, the fact that some of these structures are still in use today is testimony to the excellent design and construction skills of the Canadian military engineers.

The new facilities also presented a tremendous demand for utilities and, due to the isolated nature of many of the stations, much of the power and water had to be produced locally. The power plants, heating systems and water and sewerage systems were operated by a combination of Air Force construction tradesmen and civilians. Seventy-five electric power plants were designed and built, more than 500 kilometres of water mains were installed and 120 water-pumping stations constructed.

The Royal Canadian Air Force Home War Establishment demand for infrastructure had to be met at the same time as those of the British Commonwealth Air Training Plan so new and innovative ways had to be found to expedite this massive construction undertaking. One of the most urgent requirements was the construction of wireless telegraph, direction finding, and radar sites in isolated communities. Civilian contractors were seldom available to build and maintain facilities in remote locations or were not

able to meet security requirements, creating a need for mobile construction and maintenance units that could deploy on short notice to undertake projects in remote areas. This led to the formation of the Construction and Maintenance Units (CMUs) that were composed of service personnel in the construction trades, heavy equipment operators, mechanics and support personnel.

By the end of the war, seven Construction and Maintenance Units were deployed across Canada and played a central role in the construction of wharves, jetties, roads, runways and hangars. They also carried out the rapid construction of radio direction finding stations in remote areas, laid communications landline, erected telephone poles and cables and constructed railway lines. In the face of the threat of Japanese raids against North America, Construction and Maintenance Units were also involved in building the joint Canada/US Northwest Staging Route from Edmonton, AB to Fairbanks, Alaska. The air route was designed to transport aircraft and supplies from the continental United States to Alaska and consisted of a chain of aerodromes with intermediate landing fields at 100-mile intervals and radio ranging stations at 200-mile intervals. The project started early in 1941 and within seven months aircraft were flying from Edmonton to Whitehorse. At about the same time, construction started on the series of radar stations on both coasts, with emphasis on the Atlantic seaboard. Construction of the coastal radar installations was extremely demanding due to the remote and difficult sites but eventually more than 40 sites were operational on both coasts. Although enemy aircraft rarely put in an appearance, the radar sites were indispensable for aircraft control and navigation. The construction experience gained in meeting the demands of these projects prepared the Air Force construction engineers for similar challenges in the future.

DÉBARCADÈRE SUR LE WEST ARM.

Des membres du 44th Field Engineers rassemblent les pontons du côté nord du West Arm mardi après avoir terminé leurs exercices d'entraînement.

- PHOTO BOB HALL

Le 44th Field Engineers pratique sur le lac Kootenay

PAR BOB HALL, NELSON DAILY NEWS

Le West Arm a été transformé en une zone sinistrée plus tôt cette semaine alors que le 44th Field Engineers se lançait dans les eaux glacées du lac Kootenay.

De lundi matin jusqu'à mardi après-midi, les équipes de la Réserve de la région de Trail ont pratiqué la construction d'un traversier et le transport de gros camions sur les eaux houleuses du West Arm.

« Une partie de notre travail est de pratiquer pour des situations possibles de sinistre » a indiqué le major Brent Warne.

Les 30 hommes et femmes du 44th Field Engineers ont relié des pontons et construit des traversiers en utilisant de l'équipement d'une valeur de 4 millions $ amené spécialement aux Kootenays de la base militaire de Wainwright, Alberta. L'équipement a été tout récemment utilisé par les militaires lors des inondations du Manitoba à la fin des années 1990 pour aider aux efforts de sauvetage et de reconstruction au cours de ce désastre naturel dévastateur.

Les réservistes locaux ont débuté sur les eaux relativement calmes du lac Kootenay et se sont dirigés aujourd'hui vers la rivière Colombia près de Castlegar. Ils termineront avec les eaux les plus difficiles de la région plus tard cette semaine alors qu'ils descendront la rivière Columbia juste au sud de Trail.

C'est la première fois que ce type d'exercice est effectué dans les Kootenays depuis 1992.

« Nous devons nous entraîner à ceci sur une base régulière au cas où le besoin surviendrait au cours d'une situation d'urgence » a indiqué Warne en ajoutant que si l'équipement était nécessaire dans les Kootenays, il serait opérationnel dans les 24 heures.

Bien que l'idée n'était pas de pratiquer pendant une tempête de neige, Warne a indiqué que la météo de mardi ajoutait à l'adversité qu'il pourrait devoir affronter dans une situation réelle.

Il a mentionné que « La météo a été un défi supplémentaire ». L'équipement ne s'assemble pas bien dans ce type de froid. Mais si vous pouvez le faire dans ces conditions, vous pouvez le faire en tout temps. »

Cet été, le 44th Field Engineers accueillera des soldats des Etats-Unis et de l'Angleterre pour un exercice beaucoup plus important qui fera usage des pontons.

WEST ARM LANDING. Members of the 44th Field Engineers tied off the pontoon on the north side of the West Arm Tuesday after finishing training exercises.

— BOB HALL PHOTO

44th Field Engineers practice on Kootenay Lake

BY BOB HALL, NELSON DAILY NEWS STAFF

The West Arm was transformed into a mock disaster area early this week as the 44th Field Engineers took to the frigid waters of Kootenay Lake.

From Monday morning until Tuesday afternoon, the Trail-based crew of reserves practiced building a ferry and transporting large trucks over the choppy West Arm waters.

"Part of our job is to practice for potential disaster situations," said Major Brent Warne.

The 30 men and women of the 44th Field Engineers linked pontoons and built ferries using $4 million worth of equipment specially brought to the Kootenays from the military base in Wainwright, Alberta. The equipment was most recently used by the military in the Manitoba floods in the late-1990s to help in the rescue and rebuilding efforts during that devastating natural disaster.

The local reserves started on the relatively calm waters of Kootenay Lake and today moved onto the Columbia River near Castlegar. They will finish with the roughest waters in the area later this week when they move down the Columbia River just south of Trail.

It's the first time this type of exercise has been carried out in the Kootenays since 1992.

"You need to practice this on a regular basis in case the need arises in an emergency," said Warne, adding that if the equipment was needed in the Kootenays they would be operational within 24 hours.

Though the idea was not to practice during a snow storm, Warne said Tuesday's weather added to the adversity they may face in a real situation.

"The weather was a bit of a challenge," he said. "The equipment doesn't go together well in this type of cold. But, if you can do it under these conditions you can do it anytime."

This summer the 44th Field Engineers will host troops from the United States and Britain for a much larger exercise using the pontoons.

CORPORAL CLAUDE ALBERT RADLEY, 18 Field Company RCE

Corporal Claude Albert Radley was born in Winnipeg MB on 26 Nov 1917. He spent his childhood years in Speers, SK where he received his early schooling. He was the winner of a Provincial Gold Medal for scholastic efforts. He also exhibited the usual ingenuity and mischievous actions of a farm boy including constructing a crystal radio. He entered UBC in 1936-37 but his studies, as with many of his generation, were interrupted by the depression and the outbreak of World War II. After working at a number of jobs, he enlisted in the Canadian army and became a member of 18 Field Company RCE in 1941. He served in England, where he wrote the poem Salute, and was promoted Corporal. Due to a medical problem he was discharged on 3 May 1944.

Following a period of convalescence he joined the staff of Veteran¹s Land Act as a clerk in 1949. His talents were quickly recognized and he was awarded two Civil Service Suggestion Awards. He transferred to the Farm Credit Corporation in 1960 and retired as Chief of Systems Development in 1974. He was instrumental in the introduction of computers and many other administrative initiatives that enhanced the operation of the corporation. His boss, Brig T.J. Rutherford, was very lavish in his praise at the time of his retirement.

Corporal Radley died in White Rock BC on 10 Aug 1996, leaving behind a widow and eight children.

ENGINEERS IN THE"DIRTY THIRTIES"

The year 1929 ushered in the start of a decade that became known as the "Dirty Thirties'. Large scale unemployment and a disastrous drought on the prairies created severe hardship in the country. The Federal Government, recognizing that the problem was beyond local control, initiated the Unemployment Relief Program in 1932. The Department of National Defence was delegated responsibility for the administration of the projects.

The majority of the projects involved construction, therefore the Royal Canadian Engineers became the Office of Principal Interest. The strength of the RCE had been reduced to a skeleton force following demobilization after World War I. Despite the limited resources, they supervised the projects that employed unskilled labour. Typical projects included airfield construction, fortification repairs, highway construction, forestry operations, and barrack and training area construction. The estimated value of these projects at the time was $18,213,091 with gross expenditures of $24,517,012. Employment and experience was provided for over 170,000 workers.

Dundurn, a 26,000-acre forest reserve that had been transferred to DND in 1932, was a typical camp construction project. Hutted accommodation and training areas were established and Dundurn became an Engineer Training Centre prior to the opening of Camp Chilliwack in 1942. Many of the facilities built by the Unemployment Relief Program are still in use today, for example Petawawa, Valcartier, and Shilo, are all Canadian Forces sites that were part of the program.

In 1934 the administration, management, construction, and erection of large projects that had been handled by Department of Public Works was transferred to DND (RCE). The experience gained from the relief program was vital to the success of the massive construction program required to mobilize the Armed Forces in 1939. The skills have been passed on and are present today in the Construction Engineering Sections on all Canadian Forces Bases.

DOUBLE TROUBLE ON THE ROUGE RIVER

On 15 October 1954 Hurricane Hazel drenched the Toronto area with 21 cm of rain. There was widespread damage and many bridges were washed out including two on the Rouge River in Scarborough. The Lieutenant Governor called out the Militia and 2 Field Engineer Regiment was mobilized to help.

1984 reunion of Sappers who built "Double Trouble"

Reconnaissance of the Steeles Avenue bridge found the abutments in place and the site suitable for a Bailey Bridge, however, the Finch Avenue site presented problems. The north abutment was damaged. If it could be repaired a 150 foot double single Bailey would span the gap.

Bailey bridging was ordered from Ontario Hydro and fill was arranged from municipal sources. Construction commenced on 20 October and the Steeles Avenue bridge was opened for traffic by the afternoon of 21 October.

On 20 October at the Finch site a troop from 1st Field Squadron Chilliwack, with Toronto's 2 Field and municipal employees commenced work. The north abutment had by this time failed increasing the gap to 190 feet. It was decided to construct a timber pile trestle in mid stream. A pile driver was obtained from a local construction site and timber from the municipality. By working under lights the trestle was completed and the bridge was opened on 22 October. It was named "Double Trouble" by all involved due to the setbacks experienced on the project.

This bridge is still in operation today, although the municipality replaced the wooden deck with steel mesh and upgraded the trusses to triple single.

The bridge today.

Dutch to Build "Bridges for Canada"

On 03 June 2002, approximately 80 Dutch military engineers, commanded by Major Sebastain van den Berg, will visit Canada to participate in "Bridges for Canada." Hosted by 4 Engineer Support Regiment in Gagetown, New Brunswick, the plan is to build two bridges along the Trans Canada Trail in the Edmunston – Grand Falls area of New Brunswick. One bridge will be a steel and timber bridge while the other will be a Bailey Bridge that the Dutch have generously donated to the local community.

"Bridges for Canada" is a program developed in partnership with the Trans Canada Trail Foundation to help celebrate the Centennial of the Canadian Military Engineers. By the end of 2003 the engineers will have constructed a string of bridges in every province and territory, connecting Canadian communities along the world's longest recreational trail. "Bridges for Canada" is a unique opportunity for the military engineers to improve their skills and provide a benefit to all Canadians. The Netherlands is the first foreign engineer corps to contribute to the program, but American, British and German military engineers have also expressed interest.

The official opening of the Dutch built bridges will be on 15 June 2002 followed by a BBQ in the Grand Falls area hosted by New Brunswick Dutch Community and 4 Engineer Support Regiment. Honoured guests will include the Netherlands' Consul from Montreal Mr. André Brouwer, the Netherlands' Military Attaché, Lieutenant Colonel Leo van den Heuvel, the Premier of New Brunswick, the Lieutenant Governor of New Brunswick, Brigadier General Mitchell, Commander of Atlantic Area, Mr Georges Rioux from the Department of National Defence, and Mr. Cecil Freeman Chairman of the Board of the Trans Canada Trail Foundation.

During their stay in the Gagetown area the Dutch and Canadian engineers will participate in several kinds of military cross-training. Of course there will also be time for some fun, and a sports day supported by the New Brunswick Dutch community is planned for 08 June. Before they depart on 24 June 2002 the Dutch engineers will conduct some cultural tours in New Brunswick and experience the Canadian wilderness up close through adventure training.

Both 4 Engineer Support Regiment and 11(NL) Armoured Engineer Battalion are looking forward to the partnering. Logistics problems, command and control difficulties, language differences, and interoperability discrepancies will make it a very interesting and challenging operation for both engineer units.

Dutch to Build Bridges for Canada

By LtCol Ronald Harmsma, CO 11 (NL) Armoured Engineer Battalion

In June 2002, approximately 80 Dutch military engineers will visit Canada to participate in "Bridges for Canada." A reconnaissance party from 11 Armoured Engineer Battalion, Netherlands discussed all the necessary arrangements while visiting Canada during the week of September 24th. Hosted by 4 Engineer Support Regiment (4 ESR) in Gagetown, New Brunswick, we discussed options and possibilities, and took a closer look at the proposed bridging sites.

The plan is to build two or three bridges along the Trans Canada Trail in the Edmunston – Grand Falls area of New Brunswick.

We will, in all probability, bring a Bailey Bridge from the Netherlands and donate this bridge to one of the communities. During our stay in the Gagetown area we will also do several kinds of military cross-training with units from 4 ESR. Combining "Bridges for Canada" with the celebration of the Centennial of the Canadian Military Engineers, makes for a unique opportunity to improve the skills of the involved engineer units.

Both units, 4 ESR and 11(NL) Armoured Engineer Battalion, are looking forward to the partnering. Logistics problems, command and control, language difficulties, interoperability, etc. make it a very interesting and challenging operation for both engineer units.

Tot volgend jaar ! !

Royal Netherlands Army Engineers leave their mark

On 03 June 2002, 72 military engineers from 11 Armoured Engineer Battalion (Netherlands) arrived in New Brunswick, their aim was to complete some training at CFB Gagetown with 4 Engineer Support Regiment (4 ESR) of the Canadian Military Engineers. In honour of the Canadian Military Engineer Centennial they also constructed two bridges along the Trans Canada Trail, one in St. Leonard and another in Ste. Anne de Madawaska.

The joint training went well with the highlights being demolition training and working with 4 ESR's portable lumber mill. Due to the density of population in the Netherlands and the limited forested areas these activities were unique opportunities for the Dutch engineers.

The second phase of the visit was to construct two bridges on the Trans Canada Trail for the "Bridges for Canada" program. "Bridges for Canada" is a three year cooperative between the Trans Canada Trail and the Canadian Military Engineers. Engineers volunteer their time and expertise to bridge the gaps in the 16000 km trail that cuts through every province and territory.

The Dutch brought their own Bailey Bridge to leave in New Brunswick. The 43 m steel bridge has a capacity of 40 tons and was transported from the Netherlands in 16 sea containers. This huge gift to the province was acknowledged at the opening ceremonies by the honourable Percy Mockler, Minister of Transportation for the Province of New Brunswick.

The second bridge is much smaller and is constructed of timber provided by the New Brunswick Trails Council. The engineers were thrilled to be able to use some of their own timber that they had cut and milled the previous week in the training area of CFB Gagetown. Finding an idle moment the Dutch engineers helped to remove some unsafe fencing and a gazebo in a local school playground.

The Bridge opening ceremonies were held on 15 June 2002 at the site of the large Bailey Bridge. Officiating at the ceremony were: Honourable Percy Mockler - Minister of Transportation and MLA Madawaska-la-Vallee; Mr. André Brouwer - Consul General for the Netherlands; Lieutenant Colonel Leo van den Heuvel - Military Attaché for the Netherlands; Mr. Cecil Freeman – Chairman of the Board Trans Canada Trail Foundation and Colonel Christian Rousseau – CME Branch Representative.

Following the official ceremonies the Canadian and Dutch military engineers proceeded with their own customs. The Dutch brought with them the traditional dress of a regimental camp follower dating back to the regiment's origin 250 years ago. A Canadian engineer – Sapper Houk – had fun dressing up and serving the traditional brandy from the cask she carried with her. The Canadians had some fun throwing the bridge commander - Second Lieutenant Meulstee - in the water in true Canadian engineer tradition.

Many Canadians are aware of the close connection between Canada and the Netherlands dating from the Second Word War. The people of the Netherlands have never forgotten the Canadian soldiers that marched in to liberate them from many years of occupation. The Canadian veterans who fought in Holland have a very special place in the hearts of all Dutch people. It was a great honour for the Dutch when several veterans from the area turned out to the bridge opening. This was made more special when the sappers were all invited to the local Legion and Lieutenant Colonel Leo van den Heuvel , the military attaché, presented a friendship medal to one of the veterans.

The bridging portion of the visit was wrapped up with a BBQ hosted by the local New Brunswick Dutch community. The Dutch sappers are now off on a hiking adventure through the New Brunswick wilderness – and no those are not birds – those are mosquitos!

A Lesson from History for East Timor

Following the unrest in East Timor in 1999, the Canadian Government committed the Department of National Defence to provide troops to help stabilize the situation.

Canadian Military Engineers were tasked with providing facilities to accommodate the land force elements. This set in place a procedure to analyze the problems, develop a viable solution, and implement the construction. East Timor is a tropical island subject to heavy monsoon rains, high humidity and high temperatures. A facility where the individual soldier could be kept dry and protected from insects, with access to potable water and sanitary ablution facilities was required.

The planners turned to history for a solution. The US Navy Seabees had developed a structure known as a “Stilwell Hut” that had proven suitable during World War II. The structure featured elevated floors, screening that allowed ventilation as well as insect protection, and a sheet metal roof. This was used as a model for the Canadian solution.

Canadian military engineers chose a steel framework hut with a minimum of wooden parts, a reverse osmosis water treatment plant (a Canadian invention), and a septic field for sewage disposal. The septic field eliminated the breeding ground for mosquitoes that a sewage lagoon would have provided.

The distance involved would have made shipping material from Canada very expensive. Most of the materials were available in Australia and maximum use was made of these sources. The result was that the camp was completed at less than half the cost and more quickly than originally estimated. The completed camp was the envy of the other elements of the multi-national force and was considered a “force multiplier” by the mission commander – another coup for the military engineers.

Bosnian-Canadian Soldier Returns To Keep Peace In Homeland

By 2Lt Aida Hakirevic

2Lt / Slt Hakirevic

ZGON, BOSNIA-HERZEGOVINA - Many people ask me, someone with a Bosniac last name, how I became a second-lieutenant serving on a peacekeeping NATO mission. Well, here's my story…

I was born in Visoko (30 km northwest of Sarajevo), a place many Canadian soldiers know from Operation *CAVALIER* 1993-1995. I was 16 years old when the war broke out, changing my life forever.

Although Visoko never became a besieged city like Sarajevo, it had its share of shelling and sniper alleys. Ceasefire agreements were rarely respected, making the bloodshed even worse. People took risks, walking on the streets to get water, visit relatives, buy food, pick up humanitarian aid rations or chop wood for the winter months. Those streets could turn into deadly ground at any moment from the beginning of the war in April 1992 until it ended in 1995.

It is in human nature to be scared and angry, unable to comprehend the chaos, but this drove me to find a better future. In 1993, I became an interpreter with CANBAT 2.

Having a job meant sanity. Earning an income meant food on the table for my family. However, the job came with certain challenges. Perceptions of interpreters varied from faction to faction, civilian or military. Unpleasant situations were common, and we all learned to live with them. Incidents ranged from ceasefire violations to hostage situations and casualties.

At the time, the UN mandate failed to provide the peacekeepers with the tools needed for the mission. After all, there was no peace to keep. Being aware of these facts brought endless frustration and forced me to move on no matter what.

One-way ticket out of Bosnian hell

After a year with the Canadians, I had made friends and valuable contacts. They all encouraged my intention to emigrate, and in 1994, the Canadian Embassy in Vienna approved my one-way ticket out of Bosnian hell - a landed immigrant visa.

I arrived in Montréal in October, determined and lucky. A family, who had only stories and a photo of me to go on, opened their house to me as if I were one of their own.

Trying to put certain things behind me and start a new life in a new country was easier than I expected. The real difficulty was the inevitable guilt I felt day after day for living a dream, while my family was still trying to survive.

Slowly, I began to integrate into my new society. Continuing school was my number one priority, and before I knew it, I was in CEGEP (General and Vocational College) studying Pure and Applied Science. During this time, I joined the Reserves and was a sapper by the end of summer 1996 with 3rd Field Engineer Regiment.

Next was university. Four years at McGill meant not only an education, but also a full integration in one of the ethnically richest social environments in the world. It felt very different being

welcomed in such a complicated environment without the slightest bit of rejection or discrimination. Today, I have friends whose families come from as far away as China or Australia and as close as Poland or Italy.

Going back

Unfortunately, times are still hard in Bosnia, and it will take generations to undo what was done during this senseless war. Political turmoil is still strong, as we here are all witnesses to. The high unemployment rate is causing a depletion of young minds with fresh outlooks, leaving an even greater generation gap in this country.

I am often asked if I would ever return to live here. It is not easy to let go of one's roots and memories of 18 years, but when those memories are clouded by war, discrimination and knowledge of a corrupt system, both my heart and mind say 'no'. I realize that some people may not share this opinion.
My grandfather lived through both world wars. My father was a teenager taking care of a family of seven during the Second World War. It was my turn to experience war in the 90s.

Would I want to see my future family go through the same? When it comes to quality of life and values that I cherish, my bet is on Canada, my adoptive country. Besides, the only way to 'repay' the favour for the opportunity of a lifetime is to stay and work in Canada, and the CF is a part of it.

I am proud to be back here with the maple leaf on my shoulder.

ENGINEERS FLY FIRST

The Canadian Military Engineers share in celebrating the 75th anniversary of the Royal Canadian Air Force this year due to some unique connections with military flight 90 years ago.

Two young Canadian engineers, J.A.D. McCurdy and F.W. Baldwin, (both former members of the 2nd Field Company, Canadian Engineers) piloted the first military demonstration of aircraft flight in Canada in 1909 at Camp Petawawa, Ontario. Conducted between 23 February 1909 and 13 March using the ***Silver Dart*** and the ***Baddeck 1,*** these were the first such flights in the British Commonwealth by a member of the British Commonwealth.

Engineers also prepared the temporary hangers, the temporary airstrip and the ground crew.

After these early demonstrations the Director of Engineer Services was assigned to monitor developments. Convinced that flying had a military future, he suggested the formation of an Aviation Section, Royal Canadian Engineers. Despite his persistent championing of military aviation in Canada, the Army proposals were not approved.

While there was one aircraft with the Canadian Expeditionary Force in England during World War I, a greater contribution to that war effort was made by providing flying training facilities for the British Royal Flying Corps in Camp Borden and other locations in southwestern Ontario. Military engineers were involved in building and maintaining these facilities and operating the fire fighting services.

After the formation of the Royal Canadian Air Force in 1924, the Army's Royal Canadian Engineers provided much of their early construction engineering support. The Air Force gradually took on more of this responsibility until it fully assumed these duties early in World War II during the massive construction program of the British Commonwealth Air Training Plan.

MILITARY ENGINEERS WITH BLUE BERETS

Unarmed observer

Canada has played a major role in Peace Keeping operations under the United Nations banner and military engineers have been well represented. In many cases, they performed as an “observer” where general military knowledge, aided by their engineer skills, was the prime prerequisite. As an indication of what was involved in this role the following is a brief description of the duties of an observer in the United Nations Military Observer Group (India-Pakistan) commonly called the “mountain climbers mission”.

The role of the mission was to supervise the terms of the cease-fire agreement between India and Pakistan in Kashmir. Observers were located at, and lived with, formation headquarters of both Armies. When a suspected violation was reported, it would call for an investigation by the observer. This often involved climbing to an altitude of over 3500 metres in 40 degree C weather. A report would be forwarded to mission HQ who would follow up with the appropriate Army.

The observer had to be always vigilant, as staff officers often used subtle means to secure information about the other side. Action by the UN observer, whether on a purely military matter or the misappropriation of some goats, served as a means of “saving face” and often prevented a local firefight.

UN Observer Post - Golan Heights

It was extra interesting to an engineer as they had the opportunity to observe many imaginative uses of Bailey Bridging and other materials for expedient repairs to roads and bridges. A bonus factor was the possibility to visit many historic sites in the sub-continent.

ENVIRONMENTAL PROTECTION - A MILITARY ENGINEER ROLE

If you were to ask the general public about DND's protecting the environment, they would probably suggest it was an oxymoron. In fact the reverse is true.

Military training, as with most human activity, results in damage to the environment. Whether it is the removal of unexploded ordinance from our ranges, recycling used material, improving sewage treatment and garbage disposal, or instituting programs to conserve energy and other scarce resources, military engineers are in the forefront. All new construction and training activities are subject to an intensive environmental review to confirm that proper procedures are in place to eliminate, or at least alleviate, any environmental damage. An educational campaign is also in place to alert all members of the Canadian Forces of possible problems. Observations, such as oil spills or caribou herd numbers, are passed on to other agencies for action. The Department, due to the efforts of the Military Engineers, has been the recipient of many awards for achievement in the field of environmental protection.

CFB Suffield is one of many locations that has benefited from these procedures. Not only are the ranges cleared and decontaminated to make them safe and preserve them for future generations, but due to the access control to the base a significant area of native prairie grasslands has been protected. There are large herds of pronghorn antelope, a species that was once endangered, deer and feral horses thriving within the base boundaries. A National Wildlife Area is being established comprising some 45,000 acres on the east side of CFB Suffield where there will be no training activities. As a result of the efforts of military engineers the Suffield area will continue to be an important part of the local ecology.

ENGINEERS HELP LAUNCH EXPO ‘67

The outbreak of the Korean War and the start of the Cold War resulted in a change in plans for the Canadian military. Instead of being reduced to pre-war manning levels, it became necessary to retain a sizable force in all three services. To meet the need of a long-term commitment, it was necessary to provide a more permanent type of facility that the wartime barracks. A massive construction program was undertaken to provide Home Station camps for the units, including permanent married quarters for the families of service members. The engineers became the landlords of the forces.

On the heels of the Home Station construction the Cold War necessitated the construction of nuclear blast and fallout resistant facilities. The construction of the Army Experimental Signals Establishment, known as the “Diefenbunker”, was started in 1959. These massive and complex projects pioneered many construction firsts and were managed using the new “Critical Path Method”.

The keystone of the celebration of Canada’s Centennial in 1967 was Expo ‘67 in Montreal. When scheduling problems arose during the construction of facilities to house the exhibits, the natural choice was to turn to the Army for assistance. The Military Engineers provided a team of specialists under Colonel Ed Churchill and Lieutenant-Colonel Les Brown who took charge of scheduling the construction. After two years of hectic activity, and hard-nosed direction, the construction was completed and Expo ’67 opened on time as a resounding success.

WARTIME COMRADES BRIDGE THE KANANASKIS

In October 1950 the Canada Cement plant at Exshaw Alberta faced a problem. A steel truss bridge across the mouth of the Kananaskis River had collapsed restricting access to a slate pit located across the river from the plant. It was critical to replace the bridge for the safety of workers in the pit.

The General Manager of Canada Cement, a wartime RCE field company commander, had maintained contact with his former comrades and sought their help to erect a Bailey bridge on the site. Calling on their wartime experience they prepared the plans and specifications for the bank seats. Canada Cement constructed them in preparation for the Bailey. Ontario Hydro had large stocks of bridging on hand that they had used in construction of their power dams. Arrangements were made to deliver the necessary parts to the shale pit siding in November.

The reserve engineer unit in Calgary provided a skeleton crew of trained sappers who supervised the work parties composed of company employees and other Militia members. Company employees under the supervision of wartime sappers had done the initial set-up. After a busy Sunday, work was finished using vehicle headlights, 160 feet of double triple Bailey bridge was in place.

This project is a perfect example of the resourcefulness of the Military Engineer and his ability to use untrained personnel to achieve the objective.

Personal letter Edwin M. Peto

I had an e-mail from Jack Yeats, now living in a rest home in Calgary. He is the chap who commanded the troops who drove out to the bridge site at the mouth of the Kananaskis River in December of 1950 to erect the 160 ft triple double bridge for me on a Sunday for the access to the Canada Cement Shale pit (replacing the old steel bridge that had collapsed).

Jack had the opportunity to take a Sunday bus ride a couple of weeks ago with a group of ladies and one other male and he persuaded the driver to take the road to Exshaw and as they reached the Seebe dam over the Bow River, there was the Bailey Bridge still standing across the Kananaskis River. He did not tell in the first e-mail that he had the driver take the bus over the Dam and then over "His" (and mine) Bailey Bridge.

The "kick" is his next e-mail asked me if we had built the bridge with the DECK in the normal place at the bottom of the lower panels. I said of course we did. He said that he thought so, but it is over 50 years ago and he thought maybe his mind had slipped. The bridge now has had the deck LIFTED up 5 feet to the level of the bottom of the upper panels. When I designed the bridge, I had the bridge bank seats set down

low so the ramps would be almost flat with the deck, to eliminate any lateral thrust on the bridge from vehicles heavily loaded and crossing at too high a speed. I gather that they must have built a substantial approach slope on each side with gravel to get up 5 feet in the air.

To take that deck off and lift it 5 ft must have bean very difficult, working one bay at a time over open water. I had them tack weld all the joist clamps too in 1950.

I thought that you might like to have this information. So not only was this the longest Private Bailey Bridge built in Canada at that time, I think it was the First such bridge built after WW 2. I think that it must be now the ONLY such bridge built with the deck raised some time later to mid-height in the span AND insitu.

I suggested to Jack that it was probably raised to allow WIDE LOAD vehicles with very large wheels to cross the bridge with the truck bed above and over each side of the upper level of panels. I can't think of any other reason.

Regards Bud Peto E. M. Peto Toronto

Firefighter Combat Challenge National's 2002

"Toughest two minutes in sport"

As some of you might recall, a few months ago an article regarding some members of the 19 Wing Fire Department was published. This article referred to the Pacific Region Combat Challenge, where five members of the Wing Fire Department participated in hopes of qualifying for the Nationals in 2002. As was mentioned in the article all members did well enough to assure themselves a position at the National level.

Although the team had to change due to postings and injuries, the remaining members, (Pte Audrey Bourgoin, Pte Bryan Dube, Cpl SergioTomasi, Sgt Mark Amos, and WO J.P. Rioux) worked hard over the summer period in preparation for the National. Over the past four months with the cooperation of the Comox Fire Department and the use of their facilities, the team practiced three times a week approximately two hours each session. As cross training, members spent many hours in the Wing Rec-Center either weight or cardio training. The Wing Fitness, Sport & Recreation staff, put individual training programs together for each member of the team.

These four months prior to the competition were intense and tiresome but everyone managed to keep smiling and work even harder. In fact, due to this intense training period, three members (Pte Audrey Bourgoin, Sgt Mark Amos, and WO J.P. Rioux) of 19 Wing Fire Dept represented the DND Firefighter's at the National Firefighter Combat Challenge in Windsor, Ont. Congratulations to those members.

Over a period of 3 days, 350 firefighters from all across Canada competed in hopes of being named Canada's best. During those 3 days of competition many records were broken in all categories, unfortunately none belonging to 19 Wing firefighters. Although no records were broken every member of the team came out a winner by achieving the goal of beating their personnel best times. Overall, everyone was quite pleased with their performance in Windsor, Ontario.

What's left now? Well, at the end of October the World Firefighter Combat Challenge will be held in Florida USA.

The Plan! Send the members of 19 Wing Fire Department that qualify to the World Championship.

The aim! Train hard in preparation for this event and put out 100%.

With regards to the Pacific Regional Challenge, 19 Wing Fire Department is in the process of trying to host this competition in 2003. Let's keep our fingers crossed and hope for everyone's support on this one.

Last but not least congratulations to all 19 Wing's Firefighters for the hard training and an excellent job!

"Toughest two minutes in sport"

CHIMO!

FLOOD ON THE FRASER

Since time immemorial mankind has been beset by the threat of floods. The Military Engineers have played a major role in ameliorating the damage from these inundations.

In the spring of 1948 the lower Fraser Valley BC was threatened by a major flood. By 1 June a state of emergency was declared by the Province and control was passed over to the Canadian Army.

23rd Field Squadron and RCSME were employed on the dykes in the Chilliwack area while the squadrons of 7th Field Engineer Regiment were deployed on the dykes in the New Westminster area. A total of approximately 3000 officers and men of the Active and Reserve Forces were called out.

The emergency force erected several temporary Bailey bridges, undertook salvage and rescue operations, and removed log jams on the Vedder River with explosives. People and farm animals, including 15,000 chickens were transported to safety by boat when some 10 square miles of farmland was flooded due to a breach in the dykes near the outfall of the Vedder Canal. The action of the Military Engineers was a major factor in avoiding a greater disaster.

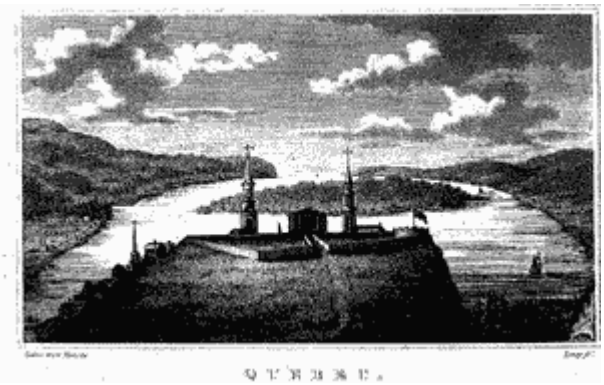
After the flood subsided, the Military Engineers demolished a badly damaged bridge at Merritt BC and started a topographical survey of Nicomen Island to assist the Fraser Valley Dyking Board to restore the dykes protecting the island.

FRENCH MILITARY ENGINEERS IN A FRONTIER LAND

During the 17th century France was establishing its presence in what is now Canada. As settlements were established militia units were formed and tasked with the protection of the settlement and construction of civil works. At that time in history every member of the army was more or less an engineer.

In 1665 the arrival of the Carignon-Salieres Regiment resulted in the construction of a series of forts along the Richelieu River in locations detailed by Jean Bourdon, a French engineer. In addition a road was built from Chambly to the St.Lawrence River near Montreal.

The French interest in protecting the mouth of the St. Lawrence River led to the construction of forts at Placentia Newfoundland and Louisburg in Cape Breton Island. Frontenac[1]s return to New France resulted in greater efforts being directed to strengthening the fortifications of Quebec under Robert Villeneuve. The strength of these fortifications was a major factor in repelling the incursion of Phibs in October 1690.



The French moved westward and constructed a series of forts that extended from Quebec to the Mississippi River as far as Louisiana. The aim was to prevent the British from moving further west. With the fall of Quebec in 1759 New France came under British rule. Due to their effectiveness in the vast New World the British chose to retain the militia system established by the French.

The Bridge at the Canso Canal is in place!

by Mr. Steven Vines
Nova Scotia Trans Canada Trail Representative

Most of the excitement took place on Wednesday 15 May 2002. All the staff from the Canadian Forces School of Military Engineering at CFB Gagetown put on an incredible display of teamwork and coordination during the deployment.

Here's a synopsis of what took place:

Monday, 13 May 2002

Millions of dollars worth the equipment arrive from CFB Gagetown; the bridge is unloaded from its trailer and inspected.

Tuesday, 14 May 2002

In wind, snow, freezing rain, and cold temperatures the structure of the bridge is assembled in about seven hours.

Wednesday, 15 May 2002

0600 - Some detail work on the bridge is completed and it is prepared to be lifted by the crane. Boats and the barge units are deployed and assembled.

1000 - The barge carries one crane from Auld Cove across to Ghost Beach. First hurdle, get a 12 ton crane up a soft beach, no problem.

1045 - The bridge is lowered onto the barge by the second crane and starts on its journey for the gap. This was the second hurdle, get a 10 ton bridge on a barge with a 12 ton crane, no problem.

1130 - The barge is maneuvered into the gap exactly on time when the tide is high and there is little current. This was the third hurdle, maneuver a barge into a rock armoured gap not much wider then the barge, easy as pie. There is only about a half hour window before the current reverses. The second crane is moved into place.

1150 - The bridge is lifted off the barge and the barge is taken out of the gap before the tide turns. Fourth hurdle, the Canadian Military Engineers have never done a double crane lift from a floating barge, you would think they do it every day.

1200 - The Bridge is lowered into place and everyone breathes a little easier.

1230 - The two cranes work together to place the decking on the bridge.

1500 - The crane on ghost Beach makes its way back on the barge and across to Auld Cove.

1600 - The Barge is disassembled and trucked away.

1830 - The end of a long but never dull day.

Thursday, 16 May 2002

0800 - Final clean up in the Canso Canal compound.

1100 - Equipment is loaded for the trip back to Gagetown.

1800 - LOBSTER FOR EVERYONE!

Friday, 17 May 2002

0630 - Troops head back to Gagetown

I knew this was a big project but really didn't fully understand how big until I saw it. Only the engineers could have put this bridge in. You would never find a contractor with the equipment, the skill, the knowledge and the experience necessary. For everyone who couldn't be there, they missed something special.

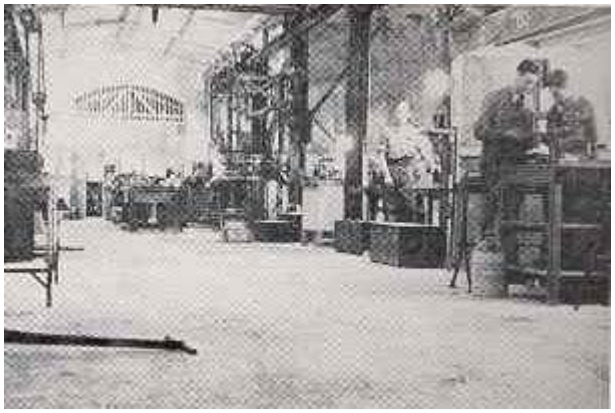
TUNNELERS TACKLE GIBRALTAR

The Rock of Gibraltar is the key to the entrance to the Mediterranean Sea. It was captured by the British in 1704 and during World War II it was a major naval and air base. Through the years the Royal Engineers had excavated several tunnels and galleries in the rock for defensive purposes.

Early in 1940, the expertise of the Canadian tunnelers, many of whom were hard rock miners, was sought by the British Government. A detachment of diamond drillers and equipment from No. 1 Tunneling Company RCE arrived in Gibraltar on 12 November 1940. No. 2 Tunneling Company soon joined them early in 1941. The Canadians set to work excavating a series of wards and tunnels to make a hospital area inside the Rock. The largest chamber was 200' x 35' and 12' high. They also constructed ammunition magazines, oil storage tanks, pillbox fortifications and installed heavy timbering where rock conditions required it. A quarrying operation produced fill to extend the airfield runways.

The tunnelers produced 35 cubic feet of excavation per man per shift. In later stages, this was increased when mechanical equipment became available to remove muck from the tunnel face. This production exceeded that achieved by civilian mining operations.

All 234 men and officers received silver watch fobs from the Wartime Mining Association. In February of 1952, the Military Engineers' Association of Canada placed an oaken lectern in the King's Chapel at Gibraltar to commemorate the tour on the Rock.



Workshop within the Rock of Gibraltar constructed by No. 2 Tunnelling Company RCE.

BRIDGING IN GROS MARNE NATIONAL PARK

The Director of Gros Marne National Park faced a problem. He wished to improve the access to the park by installing a 35 metre long suspension bridge over Wallace Creek on one of their nature trails. He had funds to provide the materials but lacked the financing for the labour part of the project. He sought the assistance of 56 Field Engineer Squadron in St. John's.

Following a recce and detailed planning by the squadron it was decided to carry out the task in three phases. Phase I was the site layout and construction of the tower abutments and Phase II included the construction of the cable anchors. These were planned for the fall of 1987. Phase III in the spring of 1988 called for the erection of the bridge superstructure.

All activities were complicated by the remoteness of the site, some 900 km from St. John's and the need for environmental protection of the area during construction. All material, including concrete, had to be manhandled several hundred metres from the parking area to the bridge site. A temporary bridge had to be built to reach the far side. During the winter the suspension cables and wooden bridge parts were prefabricated in St. John's.

The bridge was officially opened on 14 May 1988 and earned the unit the prestigious Hertzberg Trophy for the best project carried out by a Militia unit.

ENGINEERS IN HAITI

In March 1995, the Canadian Airfield Engineering Squadron (Haiti) deployed in support of the United Nations Mission in Haiti (UNMIH). They were joined by 157 engineers from the US Army Corps of Engineers to form the Canadian-American (Can-Am) Engineer Battalion. The headquarters of the unit was located in Port-au-Prince and included a detachment from 1 Construction Engineer Unit.

The main task of the battalion was to provide for the construction, maintenance and tear down of UN base camps throughout Haiti. In addition, they carried out other engineer tasks in support of the mission and performed many humanitarian deeds.

The joint operation proceeded very well but was handicapped by the slow delivery of stores through the UN supply chain. Base camps consisted of prefabricated trailers for kitchen and ablutions facilities, water and POL storage using inflatable bladders, and US Army general purpose medium tents, with tent flooring for sleeping accommodation.

Other tasks included the construction of ammunition storage, a bridge on a main supply route and similar projects. The engineers responded to a number of emergency situations such as fighting fires in Port-au-Prince and helping restore order in a prison riot.

The delay in securing supplies meant the engineers had time to carry out humanitarian tasks in the local area. On 24 Sept 95 they were tasked with the restoration of the annex of L'École St-Val-Rey, Gonaives, Haiti. The structure was of concrete block on a concrete slab foundation with a corrugated metal roof over timber trusses. It measured about 125 feet long by 20 feet in width.

The building had fallen into disrepair and before any work could be done it had to be cleaned up. It had been used as a garbage dump and public washroom. The school yard was contaminated by several sewers and could best be described as a swamp.

The work proceeded in temperatures that reached 140 degrees F and was complicated by local labour conditions. The labourers proved somewhat erratic in their work habits. Gravel was customarily loaded by hand so a Canadian front end loader had to be brought in to assist. To prevent looting the equipment had to be guarded.

The project was very gratifying for all involved. Local tradesmen benefited from the various construction techniques that were new to them. For the personnel of the flight it provided valuable experience working under primitive conditions and they felt that they had been of assistance to the local population. The military fire fighters were even involved by providing first aid treatment for many of the local children.

On 24 Oct 95 the Minister of National Defence, David Collenette, formally opened the building. MGen J.W. Kinzer (US Army), the force commander, made the following comment: “Thank God for the Engineers – they’re the only ones who get things done”.

HALIFAX-FIRST HOME OF THE ENGINEERS

In 1999 the City of Halifax celebrated the 250th anniversary of its founding. When Cornwallis landed on 21 June 1749 his engineers immediately began to lay out the town and its defences. On 10 December 1749 a company of local engineers became the earliest known engineer unit raised in Canada. The association between the Military Engineers and the city has continued to this date.

During the initial settlement of Canada the principal transportation link was by water. Harbours played a major role in this activity. There was a need to protect early settlers around these harbours with the result that fortifications of all types were needed. Sites overlooking harbour entrances and dominate features were placed under Military Reserve by the Military Engineers.

In the case of Halifax installations were constructed on Citadel Hill, Chebucto Head , McNabs Island, and other sites in and around the harbour. The Citadel was completed in 1856. An initial town survey was also carried out by Military Engineers. The Citadel served as the first location for the School of Military Engineering when the Royal Canadian Engineers were formed in 1903. It continued to be used as such until World War II.

The Naval Dockyard had a modest start with the construction of jetties to handle shipping in the port. The period 1800-1814 saw the development of a Naval Dockyard but the real expansion came with the prominent role played by the Royal Canadian navy in World War II. It has since been further developed under the auspices of the Military Engineers and is currently a modern facility capable of handling the repair and supply of Military vessels. It has become one of the principal employers in the area with the attendant financial benefit to the area.

To mark the association between the Military Engineers and Halifax a monument, based on two Bailey bridge panels, was installed on the grounds of Royal Artillery Park. It was formally unveiled on 24 September 1995. This is a very fitting monument due to its location on the grounds of the Royal Artillery/Royal Engineers Officers mess and the use of Bailey panels, which was one of the most successful pieces of equipment used by the engineers during WW II.

“I NGA WAHI KATOA”

The Centennial of the Corps of Royal New Zealand Engineers 2002

by
Lieutenant Colonel Joe Hollander (Ret’d)
President, The Sappers Association of New Zealand

“UBIQUE” (or “I Nga Wahi Katoa” in Maori) is well known to Sappers from all about the Commonwealth and also the Australian, British, Canadian and American (ABCA) and New Zealand forces. It is also coincidental that the Australian Corps (RAE), then the New Zealand (RNZE) Corps, followed by the Canadian Military Engineer (CME) Branch of the Canadian Forces are all celebrating centenaries during the 2002-2003 period.

The Australian celebrations commenced in May 2002 (… and the RNZE beat the RAE 25-0 in their Centenary rugby match at Victoria Barracks in Sydney on 3 August 2002).

Our major RNZE commemoration occurs during the period 12 - 16 October 2002. Included are: a Sapper's Ball, Memorial Services, a Corps Centenary Parade, the planting of Centenary trees, and a Corps Centenary Formal Dinner. A Corps Centenary Exhibition opens in the Manawatu Museum and Science Centre in Palmerston North, to be followed at the QEII Army Memorial Museum in Waiouru.

As Colonel-in-Chief Her Majesty Queen Elizabeth II visited New Zealand earlier this year, our Governor General will be her official representative. It is understood that a similar arrangement is set for the CME Centennial in 2003. Also expected is senior Sapper representation from the four ABCA forces at the celebrations in October. CME Branch Advisor Colonel Rene Gervais is attending for Canada.

Other events have also been planned to occur in Burnham Camps and Christchurch in the South Island, as well as in Auckland - all around our Sappers Day on 15 October. (This is the official anniversary date of the establishment of the Corps of Royal NZ Engineers.) There will be other centenary activities undertaken later in 2002 and in 2003,

including the issue of a commemorative stamp with first day cover, sporting fixtures, bridge buildings about New Zealand, and other related events.

Serving and former military members, and Defence civilians of the CME community traveling to/about New Zealand during mid-October are most welcome to join us for these significant events. Please make contact with:

Secretary
Sappers Association of New Zealand
PO Box 88
Palmerston North
New Zealand

E-mail c/- atlnprint@inspire.net.nz

(Our website will be up and running soon.)

We do wish the Canadian Military Engineers all the very best for their centenary in 2003.

Best wishes to all and CHIMO!

Visitors tour Kootenay Castle combat, bridge-building exercise

By Lana Rodlie
Trail Daily Times

Barbed wire, sentries at the gate, firearm specialists hidden in the trees, an individual meal pack for lunch, and an actual engagement of fire between the good guys and the bad guys were just some of the exciting events for visitors to Excercise Kootenay Castle on Wednesday.

Defending a gravel pit may not seem like much, but these soldiers from the 33rd Field Engineer Squadron of Calgary, Alberta were forced to do what they could when attacked by "enemy" fire while building a dry-gap bridge.

About 50 area politicians, corporate sponsors and retired regular Armed Forces and reservists were invited to get a first-hand look at the military operations and training taking place throughout the area. Also arriving were a handful of military enthusiasts from Kelowna.

Before heading out to the Trail Airport to see the full-service U.S. 396th Combat Support Hospital, and a bridge-building effort, the group witnessed a number of commendations, most notably Maj. Brent Warne of 44 Field Engineer Squadron promoted to lieutenant colonel.

The City of Trail and Teck Cominco were also given an award for their sponsorship and support.

Other visiting dignitaries included Brig.-Gen. Ivan Fenton, commander of land forces for all army units from Manitoba to British Columbia, and Col. Paul Krober, 39th Brigade commander of all reservists in B.C.

Lt.-Col. Warne, not quite used to his new title, walked with the visitors down to the river, pointing out the movement of the Missouri National Guard as they crossed the river transporting heavier vehicles via ferry at Beaver Creek. Vehicles were put on the ferry and then boats pushed them across.

He gave an overview of the bridge building exercise being conducted by the U.S. 671st Multirole Bridge Company of Portland, Ore.

Boats full of troops scurried back and forth along the waterway, an American Chinook helicopter flew over with large pylons which were lowered into the water and expanded to produce a bridge deck.

"The plan, if doing this for real, would be to move the armoured and the infantry (elements) across the river," Warne said. "We could also move humanitarian supplies in a disaster."

The speed of the river presented a real challenge, Warne said.

"Four days ago the river was flowing so fast, we would have had huge difficulty and probably would have had to cancel this exercise altogether," he said.

Fortunately, BC Hydro lowered the water, reducing the speed of the river for a 12-hour period so the military could go ahead with the training exercise.

"The Americans, who are operating the equipment with some Canadian assistance, this is the first time they've hit fast water," Warne said. "It's usually done on calm water. It's quite different and takes a lot longer."

When complete, the bridge was to be about 750 feet long and capable of transporting a 70-ton battle tank. Between 30 and 32 pylons were used to make the floating bridge with each section secured to the next.

Warne said he was hoping the American commander would beat the current Canadian record of four hours.

But when the first few pylons hit the water, which were supposed to open on impact but didn't, soldiers in boats had to chase them down river and get them to open while the helicopter returned to the plateau above for another load.

After watching a few loads of pylons, visitors headed over to the hospital for a quick look and onto to a gravel pit further down the highway where the 33 Field Squadron of Calgary was attempting a dry gap build ? a bridge over a gulch, in this case, a man-made one.

But the engineers were having a little trouble with the enemy, firing on them from a clump of trees beyond the gravel pit.

As both groups exchanged fire, it was interesting to watch how one of the soldiers would call orders and each small group would advance on the enemy.

Heading back to the Armoury, each visitor was given an IMP ? or individual meal pack ? compliments of the U.S. military.

Menu No. 20 (spaghetti with meat sauce) contained a variety of crackers, peanut butter or cheese spread, and a self-heating pouch activated by plain water to warm the ready-to-eat main dish. The slim, plastic-sealed meal was packed into a cardboard container not much larger than two CDs stacked upon two more.

There was also powder for hot cocoa, instant coffee, non-dairy creamer, a wet napkin, moisture-resistant matches, tissues, two mint-flavoured Chicklet-type gum pieces, a pack of Charms (hard fruit-flavoured candy) and perhaps most-entertaining, a miniature plastic bottle with an eighth-of-an-ounce of Tabasco sauce.

All during Exercise Kootenay Castle, soldiers have had nothing but good things to say about the area and the exercise.

"It's been greater than my expectations," said Capt. Gabriella Schneider of the 304th Military Public Affairs from Fort Lawton, Seattle.

"It's been amazing working with Canadians," she said. "But it will be disappointing to go back (home). We've been on such a high. It's been so exciting. Canadians are so polite and the British are so funny. It makes American men look quite boring . . ."

The public has really enjoyed seeing all the military goings-on over the past two weeks, as well.

In one incident, a man from Rossland showed up at the Trail Armoury and wanted to shake hands with a soldier.

"It was the day before the anniversary of the Dieppe Raid and he want to come and say ?thanks' for what we're doing," said Capt. Jim Smee of 44 Field.

Smee said there have been a lot of cars driving around watching the activities, plus a lot of people stopping the soldiers to chat and ask them where they're from.

"Seniors who have been through the war, I guess it brings back a lot of memories for them," he said. "It really makes you feel good about what you're doing."

Thanking the public at the end, Brig.-Gen. Fenton pointed out the complexity of the exercise, "how long it took to put together, organizing an agreement with land owners, etc. We're not able to do this often as it is extremely expensive.

"But, I want to drive home the point that the key disadvantage that reservists have in Canada compared to the U.S. is, our reservists are here only by the good graces of their employer or they are using up their vacations.

"Those who want to and thousands of them have, joined the regular forces for tours but run the risk of losing their jobs during training or deployment or for military career courses. We have no legislation in Canada, or any other way to encourage civilian employers of our reservists to understand that these people are trying to give something back to Canada; to understand that every piece of military training and operational experience they gain makes them a better citizen and a better employee."

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ENGINEERS IN THE LAND OF THE MORNING CALM

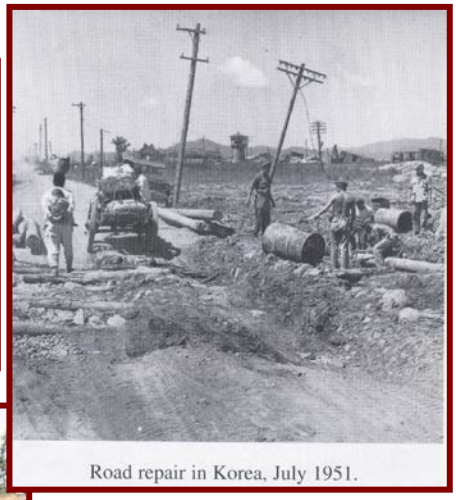
Korea presented a major challenge to the military engineer. It was a land of mountains interlaced with rice patties in the valleys and there were few roads capable of carrying heavy military traffic. The area was also subject to heavy monsoon rains that seemed to destroy roads and bridges annually. 57th Canadian Field Squadron RCE was thrust into the centre of these problems as part of the 25th Canadian Infantry Brigade Group. They joined with 28th Field Engineer Regiment RE when 1st Commonwealth Division was formed. They were replaced by the 23rd Field Squadron after one years service, who in turn were followed by the 59th Field Squadron.

The tasks faced by the Engineers were formidable. Roads had to be built and maintained over what seemed to be bottomless rice patties and up steep mountain slopes; minefields were laid and lifted; timber was cut for defensive positions; ferries were operated over rivers; airfields were constructed; tunnels driven for defensive works; and other “normal” engineer tasks. There was little rest for the sappers.

All these tasks required heavy equipment such as bulldozers, face shovels, graders, and dump trucks. Divisional staff were successful in the supply of additional equipment, which meant more operators were required. The Canadian sapper proved very adept at this task. The Royal Canadian Engineers were raided for potential operators, and they soon became the backbone of plant operators in the regiment.

Just as so many times in the past, “the muddy old engineers” proved to be full value for their service in Korea. Today Field Engineer Equipment Operators are a trade within the Canadian Forces. They continue the legacy of the engineers who served in Korea, operating heavy equipment in support of combat operations and United Nations Peacekeeping missions.

A quarry in Korea, June 1953.



Road repair in Korea, July 1951.

Modern Heavy Equipment

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LUMBERJACKS IN UNIFORM

During the 1st World War the Canadian Forestry Corps did important work in the United Kingdom and in France. Thus it was natural that the British Government should request a similar unit in October 1939. A decision to form the Corps was taken in May 1940 and ultimately nearly 7000 all ranks saw service in the UK and North-West Europe. The unit received an “appropriate level” of military training before sailing to England in late 1940.

In the early part of the war these units were employed producing timber supplies from Scottish forests. During 4 1/2 years they put out 394,467,161 FBM of sawn lumber. Immediately prior to employment on the continent in August 1944, they constructed 77 rafts of squared timber and 54 of round timber that were towed to France thereby saving critical shipping space. In France a British Pioneer Company and two Forestry Companies of Royal Engineers were placed under command. They cut timber in the Cerisy Forest near St. Lo and later moved to the Westerloo Forest near Brussels.

About the end of October five companies were assigned to the Ardennes Forest in the American Sector to join the one company already working there. During the German offensive in December, they were forced to take up a defensive position, before making a hasty withdrawal. In February 1945 they were employed in the Reichwald and Hochwald in Germany until they ceased operations in November 1945.

The Corps produced 47,700,000 FBM of sawn lumber, which was a major contribution to the success of the campaign

MARTINS RIVER BRIDGE
"Damn all that eagerness"

On 17 June members of 143 AEF Lunenburg County, Nova Scotia, under the leadership of MWO Clayton, arrived at the Martins River Railway Bridge to start the task of decking the bridge for safe pedestrian use. The Martins River Bridge is located in Lunenburg County NS between the towns of Mahone Bay and Chester. It is part of Phase II of the Trans-Canada Trail and was included in the CME2003 Bridges For Canada Program for renovations. The abandoned railway trestle/double span bridge crosses a gap of 77 M over Martins River. The Dynamite Trail Association with support from the NS Department of Natural resources and the NS Trails Association sponsored the project. The plan was to complete the project during the 17-21 June timeframe with the posts and side panels being pre-fabricated at the 143 AEF building, outside of Bridgewater, the previous week.

The bridge crew of ten individuals left the unit at 0730 17 June with three trucks full of materials and equipment for the bridge site located 22 Km away. Captain Gary Silliker, OC 143 AEF, went to the job-site at 1300 that day to see how the project was proceeding. After viewing the progress he was heard to paraphrase a military commander from the Crimean War when he remarked, "143, damn all that eagerness - slow down, you have 5 days to complete this job!" The reason that OC 143 AEF felt like that CO of yore was brought on by the rapid progress that had been made that morning. The small, but very eager, crew had installed 75% of the posts, 50 % of the side panels and 30 % of the decking - they were well ahead of schedule!

By the end of day two the crew had all posts in place, 95% of the side panels up and 70% of the decking completed. They would have had all the decking completed if they had not run out of lumber on the job-site. Day three saw the crew on site working on the approach "cow catchers" and installing the last side panels and decking. The bridge was completed at 1630 that day.

At 1200 20 June the bridge builders and other members of 14 AES, along with some of the local community, met on the bridge for a Bridge Opening BBQ. Local politicians retired CME members, Mr Steven Vines the President of the NS Trails Association, and members of the sponsoring Dynamite Trail Association were in attendance. Mr Vines presented all members of 143 AEF, who had worked on any of the "Bridges for Canada" projects, with NS Trails Association "Builder" pins and certificates of appreciation. Major Carlos Marques, CO 14 AES, used this fine sapper setting to induct three new recruits into the CF by conducting the "swearing in ceremony" on the bridge in the shadow of the CME flag.

This is the third bridge project completed by 143 AEF as part of the Bridges for Canada project, bringing the 14 AES total to 8 bridges repaired/renovated along the TCT.

Capt Gary Silliker, OC 143 AEF Lunenburg County

20 avril 2002

90 ANS DE SERVICE :
L'ASSOCIATION DU GÉNIE MILITAIRE DU CANADA

L'Association du Génie militaire du Canada (AGMC) est distincte. D'abord, elle est quelque peu unique en ce que sa création a été autorisée par le gouvernement du Canada (Ordre de la Milice 212 du 20 avril 1912[1].) Deuxièmement, ses objectifs sont moins ceux d'une fraternité que de consultation - consultation au nom des ingénieurs militaires comme discipline professionnelle et consultation en soutien à une présence organisationellement forte et techniquement capable du Génie militaire au service de la défense du Canada. L'Ordre de la Milice 212 donne au AGMC le privilège d'accès au ministre de la Défense nationale pour conseiller le gouvernement sur les questions d'intérêt national qui implique le Génie militaire. L' AGMC a et exerce ce privilège.

« L' AGMC a survécu à de nombreux défies, incluant le manque d'intérêt de l'après-guerre vis-à-vis des questions militaires, les changements sociaux et politiques, l'explosion technologique et l'unification »[2] et, récemment, la dévolution. L' AGMC est compose de 500 ingénieurs militaires principalement non en uniforme. Aujourd'hui, la société demande une renaissance de l'esprit militaire canadien. L' AGMC souligne son 90^{e} anniversaire en cherchant à se retrouver comme consultant répondant à ce défi. Pour atteindre cet objectif vers l'extérieur, il n'y en a pas d'autre comme l' AGMC.

L' AGMC est un membre fondateur du Comité directeur national du centenaire. Plusieurs dans ses rangs, alors que nous débutons deux années de célébrations pour marquer le centenaire, dirigent activement le programme d'événements nationaux, dans les régions et localement dans les communautés canadiennes. Nous, dans la grande famille du Génie militaire, l'apprécions beaucoup.

Joyeux anniversaire, AGMC!

Notes :
1. La création du AGMC a été approuvée lors d'une réunion du Conseil de la Milice le 4 avril 1912.
2. Citation extraite de *L'Histoire du Génie militaire canadien*, Volume III, 1997.

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20 APRIL 2002

90 YEARS OF SERVICE:
THE MILITARY ENGINEERS' ASSOCIATION OF CANADA

The Military Engineers' Association of Canada (MEAC) is distinct. First, it is somewhat unique in that its formation was Government of Canada authorized (Militia Order 212, dated April 20th, 1912[1].) Second, its objectives are less those of fraternity than they are of advocacy - advocacy on behalf of military engineering as a professional discipline, and advocacy in support of an organizationally strong and technically capable military engineer presence in the service of the defence of Canada. Militia Order 212 gives MEAC right-of-access to the Minister of National Defence to advise Government on matters of national interest that involve military engineering. MEAC has and does exercise this right.

"The MEAC has survived many challenges, including the post-war lack of interest in military matters, social and political changes, the technology explosion and unification" [2] and, recently, devolution. MEAC is comprised of 500 primarily non-uniformed military engineers. Today, society

is calling for a reinvigorated Canadian military. MEAC is marking its 90th anniversary by seeking to re-niche itself as advocates responsive to that challenge. For this outward looking objective there is none other than the MEAC.

MEAC is a Founding Member of the Centennial National Steering Committee. Many from within its ranks are, as we begin two years of Centennial celebrations, actively leading the program of events nationally, in the regions and locally in Canadian communities. We of the broader military engineer family are most appreciative.

Happy Birthday MEAC!

Notes:
1. MEAC was approved at a meeting of the Militia Council on April 4th, 1912.
2. Quotation taken from *The History of the Canadian Military Engineers*, Volume III, 1997.

A letter from Donald Deacon, PEI Trails Coordinator regarding the CFSME construction project on the Melville Bridge:

I thought you might appreciate seeing some of the publicity which resulted from the excellent job of building bridges on P.E.I. The whole operation went very smoothly following the earlier visit to organize the availability of permits and materials in advance.

There was an excellent turnout at the reception including Gail Shea, the new Minister of Transportation and whose department maintains the trail. In addition the enclosed article has aroused some "movers and shaker" in the area to get moving to connect the Murray River line with Mt Stewart and the rest of the Trans Canada Trail. They will organize a Developmental Corporation and press the government to give 2 year notice to the Coop to vacate the rest of the route to Mt. Stewart so it can be developed as the eastern connector. The Melville Bridge had been a stumbling block to earlier moves on their part.

Thanks again for all you and the Canadian Military Engineers are doing to build a stronger link across the country in the form of the Trans Canada Trail!

Best wishes from Florence and me.

Sincerely

Donald Deacon

"MELVILLE" BRIDGE TAMES THE RHINE

"MELVILLE" BRIDGE CARRIES TRAFFIC ACROSS THE RHINE
This bridge across the Rhine at Emmerich, completed on 1 April 1945 by the 2nd Canadian Army Troops Engineers, is here seen from the right bank of the river.

March of 1945 saw the construction of major bridges over the Rhine to enable the Allied advance into the heartland of Germany to be pursued with vigor. An example was the "Melville" bridge at Emmerich.

The aim of the operation was to construct a low level, floating Bailey bridge with a class 40 loading. Orders to construct the bridge were issued on 25 March 1945, and site preparations began the night of 30/31 March. Construction by RCE 2nd Army Troops began at noon on 31 March and it was opened for traffic at 2100 hours 1 April. The bridge was 1348 feet long.

Construction was under the control of 33rd Field Company which built the near bank approach, end floating bays and sliding bay, and connected the floating bays. 32rd Field Company handled the far bank, while 34th Field Company built the floating bays and delivered them to the bridge site. 11th Field Park Company was responsible to deliver 450 truckloads of stores to the construction site. A detachment of 2nd Field Survey Company RCE and 1st Landmark Unit RCE were also involved.

In addition, units of the Royal Army Service Corps, the British Pioneer Corps, and Royal Navy were part of the total force employed on this bridge.

This operation typifies the extraordinary administrative and organizational skills required to support an army during full-scale operations. It is but one of scores of bridging operations carried out by the RCE from Normandy to the German heartland.

(A picture of this bridge in included in the Official History of the Canadian Army in the Second World War Volume III, page 498).

Army Editor
Susan Turcotte (613) 945-0419

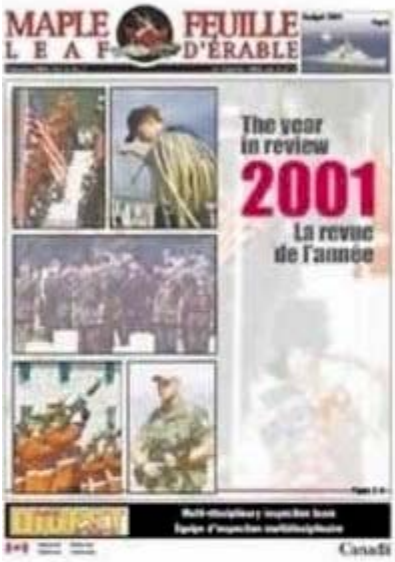
Passage d'armes d'une rive à l'autre

BFC PETAWAWA — Malgré la pluie et la neige, des sapeurs et des artilleurs ont travaillé de concert, tard dans la nuit, afin de faire passer des obusiers automoteurs M109, des véhicules M113 et des munitions d'une rive à l'autre de la rivière Petawawa, une première en 16 ans.

Cette mission nocturne n'était qu'une des nombreuses autres effectuées par des membres du 2e Régiment du génie (2 RG) et du 2e Régiment, Royal Canadian Horse Artillery (2 RCHA), au cours d'exercices sur la science du combat tenus fin novembre. Des membres du 3e Bataillon, The Royal Canadian Regiment, ont également traversé la rivière à l'aide de bateaux d'assaut du 2 RG.

L'Ex *Returning Sapper*, auquel ont pris part des membres du 24e Escadron de campagne, 2 R.G. a porté particulièrement sur des tâches propres au génie qu'ils n'ont pas eu l'occasion d'effectuer pendant leur récent déploiement de six mois en Bosnie.

Pour les membres de la Batterie Echo, 2 RCHA, la traversée de la rivière, appelée traversée du Rhin, a précédé un exercice de tir réel qui comprenait 25 obus de la charge la plus forte.



Guns ferried across river

CFB PETAWAWA — Sappers and gunners worked together long into the night, despite the rain and snow, to ferry self-propelled M109 Howitzers, M113s and ammo vehicles across the Petawawa River, the first such crossing in 16 years.

The night tasking was one of many for members of 2 Combat Engineer Regiment (2 CER) and 2nd Regiment, Royal Canadian Horse Artillery (2 RCHA) during subunit warfighting skills exercises in late November. Members of 3rd Battalion, The Royal Canadian Regiment, also crossed the river the same night with the help of 2 CER assault boats.

For members of 24 Field Squadron, 2 CER, *Exercise RETURNING SAPPER* focussed on engineer-specific tasks they did not use during their recent six-month deployment in Bosnia.

For members of Echo Battery, 2 RCHA, the river crossing, known as Rhine Crossing, preceded a live-fire exercise that included 25 rounds of maximum charge.

1 Construction Engineering Unit honoured at Moncton City Hall

On Friday November 8, 2002, 1 CEU was granted the freedom of the city of Moncton This ceremony marked the 60th anniversary of 1 CEU. Heading the tradition was LCol Chris Whitecross marching with sword drawn to the doors of Moncton's City Hall in New Brunswick. Accompanied by an RCMP officer in formal scarlet uniform, LCol Whitecross pounded on the door with her sword, and was greeted by deputy mayor Merrill Henderson. Thus began the Freedom tradition. The party of three walked to Main Street to inspect the waiting troops, then the proclamation was read, granting the freedom of the city. The engineer flag was raised and as to exercise their freedom, the unit completed a march pass.

As part of the ceremony, several medals were awarded. They were awarded as follows:

- Capt S.D. MacEwan - CD medal for 12 years of dedicated service, NATO medal.
- WO L.B. Connolly - CD1 medal for 22 years of dedicated service, NATO medal
- Sgt J.M. Cormier - CD1 medal for 22 years of dedicated service
- Sgt J.L. Hutchinson - CD2 medal for 32 years of dedicated service
- Capt R. Aucoin - South-West Asia Service medal
- Capt D.D. Saunders - South-West Asia Service medal
- WO A.W. Pemberton - South-West Asia Service medal
- WO J.S.J. Lachapelle - South-West Asia Service medal
- Sgt D. Aubertin - South-West Asia Service medal
- Sgt D.N. Martin - South-West Asia Service medal
- Sgt M. Pilon - South-West Asia Service medal
- MCpl R.A. Macpherson - South-West Asia Service medal
- Cpl G.B. Nixon - South-West Asia Service medal

RON WARD/TIMES & TRANSCRIPT

Lt.-Col. Chris Whitecross stands in front of Moncton City Hall yesterday as 1 Construction Engineering Unit is granted freedom of the city.

MOUNT SORREL BATTLE - 10 METRES UNDERGROUND

In the fall of 1916 a vast labyrinth of tunnels had been constructed by German, French, British, Australian, and Canadian Engineers along the western front. Mount Sorrel was a ridge held by the Allies against repeated German attacks.

On 16 Sept. 1916, a troop of Sappers of the 2nd Canadian Tunnelling Company were busy enlarging the tunnel system. Vibrations felt by the men indicated that there was an artillery battle going on overhead. The troop commander went to check the entrance to their tunnel for damage from shell fire. On emerging into the trenches he found German troops occupying the position.

The half mile long tunnels system was composed of narrow passageways, just over a metre in height, with several exits. The Germans attacked the tunnels and suffered casualties as they advanced in single file. Despite the sappers having blown all but one exit, the Germans continued to infiltrate the system. As any show of light attracted fire, the battle was fought in total darkness. Recognition of the enemy was achieved by checking for epaulets on the uniform, the Germans had them, the sappers did not. The sappers were equipped with knuckle- knives that were strapped to their wrists that made short work of any enemy they encountered. Casualties were heavy on both sides. When it seemed that all was lost for the sappers the Germans withdrew.

On the morning of the 17 Sept. the tunnellers cautiously checked out the surface conditions. They were overjoyed to find British Tommies brewing tea. A counter attack during the night by the Allies had regained the position.

Thanks to the Royal Engineers Museum and Peter Barton of Parapet Productions for bringing these items to our attention.

ENGINEERS ADOPT NEW ORGANIZATION

During the latter part of the First World War the demands on engineer resources were very heavy. The trench warfare situation required massive use of engineer expertise to construct and repair defensive works in addition to tramways, signals and tunneling. Using traditional procedures the engineers provided the technical expertise and supervision of labour provided by other units. This was very inefficient as the labour was unskilled, had little or no dedication to the work at hand and often changed every day. To further complicate matters, although the Command Engineer was technically in charge of the works the Brigade Commander considered engineer personnel to be part of his resources.

The Canadian Corps Commander, General Currie, was well aware of the problems and sought the advise of his Chief Engineer. The Chief Engineer's recommendation called for the formation of a brigade of engineers with a battalion in support of each brigade, under the command of the Chief Engineer. The battalion would be a self contained unit with the existing field companies along with the divisional engineers, tunneling companies and pioneer battalions. In addition a pontoon bridging transport unit was part of the brigade as well. This organization provided the engineers with a pool of skilled labour and the capability of carrying out the actual construction of all engineering works. It also freed other units from the need to supply labour parties.

Gen Currie fully supported the proposal and on 24 March 1918 it was authorized. The Corps Commander credited much of the success of the Corps during the last 100 days to this organization. Modern engineers continue to use a similar organization.

Dennis Newnharn
Box 209 Victoria Place
RR I Bobcaygeon
Ontario Canada
KOM I AO

June 17 2002

Hello Scott:

Here are some notes on 9 CMU as promised. They may be of interest to you and perhaps be a help in your research. Please feel free to use this information in any way you might choose, including my name. I'd appreciate a note via E mail to say this has arrived OK.

Thanks for your time, regards,

Original signed by Dennis Newnham

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May 2002

Recollections of # 9 Construction & Maintenance Unit, Western Air Command, R.C.A.F. 1942 - 1946 on Canada's West Coast. By a telecommunications member.

On Canada's West Coast radio transmission and reception was unreliable, to say the least, at that time- often due to turbulent weather, coupled with the mountainous terrain, etc. Landline communication circuits were installed in many places to make sure connections from coastal Radar and other defence sites would be sure to reach Command Control Centres in Victoria and Vancouver.

#9.CMU headquarters and its orderly room had been established in RCAF #2 Equipment Depot, Kitsilano, Vancouver, almost under the Burrard St. bridge where it touches land at Kitsilano after spanning False Creek. I think I recall it may have had a Chestnut St. address. RCAF buildings have long since gone and the area is now known as Vanier Park. Included on the Equipment Depot property were wharf facilities on False Creek. This allowed small military boats to arrive and leave for points north, up the coast, with personnel, supplies, machinery, and construction materials directly from #9 CMU headquarters.

These small boats which provided much of the transportation for #9 CMU were mostly small seagoing fishing vessels. Some taken from Japanese internees, and boats expropriated by the government for wartime service, or lent to the government for the duration of the war by generous citizens wishing to contribute something to the war effort. Some of these boats eventually found their way into the RCAF Marine Section, the RCASC, and the RCNVR. Two boat names come to mind that wore the RCAF Roundel; the "Midnight Sun" a small fishing boat, and the "Deer Leap", a slightly larger MV that was lent by the Woodward family who operated a department store in Vancouver. Another boat, the "Lady Rose" a small coastal packet steamer, was taken over by the RCASC in 1942. It transported most of the Army and Air Force, including #9CMU personnel, mail, etc, back and forth between Port Alberni on Vancouver Island and RCAF Station, Uclulet. As of this date this ship is still in service making stops along the coast.

Sometimes these boats would carry #9CMU personnel and also tow a barge loaded with construction supplies and equipment. This could be particularly hazardous in rough seas. At the time of the loss of the "B.C. Star" with all on board, it was thought to have been caused by the barge in tow, sinking, and dragging the boat down with it.

Construction and maintenance of telephone lines by # 9 CMU was carried out under a variety of mostly adverse conditions. Few, if any, connecting roads existed up the coast of mainland B.C. or on Vancouver Island, or on the Queen Charlotte Islands. Men, material

and supplies had to be landed from boats as close to the work site as they could get. This in itself was no easy task and much of the material had to be carried on backpack boards through thickly forested areas and often over very rough terrain. Temporary tent work camps housed personnel. The size of the work forces varied depending on the size of the job at hand.

From my own experience, everything about those tent work camps was always WET, including the insides of the tents. Rain and winds seemed to be endless. #9 CMU issued outer clothing and hats called Bone-Drys (supposed to keep you dry), made of a heavy material. We eventually would sweat in these outfits, and the outfits would eventually leak so that we were wet both inside and outside most of the time.

#9 CMU remote tent work camps and line maintenance sites received Coast Watch rations, which were equivalent to a standard ration plus one third. No power was available on most sites, therefore no refrigeration. So most rations were canned or dehydrated. Fresh meat, fruits and vegetables were a rarity. The RCASC had stocks of dried rations destined for our Army in Hong Kong, but when it fell to the Japanese in 1941, these stocks eventually became part of our rations.

#9 CMU had very definite rules about not getting involved with native people who inhabited coastal villages, and to respect their property and lifestyle. Non-native people were few and far between in the remote areas, and we missed not having the company of young ladies of our own age group. Personnel on some line maintenance sites that happened to be close to more populated areas made friends with the locals and sometimes became involved in home and church visits and social gatherings, dances, etc.

Three non-native people come to mind that lived in separate places in the northern part of Vancouver Island. Their help was invaluable to #9 CMU maintenance people. At first they usually referred to us disdainfully as "you city slickers from down East", which I suppose some of us were. But as time went by they taught us about ocean tidal patterns, how to tell what weather conditions were coming, all about animals in the forest, which to be afraid of, which not to be afraid of, types of trees, plants, which ones were edible and which ones were not, etc, etc.

The government had issued them carbines and asked them to watch remote coastal areas for signs of unusual or enemy activity. I believe they were known as Coast Rangers.

They were recluses, each in his own eccentric way, but they became firm friends with some of us. We in turn helped them occasionally with chores that required young muscles.

Remote line maintenance sites typically were prefabricated wooden buildings, always referred to as "shacks", with a number. These buildings had been transported in and erected sometime before our arrival, possibly by other #9 CMU personnel, or perhaps by Army construction units. Four bunks with straw mattress and several blankets, a firewood

cook stove were provided. Drinking water was obtained from whatever stream or lake that could be found nearby. Two kerosene or gasoline lanterns provided light.

A number of these telephone lines were simply a single circuit of two #14 gauge copper wires on side blocks fastened to trees. Tree climbing spurs and safety belts were a must. Machetes for slashing through forest undergrowth were also a #9 CMU issue. The line usually would follow an irregular foot trail through the forest, up and down steep ravines, over rough rocky areas, and across very difficult terrain. No vehicles here, everything done on foot and most things done by hand labour. Material and supplies were carried on backpack boards.

Remote maintenance site personnel usually consisted of three telecom persons and a GD person who acted as a cook. (Truly some of them were only "acting" as cooks!)

Isolation was a factor. The only contact with the outside world was through the mail (which was often delayed, along with rations, if rough water or storms prevented supply boats making their rounds), and also through a small battery operated table radio supplied to each shack by the YMCA/YWCA. Radio reception was poor and only intermittent although we most often got music and the news from stations in California. Radio batteries ran down and replacements were difficult to come by. At one point some of us were "adopted" by girls from a "Friday Night Club" in Vancouver. These were teen-age students who wrote to us, sent the odd battery and perhaps some cookies, and became our friends although I never got to actually meet any of them.

Telephone line patrols and inspections were ongoing on a daily basis. Storm damage caused the most problems requiring repairs to the lines.

RCAF Station Uclulet and RCAF Station Tofino were on the West Coast of Vancouver Island. To reach these stations from Vancouver, the trip consisted of a ferryboat ride to Nanaimo on Vancouver Island, followed by an uncomfortable bus ride to Port Alberni. Usually an overnight stay was required here. Beds in private homes (some complete with bed bugs!) could be had for 25 cents a night. Early the next morning a boat ride on perhaps the "Lady Rose" or the "Uchuk I" would eventually get personnel to Station Uclulet. Speculation always centred on how rough the trip might be as the boat headed toward open water near Uclulet. Personnel going on to Station Tofino, would eventually be picked up by truck to go the rest of the way. Usually a long and tedious trip from Vancouver.

Station Uclulet was for seaplanes mostly PBYs and Stranraers; Station Tofino for land planes, mostly Curtis P40 Kittyhawks. These two stations had recently been connected by a road pushed through the bush, a distance of about 16 miles. This road approximately followed the shoreline; part of which I think was called Long Beach, now part of the larger area known as Pacific Rim National Park. The pristine beaches and tidal flats of that area that we know today were at that time covered with randomly placed piles, - logs driven into the ground sticking up 6 or 8 feet. This was to prevent the landing of Japanese

aircraft. In many places along the edge of the tree line at the beaches, sandbagged entrenchments and bunkers had been dug, all vacant, but ready for when the expected eventual Japanese invasion took place.

On June 20 1942, a coastal Light House & Radio TX site at Estevan Point, about 40 miles north of Station Tofino, had been shelled by a Japanese submarine, which had surfaced offshore. Locals thought the invasion was about to start.

Alongside this newly constructed Uclulet/Tofino road, #9CMU built a pole line to connect the two stations together. Weather at the time was particularly poor, and postholes and anchor holes were hand dug with considerable difficulty in the wet gumbo clay, mixed with rocks and endless tree roots.

Two ten pin cross arms of open wire (copper #14 gauge) were placed, which provided about 10 circuits.

Our crew of #9 CMU for this job consisted of about 20 to 25 men. We were attached to Station Tofino for rations & quarters. For those of us who had experienced tent work camps, this was like living in a posh hotel; showers, hot & cold running water, dry bunks, electricity and above all a proper mess hall with good meals. Also the use of a Rec hall.

#9CMU members were included with Station personnel in weapons training This included firing of the Lewis and the Vickers machine guns and learning of their stoppages, rifle and bayonet drill, hand grenades, etc.

The original #9 CMU rifle issue was a Springfield 30.06 calibre (I think), a finely crafted rifle left over from World War I US Armed forces. It had an excellent long range graduated sight. At about this time these rifles were replaced by the Lee-Enfield, much lighter, shorter and simpler operating, but less accurate.

A little north of Uclulet, the present day highway coming from Port Alberni connects with the Uclulet /Tofino highway. At this point there was a tent work camp known to #9CMU people as "Joeville" It was used in the construction and the maintenance of a single telephone circuit travelling Easterly across the centre of Vancouver Island, alongside Kennedy Lake and Sproat Lake. Eventually it joined civilian telephone lines at Port Alberni. This was the landline connection for both Stations Uclulet and Tofino.

Langara Island lies off the NorthWestern tip of the Queen Charlotte Islands. It's a small island that was uninhabited at the time. A Radar defence site had been established there. Protected incidentally, by one small field gun manned by four or six members of the RCA.

About 20 to 25 of us telecom people sailed from #9CMU headquarters in Vancouver aboard the MV "Deer Leap", a former private pleasure boat that had accommodation for just a few people along with its small crew. A trip by way of Masset that would cover about 500 miles. The rear deck was open to the weather on **three sides but had** a canvas a

awning top for sun and rain shade. To stay out of the weather, most of us spent our time under tarpaulins covering material and supplies on the rear deck. The tiny galley worked endlessly to prepare our rations. Travelling through the Hecate Straits, south of the Queen Charlotte Islands, introduced some of us to seasickness for the first time, but not the last time.

Langara Island is a plateau on top with steep rocky cliffs leading straight down to the surf, which pounds on the rocks. Much of the Island shoreline is inaccessible except for a few places where stony beaches exist. The #9 CMU tent work camp was located at one of these places. Here supplies and gear could be landed by rowboat and small barge or rafts, often with difficulty, from an off shore supply boat. This camp was located on the opposite side of the Island from the Radar site. The project was to construct a pole line with one ten pin cross arm of #14 gauge copper wire which would provide about five circuits. This would connect the Radar site to a new Radiotelephone transmitter site. This site again was on the opposite side of the Island from the Radar site. No vehicles here, all hand labour and much effort to drag and carry materials up steep slopes covered with thick forest underbrush to reach the plateau area. I recall once when the supply boat was delayed by stormy weather for an extended period, most rations had been consumed, including the mandatory hardtack & bully beef emergency rations, and we were reduced to beer and chocolate bars that the cook had thoughtfully put aside.

An interesting sideline here. Access to the Radar site was by means of a highline lift to raise a rowboat with its occupants, out of the water and lift it straight up, then pull it horizontally along the highline and set the rowboat down on a flat rock surface. The highline was a steel trolley cable fastened to a high point on each side of a very narrow sea inlet in the cliff face. Riding this highline was a small-wheeled carriage with a centre pulley mounted so a lifting cable could be fed round the pulley and head downward toward the water. The highline was perhaps 70 feet above the water surface, and the lift up was probably about 50 or 60 feet (memory is vague on these measurements). The rowboat, having left the supply boat standing offshore, would have to be maneuvered into this inlet (by oars) when the tide was right, and sea swells not too menacing. Much credit should go to the Marine Section people for their skills here. A stationary gasoline engine powered the highline trolley. The high line operator became quite skilled in giving selected people a rather hair raising ride. Often visiting officers of high rank on an inspection visit! On an outward trip the operator would lift the rowboat (by means of four hooks attached to the lifting cable) from the flat rock surface, with departing people sitting inside, and let it slide along the sloping highline gathering speed quickly, then brake it suddenly as it centred over the water inlet. This would cause the boat to swing back and forth. As the rowboat stabilized he would suddenly release the brake, letting the rowboat freefall at gathering speed until it was right above the water, then brake it suddenly, then gently lower it the last couple of feet into the water where the four hooks

had to be quickly released and the boat rowed out to the supply boat standing off shore.

One needs to have experienced this to really appreciate either the scare or thrill of it, whichever. I recall one highline operator who sat by the engine controls, usually with a cigar, and always grinning, while enjoying doing his thing! More often than not, officers so treated, seldom returned to the Island!

A Radar defence site was located at Cape Scott at the northern tip of Vancouver Island. I seem to recall it was manned by #10 Radar Detachment RCAF. They were connected to the Victoria/Vancouver Command Control Centres by a single telephone circuit that found its way across the thickly forested northern part of Vancouver Island to Port Hardy, on the East Side of the Island. Then south along beside Johnstone Strait to a point almost at Campbell River (a distance of about 160 miles) where it connected into civilian telephone company facilities that took it to its destination.

As an aside, F/O C. O'Callaghan, a #9CMU officer was awarded a "Mention in Despatches" for directing a #9CMU group in fighting a stubborn bush fire for several days. They were successful in saving several miles of RCAF communication lines from destruction. This was somewhere along the Johnstone Strait in 1945.

The telephone line over that distance was maintained by a number of remote maintenance sites, and I believe these sites were manned by #9 CMU and also by either RCAF #1 or #2 Land Line Maintenance Units. I spent #9CMU Maintenance time at the most northern part of the line that connected with the Radar site. Our shack was located where the last decaying remains of the failed turn of the century Cape Scott village could still be seen. This was remote from the Radar site, and our supplies landing area was a rough stony beach at Fisherman's Bay. Supplies were carried on foot for some distance over a rough trail to our shack.

When our work took us near the Radar site, we were always welcomed in for a shower, and a snack in the mess hall. I think #9CMU was mostly unknown to the Station personnel, and the officers in charge viewed us as some kind of an oddity - four persons living out in the bush in the middle of nowhere. One Station officer offered to issue us with side arms, which we accepted. Smith & Wesson 38 calibre revolvers, along with a couple of Sten guns. We thought at the time this was unusual because I don't think side arms were issued to anyone below the rank of sergeant.

As an aside, parts of the shoreline on this Part of Vancouver Island were littered with washed up debris from the Pacific war. Including endless numbers of lifejackets stamped USN and many life rafts, some relatively undamaged, with drinking water casks and rations still intact. These rations we added to our own ration supply.

RCAF Station Prince George in the British Columbia interior was part of the North West Staging Route and it was used extensively by the USAAF. Communication lines from

the Station went from a telecom repeater station, south, beside what was called the Caribou Highway. Two ten pin cross arms of open wire. #9CMU line maintenance persons were attached to Station Prince George for rations & quarters, another good accommodation. They also had a Jeep and trailer for their telecom line inspections and maintenance work. What a treat after all those miles of walking through the bush at those remote sites!

The next line maintenance site south of Prince George was located at the town of Quesnel. Here, maintenance people had the best accommodation that I had ever seen or heard of in #9CMU. They were boarded in a local hotel (called The Caribou Hotel I think), run by a comical Chinese fellow, and the meals were almost home style. As an added bonus there were a couple of waitress/chamber maids on staff that our fellows could make friends with. We from Prince George were always envious!

I think #9CMU may have had a strength of about 2000 people, but we in the telecom section always worked in small groups, probably 20 at the most, but generally in threes and fours. So as individuals we never got to meet many of them and we never were assembled together as a whole group.

Dennis Newnharn
Bobcaygeon Ontario.

May 2002.

Dennis E. Newnham
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July 31, 2002

Hello Scott:

Thank you very much for sending all the info about the CMUs'. What a surprise package!! Perhaps I had mentioned earlier that following my discharge in the spring of 1946, 1 had never heard of, or seen anything in writing about CMUs until I spotted Gary Silliker's ad in the LEGION magazine this past spring. The only other CMU I knew of was #8 where my friend Don Shaw had served. I was not aware the other CMUs even existed, so the whole thing has been fascinating reading. Wartime restrictions kept everybody in the dark as to where other Units or groups were and what they were doing. Certainly the achievements of the CMUs as a whole were spectacular and I would guess, little known to the public.

It was refreshing to read the Forward notes by CWO K.M. Deller complimenting the CMUs on their efforts and successes and pointing out the importance of their work and the need for some recording of all this, and the making of it public before it becomes lost in time.

In my experience no one is interested in an RCAF member's experiences unless that member was part of an Aircrew. An old friend of mine who served in the Navy during the war said pretty much the same thing; no one is interested unless you actually served on a ship. Also of course, if you had no overseas time you don't count for anything. I think the DVA still has some of that mindset. At one point I applied for whatever financial assistance they might give, to help treat a hearing loss problem and get some hearing aids. My application was disqualified immediately when they learned I had no overseas time. Yet a friend of mine also ex- RCAF, but with overseas time,, had similar problems and made the same application. His request went right through without delay and was honoured.

That must sound like sour grapes, but it's not intended that way .....just the way things appear to be.

I digress.

Pictures were most interesting and filled in some blanks in my memory. I had forgotten the Masset landing strip mats. At one point some of us were held over at Masset, likely due to bad weather. We were probably on the way to, or coming from, Langara Island. We were assigned to assist in placing these mats, and I also have some recollection of working with a surveyor. Probably on the end of the plumb - bob!

These pictures got me rummaging through some old snap shots and I found I have one or two that were taken during that period. They have suffered with age so the quality isn't the best, but my son has taken them to see if he can improve them with his computer. As you probably are aware, cameras were a no-no at pretty well all locations due to wartime restrictions, but I did manage to get a few snaps. I'll send them on to you later, and they may be of some interest to you.

Good to see the logos of the different groups, including 9 CMU, which had slipped my mind completely.

I was surprised at recognizing some of the Officers' names.

I'm enclosing a copy of a newspaper article written immediately after the war that tells about the West Coast Radar stations. Thought that may be of interest to you, or someone else. I donated the original to the RCAF museum in Trenton Ont. a couple of years ago.

Thank you again for your time and effort that went into assembling the info on CMU's, very much appreciated and it made a great read.

Looking forward to hearing from you about how you're progressing with your research, when you have the time, I'll close off for now

Regards,

Original signed Dennis Newnham

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Article from the Vancouver Sun newspaper dated November 5 1945

RADAR GUARDED B.C. COAST AGAINST JAPS

POSTS BUILT ON FAR HEADLANDS, MANNED BY 800 RCAF STAFF

Details of the Radar chain that protected Canada's west coast against the one-time possible attack by Japanese were revealed exclusively to The Vancouver Sun today. In darkness and daylight, in fog, rain or sunshine, month in and month out, the war's most fabulous development gave British Columbians the safety behind which they were able to live and work.

For almost four years the invisible all-seeing eye of radar scanned sea and sky from the southern tip of the Alaskan panhandle to the International Boundary for the expected approach of the enemy.
He could not have come within 100 miles of the coast before his presence was detected by some of the 800 RCAF personnel who manned the chain.

History of radar in B.C. is not the glamorous, action packed story of similar organizations in England and on the fighting fronts.
It is story of lonely vigils in outposts and utter boredom that can only come in complete isolation, the monotony of constantly repeated tasks and little or no diversion.

EFFICIENCY FIRST, COMFORT LAST

Late in 1941 it was decided that radar protection was top priority for east and west coasts. The decision for the establishment of the chain in British Columbia was just out of the typewriters of stenographers when the skeleton organization went into action. Most important factor for operation of a radar station is location, which must be high above the surface of the sea and have an unobstructed "view' of all possible approaches of attack.
Parties of RCAF technicians travelled up and down the coast in aircraft and boats to select the sites to be used, and out of the mass of material they collected in a short time, they chose the locations for the electronic defence posts. No thought of comfort for personnel or ease of communication entered into the considerations of the scouting parties. Efficiency of operation was the only factor to be considered. The other difficulties would be solved.

And so the party selected, Langara Island, Marble Island and Cape St. James, in the Queen Charlottes; Spider Island, between Vancouver Island and the Charlottes; Cape Scott, Ferrer Point, Amphitrite Point, Tofino and Patricia Bay, on Vancouver Island, and Sea Island on the mainland.

Builders and technicians moved into Amphritite Point in December, 1941, and started construction of the first radar station which guarded the approaches to Vancouver.

SHIPS SPOTTED AT 30 MILES

Other construction and installation work went ahead with amazing facility and Canada's west coast had it's protective screen in a minimum of time.
All of these installations were of the general purpose type of station known in the radar parlance as "CHL" , which means "Chain Home Low", or "Chain Low Angle", the stations which defeated Germany's wave-hopping aircraft in attacks on England's coastal targets.
Aircraft could be detected up to 150 miles depending on their altitude, and surface vessels were made visible to keen-eyed watchmen from 30 miles away.
Filter rooms, where operational data is collected and analyzed before being passed on to fighter, bomber, and other stations, were established at Prince Rupert and Victoria.

Every item of equipment that went into the radar gear was manufactured in Canada by Research Enterprises Limited, the government owned plant at Leaside Ontario, an outgrowth of the National Research Council.
Basic electrical design of the gear came from England, which pioneered in radar detection, but the circuits were redesigned for the use of Canadian radio tubes, thus eliminating supply problems.

24-HOUR GRIND, FEW LEAVES

Mechanical design of the equipment was entirely Canadian, and a great amount of the Canadian equipment was supplied to the United States when requirements of radar installations here were met.
The west coast stations were self contained units, and besides the CHL equipment, maintained radio navigational aid -beacons for guidance of friendly aircraft, and gear for the identification of aircraft coming in.

Plots on ships were passed up to the navy, and communication with filter rooms and other supervisory units were maintained by land lines terminating in frequency modulation links and straight radio telephone.

Ground controlled interception units were established at Patricia Bay and Sea Island to guide fighters to enemy aircraft which dared to penetrate the defences.

Day in and day out a 24-hour watch was maintained on these stations, which saved Canadian aircraft of greater value than the entire cost of installing the chain, as well as providing an infallible defence.

Leave for the personnel manning these stations was scarce and the transportation problem was hazardous. In some cases men had to be swung ashore in cradles suspended from overhead lines.
Weather was so bad at times, that mail and supplies could not be got into the stations for two or three weeks at a time. When the sea was calm enough, the supplies and building materials were taken ashore on rafts.

Dennis E. Newnham
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September 12, 2002.

Hello Scott:

Once again, thank you very much for another surprise package, the 9 CMU Diary. I found it a most interesting read. I've gone over every entry and it filled in many blanks in my memory. As I read it I began to think I'd entered into some sort of a time warp! Interestingly, it also pointed out some inaccuracies in what I thought I remembered! Over a period of 60 years memories can get twisted I suppose. I do appreciate your time and effort that went into the preparation and assembling of all this data.

As promised, enclosed are photos that maybe of some interest to you. As you can see it's a mixed batch. The 5X5 in. are copies from old negatives, the others have been old pictures scanned through a computer.

My initial thought was to send the pictures only, then I thought if you or any one else had occasion to use any of these in research it would be better to send you the CD as well, so you could manipulate for size, detail, etc. So the CD is yours, no need to send it back, you can dispose of it some time ..... whenever. There are some other Service pictures on the CD which aren't relevant to your research. Son Bob says access the CD through "Low Res".

For identification, I've put together some sketchy captions as best remembered.

Wishing you success in your research endeavours, and looking forward to hearing from you any time,

regards,

Original signed Dennis Newnham

Photo # 1.
Langara Island BC

Tent work camp used by #9 CMU Telecom members while constructing a pole line and circuits to connect the Radar site to a remote Radio Telephone transmitter unit. Camp was remote from the RCAF Station. Rowboat and barge/raft for bringing in supplies can be seen. Photo taken at low tide and shows rocky shore line that had to be navigated by rowboat. Having rowed this boat several times, I can recall it was often tricky going because tides were always changing.

Photo # 2.
Cape Scott B.C.

Plank road connecting RCAF Station with its Radar site. Perhaps a mile long. Shifts rode back and forth in the back of a dump truck.

Photo #3.
Vancouver B.C.

A group of #9 CMU telecom members fresh from #1 Manning Depot in Toronto. Identities unknown except for member on extreme left, George Andrews from North Bay Ontario. Photo taken in Vancouver's Stanley Park, early in January 1943.

Photo # 4.
Prince George B.C.

Two #9 CMU telecom members
LEFT Sgt. Frank Senz
RIGHT Dennis Newnham

Photo # 5.
Prince George B.C.

#9 CMU Line Maintenance Jeep outside Telecom repeater station near RCAF Station Prince George.

Photo # 6.
Prince George B.C.

A #9 CMU Line Maintenance Telecom member "on top of his work" astride two cross arms of # 14 gauge copper wire that carried RCAF communications circuits south from Station Prince George.

Photo # 7.
Cape Scott B.C.

Christmas dinner for #10 Radar Detachment at RCAF Station Cape Scott. Likely in 1944.

Photo # 8.
Cape Scott B.C.

Part of # 10 Radar Detachment assembled outside the Mess Hall following Christmas dinner. The four members in the back row are #9 CMU Line Maintenance people who lived in a shack some distance away. Though not attached to the Station in any way, they were invited for Christmas dinner through the generosity of the C. 0. of # 10 Radar. Likely 1944.

Photo # 9.

Typical Line Maintenance prefabed living quarters shack. Usually for four people. The neat appearance of this particular site location doesn't truly reflect the usually rough terrain of the area. The building shown was located between Cape Scott and Holberg on Vancouver Island. B.C.

Photo # 10

Interior of typical Line Maintenance shack

Photo # 11.
Vancouver B.C

This picture of Vancouver city was taken sometime in the 1940's, and appeared in the Reader's Digest magazine in 195 1. Part of RCAF #2 Equipment Depot buildings that housed #9 CMU Hdqtrs. can be seen in the lower left hand comer.

Photo # 13.
Cape Scott

The Swami

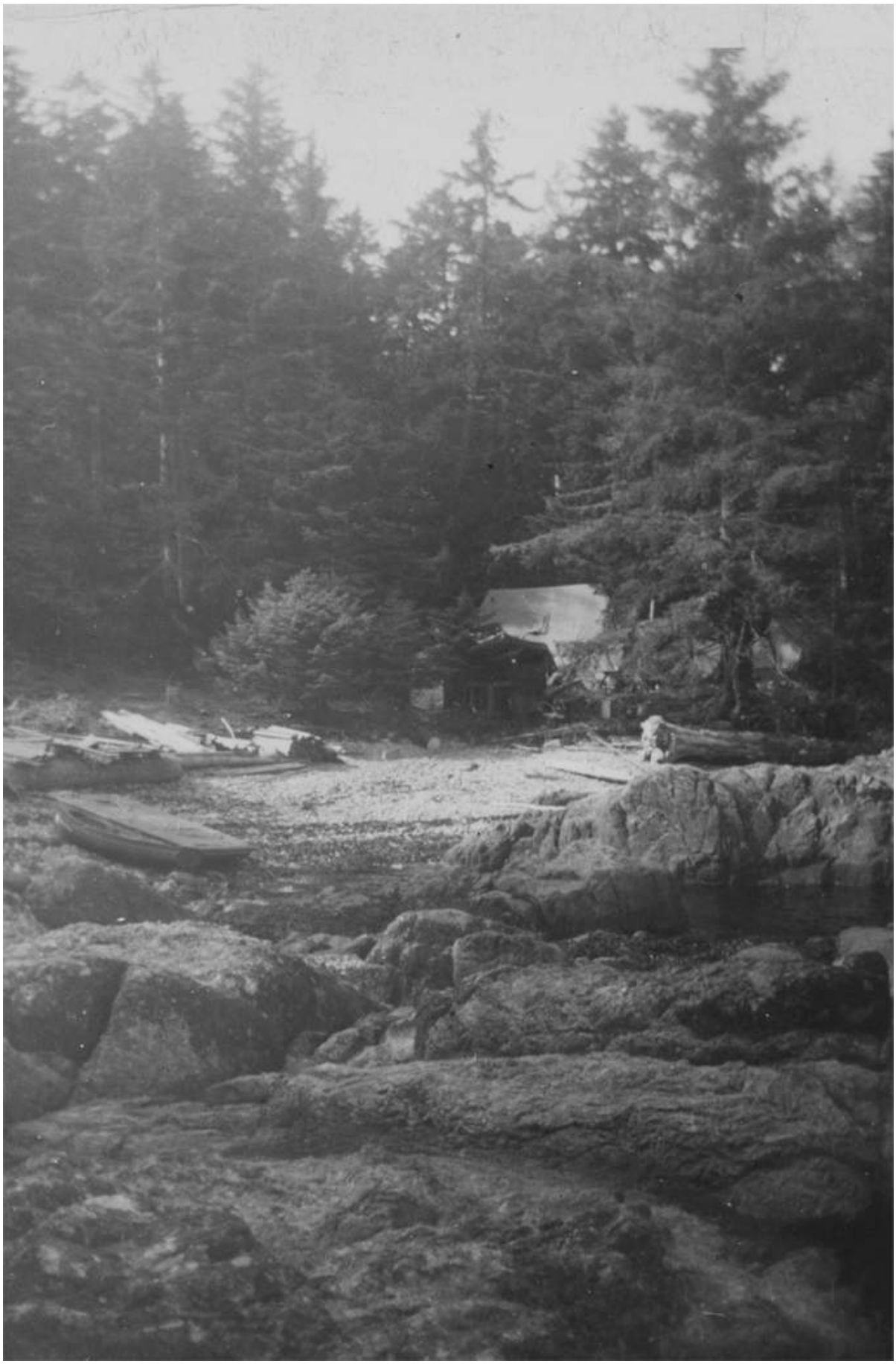
The Swami was a member of # 10 Radar Detachment. (identity unknown) As in other isolated sites, entertainment sometimes came from personnel on site. Often Swami would look in his crystal ball and would "see" that the war was going to end next month. This always brought a cheer from his audience ……wishful thinking ……..so much on everyone's mind at the time.

Photo # 12.

Two #9 CMU telecom members (identities unknown) aloft on a pole that is carrying a single circuit of two #14 gauge copper wires fastened to insulators on side blocks. This was a typical circuit arrangement that connected remote RCAF sites eventually to Command/Control Centres, either by connecting to civilian telcos, or to Radio Telephone sites such as found on Langara Island. This photo also shows a third wire which is not usual. It's called a drop wire, and would only be used when connecting the circuit to a telephone or to a test point.

Photo # 14.
Uclulet B.C.

A usual rainy day on the apron at RCAF Station Uclulet.

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HAPPY


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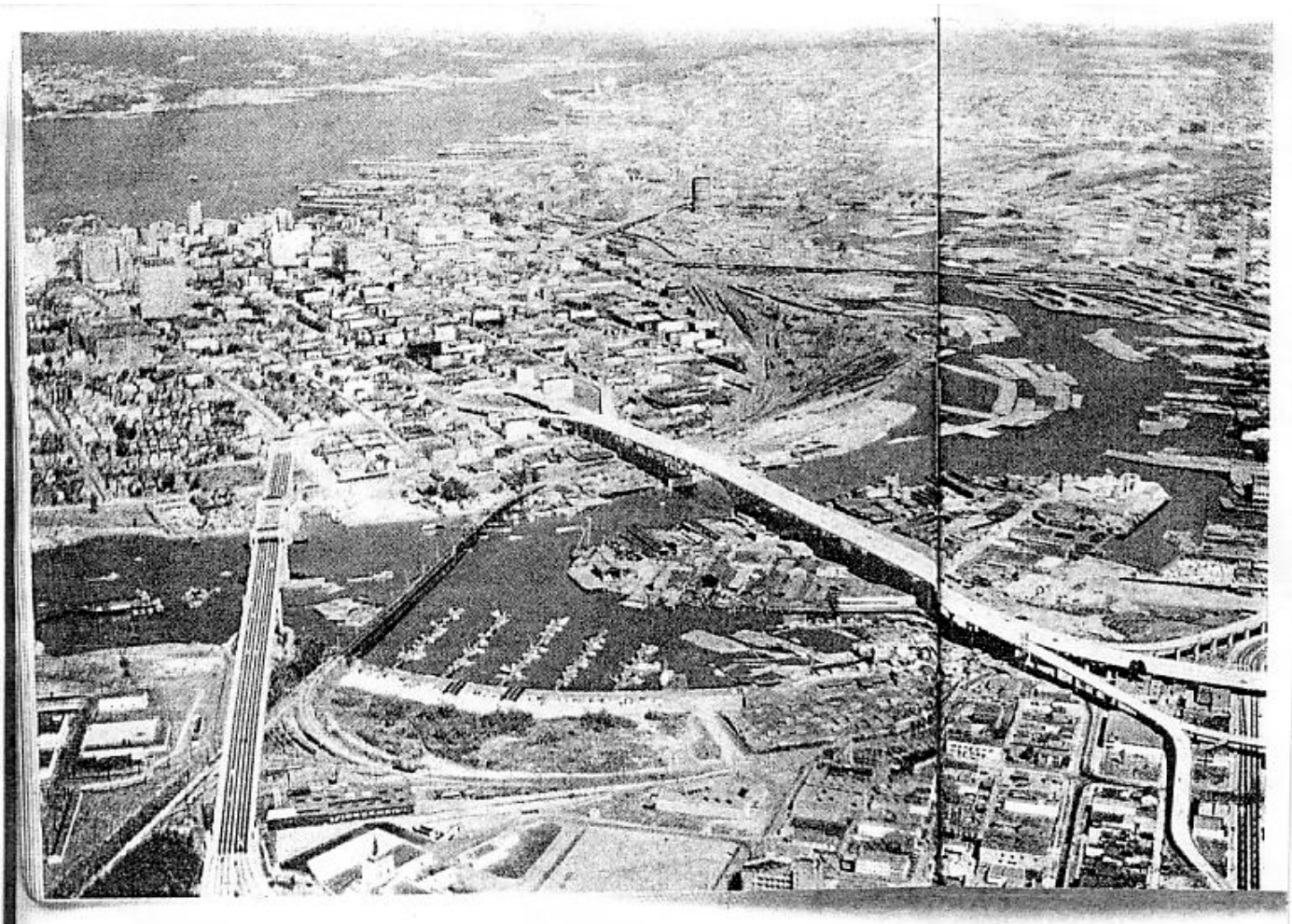

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HOTE

ENGINEERS RESTORE NORTHERN LINK

The Peace River suspension bridge was the show piece of the bridges on the Alaska Highway. Late on 16 October 1957 a shift of the northern anchor block caused the collapse of the bridge. This closed the highway and severed the main road link with northern BC and the Yukon.

Quick action by the North West Highway System engineering staff was instrumental in getting a ferry into operation. Due to the impending winter, planning was taken to secure an all weather link. The Pacific Great Eastern Railway bridge up stream was converted into a single lane roadway. Seven miles of access road was built and a low level crossing of the Pine River was completed to connect with the railway bridge and restore traffic.

Planning was underway for a high level Bailey bridge over the Pine River and construction began the first week of January. Construction of the timber piers and the access road was carried out by Plant Troop of the Northwest Highway Maintenance Establishment during the period of January through March. A troop from 2 Field Squadron RCE in Chilliwack was tasked with the assembly and erection of the five span triple single Bailey and this was completed by the end of March. This was the longest Bailey erected by DND in Canada. The new structure opened for traffic before spring break up.

The bridge handled over 7000 vehicles a week until a new bridge was complete over the Peace River on 9 July 1960. Once more the Engineers rose to the occasion and kept traffic moving .

MOUSE HOLING IN ORTONA

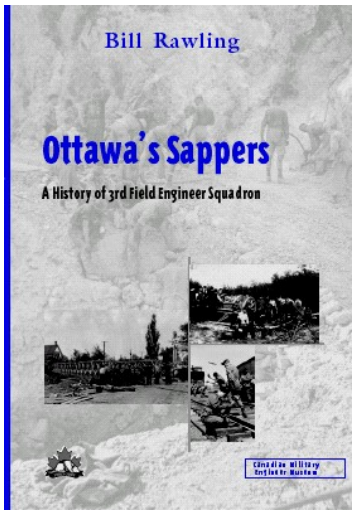
In December 1943 the German Army had retreated to the “Bernhard Line” across the narrowest part of the Italian Peninsula. The German Engineers had destroyed most of the bridges in the area South of the defensive line, they had also cratered road defiles, torn up railway tracks, and planted many minefields. To make matters worse the area was crossed by many mountain rivers swollen with the winter rains.

The Engineer resources of 1st Canadian Division were fully committed to restoring the routes by building bridges, clearing minefields, which were often booby trapped, and other tasks to allow the forward movement of tanks and heavy transport vehicles. Their efforts earned the personal congratulations of General Montgomery.

On the 21 Dec 1943 the Loyal Edmonton Regiment and Seaforth Highlanders, supported by the tanks of the Three Rivers Regiment, entered Ortona, the eastern anchor of the “Bernhard Line”. They encountered the most intensive street fighting in the history of warfare. The Engineers and pioneers were heavily involved in clearing obstacles restricting the advance. In the house to house fighting the tactic of “mouse holing” was perfected. A hole in the common wall between adjacent houses was prepared by hand tools or explosives to gain entry to the second house. When the enemy occupied the upper floors a demolition charge quickly destroyed the house. This procedure allowed the Canadians to advance up the street unseen by the enemy and was used as an example for other Allied Armies.

On 27 Dec the German Army broke off contact and the Battle of Ortona was won.

Ottawa's Sappers: A History of 3rd Field Engineer Squadron
By Bill Rawling



Book Release: September 14, 2002 – Now accepting orders

In celebration of the Squadron's 100th anniversary in 2002, the 3rd Field Engineer Squadron Association and Dr. William Rawling have partnered with the Centennial of the Canadian Military Engineers and the Military Engineer Museum Association of Canada to publish a comprehensive history of the Squadron which will be of interest to military engineers and military history collectors.

There are two options for payment:

Pay $20.00 and receive a copy of Ottawa's Sappers (shipping included)

OR

make a minimum $50.00 donation to the CME Centennial and receive a copy of Ottawa's Sappers (shipping included) **and** a tax receipt for income tax purposes.


Ottawa's Sappers

A History of 3rd Field Engineer Squadron

Militia units in Canada train and operate in rather ambiguous circumstances. Originally conceived in the nineteenth century as the foundation for mobilizing an army, they fulfilled that role very rarely over the next 150 years. They were not, however, idle, justifying their existence and – admittedly meagre – budgets through training, various forms of community work, and knowledgeable individuals joining other branches of the armed services or government.

Since 1902, 3rd Field Engineer Squadron's experiences have reflected those of the Militia as a whole. Though only mobilized once, in 1939, it has still performed a role, or should one say, several roles in its hundred-year history to date. From helping to fight the Lethbridge Flats fire of 1908 to supporting the community in the 1998 ice storm, through front-line service in the Second World War and providing individual augmentees to unarmed overseas operations, the unit has made little more than fill a single theoretical function, but has instead played whatever part was required to complete the task at hand.

How 3rd Field has applied such pragmatism in over a century of service is the main theme of the narrative within these pages.

The author of *Surviving Trench Warfare: Technology and the Canadian Corps, 1914-1918*, of *Death their Enemy: Canadian Medical Practitioners and War*, and of *Technicians of Battle: Canadian Field Engineering from Pre-Confederation to the Post-Cold War Era*, Bill Rawling is currently a DND employee with the Directorate of History and Heritage.

ISBN 0-9781265-0-7

To receive your book send a cheque for $20.00 payable to 3 FES Association **OR** a cheque for $50.00 payable to MEMAC(CME 2003 Fund) to:

3rd Field Engineer Squadron Association
2100 Walkley Road
Ottawa, ON
K1A 0K2

For more info call (613)991-1529 or di827@freenet.carleton.ca

SALUTE TO THE ENGINEERS

Now the Lord of the realm has glorified the charge of the Light Brigade,
And the thin red line of Infantry, when will its glory fade?
There are robust rhymes of the British tar and classics on Musketeers,
But I shall sing till your eardrums ring of the muddy old Engineers.

Now its all very well to fly through the air, or humour a heavy gun,
Or ride in tanks through the ranks of the broken and shattered Hun,
And it¹s nice to think, when a U-boat sinks, of the glory that outlives years,
But whoever heard a vaunting word for the muddy old Engineers .

Now you must not feel, as you read this rhyme, that a Sappers¹s a jealous knave,
That he joined the ranks for a vote of thanks, or in search of a hero¹s grave ,
No, your mechanized is alright and your Tommy has darned few peers,
But where in Hell would the lot of them be if it weren¹t for the Engineers.

Oh, they look like tramps, but they build your ramps and sometimes lead the advance,
And they sweat red blood to bridge the flood, to give you a fighting chance,
But who stays behind when it gets too hot, to blow up the roads in the rear?
Just tell your wife that you owe your life to the muddy old Engineers.

No fancy crest is pinned on his chest, if you read what his hat badge says,
Why "Honi Soit Qui Mal Y Pense" is a queersome sort of phrase,
But their modest claim to immortal fame has probably reached your ears,
The first to arrive and the last to leave are the glorious Engineers.

Author- Cpl Claude Radley, 18 Fd Coy RCE
England 1943

The Engineer Prayer: *Almighty God, we pray thee to bless the Canadian Military Engineers. May our bridges always stand, and our charges never fail, our members be ever loyal, and our officers worthy of their loyalty. May we work diligently in all our purposes and be skilled in our trades; steadfast for Queen and Country everywhere. Amen.*

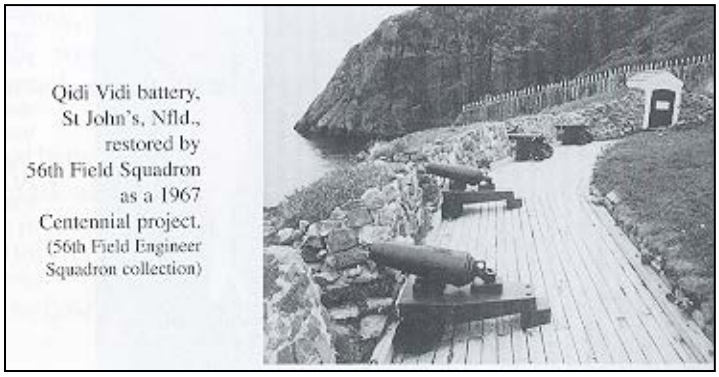
ENGINEERS EARN SPURS AS ARCHEOLOGISTS

As part of the overall celebration of Canada's Centennial in 1967 Militia units were encouraged to undertake suitable projects. For 56 Field Engineer Squadron this involved working with the Newfoundland Naval and Military Museum to restore Quidi Vidi Battery.

The initial fortification at Quidi Vidi was constructed by the French in 1762 only to have it captured by the British a few months later. The fort was used by the British until they left Newfoundland in 1870. The facilities felt the ravages of time and in 1967 was in ruins and overgrown with brush,

The first task of the squadron was to determine the nature and extent of the defensive works and buildings that occupied the site. All excavation had to be carried out in accordance with archaeological procedures to recover any artefacts in the area. Once confirmation of the site plans were completed, reconstruction proceeded with a few wrinkles. To match the bricks used in the original structure it was necessary to salvage bricks from a building being demolished in St. John's. The original sandstone blocks in the parapets had fallen down and were lodged on the beach over 35 metres below the site. All hardware had to manufactured in accordance with 1812 standards.

Once the construction was completed four period cannons were installed and are used to fire salutes on ceremonial occasions. A fine example of our history restored by Military Engineers.



Qidi Vidi battery, St John's, Nfld., restored by 56th Field Squadron as a 1967 Centennial project. (56th Field Engineer Squadron collection)

MILITARY ENGINEERS AT THE THROTTLE

In 1943, the United Kingdom renewed its request for Canadian Railroaders. The request was fulfilled when No 1 Railway Operating Group RCE was established on 19 March 1943. The units were formed mainly from employees with the Canadian Pacific and Canadian National Railways. The unit embarked for England on 23 July 1943.

The tasks of the group covered all aspects of railway operation from constructing and maintaining railroads, to operating trains, controlling scheduling and signaling, repairing and rebuilding rolling stock. As the equipment they were expected to operate was of British manufacture, the initial stage of their employment was to learn the technical aspects of railroading in England. This included learning to hand stoke the firebox of a locomotive as most Canadian equipment had automatic stokers.

The first elements of the unit arrived in France on 2 September 1944. They moved forward with the advance creating a reliable operating rail system to supply the mass of stores needed to support the Allied Armies. Local French, Belgian, and after the cease-fire, German railroaders were pressed into service as the rail lines extended eastward into Germany. The Railway Workshop Company had assembled 6000 railway wagons when they ceased operation on 31 August 1945.

The group became involved in the move of thousands of displaced persons following the cessation of hostilities.

Their magnificent effort in support of the Allied Armies ended on 13 October 1945 when the group was disbanded. To commemorate their role, a stained glass window was unveiled in the Garrison Church at Longmoor in 1948.

British Pioneers with First Canadian Army Laying New Railroad Track in Germany.

Article from the Vancouver Sun newspaper dated November 5 1945

RADAR GUARDED B.C. COAST AGAINST JAPS

POSTS BUILT ON FAR HEADLANDS, MANNED BY 800 RCAF STAFF

Details of the Radar chain that protected Canada's west coast against the one-time possible attack by Japanese were revealed exclusively to The Vancouver Sun today. In darkness and daylight, in fog, rain or sunshine, month in and month out, the war's most fabulous development gave British Columbians the safety behind which they were able to live and work.

For almost four years the invisible all-seeing eye of radar scanned sea and sky from the southern tip of the Alaskan panhandle to the International Boundary for the expected approach of the enemy.
He could not have come within 100 miles of the coast before his presence was detected by some of the 800 RCAF personnel who manned the chain.

History of radar in B.C. is not the glamorous, action packed story of similar organizations in England and on the fighting fronts.
It is story of lonely vigils in outposts and utter boredom that can only come in complete isolation, the monotony of constantly repeated tasks and little or no diversion.

EFFICIENCY FIRST, COMFORT LAST

Late in 1941 it was decided that radar protection was top priority for east and west coasts. The decision for the establishment of the chain in British Columbia was just out of the typewriters of stenographers when the skeleton organization went into action. Most important factor for operation of a radar station is location, which must be high above the surface of the sea and have an unobstructed "view' of all possible approaches of attack.
Parties of RCAF technicians traveled up and down the coast in aircraft and boats to select the sites to be used, and out of the mass of material they collected in a short time, they chose the locations for the electronic defence posts. No thought of comfort for personnel or ease of communication entered into the considerations of the scouting parties. Efficiency of operation was the only factor to be considered. The other difficulties would be solved.

And so the party selected, Langara Island, Marble Island and Cape St. James, in the Queen Charlottes; Spider Island, between Vancouver Island and the Charlottes; Cape Scott, Ferrer Point, Amphitrite Point, Tofino and Patricia Bay, on Vancouver Island, and Sea Island on the mainland.

Builders and technicians moved into Amphritite Point in December 1941, and started construction of the first radar station that guarded the approaches to Vancouver.

SHIPS SPOTTED AT 30 MILES

Other construction and installation work went ahead with amazing facility and Canada's west coast had its protective screen in a minimum of time. All of these installations were of the general purpose type of station known in the radar parlance as "CHL", which means "Chain Home Low", or "Chain Low Angle", the stations which defeated Germany's wave-hopping aircraft in attacks on England's coastal targets. Aircraft could be detected up to 150 miles depending on their altitude, and surface vessels were made visible to keen-eyed watchmen from 30 miles away. Filter rooms, where operational data is collected and analyzed before being passed on to fighter, bomber, and other stations, were established at Prince Rupert and Victoria.

Every item of equipment that went into the radar gear was manufactured in Canada by Research Enterprises Limited, the government owned plant at Leaside Ontario, an outgrowth of the National Research Council. Basic electrical design of the gear came from England, which pioneered in radar detection, but the circuits were redesigned for the use of Canadian radio tubes, thus eliminating supply problems.

24-HOUR GRIND, FEW LEAVES

Mechanical design of the equipment was entirely Canadian, and a great amount of the Canadian equipment was supplied to the United States when requirements of radar installations here were met. The west coast stations were self-contained units, and besides the CHL equipment, maintained radio navigational aid -beacons for guidance of friendly aircraft, and gear for the identification of aircraft coming in.

Plots on ships were passed up to the navy, and communication with filter rooms and other supervisory units were maintained by landlines terminating in frequency modulation links and straight radio telephone.

Ground controlled interception units were established at Patricia Bay and Sea Island to guide fighters to enemy aircraft that dared to penetrate the defences.

Day in and day out a 24-hour watch was maintained on these stations, which saved Canadian aircraft of greater value than the entire cost of installing the chain, as well as providing an infallible defence.

Leave for the personnel manning these stations was scarce and the transportation problem was hazardous. In some cases men had to be swung ashore in cradles suspended from overhead lines. Weather was so bad at times, that mail and supplies could not be got into the stations for two or three weeks at a time. When the sea was calm enough, the supplies and building materials were taken ashore on rafts.

Recollections of # 9 Construction & Maintenance Unit, Western Air Command, R.C.A.F. 1942 - 1946 on Canada's West Coast.
By Dennis E. Newnham

On Canada's West Coast radio transmission and reception was unreliable, to say the least, at that time- often due to turbulent weather, coupled with the mountainous terrain, etc. Landline communication circuits were installed in many places to make sure connections from coastal Radar and other defence sites would be sure to reach Command Control Centres in Victoria and Vancouver.

#9.CMU headquarters and its orderly room had been established in RCAF #2 Equipment Depot, Kitsilano, Vancouver, almost under the Burrard St. bridge where it touches land at Kitsilano after spanning False Creek. I think I recall it may have had a Chestnut St. address. RCAF buildings have long since gone and the area is now known as Vanier Park. Included on the Equipment Depot property were wharf facilities on False Creek. This allowed small military boats to arrive and leave for points north, up the coast, with personnel, supplies, machinery, and construction materials directly from #9 CMU headquarters.

These small boats, which provided much of the transportation for #9 CMU, were mostly small seagoing fishing vessels. Some taken from Japanese internees, and boats expropriated by the government for wartime service, or lent to the government for the duration of the war by generous citizens wishing to contribute something to the war effort. Some of these boats eventually found their way into the RCAF Marine Section, the RCASC, and the RCNVR. Two boat names come to mind that wore the RCAF Roundel; the "Midnight Sun" a small fishing boat, and the "Deer Leap", a slightly larger MV that was lent by the Woodward family who operated a department store in Vancouver. Another boat, the "Lady Rose" a small coastal packet steamer, was taken over by the RCASC in 1942. It transported most of the Army and Air Force, including #9CMU personnel, mail, etc, back and forth between Port Alberni on Vancouver Island and RCAF Station, Uclulet. As of this date this ship is still in service making stops along the coast.

Sometimes these boats would carry #9CMU personnel and also tow a barge loaded with construction supplies and equipment. This could be particularly hazardous in rough seas. At the time of the loss of the "B.C. Star" with all on board, it was thought to have been caused by the barge in tow, sinking, and dragging the boat down with it.

Construction and maintenance of telephone lines by # 9 CMU was carried out under a variety of mostly adverse conditions. Few, if any, connecting roads existed up the coast of mainland B.C. or on Vancouver Island, or on the Queen Charlotte Islands. Men, material and supplies had to be landed from boats as close to the work site as they could get. This in itself was no easy task and much of the material had to be carried on backpack boards through thickly forested areas and often over very rough terrain. Temporary tent work camps housed personnel. The size of the work forces varied depending on the size of the job at hand.

From my own experience, everything about those tent work camps was always WET, including the insides of the tents. Rain and winds seemed to be endless. #9 CMU issued outer clothing and hats called Bone-Dries (supposed to keep you dry), made of a heavy material. We eventually would sweat in these outfits, and the outfits would eventually leak so that we were wet both inside and outside most of the time.

#9 CMU remote tent work camps and line maintenance sites received Coast Watch rations, which were equivalent to a standard ration plus one third. No power was available on most sites, therefore no refrigeration. So most rations were canned or dehydrated. Fresh meat, fruits and vegetables were a rarity. The RCASC had stocks of dried rations destined for our Army in Hong Kong, but when it fell to the Japanese in 1941, these stocks eventually became part of our rations.

#9 CMU had very definite rules about not getting involved with native people who inhabited coastal villages, and to respect their property and lifestyle. Non-native people were few and far between in the remote areas, and we missed not having the company of young ladies of our own age group. Personnel on some line maintenance sites that happened to be close to more populated areas made friends with the locals and sometimes became involved in home and church visits and social gatherings, dances, etc.

Three non-native people come to mind that lived in separate places in the northern part of Vancouver Island. Their help was invaluable to #9 CMU maintenance people. At first they usually referred to us disdainfully as "you city slickers from down East", which I suppose some of us were. But as time went by they taught us about ocean tidal patterns, how to tell what weather conditions were coming, all about animals in the forest, which to be afraid of, which not to be afraid of, types of trees, plants, which ones were edible and which ones were not, etc, etc.

The government had issued them carbines and asked them to watch remote coastal areas for signs of unusual or enemy activity. I believe they were known as Coast Rangers.

They were recluses, each in his own eccentric way, but they became firm friends with some of us. We in turn helped them occasionally with chores that required young muscles.

Remote line maintenance sites typically were prefabricated wooden buildings, always referred to as "shacks", with a number. These buildings had been transported in and erected sometime before our arrival, possibly by other #9 CMU personnel, or perhaps by Army construction units. Four bunks with straw mattress and several blankets and a firewood cook stove were provided. Drinking water was obtained from whatever stream or lake that could be found nearby. Two kerosene or gasoline lanterns provided light.

A number of these telephone lines were simply a single circuit of two #14 gauge copper wires on side blocks fastened to trees. Tree climbing spurs and safety belts were a must. Machetes for slashing through forest undergrowth were also a #9 CMU issue. The line usually would follow an irregular foot trail through the forest, up and down steep ravines, over rough rocky areas, and across very difficult terrain. No vehicles here, everything done on foot and most things done by hand labour. Material and supplies were carried on backpack boards.

Remote maintenance site personnel usually consisted of three telecom persons and a GD person who acted as a cook. (Truly some of them were only "acting" as cooks!)

Isolation was a factor. The only contact with the outside world was through the mail (which was often delayed, along with rations, if rough water or storms prevented supply boats making their rounds), and also through a small battery operated table radio supplied to each shack by the YMCA/YWCA. Radio reception was poor and only intermittent although we most often got music and the news from stations in California. Radio batteries ran down and replacements were difficult to come by. At one point some of us were "adopted" by girls from a "Friday Night Club" in Vancouver. These were teen-age students who wrote to us, sent the odd battery and perhaps some cookies, and became our friends although I never got to actually meet any of them.

Telephone line patrols and inspections were ongoing on a daily basis. Storm damage caused the most problems requiring repairs to the lines.

RCAF Station Uclulet and RCAF Station Tofino were on the West Coast of Vancouver Island. To reach these stations from Vancouver, the trip consisted of a ferryboat ride to Nanaimo on Vancouver Island, followed by an uncomfortable bus ride to Port Alberni. Usually an overnight stay was required here. Beds in private homes (some complete with bed bugs!) could be had for 25 cents a night. Early the next morning a boat ride on perhaps the "Lady Rose" or the "Uchuk I" would eventually get personnel to Station Uclulet. Speculation always centred on how rough the trip might be as the boat headed toward open water near Uclulet. Personnel going on to Station Tofino, would eventually be picked up by truck to go the rest of the way. Usually a long and tedious trip from Vancouver.

Station Uclulet was for seaplanes mostly PBYs and Stranraers; Station Tofino for land planes, mostly Curtis P40 Kittyhawks. These two stations had recently been connected by a road pushed through the bush, a distance of about 16 miles. This road approximately followed the shoreline; part of which I think was called Long Beach, now part of the larger area known as Pacific Rim National Park. The pristine beaches and tidal flats of that area that we know today were at that time covered with randomly placed piles, - logs driven into the ground sticking up 6 or 8 feet. This was to prevent the landing of Japanese aircraft. In many places along the edge of the tree line at the beaches, sandbagged entrenchments and bunkers had been dug, all vacant, but ready for when the expected eventual Japanese invasion took place.

On June 20 1942, a coastal Light House & Radio TX site at Estevan Point, about 40 miles north of Station Tofino, had been shelled by a Japanese submarine, which had surfaced offshore. Locals thought the invasion was about to start.

Alongside this newly constructed Uclulet/Tofino road, #9CMU built a pole line to connect the two stations together. Weather at the time was particularly poor, and postholes and anchor holes were hand dug with considerable difficulty in the wet gumbo clay, mixed with rocks and endless tree roots.

Two ten pin cross arms of open wire (copper #14 gauge) were placed, which provided about 10 circuits.

Our crew of #9 CMU for this job consisted of about 20 to 25 men. We were attached to Station Tofino for rations & quarters. For those of us who had experienced tent work camps, this was like living in a posh hotel; showers, hot & cold running water, dry bunks, electricity and above all a proper mess hall with good meals. Also the use of a Rec hall.

#9CMU members were included with Station personnel in weapons training This included firing of the Lewis and the Vickers machine guns and learning of their stoppages, rifle and bayonet drill, hand grenades, etc.

The original #9 CMU rifle issue was a Springfield 30.06 calibre (I think), a finely crafted rifle left over from World War I US Armed forces. It had an excellent long-range graduated sight. At about this time these rifles were replaced by the Lee-Enfield, much lighter, shorter and simpler operating, but less accurate.

A little north of Uclulet, the present day highway coming from Port Alberni connects with the Uclulet /Tofino highway. At this point there was a tent work camp known to #9CMU people as "Joeville" It was used in the construction and the maintenance of a single telephone circuit traveling easterly across the centre of

Vancouver Island, alongside Kennedy Lake and Sproat Lake. Eventually it joined civilian telephone lines at Port Alberni. This was the landline connection for both Stations Uclulet and Tofino.

Langara Island lies off the Northwestern tip of the Queen Charlotte Islands. It's a small island that was uninhabited at the time. A Radar defence site had been established there. Protected incidentally, by one small field gun manned by four or six members of the RCA.

About 20 to 25 of us telecom people sailed from #9CMU headquarters in Vancouver aboard the MV "Deer Leap", a former private pleasure boat that had accommodation for just a few people along with its small crew. A trip by way of Masset that would cover about 500 miles. The rear deck was open to the weather on **three sides but had** a canvas awning top for sun and rain shade. To stay out of the weather, most of us spent our time under tarpaulins covering material and supplies on the rear deck. The tiny galley worked endlessly to prepare our rations. Traveling through the Hecate Straits, south of the Queen Charlotte Islands, introduced some of us to seasickness for the first time, but not the last time.

Langara Island is a plateau on top with steep rocky cliffs leading straight down to the surf, which pounds on the rocks. Much of the Island shoreline is inaccessible except for a few places where stony beaches exist. The #9 CMU tent work camp was located at one of these places. Here supplies and gear could be landed by rowboat and small barge or rafts, often with difficulty, from an off shore supply boat. This camp was located on the opposite side of the Island from the Radar site. The project was to construct a pole line with one ten pin cross arm of #14 gauge copper wire which would provide about five circuits. This would connect the Radar site to a new Radiotelephone transmitter site. This site again was on the opposite side of the Island from the Radar site. No vehicles here, all hand labour and much effort to drag and carry materials up steep slopes covered with thick forest underbrush to reach the plateau area. I recall once when the supply boat was delayed by stormy weather for an extended period, most rations had been consumed, including the mandatory hardtack & bully beef emergency rations, and we were reduced to beer and chocolate bars that the cook had thoughtfully put aside.

An interesting sideline here. Access to the Radar site was by means of a highline lift to raise a rowboat with its occupants, out of the water and lift it straight up, then pull it horizontally along the highline and set the rowboat down on a flat rock surface. The highline was a steel trolley cable fastened to a high point on each side of a very narrow sea inlet in the cliff face. Riding this highline was a small-wheeled carriage with a centre pulley mounted so a lifting cable could be fed round the pulley and head downward toward the water. The highline was perhaps 70 feet above the water surface, and the lift up was probably about 50 or 60 feet (memory is vague on these measurements). The rowboat, having left the supply boat standing offshore, would have to be maneuvered into this inlet (by oars) when the tide was right, and sea swells not too menacing. Much credit should go to the Marine Section people for their skills here. A stationary gasoline engine powered the highline trolley. The high line operator became quite skilled in giving selected people a rather hair raising ride. Often visiting officers of high rank on an inspection visit! On an outward trip the operator would lift the rowboat (by means of four hooks attached to the lifting cable) from the flat rock surface, with departing people sitting inside, and let it slide along the sloping highline gathering speed quickly, then brake it suddenly as it centred over the water inlet. This would cause the boat to swing back and forth. As the rowboat stabilized he would suddenly release the brake, letting the rowboat freefall at gathering speed until it was right above the water, then brake it suddenly, then gently lower it the last couple of feet into the water where the four hooks had to be quickly released and the boat rowed out to the supply boat standing off shore.

One needs to have experienced this to really appreciate either the scare or thrill of it, whichever. I recall one highline operator who sat by the engine controls, usually with a cigar, and always grinning, while enjoying doing his thing! More often than not, officers so treated, seldom returned to the Island!

A Radar defence site was located at Cape Scott at the northern tip of Vancouver Island. I seem to recall it was manned by #10 Radar Detachment RCAF. They were connected to the Victoria/Vancouver Command Control Centres by a single telephone circuit that found its way across the thickly forested northern part of Vancouver Island to Port Hardy, on the East Side of the Island. Then south along beside Johnstone Strait to a point

almost at Campbell River (a distance of about 160 miles) where it connected into civilian telephone company facilities that took it to its destination.

As an aside, F/O C. O'Callaghan, a #9CMU officer was awarded a "Mention in Dispatches" for directing a #9CMU group in fighting a stubborn bush fire for several days. They were successful in saving several miles of RCAF communication lines from destruction. This was somewhere along the Johnstone Strait in 1945.

The telephone line over that distance was maintained by a number of remote maintenance sites, and I believe these sites were manned by #9 CMU and also by either RCAF #1 or #2 Land Line Maintenance Units. I spent #9CMU Maintenance time at the most northern part of the line that connected with the Radar site. Our shack was located where the last decaying remains of the failed turn of the century Cape Scott village could still be seen. This was remote from the Radar site, and our supplies landing area was a rough stony beach at Fisherman's Bay. Supplies were carried on foot for some distance over a rough trail to our shack.

When our work took us near the Radar site, we were always welcomed in for a shower, and a snack in the mess hall. I think #9CMU was mostly unknown to the Station personnel, and the officers in charge viewed us as some kind of an oddity - four persons living out in the bush in the middle of nowhere. One Station officer offered to issue us with side arms, which we accepted. Smith & Wesson 38 calibre revolvers, along with a couple of Sten guns. We thought at the time this was unusual because I don't think side arms were issued to anyone below the rank of sergeant.

As an aside, parts of the shoreline on this Part of Vancouver Island were littered with washed up debris from the Pacific war. Including endless numbers of lifejackets stamped USN and many life rafts, some relatively undamaged, with drinking water casks and rations still intact. These rations we added to our own ration supply.

RCAF Station Prince George in the British Columbia interior was part of the North West Staging Route and it was used extensively by the USAAF. Communication lines from the Station went from a telecom repeater station, south, beside what was called the Caribou Highway. Two ten pin cross arms of open wire. #9CMU line maintenance persons were attached to Station Prince George for rations & quarters, another good accommodation. They also had a Jeep and trailer for their telecom line inspections and maintenance work. What a treat after all those miles of walking through the bush at those remote sites!

The next line maintenance site south of Prince George was located at the town of Quesnel. Here, maintenance people had the best accommodation that I had ever seen or heard of in #9CMU. They were boarded in a local hotel (called The Caribou Hotel I think), run by a comical Chinese fellow, and the meals were almost home style. As an added bonus there were a couple of waitress/chamber maids on staff that our fellows could make friends with. We from Prince George were always envious!

I think #9CMU may have had a strength of about 2000 people, but we in the telecom section always worked in small groups, probably 20 at the most, but generally in threes and fours. So as individuals we never got to meet many of them and we never were assembled together as a whole group.

Dennis Newnharn
Bobcaygeon Ontario.
May 2002.

ENGINEERS BATTLE THE RED RIVER

The Red River as it flows from North Dakota to Lake Winnipeg, due to the flat terrain, has been prone to flooding since time immemorial. Once it overflows its low banks, the river becomes a huge lake. The high water levels upstream from the snow melt in the spring of 1997 were causing major flooding in North Dakota.

The magnitude of the danger dictated the move of 1 Combat Engineer Regiment from their base in Edmonton to Winnipeg on 22 April. Once in situ, in true engineer tradition, they set about using their expertise to help the local residents. Some of the tasks they were involved in were as follows:

- operating assault boats and rafts to move troops and civilians in the flooded areas

- setting up and operating a reverse osmosis water treatment plant to supply potable water

- using an armoured vehicle launched bridge to replace a damaged highway bridge

- coordinating and assisting in the building of "Z Dyke" which was erected to prevent flooding of the city of Winnipeg. Over 300 pieces of heavy equipment were involved. Military divers played a stand-by role and a C-130 Hercules aircraft was used to fly in needed supplies and drop flares for night time operation on the dyke

- patrolling and maintaining the dyke system to ensure the integrity of the system

- when the flood waters started to recede, working with provincial authorities to inspect and repair damaged roads

After 22 days of non-stop work, 1 Combat Engineer Regiment returned to Edmonton to prepare for a deployment to Bosnia.

ROAD TO LAKE TEMISCOUATA -1784

During the French regime in Canada militia units were established at most settlements. These units were employed for the most part in what today would be Military Engineering tasks. In addition to fortifications they also constructed roads to connect communities. Upon taking over the administration of New France the British retained this system and on 29 March 1783 General Haldimand ordered the Captains of Militia of Ste Anne,Riviere Ouelle, and Camouraska to supply 150 men, under the supervision of M.Jean Renaud, overseer of roads for the district of Quebec, to open a road suitable for loaded horses to Lake Temisquata.

A party from the Deputy Surveyor General with three guides and eleven men set out to survey a route for the road. The militia units provided a total of 185 men to work for 18 days. They set to work on 12 June and proceeded to construct a road 12 feet wide. This involved cutting trees, leveling humps and filling hollows, taking out stumps and rocks. Great difficulty was encountered as many swampy areas defied draining and had to be bridged using local timber. The multi-span bridges were up to 18 chains in length. On 29 June the original party was replaced with 185 men from Saint Roch, Saint Jean, and l[1]Islet who were to work for 16 days. An additional call went out for 125 men to work for another 16 days. Work was completed 29 July and all men were discharged. One section with large boulders required the services of miners and was completed in September with support the of the militia.

The completed road was twelve leagues and sixteen chains long and stretched from the St Lawrence River to Lake Temiscouata. This is but one of many engineering tasks that militia units completed to aide in the development of our great country.

ENGINEERS HELP LOCAL ROTARY CLUB

The local Rotary Club had taken on the task of developing a walking trail along the Vedder River near Canadian Forces Base Chilliwack in British Columbia. To connect two sections of the trail, a rudimentary bridge using a fallen log was made to provide a crossing over a creek. At the best of times the user was faced with the risk of a dunking in the creek as the result of the slightest misstep.

The local Base Construction Engineering Officer was requested to help solve the problem. The Base Commander approved the commitment. A bridge was designed using two 60 foot steel beams with a six foot wide timber deck and hand rails. The design was approved by various bureaucratic channels.

An all ranks crew was marshaled from the Construction Engineering Section from volunteers who normally would not be employed on this type of project. They departed for the site at 0830 hours. They had to clear the shrubs around the bridge site, place the steel beams, lay the deck, construct the railings, and prepare the approaches. A small mechanical earth mover, which was to be used on the approaches, became non-serviceable. As a result, the construction crew was forced to use the universal engineer tool otherwise know as the long handled shovel. Nonetheless, the task was completed in eight hours much to the delight of the Base Commander, the Rotary Committee, and a proud but weary construction crew.

AN INVESTMENT IN CANADA'S YOUTH

In 1953, the Canadian Army developed a plan to provide an opportunity for 16 - 17 year old young men to acquire training in life skills. Known as the Soldier Apprentice Program, it was structured to provide trades training in selected trades while upgrading their educational qualifications and paying them a wage.

The Military Engineers operated one of the most successful programs under their Sapper Apprentice training. Recruits had to have at least Grade VIII educational qualifications and be physically fit. They were enrolled for seven years, but could take their release after five years. They were paid half the pay of a regular soldier. After two years, and qualification in a trade, they were placed on full pay. Their education was upgraded to at least the Grade X level.

The first intake started training with the Royal Canadian School of Military Engineering on 19 January 1953, and some 850 individuals partook in fourteen intakes ending in 1967. Of these, 564 graduated and went on to distinguish themselves in military and civilian careers. Several earned their commissions, and at least one retired with the rank of colonel. Twenty years later, the Sapper Apprentices were well represented in the ranks of the senior non-commissioned members of the Canadian Military Engineers.

The program was very successful and provided a bright future for many young men who had faced an uncertain future.

The Sapper Apprentice Reunion is still going strong today and will be celebrating their 50th anniversary in 2003. For more information go to : **www.members.shaw.ca/jim.harris1**

STANLEY PARK - A MILITARY ENGINEER LEGACY

Military Engineers played a major part in the development of the various colonies that were to become the country of Canada. Their role in the British Columbia area was crucial to the establishment of the area as we know it today.

In 1858, Lieutenant-Colonel Richard Clement Moody RE, with his surveyors and carpenters, was present when the new colony of British Columbia was declared on 19 November. His engineers were employed on numerous tasks over the following five years. Their exploits would make the subject of many exciting stories. Some highlights of their activities are:

- the border between Canada and the United States was surveyed from the Pacific Ocean through the Rocky Mountains by a sapper party

- the city of New Westminster was established on the site of Sapperton, developed by the military engineers

- two of the most dangerous and difficult sections of the Caribou wagon trail were built by engineers. The engineers also surveyed and laid out the trail, and supervised its construction

- engineers explored and mapped the area and their presence ensured law and order in the gold mining camps

- the early town of Vancouver was laid out and Stanley Park was reserved for military use, thus preserving one of the country's greatest treasures

When the unit was disbanded in late 1863, most of the other ranks took their discharge and became early settlers in the land they had worked so hard to develop.

SURVEYORS ON HORSEBACK

There is probably no single item that is more essential for today's traveler than a map. Without it, and the ability to read it, you are lost. In the southern parts of Canada, these maps are based on the civil cadastral surveys needed to define property holdings. In the northern areas this was not the case, and in 1947 the Army Survey Establishment (ASE) set out to remedy the problem.

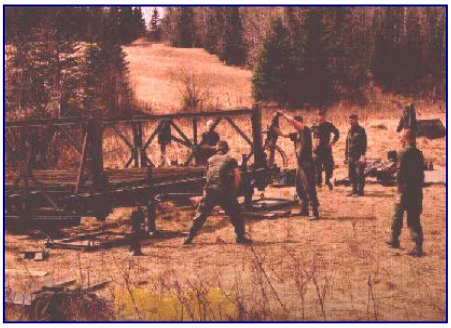
To construct a map, there is a need for a series of control points which are accurately located on the earth's surface. In 1947, ASE sent out 14 survey crews, mounted on horseback, to establish these points in the Yukon. It was necessary for each control point to be seen from two other points to permit verification by triangulation. The preferred location was on selected mountain peaks that involved considerable physical exertion on the part of the survey crew. Readings taken had to be within a high degree of accuracy before the fieldwork was completed.

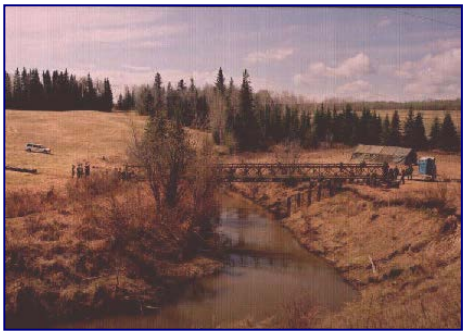
During the winter months, the crew would transfer these readings onto a map sheet. Aerial photography flown by the RCAF was used to fill in details of the terrain to produce a usable map. This labour intensive activity was reduced when helicopters became the transportation mode for the crews in the field in 1949.

Army Survey has continually adopted the latest in mapmaking techniques and is recognized world wide as a leader in their field. But they still owe a lot to those hardy individuals who provided the backbone of the northern mapping program.

Bridge Built in Alberta

On 23 May 2002 an advance party from 8th Field Engineer Regiment in Edmonton deployed to the Athabaska area to prepare for a bridge build across the Tawatinaw River. The next day the remainder of the 20 sappers in the bridge party arrived. On 25 May 2002 work began on the 28 meter Bailey Bridge and by the end of the day the Trans Canada Trail had one less gap.
Everything went smoothly until it was found that the chesses had not been cut to specification. Luckily using the engineers' favourite precision tool, a chainsaw, they were modified to fit. The bridge was provided from Land Forces Western Area surplus stores and the decking was provided by the Alberta TrailNet Society. The bridge is now owned and maintained by the trail owners.





Pont construit en Alberta

Le 23 mai 2002, un détachement précurseur du 8e Régiment de génie à Edmonton a été déployé dans la région d'Athabaska pour y préparer la construction d'un pont au-dessus de la rivière Tawatinaw. Le reste des 20 sapeurs de l'équipe de construction est arrivé le lendemain. Les travaux ont débuté le 25 mai sur le pont Bailey d'une longueur de 28 mètres. À la fin de la journée, le Sentier transcanadien était muni d'un passage de plus. Tout se passait bien jusqu'à ce qu'on découvre que les éléments de travée n'avaient pas été coupés selon les spécifications. Heureusement, à l'aide de l'outil de précision favoris des ingénieurs, la scie à chaîne, ils ont été ajustés.
Le pont a été fourni par des magasin d'approvisionnement du Secteur de l'Ouest de la Force terrestre et le tablier par l'Alberta TrailNet Society. Le pont est maintenant appartenu et entretenu par les propriétaires du sentier.

The BC Star Tragedy

Sixty years ago on July 24th 1943, the RCAF marine vessel M427 BC Star, a requisitioned 70 ton fishing boat, departed Bella Bella, BC for the coastal radar station under construction at Cape St.James in the Queen Charlotte Islands. Manned by an all RCAF crew of ten and tasked with the delivery of construction materials (43 tons of gravel and cement) and six members of No.9 Construction and Maintenance Unit (9 CMU) to the radar site, it never arrived at its final destination. On 6 Aug 1943 the BC Star was declared missing and by 8 Mar 1944 when Air Force HQ announced that personnel lost on board the vessel were presumed dead, only two bodies and miscellaneous debris were ever recovered. The exact cause of the disappearance remains a mystery. This incident was the single greatest loss of life to occur during CMU operational activities during the Second World War and maybe the greatest loss of life to Canadian military construction tradesmen to date. Due to wartime secrecy the sinking of the BC Star never gained widespread publicity. In the summer of 1943 the Japanese were still a threat, although diminishing, in the Pacific North West; having occupied Alaska's Aleutian Islands since 1942.

The 9 CMU war diary reveals the following entries concerning the BC Star:

6 Aug 43 — *M.V. B.C. Star was declared missing by W.A.C. with all hands. Sgt Slater, F/S Drouillard, Sgt Hearfield, LAC Stead, and AC1 Vollhoffer of this unit were passengers on the boat. Next of kin were notified.*

24 Aug 43 — *Western Air Command released the information that two bodies had been picked up near the spot where the BC Star was last reported. No identification has yet been established, although a tunic found, bore the number of LAC Stead of No.9 CMU, Vancouver.*

21 Sep 43 — *A committee of Adjustment was appointed with F/L Ross as president and F/L Robinson and F/O Berwick as members to take action as required on the service estate of Cpl Polec, missing on the BC Star.*

25 Oct 43 — *F/L Borthwick was posted to No.1 Training Command effective October 24, reporting October 29. As F/L Borthwick was required to attend a Court of Inquiry into the loss of the MV BC Star permission was obtained from AFHQ to postpone posting date until completion of Court.*

27 Oct 43 — *A court of inquiry composed of W/C Tuille No.4 Group HQ, S/L Edwards, WAC HQ, F/O Beck, Prince Rupert and F/O Berry, Prince Rupert, reported to No.9 CMU and proceeded to take evidence concerning the loss of the MV BC Star.*

28 Oct 43 *The Court of Inquiry regarding the BC Star continued with the following personnel on strength of 9 CMU giving evidence. S/L Purvis, F/L Borthwick, F/O Hansen and Sgt Schiltz.*

8 Mar 44 *Advice received from Air Force Headquarters that Unit personnel on board MV BC Star when boat was lost July 24, 1943 now presumed dead.*

The last entry, over 7 months after the sinking of the BC Star closed the book on this incident.

The Crew of the BC Star:
Flt Sgt, WA Mitchell, age 23
Sgt WAG, WM MacNeil, age 24
Sgt, PE Olsen, age 22
Cpl, CG Glover, age 21
LAC, FC Mack, age 22
LAC, HF Oakenfold, age 19
LAC, CJ Sherlock, age 37
AC1, McFadyen, age age 18
AC2, GA Davies, age 18
AC2, MD Onuski, age 18

The Passengers (No.9 Construction Maintenance Unit)
Flt Sgt, RH Drouillard, age 31
Sgt, JD Hearfield, age 22
Sgt, JC Slater, age 36
Cpl, TL Polec, age 25
LAC, GT Stead, age 21
AC1, T Vollhoffer, age 19

At the going down of the sun,
And in the morning,
We will remember them.

Information compiled by MWO Scott Laird, 4 AES, July 2003

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They Shall Grow Not Old, Memorial Book: Les Allison and Harry Hayward; 1995; Commonwealth Air Training Plan Museum, Inc.;

The Germans are coming to Shilo

German Military Engineer reconnaissance party from Pionierbattalion 701, GERA will arrive in Shilo on 28 October to complete the initial recce on a bridge over the Assiniboine River. This is part of the Canadian Military Engineer Centennial "Bridges for Canada" initiative to build bridges along the Trans Canada Trail.

Site of "Bridges for Canada" bridge over the Assiniboine River, MB to be designed and constructed by German military engineers from Pionierbattalion 701, GERA

The bridge site is a challenging one. The banks will require reinforcement and the span is 90 m. The German engineers will design the bridge once they return home and will send troops to complete the bridge in spring 2003. They have already begun to look at bridge designs including a pedestrian suspension bridge design that 1 Construction Engineering Unit is using across the Sylvia Grinnell River in Iqaluit, Nunavut. Once the design is complete, the Manitoba chapter of the Trans Canada Trail Foundation will acquire the required materials through local fundraising initiatives.

Premier Gary Doer of Manitoba is very interested in the project and has asked that the German Engineers meet with him to discuss their generous contribution to the citizens of Manitoba. This is the third international military engineer unit to build "Bridges for Canada". The Royal Netherlands Engineers built two bridges in New Brunswick in June 2002. They even brought one of the bridges with them from Holland and donated it to the people of New Brunswick. The British Royal Engineers have just completed an upgrade to the Cascade Gorge Trestle Bridge in British Columbia and both the US Army and Air Force are planning "Bridges for Canada" contributions.

Canadian Military Engineers have worked side by side with their allied counterparts around the world. No matter what the situation these sappers from different parts of the world have always managed to learn something from each other. The Canadian Military Engineers have been exhilarated by the support received from our allied engineer corps in helping us leave a legacy to our Canadian communities. As the third international "Bridges for Canada" project unfolds, we hope that the citizens of Manitoba will feel the same.

With the UN in Egypt

A new phase of activities began for the military Engineers when the United Nations Emergency Force (UNEF) was authorized on 4 Nov 1956 for deployment to the Middle East.

The Royal Canadian Engineer detachment became the engineer component of this multi-national force. The detachment consisted of UNEF Engineer Company with a Field Engineer Section and a Military Foreman of Works Section. A two-man survey detachment was attached to UNEF Headquarters.

Their tasks covered the full gambit of engineer expertise. Minefields laid by all the combatant forces were lifted, patrol boats were operated on the Suez Canal, a water supply plant in Port Said was manned, two 1,200 yard runways were constructed, a huge map depot with 40,000 maps was established and operated, four camps were rehabilitated and maintained for the 4000 man force, a diesel railway was operated, and roads were maintained along the Armistice De-militarized Zone.

During the ten-year tenure of the UNEF the military engineers embarked on a program of improving the accommodation. The work was implemented using local labour and contractors. In the Canadian tradition a combination of local and Canadian construction standards were implemented. Use was even made of camels to transport material in some locations.

In the spring of 1967 Egypt withdrew permission for the UNEF to occupy their territory and the force was withdrawn.

ENGINEERS PREPARE THE WAY FOR VIMY RIDGE ATTACK

First position at Vimy

In order to support a massive attack such as the Canadian Corps successful assault on Vimy Ridge the engineers were sorely tested. Roads, tramways, tunnels, water lines and reservoirs, accommodation, camouflage for installations, defensive works, stores dumps were but some of the tasks facing the engineer troops controlled by the Chief Engineer.

The standard operating procedure was to assign troops from all corps to an ad hoc organization which was responsible for stock piling stores and moving them forward as required. The method proved to be unsatisfactory due to the uncertainty of the number and skills of the personnel available.

In an attempt to resolve this problem on the 12 Feb 1917 the Permanent Base Company C.E. was formed at Le Havre. The unit was composed of skilled tradesmen and was tasked with coordinating the supply of engineer stores. It was the forerunner of the corps field park company that became a standard feature of engineer forces. The unit quickly proved its worth and was moved forward to the Corps area where it joined six army troop companies, five tunnelling companies, four entrenching battalions, two light railway companies, two pioneer battalions and some British labour companies in preparing for the attack.

The final task was to prepare a reasonable facsimile of the German trenches to familiarize the attacking troops with the terrain held by the enemy.

Upon achieving success the engineers were employed in developing defensive positions. Even when the attacking formations were withdrawn the engineers work continued on Vimy Ridge. Once more first in, last out for the engineers.

THE WAR DOWN UNDER

On the 11 November 1918 the armistice that ended the fighting was signed. Engineers played a significant part in supporting the operations but the role of the tunnelers is not widely known.

Tunneling Companies were formed by recruiting miners to construct underground shelters and other works in support of the troops. Galleries were constructed off trench systems where troops could find shelter near the front. In the Arras-Vimy Ridge area a tunnel over 2 miles long allowed troops to move up to the front in safety. A network of passageways in Arras connected basements and caves to provide shelter and communications for units out of view from the enemy. During 1917 an average of 16000 feet of tunnels were driven every week.

Tunnelers were also involved in offensive operations. A shaft would be driven under German front lines and loaded with explosives to be detonated at the time of an allied attack. One such explosive created a crater with a diameter of 273 feet and 63 feet deep.

These tunnelers were not alone. The German Army was also engaged in underground operations and occasionally contact was made and pitched battles fought 100 feet underground. It was therefore necessary to conduct tunnelling as quietly as possible and to listen for enemy digging.

When tunnelers were not underground, they were engaged in normal engineers tasks with an emphasis on preparation and neutralising of demolitions.

A former tunneler, Capt N.C. Mitchell, was awarded the Victoria Cross for neutralizing demolition charges placed on a bridge.

FLOOD ON THE FRASER

Since time immemorial mankind has been beset by the threat of floods. The Military Engineers have played a major role n ameliorating the damage from these inundations.

In the spring of 1948 the lower Fraser Valley BC was threatened by a major flood. By 1 June a state of emergency was declared by the Province and control was passed over to the Canadian Army.

23rd Field Squadron and RCSME were employed on the dykes in the Chilliwack area while the squadrons of 7th Field Engineer Regiment (Reserve Force) were deployed on the dykes in the New Westminster area. A total of approximately 3000 officers and men of the Active and Reserve Forces were called out.

The emergency force erected several temporary Bailey bridges, undertook salvage and rescue operations, and removed log jams on the Vedder River with explosives. People and farm animals, including 15,000 chickens were transported to safety by boat when some 10 square miles of farmland was flooded due to a breach in the dykes near the outfall of the Vedder Canal. The action of the Military Engineers was a major factor in avoiding a greater disaster.

After the flood subsided, the Military Engineers demolished a badly damaged bridge at Merritt BC and started a topographical survey of Nicomen Island to assist the Fraser Valley Dyking Board to restore the dykes protecting the island.

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ENGINEERS IN THE LAND 0F THE MORNING CALM

Korea presented a major challenge to the Military Engineer. It was a land of mountains interlaced with rice paddies in the valleys. There were few roads capable of carrying heavy military traffic. The area is subject to heavy monsoon rains that destroy roads and bridges on an annual basis. 57 Cdn Ind Fd Sqn RCE was thrust into this problem as part of 25 Canadian Infantry Brigade Group. They joined with 28th Field Engineer Regiment RE when 1st Commonwealth Division was formed. They were replaced by the 23rd Fd Sqn after a years service, which in turn were followed by the 59th Fd Sqn.

The tasks faced by the Engineers were formidable. Roads had to be built and maintained over what seemed to be bottomless rice patties and Up steep mountain slopes; minefield were laid and lifted; timber cut for defensive positions; ferries operated over rivers; airfield constructed; tunnels driven for defensive works; and other normal engineer tasks. There was little rest for the sappers.

All these tasks needed heavy equipment such as bulldozers, face shovels, graders, dump trucks, and ail such plant. Divisional staff were successful in the supply of additional equipment, which meant more operators. The Canadian sapper proved very adept at this task, and the RCE unit was raided for potential operators, and they soon became the backbone of plant operators in the regiment.

As se many times in the past, "the muddy old engineers" proved to be full value for their service in Korea.

MILITARY ENGINEERS WITH BLUE BERETS

Canada has played a major role in Peace Keeping operations under the United Nations banner and military engineers have been well represented. In many cases they performed as an “observer” where general military knowledge, aided by their engineer skills, was the prime prerequisite. As an indication of what was involved in this role the following is a brief description of the duties of an observer in the United Nations Military Observer Group (India-Pakistan) commonly called the “mountain climbers mission”.

The role of the mission was to supervise the terms of the cease-fire agreement between India and Pakistan in Kashmir. Observers were located at, and lived with, formation headquarters of both Armies. When a suspected violation was reported, if would call for an investigation by the observer. This often involved climbing to an altitude of over 3500 metres in 40 °C weather. A report would be forwarded to mission HQ who would follow up with the appropriate Army.

The observer had to be always vigilant, as staff officers often used subtle means to secure information about the other side. Action by the UN observer, whether on a purely military matter or the misappropriation of some goats, served as a means of “saving face” and often prevented a local firefight.

If was extra interesting to an engineer as they had the opportunity to observe many imaginative uses of Bailey Bridging and other materials for expedient repairs to roads and bridges. A bonus factor was the possibility to visit many historic sites in the sub-continent.

AIRFIELD ENGINEERS RENOVATE A SCHOOL

41 Flight Canadian Airfield Engineering Squadron was deployed as part of the United Nations Mission in Haiti. On 24 Sept 95 they were tasked with the restoration of the annex of L'Ecole St. Val-Rey, Gonaives, Haiti. The structure was of concrete block on a concrete slab foundation with a corrugated metal roof over timber trusses. If measured about 125 feet long by 20 feet in width.

The building had fallen into disrepair and before any work could be done if had to be cleaned up. If had been used as a garbage dump and public washroom. The schoolyard was contaminated by several sewers and could best be described as a swamp.

The work proceeded in temperature that reached 140 degree F and was complicated by local conditions. The local labour proved somewhat erratic in their work habits. Gravel was only available for loading by hand so a front-end leader had to be brought in to assist in the project. If was necessary to guard the equipment to prevent looting.

For the personnel of the flight if provided valuable experience, for both regular and reserve members, working under primitive conditions, as well as the gratification of being of assistance to the local population. Local tradesmen benefited from the various construction techniques that were new to them. Military fire fighters provided first aid treatment for many of the local children.

On 24 Oct 95 the Minister of National Defence, David Collenette, formally opened the building.

Water, Water, Everywhere

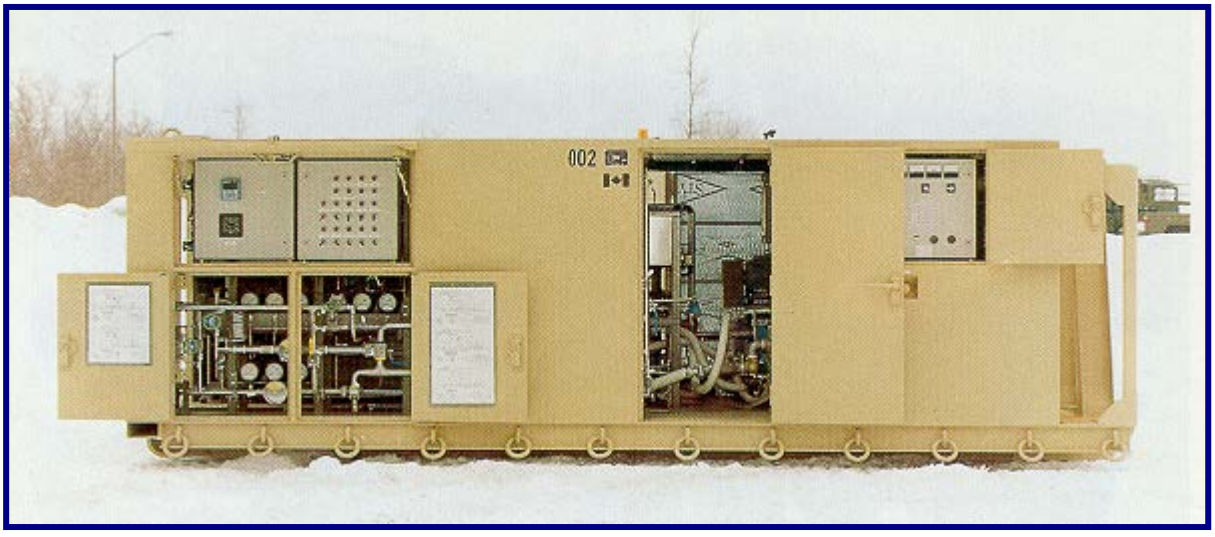
Without a doubt, water is the single most critical resource for the human race. A poor water supply can cause even more casualties than the enemy. This has been proven many times throughout history, as soldiers have died in the thousands due to unsanitary camp conditions and contaminated water. The task of providing a potable source of water falls to the Military Engineers.

In the early days this involved drilling wells or finding some other safe supply. As the level of global pollution increased, a system based on coagulation and settlement became standard. This system has failed to produce an acceptable water quality from the highly contaminated water sources found in most of the locations where the Canadian Forces are currently deployed. A new high tech solution to the water problem was required.

The Military Engineers, in conjunction with Zenon Environmental Systems Inc., responded to the requirement by developing the Reverse Osmosis Water Purification Unit (ROWPU). This fully self contained system is based on the reverse osmosis principal. The raw water is forced through a thin semi-permeable membrane under high pressure, the membrane allows fresh water to filter through while eliminating all impurities. This system produces the highest quality water possible short of distillation. The ROWPU is capable of producing 2,400 litres per hour under the most severe conditions. A bagging machine then packages the water into plastic bags, similar to the way milk is packaged for sale in Canada. The 1300mL bags are then ready for distribution to the soldier or refugee.

This equipment has been included in the inventory of engineer equipment and has been successfully used in many parts of the world, including Ethiopia, Somalia, East Timor, Haiti, and Croatia. It is considered to be one of the best deployable water purification systems in the world and a prime example of the new technology developed by the Canadian Military Engineers.

UBIQUE 35 -SEPT 1990



“PRO VICTORIA AEDIFICAMUS”

(WE BUILD FOR VICTORY)

POEMS AND JOKES OF
THE ROYAL CANADIAN AIR FORCE
CONSTRUCTION AND MAINTENANCE UNITS
1943-45

Compiled by WO Scott Laird, 4 AES
(Ex 1 CEU –1978, 1988-91)

During the Second World War the RCAF raised seven construction units to support the growing needs of the airforce on the home front. Tasks included support to the British Commonwealth Air Training Plan (BCATP), the North West Staging Route (NWSR), coastal radar sites and many other construction and maintenance tasks required to support a nation at war.

Construction and Maintenance Units (CMU) were formed in November 1942 in Toronto (1 CMU), Winnipeg (2 CMU), Montreal (3 CMU), Calgary (4 CMU), Halifax (8 CMU) and Vancouver (9 CMU). With the growing importance of the NWSR 10 CMU was formed in 1944 at Dawson Creek, BC.

The workday of a CMU tradesman was long and hard; often at far off locations in the Canadian hinterland constructing hangers for the NWSR or building temporary airfields and radar sites in the most remote and desolate locations on the east and west coasts. Work was not without peril. In July 1943 the RCAF vessel BC Star was lost at sea off the BC coast with all hands while transporting 9 CMU tradesmen and material to a coastal radar site.

The CMU crews received very little thanks for the work they did but this did not dampen their commitment and determination to get the job done. Morale remained high nevertheless. Several of the CMU's published newsletters reflecting life on the job. "The Rambler" of 4 CMU Calgary, The "See Emm" of 1 CMU Toronto and "The Bushland Banner" of 10 CMU Dawson Creek.

The poems and other misc items compiled here are from those newsletters. They portray an era when Canada was at war and the need for military construction engineers and tradesmen was urgent, real and necessary. Their commitment to help win the war is reflected in the unofficial motto of 4 CMU – Pro Victoria Aedificamus (We Build For Victory). The men and women of the CMU's met the challenge - and won.

A note of caution. The content of this compilation reflect the values of the times they were written in and may not be politically correct by today's standards.

WO Scott Laird
Sept 2002

A TRIBUTE TO THE UNIT

WO2 “Jack” Henninger

I’ve been ramblin’ round the country
For fifteen years, nigh on,
Ridin’ cats and pavers
Or whatever came along.

There’s something in that racket
That gives you itchy feet,
You’ll never settle down at home
Or business on the street.

You’ve got to keep a movin’
Just to hear a hammer smack,
And hear the engines roar and whine
And men say “damn” and that.

There is such an outfit
In the air force even now,
It’s called the “Mobile Unit”
And boy, is it a wow.

I’m glad I made this outfit
Although I’ve often cussed,
When everything seemed to go wrong
Or the pavement was all mussed.

We do the jobs that come along
We don’t get all the breaks,
We get the jobs all finished
And then we drive more stakes.

We can build’em, wire’em, paint’em,
We can turn the water on,
We can build’em roads and runways,
Landscape the CO’s lawn.

And if the storms begin to flow
And snow is piled too high,
The “Mobile’s” there to dig’em out
So airplanes can fly.

And you should see our office staff
We have the smartest clerks,

Sure, Ottawa is jealous,
But, by Gad, we saw them first.

Of course we all can grumble
If a tough job comes along,
We know it is our privilege
Until the lights come on.

And if they ever need us
Over there where bullets fly,
You'll find the "Mobile" ready
For duty, or to die.

Taken from the Vol. 1, No.1, Feb, 1944 edition of "See Emm", monthly newspaper of No. 1 Construction and Maintenance Unit, RCAF, Toronto, Ont.

HERE WE ARE

Anonymous

Hey guys! Look what's come out of the vapour,
The Unit's out with a brand new paper.
Full of wit, and whatever-is-news,
And it's success depends on you.

So, send in your news or "corn-off-the-cob',
Whatever you can pick up on the job.
And we'll all show that we're not slow,
Let's push together and make it GO.

Taken from the Vol. 1, No.1, Feb, 1944 edition of "See Emm", monthly newspaper of No. 1 Construction and Maintenance Unit, RCAF, Toronto, Ont.

No title

Anonymous

If I take time out for a game of crap,
They'll say I 'm helping out the Jap.
And if I stop to take a drink,
They'll say I'm letting down a Chink.
And if I slow down cause I'm ailing,
They'll say its less for partner Stalin.
And if I stay home 'cause I'm ill,
They'll say I help that Hitler still.
And if I don't pay my income taxes,
They'll say I help the whole damn Axis.
So I'll work like hell and never stop,
I'll stay right there until I drop.
I'll have no fun. I'll sure show them,
That I'm the one of the boy's from the C & M

Taken from the Vol. 1, No.1, Feb, 1944 edition of "See Emm", monthly newspaper of No. 1 Construction and Maintenance Unit, RCAF, Toronto, Ont.

OUR BABY NEEDS NEWS

By LAC Harry Ross
No.5 Radio School, Clinton

This poem will serve to tell you,
That we've a new baby in the C & M U
Small and square and one month old,
And really a beauty, so I'm told.

Now, In order to keep it flourishing,
Our baby needs lots of nourishing,
Not bread and milk like some babies do,
What our baby needs can come right from you!

So, if you have something you'd like to say,
Write to the editor without delay,
For ours eats news, we call it See Emm,
Our baby needs food like the rest of them.

Taken from the Vol. 1, No.1, Feb, 1944 edition of "See Emm", monthly newspaper of No. 1 Construction and Maintenance Unit, RCAF, Toronto, Ont.

TO THE MAINTENANCE CREWS

Anonymous

We may not be the heroes,
That fly by night or day,
We may not be the men,.
That keep the enemy at bay.

We may never know the thrill that comes,
When diving on a foe,
Or how it feels to drop our bombs,
On a target far below.

But someone has to maintain our land,
From hidden Axis powers,
And because this job has to be done,
I'm glad this task is ours.

There is no glory to our work,
But duty knows no bounds,
Let the pilots guard the air,
And we'll maintain the grounds.

Taken from the Vol. 1, No.1, Feb, 1944 edition of "See Emm", monthly newspaper of No. 1 Construction and Maintenance Unit, RCAF, Toronto, Ont.

MANNING SECTION

By Anonymous

"Nerve centre." we call it. I hope we're not wrong,
For here reports all the maddening throng.
Electricians. Carpenters. Painters and such,
Call at the wicket for our magical touch.

Sanagan rushing, while Koff's on the phone,
Listening to pleas of who want to go home.
Kingston, the "Kap", or Kitchener bound,
Port Albert, Mount Hope, they all can be found.

"Flight" Fairbain, the maestro, he has his woes,
But nevertheless keeps the men on their toes.
But harkening to tales that would do your heart good,
If condensed to water would cause quite a flood.

A warning he utters to all who may hear,
Report yourself in and keep yourself clear.
Subsistence you like and please do not spout,
Always remember to check in and out.

Taken from the "See Emm", Vol. 1, No.2, (Mar, 1944), monthly newspaper of No. 1 Construction and Maintenance Unit, RCAF, Toronto, Ont.

FIELDMAN'S PLEA

Anonymous

As an N.C.O. in charge of a job
I have a minor complaint to lodge.
Here's hoping it will not cause my burial.
What I want to discuss is regarding material.

Before we start on any work
The job is reviewed by a material clerk,
The estimate list is prepared so neat,
We assume there's enough for the Job complete.

But this is not at all the case
Certain Items are short and we lose face,
We indicate on our weekly report
That in so many days we will be short.

The action taken is so very slow
That the summary — it makes us Joe.
Is it the estimator who is so lax —
Or the Equipment boys on their income tax.

Regardless of where the trouble may be
I take this chance to lodge my plea,
If the ones at Headquarters do not shirk
The boys in the field will do the work.

Taken from the "See Emm", Vol. 1, No.2, (Mar, 1944), monthly newspaper of No. 1 Construction and Maintenance Unit, RCAF, Toronto, Ont.

Untitled

By “Katz”

I was marooned atop a barn near London last spring during one of the countries worst floods. The water was so deep and the current so powerful that *back* yard two seaters, chicken coupes, livestock and *even* farm machinery went swirling by, helpless, in the rushing torrent

"Look, there goes one of our Adams Graders,” I remarked to another airman, marooned alongside me on the roof, as the yellow cab roof appeared, momentarily, above the brown flood. But to my amazement, the Grader, after passing several hundred yards down the former road, reversed its former direction and slowly battled its way back against the current.

“Don’t look so dumbfounded.” advised the airman. “That is only Cpl Bouey driving the machine. The C. & M. Unit ordered that the road be graded today come hell or high water.”

Taken from the “See Emm”, Vol. 1, No.2, (Mar, 1944),
monthly newspaper of No. 1 Construction and Maintenance Unit, RCAF, Toronto, Ont.

GROUP GROPING

Anonymous

SCENE: Orderly Room Wicket.
TIME: Any time – any day.

FITTER:

My name is Ellacee Pipewrench
The bestes' fitter what works in trench,
Make application for de trade group "B".
I t'ink she is de bes' for me.
When I recruit de h'officer
Say I Construction Hand for sure,
And say dat he t'inks it's better
That I remust' to trade of fitter,
Now I have de recommend of Flight,
He say I am "B" Group all right.

ORDERLY ROOM CLERK:

Well spoken LAC --- one mistake you made
The 'Fitter General" is a closed trade.

FITTER:

Sacre --- what you say is de nex' bes'
For me to try at de trade tes'—
I lay de tile—I fit de wood,
I
do de bestes' job I could.
I am painter, 'electrician, mechanic man,
Jus' show me de job --- I show you I can.

ORDERLY ROOM CLERK:

According to bulletin three one seven
There's nothing open this side of heaven.

FITTER:

What chance Is dere for one poor' Joe,
I want de parade to de C.O.

ORDERLY ROOM CLERK:

According to Bulletin. Seventy-nine
Each C.H. specialist will be fine.
The C.O. is a busy man
And is doing everything he can.
He has written reams on your behalf,
I tell you that — so please don't laugh.
He considers it a great offence,
And will bring it up at the conference,
Keep your fingers crossed and be a gent
And wait for seventy-nine supplement.
We hope that it will show the way
To increase trade group with better pay;
But there is a thing — we must realize
We can't all be those "A" group guys.

Taken from the "See Emm", Vol. 1, No.2, (Mar, 1944), monthly newspaper of No. 1 Construction and Maintenance Unit, RCAF, Toronto, Ont.

MAINTENANCE

By Anonymous

The incessant waves upon a shore
Create erosion more and more,
Until this Unit one fine day
Will shift a shelter from harm's way.

The bright sun beats upon some paint,
And causes it to curl and faint,
Until this unit's painters should
Repaint the job to save the wood.

A bit of water feels it must
Stay on steel to create some rust,
It will be this Units despair,
And next year cause complete repair.

The Northwest wind goes on the loose
And tears out parts of twenty roofs,
Which will be this Unit's sorrow,
And cause complete repair tomorrow.

Some primal termite knocked on wood.
He tasted it and found it good,
That is why this Unit may
Repair a barrack floor today.

And so it Is quite easy to see
What caused the C. & M to be,
And the reason personnel frequents
The battle of the elements.

Taken from the "See Emm", Vol. 1, No.2, (Mar, 1944), monthly newspaper of No. 1 Construction and Maintenance Unit, RCAF, Toronto, Ont.

FIELD TO HEADQUARTERS (2)

By Anonymous

Have you ever been to Clinton
When the winter breezes blow?
An under drainage job came up.
And Henniger had to go.

He took some choice Commandos
A trencher and a crane,
He thought the job was easy,
He neglected snow and rain.

The Buckeye dug the trench all right
And then the trench fell in;
The language used by Henniger
Marked him a man of sin.

But Taylor helped out with the clam,
And Billings with the tractor,
And both was there to set the stakes,
So Henniger turned Contractor.

He cleaned the trench and laid the pipe
In spite of rain and snow;
In spite of concrete, mud and muck
And a pump that wouldn't go.

In spite of no assistance from
The Station Works and Bricks;
And in spite of all the tractors, trucks,
And a pump he had to fix.

The Works and Buildings Officer
Looked on with growing doubt,
The trench filled up with water,
Could Henniger get it out?

The C.O. on inspection said,
"You're certainly out of luck,
I don't see how you'll lay the pipe,
In all that mud and muck."

But Henniger took it smiling,
He wasn't fazed a bit,
He knew that his Commandos,
Would make a job of it.

And sure enough when Xmas came,
He had the *job* all done,
The drain was laid as it should be laid,
The water had to run.

Taken from the "See Emm", Vol. 1, No.2, (Mar, 1944), monthly newspaper of No. 1 Construction and Maintenance Unit, RCAF, Toronto, Ont.

MIDWEEK PASS

By LAC. J. Hornby

"Oh Sergeant sir, I greatly fear,"
I'll need a 48 pass;
My wife is having a new born,
And I'd like to be near the lass.

I deserve it on my record.
My discipline is fine;
I never touch the malt and hops
Nor partake of old moonshine.

The sergeant heard, and then did melt,
His stony heart gave in;
He fixed the airman with his pass,
His journey to begin.

The pass expired, the ordeal o'er,
The airman, in he blew,
A half day late, but what of that,
Just think what he'd been through

When asked regarding the state of things,
The sex of the babe and stuff,
The Sarg began to smell a rat,
And to see through his great bluff.

For his eyes were bagged, he needed a shave.
His frame was all a-jitter,
He'd been out with a babe (not one just born),
And was saturated with liquor.

So now he joins the motley crowd
Up yonder in the digger.
To rue his sins for several days
Without blondes, brunettes or liquor.

Taken from the "See Emm", Vol. 1, No.2, (Mar, 1944), monthly newspaper of No. 1 Construction and Maintenance Unit, RCAF, Toronto, Ont.

THE WINDOW CLEANER

Anonymous

Some hundred men were hard at work on the excavation for a new munitions factory. It was a rush job and the foreman rarely let them forget it. When all was in readiness to lay the foundation, a man clad in coveralls with a ladder on his shoulder stopped for a moment to watch the proceedings. The foreman saw him and roared out to his men "Now then lads, get a move on. Don't keep the window cleaner waiting!"

Taken from the "See Emm", Vol. 1, No.2, (Mar, 1944), monthly newspaper of No. 1 Construction and Maintenance Unit, RCAF, Toronto, Ont.

BOYS OF THE PENGUIN PATROL

By S/L WG Watkins, CO 1 CMU

I speak for those,
The men who chose
For reasons they could not control
To serve Jack Canuck
Regardless of luck,
On Land—In the Penguin Patrol.

It is our task
Whenever asked
To alter, build and maintain
The Air Force's homes
And large aerodromes,
For our Country's ultimate gain.

We shall not shirk
While there is work
To be done on our service job,
We shall support those
Who want to close
On the Axis' ruthless mob.

There'll be a day
Not far away,
Which is our fondest desire
When every man
Of those who can,
Will return to his own home fire.

It does not seem
That we should dream
Of such --- while bombs still rain
On country down
And London town,
And our allies' home domain

But there is a score,
We can help more,
Which will add to our personal gain;
Before we are through
Let us again subscribe to
Our own War Savings Campaign.

Taken from the "See Emm", Vol. 1, No.3, (Apr, 1944), monthly newspaper of No. 1 Construction and Maintenance Unit, RCAF, Toronto, Ont.

FROM FIELD TO HEADQUARTERS (3)

Anonymous

Flight Honsberger spent last summer
Downcast with the Royal Air Force
He was at several stations and had several jobs
Which were all finished up, of course,
But his downfall was at Gananoque
Where his straw boss was Corporal McLean
They were trying to work in November
And were hampered by snow, ice and rain.

McLean with a bunch of Commandos
Dug a trench for a new water main
But Command changed the plans and location
And McLean filled the trench in again;
Then a new trench was dug for the pipe,
Which the main station said they'd supply,
But it wasn't on hand, so they signaled
Equipment, the sizes to buy.

The station said they had a hydrant
The commandos sent over for it;
When everything else was connected
They found that it just wouldn't fit;
Materials, pipes and a fitter
Arrived after many delays,
And once they arrived the Commandos
Finished up in a couple of days.

One morning the Flight and the Corporal
Went to Kingston---on business of course;
On returning, they found the commandos
Tangled up with the Royal Air Force;
For while they were off the station
The CO in mufti was there,
The Commandos didn't salute him,
The CO went up in the air.

While the Corporal was having his headaches
Trying to get his job through,
The Flight's troubles centred on asphalt
And he had his headaches too;
Surface treating a runway is easy,
He'd done it again and again,

But you can't do a good job with asphalt
When you have to compete against rain.

He had a distributor rented;
And it didn't take him long to see
It was costing too much, so Sam Bellamy
Came down with the Diamond T.
They sprayed when they could, which was seldom,
You remember the weather last fall,
And they spent their spare time with the mixer,
Mixing sand, lime, asphalt and kotal.

These are some of the troubles the Flight had,
There's no use in telling them all;
He had a good time last summer,
He paid for his fun in the fall.
If you're thinking that he was discouraged
You're wrong, for he did get some breaks,
He finally got his job finished;
Those Commandos—they have what it takes.

Taken from Vol. 1, No.3, (Apr, 1944) edition of "See Emm", monthly newspaper of No. 1 Construction and Maintenance Unit, RCAF, Toronto, Ont.

I ASKED A LAD IN AIRFORCE BLUE

Anonymous

"What does Canada mean to you?"
I asked a lad in airforce blue.
He looked me over with flyer's eyes,
As deep as a canyon, as bright as skies.

"What does Canada mean to me?"
Then deliberately he tasted the words and found them good,
And he looked to the heavens from where he stood.

"It's a limitless carpet of rainbow hues
We pilots can tread with winged shoes;
It's the fields, it's the lakes, It's the boundless sea;
It's adventure and romance, and liberty;

It's the highest trees and the mountain's crest,
a refuge for dove or eagle's nest;
It's the glory of man, by nature blest;
It's a march, it's a hymn, it's a symphony---
That's what Canada means to me."

Taken from the "See Emm", Vol. 1, No.3, (Apr, 1944), monthly newspaper of No. 1 Construction and Maintenance Unit, RCAF, Toronto, Ont.

JOKES – Electrical

Anonymous

"Hey, Jack," F/Sgt. Massey, the electrician, yelled to his helper, "grab hold of one of these wires."
"OK," said Jack; "I've got one."
"Feel Anything?"
"Nope."
"Good, I wasn't sure which was which. Don't touch the other one."

Taken from the "See Emm", Vol. 1, No.3, (Apr, 1944), monthly newspaper of No. 1 Construction and Maintenance Unit, RCAF, Toronto, Ont.

A NIGHT AT THE BALLET

Anonymous

“One night happens I'm hengink around Moscowitz's Delicatessen witt loose ends when a frand is hending me free a pass to de Ballet. I'm knowink notting from Ballet but I'm in de mood end de price is right.

So gradually I’m arrivink de theatre and hop is goink de coitin. On to de stage comink oud mincing on tippy toes gradually a goil, dressed 40 years younger den sprink in noddink bud a semple blue crepe de Cheney. In de program is saying de goil's name is Danseussey. Her foist name is Premier. In beck each laig looks like she's carrying a New Enqland boiled dinner.

She’s ronnink here, she. ronnink dere. She’s afrady sometink? I’m saying to mineself, vots mekkink de goil so noivous, when soddenly comes jompink from de stage a fella. He's wearink noddink but a stale leopard. De fella's name is Adagio.

Soddenly de goil Danseussey, is seeink Adagio so she’s hidink. So help me, on de stage is not wan single piece foiniture. But she’s hidink. Behind nodding. Adagio is lookingk. In de exact middle of de stage she's standink yet and Adagio, dot dope, ain’t seeink her.

Soddenly he’s seeink. So he makes gradually a terrifik jomp at her. He vaunts. She's jommpink away. She dunt vunt. So he’s ronnick witt jommpink witt grebbink. He vunts. She’s ronning wltt leapink witt doggink wot she dunt vunt. He vunts, she dunt vunt. Oy! Iss dis a bizzness! So he chasink de goil at eight toity-five. I’m leavink at tan twenny-five. So I’m not knowink how he made oud.”

Taken from Vol. 1, No.4, (May, 1944) edition of “See Emm”, monthly newspaper of No. 1 Construction and Maintenance Unit, RCAF, Toronto, Ont.

FIELD TO HEADQUARTERS (4)

By Anonymous

A job came up at St. Thomas
Job number 9-0-2,
Henniger went to the T.T.S.
To see what he could do.

He picked Saville as his N.C.O.
And "Cookie" to run the crane,
Lechasseur for the ditcher
But he didn't count on the rain.

Saville got organized promptly
And bet Command he'd be done
In four weeks, but then he was posted
Just after he'd nicely begun.

Lechasseur did a job with the ditcher
And then he was posted out West,
But his posting was cancelled, thank goodness,
That Frenchman is one of the best.

Corp. Donnelly started in grading
But he only stayed a few days,
He was posted to Northwest staging
Now he basks in the Arctic sun's rays.

There was trouble of course, with materials
Too much stone, rented trucks, and stockpiles,
Do you think it got Henniger flustered,
Not a bit, he continued all smiles.

For he thought that the job would be finished
In four or five days and would show,
A good job well done in a hurry
But again he forgot it might snow.

But it snowed and it rained, and it snowed some more,
And rained and snowed and rained,
And Both and Henniger did their best
But the Parade Ground could not be drained.

It became so wet and soggy
It wouldn't hold up a truck,
It couldn't be treated with asphalt
Which was just T.T.S.'s hard luck.

For they wanted a nice shiny pavement
Where the boys wouldn't get their feet wet,
When they practiced their ceremonial,
They do that at T.T.S. yet.

Now it's spring and the weather is decent
And there is no more snow or rain (we hope)
Henniger and his Commandos
Are on the same job again.

And will give to the School at St. Thomas
A surface of asphalt. And yet,
The boys could have done ceremonial
Even if they did get their feet wet.

Taken from Vol. 1, No.4, (May, 1944) edition of "See Emm", monthly newspaper of No. 1 Construction and Maintenance Unit, RCAF, Toronto, Ont.

PER ARDUA AD ASTRA

By LAC T. Baker, MT. Sect

When you speak about the Air Force
Sure you think of wives and planes,
And the boys who do the flying
In the atmospheric lanes.

You glory in their daring
And the chances that they take,
In their wild swift flights for freedom
In their spirit none can break.

Look behind the scenes still further
You will find another crew,
It's a gang of working fellows
Who comprise the C.M.U.

Though their work be seldom heard of
Sure it's work that must be done,
Its essential to the Air Force
If our air war's to be won.

Building camps and laying runways
Keeping air schools in repair,
So that boys the Empire over
Can be trained for 'over there.'

Taken from Vol. 1, No.4, (May, 1944) edition of "See Emm", monthly newspaper of No. 1 Construction and Maintenance Unit, RCAF, Toronto, Ont.

THE RIVERDALE ISOLATION STRETCH

Sgt. J E. Johnson, No. 1 C. & M. Unit, R.C.A F

The rash is on they bring you in
They take you up! Oh what a din,
Although you're sick some boys are well
The radio is playing hell,

You're given pills, you wash them down
And cover your head the noise to drown.
And later on you fall asleep
And dream of things that make you creep

But morning comes and you awake,
The nurse is there your (heat) to take.
Though it's still up you're very much down
And you look on the world with a troubled frown,

She brings a bowl and water too
Sponges you off and says adieu,
In 30 minutes more or less
In comes the breakfast and you confess.

Your throat is swollen and dry as a bone
You wonder again why you ever left home,
So you sip at the coffee and look at the rest
And you honestly know you've done your best.

You ask for a bedpan (Oh what a disgrace)
To sit there and look them all in the face,
The doctor comes in with a cheery smile
And tells you right out, you'll be here for a while,

But as days pass on you start to pick up
And you relish your meals like a half starved pup,
And then the day comes, convalescence you go
They take you across through the tunnel below.

Now you make your own bed and carry your meals
And slide round in slippers without any heels.
But there's poker to play and books you can read
And the store to send to for the things that you need,

So you worry and fret and feel at your glands
And gaze out the window at happier lands.
You gargle and sniff in attempts to stay well
And you lay awake nights when you can't sleep it's hell.

But the nurses are patient and as good as they come
The doctors as well they are all on the run.
So the days dwindle down till there's just 3 or 4
And you're almost convinced that your throat's getting sore,

Then the doctor comes in and looks with a light
And tells you in 10 days you'll be all right.
So your hopes fade away of your getting out soon
And you lay in your bed and you gaze at the moon

But at last the day comes and he thinks you're O.K.
So he gives you your ticket and boy you're away,
Your ordeal is thru and gone into the past
But your thoughts of old Riverdale always will last.

Taken from Vol. 1, No.4, (May, 1944) edition of "See Emm", monthly newspaper of No. 1 Construction and Maintenance Unit, RCAF, Toronto, Ont.

WHAT TO DO IN CASE OF AN AIR RAID

1. As soon as bombs start dropping, run. It doesn't matter where, as long as you run. If you are inside a building, run outside, if you are outside, run inside.

2. Take advantage of opportunities afforded you when air raid sirens sound the attack warning - for example:

(a.) If in a bakery, grab some pie or cake, etc.
(b.) If in a tavern, grab a bottle.
(c.) f in a movie, grab a blonde.

3. If you find an unexploded bomb, always pick it up and shake it, the firing pin may be stuck.

4 If this doesn't work, place it in the furnace. (The fire department will come later and take care of things).

5. If an incendiary bomb is found burning in a building., throw some gasoline on it. You can't put it out anyhow, so you might just as well have some fun.

6. (a) If no gasoline is available, throw a bucket of water on it and lie down -- you're dead.
(b) The properties of the bomb free the hydrogen from the water with rather rapid combustion (in fact it will explode with a hell-uv-a crash).

7. Always get excited and holler murder. It will add to the fun and confusion and scare the kids.

8. Drink heavily, eat onions, limburger cheese, etc. before entering a crowded shelter. This will make you unpopular with the crowd in your immediate vicinity, eliminating any unnecessary discomfiture that would be more prevalent if the people crowded too close.

9. If you should be the victim of a direct bomb hit, don't go to pieces—lie still and you won't be noticed.

10. Knock the air raid wardens down if they start to tell you what to do. They always save the best seats for themselves and their friends anyway.

Taken from Vol. 1, No.4, (May, 1944) edition of "See Emm", monthly newspaper of No. 1 Construction and Maintenance Unit, RCAF, Toronto, Ont.

THE BATTLE OF FORT ST.JOHN

By Cpl Wales

Hence thirty years from now, my lads,
When I am aged, and gray, and sere,
And rich enough (I hope) my lads,
To rock, and smoke, and quaff my beer,
(And mayhap drool a bit, I fear)
while grabbing on with venerable leer
Of the Battle of Fort St. John.

Yes, thirty years from now, my lads,
I'll take my grandchild on my knee
And spin tall tales to her, my lads,
(Purportedly from memory)
Of what adventures came to me
And the hero that I used to be
At the battle of Fort St. John!

No doubt she'll say to me, my lads,
"Grandpop, please tell me, what were you?"
I'll say "RCAF", my lads,
"I joined the wondrous force in blue
Whose mighty task – heroic crew!—
Was, single-handed, winning through
At the Battle of Fort St. John!"

I'll speak of our Commanders, lads,
Of Squadron Leader Manning's fames,
"He generalled that great battle, lads,
"(Assistant---Flight Lieutenant James!)
They led the charge, directed aims!
To win us our immortal names
At the Battle of Fort St. John!"

Then may she say, "Grandpop!" my lads,
"I'll bet you flew a wondrous ship
Or navigated one." My lads,
"Or triggered guns at wicked clip,
Or photographed the whole darn trip
All during dip and flip and zip,
At the Battle of Fort St. John!"

"No! No! Not that!" I'll quaver, lads,
"No tasks so trivial did I do,

For I was on Construction," lads,
"(Staunch No.4, C. & M. U!)
We dug and sweated, all the crew—
Vast structures from our efforts grew—
(All painted a most bilious hue!)
At the Battle of Fort St. John!"

She'll ask, "Where are your wounds?" my lads,
"I never see you halt nor lame!"
I'll say, "Tsk! Tsk! Sweet Child," my lads,
"You're not to question Grandpop's fame
I could have fallen, just the same,
And broke my doggone leg, I claim,
At the Battle of Fort St. John!"

She'll query further, too, my lads,
"Where did your nice wide ribbons go?"
And damn fool questions such, my lads,
As, "Why's your pension nil, or low?
How come your medals you can't show?
Why do your pals call you "Joe"?
From the Battle of Fort St. John?"

She'll ask me for my proofs, my lads,
Anent this squad I had my place in –
And make remarks about, my lads,
"This squad, Grandpop, you set the pace in?"
"This fight you say you saved the race in?"
(Then, lads, I'll slap her pretty face in!)
Alas! Battle of Fort St. John!

Taken from Vol 1, No.1 (December, 1943) of The Rambler, monthly newspaper of No. 4 Construction and Maintenance Unit, RCAF, Calgary, Alberta.

DIRTY SUPPLICATION

By Cpl AWF Wales

Dust! Dust! Dust!
Eddying around with devilish lust
Dust in your soup and dust in your ears
Dust in your pudding, dust in your tears
Soiling your boots to a hideous state,
Blowing clean back of your loose upper plate.
Chum, in the Old Days, WE never cussed!
But now we've encountered the Fort St. John dust!

Dust! Dust! Dust!
Swirled and dropped by a fiendish gust!
Dust on the table; dust on the chair,
Dust down your neck and dust in your hair!
Black'ning your spuds and peppering your meats
Clouding your blankets, besmirching your sheets.
Chum, hear us whimper, with loathing disgust
Of the misery we suffer through Fort St. John dust!

Dust! Dust! Dust!
Cementing your sweat to a filthy crust!
Dust in your nostrils, dust in your throat
Dust in your pants, and dust in your coat!
Making your bronchials rattle like chains
Blowing right through to your wind-befogged brains!
Oh, burn us to Ashes, if so be You must,
But please, Lord, don't change us alive into Dust.

Taken from Vol 1, No.2 (December, 1943) of The Rambler, monthly newspaper of No. 4 Construction and Maintenance Unit, RCAF, Calgary, Alberta

MESS

By Cpl AWF Wales

(Civilian interpretation permitted)

Nothing gives greater surge to
My inner most passions
Than to hear that in Whitehorse
I'm fed Labrador rations!

It's not ME that I pity
Or feel sorry for
It's those underfed wretches
In Labrador!

Taken from the December, 1943 edition (Vol 1, No. 2) of The Rambler, monthly newspaper of No. 4 Construction and Maintenance Unit, RCAF, Calgary, Alberta

SOLILOQUY – NWSR

No.4 C. & M. U. Personnel – Experienced by:

Cpl AWF Wales

Pay heed ye natives of temperate zones,
Of the balmy South; hark, ye torrid drones!
Come hear my song of the wondrous North,
Whence the booming, ice-born winds come forth.
Driving the snow in a glistening dance—
(Gad! How it whistles through my pants!
For, due to Equipment Section's blunderin'
I ain't got nothin' at all on under'em!)

(Hmm – yes – but to get on –)

Each eve the flare of Aurora Borealis
Flames forth its beauties to enthral us –
Myriads of colours painting the night
From the mountain range to the zenith's height.
Crackling above in fantastic race!
(And my poor ears crackle in kindred pace,
Frosted crisp to a crystal tissue –
"Caps, winter" were omitted from my issue!)

(Yeah – and where was I – Oh –)

And all around bleak, icy peaks,
Tower high through writhing, cloudy reeks,
Solid, eternally ice-immersed,
Defying King Winter to do his worst –
Everlasting, in spite of weather;
(Let's see now, I'm wondering whether
It could be done, for my information.
Chum, what do you know of hibernation?)

(Not a bad idea…if I had some mitts.
…..Oh, well!…)

The gelid, sluggish river below,
Surlily yields to the frost and snow,
Grudgingly lessening its turgid motion,
Losing its struggle t'ward Mother Ocean;
Almost in solid and inert state –
(And, brother, mine is a similar fate!

No winter shoes, or socks, or shirts –
Chum, just to pick up a shovel hurts!)

(….Outdoor plumbing, too…Hey!
Here's last week's newspaper…)

The frosty mist is a tinsel bleach
Glitters beyond the eye's farthest reach –
And the frigid wind and the glaring snow
Recall the brave tales of long ago
Of this snow-bound land, and adventures bold!
(Holy suffering Cripes! I'm Cold!
I wonder if anyone knows how s'ark a
Man can freeze here, without a parka?)

(N.B.: Personnel – Equipment: For your file:
We'll trade you jobs – and clothes – for a while!)

Taken from Vol 1, No.2 (December, 1943) of The Rambler, monthly newspaper of No. 4 Construction and Maintenance Unit, RCAF, Calgary, Alberta

ODE TO CMU

By Sgt JW Shorten

You boast of all your trades, lads,
From Pilot to Ground Crew,
With your “this and that” procedure,
Till it nearly makes us blue.

But when you’re in a jam, boys,
When you’ve really got it tough,
You wire our little Unit,
For men who know their stuff.

When your building’s looking shabby,
And needs a coat of paint,
Up comes the blooming painter,
Who makes them what they ain’t.

When your fridge is out of order,
Or your roadways are a sight,
We’ve a gang that really fix’em,
If they have to work all night.

There’s a gang for every section,
Action is their name,
And we keep the kites a-coming,
To HITLER just the same.

So when you see us working,
With machines or tools and crew,
Take your hat off to a Buddy,
We’re the men from C.M.U.

Taken from the February, 1944 edition of The Rambler, monthly newspaper of No. 4 Construction and Maintenance Unit, RCAF, Calgary, Alberta.

THE BOYS IN THE C.M.U.

By Cpl. G.R. Getson

Up here in the tall, tall timber,
Watson Lake is sure the spot,
Working in all kinds of weather,
In this land that God forgot.

Out in the snow with hammers,
We must get it built or bust,
Doing the work of others,
Because our C.O. says we must.

Out with the Eskimos and Indians,
Out where the boys freeze blue,
Out on the wind-swept muskeg,
Two thousand miles from you.

We are the boys from No.4 C & M Unit
Earning our meager pay,
Guarding the folks with millions,
For one buck thirty a day.

They don't care if we are living,
Everyone thinks that we are fine,
Back home we are soon forgotten,
We are working for Number Nine.

All night the wolves keep howling,
It is more than we can stand,
Hell folks, we're not convicts,
We're defenders of our land.

Until victory we must stand it,
Many years of fun we miss,
So that you boys that keep to the cities,
Can live in a life of bliss.

But we are the boys of Canada,
And we can stand the gaff,
Till somebody catches old Hitler,
And this damn war is over at last.

Taken from the February, 1944 edition of The Rambler, monthly newspaper of No. 4 Construction and Maintenance Unit, RCAF, Calgary, Alberta.

THE CALGARY STREET RAILWAY

Gentlemen,

I have been riding your No.7 street car for the past 18 months and the service seems to be getting worse everyday. I think the transportation you offer is worse than they enjoyed 1000 years ago.

Yours truly

AIRMAN

Reply from the Street Railway Co.:

Dear Sir,

We received your letter of the first, and believe that you are somewhat confused in your history. The only transportation of 1000 years ago was on foot.

Yours truly,

STREET RAILWAY CO.

From the traveler:

Dear Sir,

I am in receipt of your letter of the 7th and believe that you are the ones confused in your history. If you will read the Bible, Book of David, 9th verse, you will find that Aaron rode into the city on his Ass, and that, gentlemen, is something I haven't been able to do on your street cars for the last 18 months.

Yours truly

AIRMAN

Taken from the February, 1944 edition of The Rambler, monthly newspaper of No. 4 Construction and Maintenance Unit, RCAF, Calgary, Alberta.

THE AIRMAN'S MISTAKE

Anonymous

He kissed her in the garden,
The moon was shining bright,
She was a marble statue,
And he was drunk that night.

Taken from the Vol. 1, No.1, June 1, 1945 edition of Bushland Banner, bi-monthly newspaper of No. 10 Construction and Maintenance Unit, RCAF, Dawson Creek, BC.

GEN ON RANK

Anonymous

You can always tell a corporal,
By the stripes upon his arm,
While an LAC is usually,
Too weak to cause alarm.

An officer, of course, you tell,
By rings and bars and such,
You can also tell a sergeant,
BUT---you cannot tell him much.

Taken from Vol. 1, No. 2, (June 15, 1945) edition of Bushland Banner, bi-monthly newspaper of No. 10 Construction and Maintenance Unit, RCAF, Dawson Creek, BC.

No Title

Anonymous

I think that I shall never see,
A time when cigarettes are free.
In fact, unless the taxes fall,
I may not ever smoke at all.

Taken from Vol. 1, No.3, (July 30, 1945) edition of Bushland Banner, bi-monthly newspaper of No. 10 Construction and Maintenance Unit, RCAF, Dawson Creek, BC.

SONGS

By “Trev”

There are songs that are sung at eventide,
When the toil of the day is done,

There are songs that are sung by joyous birds,
As they herald the rising sun.

There are songs that are sung by the wanderer,
As he cheers himself on his way,

And there are songs that are sung for the joy of a song,
When hearts are light and gay.

There are songs of praise to the Maker,
And songs meant for joy and fun.

But the grandest song I’ve ever heard,
The grandest song I ever knew,

Is the song my glad heart sings to itself,
As I hit the trail to home and you.

Taken from Vol. 1, No.3, (July 30, 1945) edition of Bushland Banner, bi-monthly newspaper of No. 10 Construction and Maintenance Unit, RCAF, Dawson Creek, BC.

ENGINEERS IN WORLD WAR II

The Royal Canadian Engineers lived up to their motto “UBIQUE” during all phases of the Canadian efforts in the Allied cause. As far as numbers were concerned, as of V-E Day Engineers comprised 8 percent of Canadian Army troops in the European Zone. These sappers were employed in numerous activities such as:

- Field Companies in direct support of front line troops building bridges, lifting minefields, operating rafts and assault boats on river crossings, carrying out demolitions, preparing defensive works, and road repairs;
- Field Park Companies providing stores and equipment to support Engineer operations including bridging stores;
- RCE Army Troops providing heavy duty bridging and road construction, recovering redundant bridging equipment in rear areas, and constructing airfields;
- Field Survey companies preparing maps and providing survey details for military operations;
- Railway Operating Companies constructing railroads and operating railway equipment;
- Construction Companies responsible for building facilities to house troops, equipment and aircraft in England and France;
- Tunneling Companies involved in tunneling and blasting operations in Gibraltar, England and France, and pipeline construction;
- Cemetery Construction Units;
- Fighting as infantry when required; and
- General staff at all levels of the command structure.