Silver Jubilee Celebration

June 14—17, 1979

Canadian Forces Base Cold Lake

This Book is dedicated to all past and present residents of Canadian Forces Base Cold Lake, the towns of Grand Centre, Cold Lake and Bonnyville, and all other residents of the provinces of Alberta and Saskatchewan, who have participated in the growth of the Base during its first Twenty Five years.

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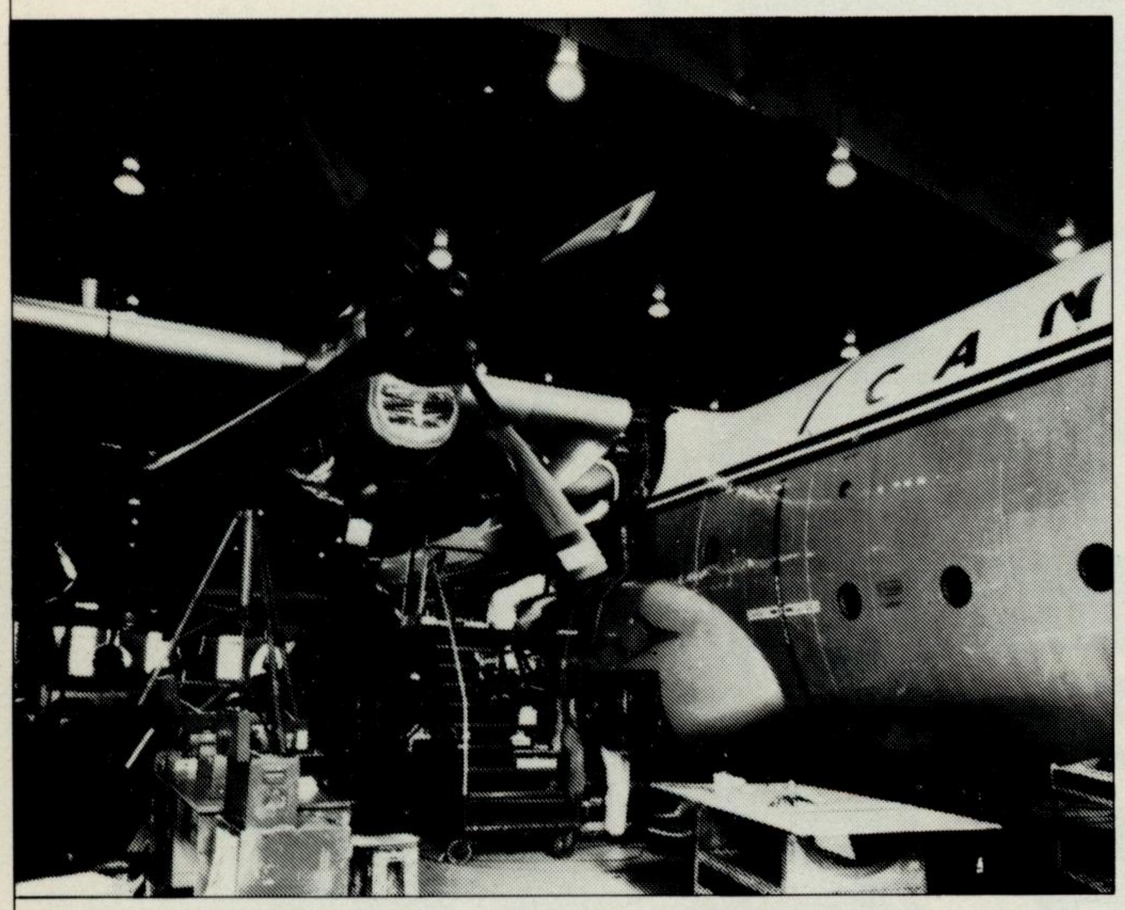

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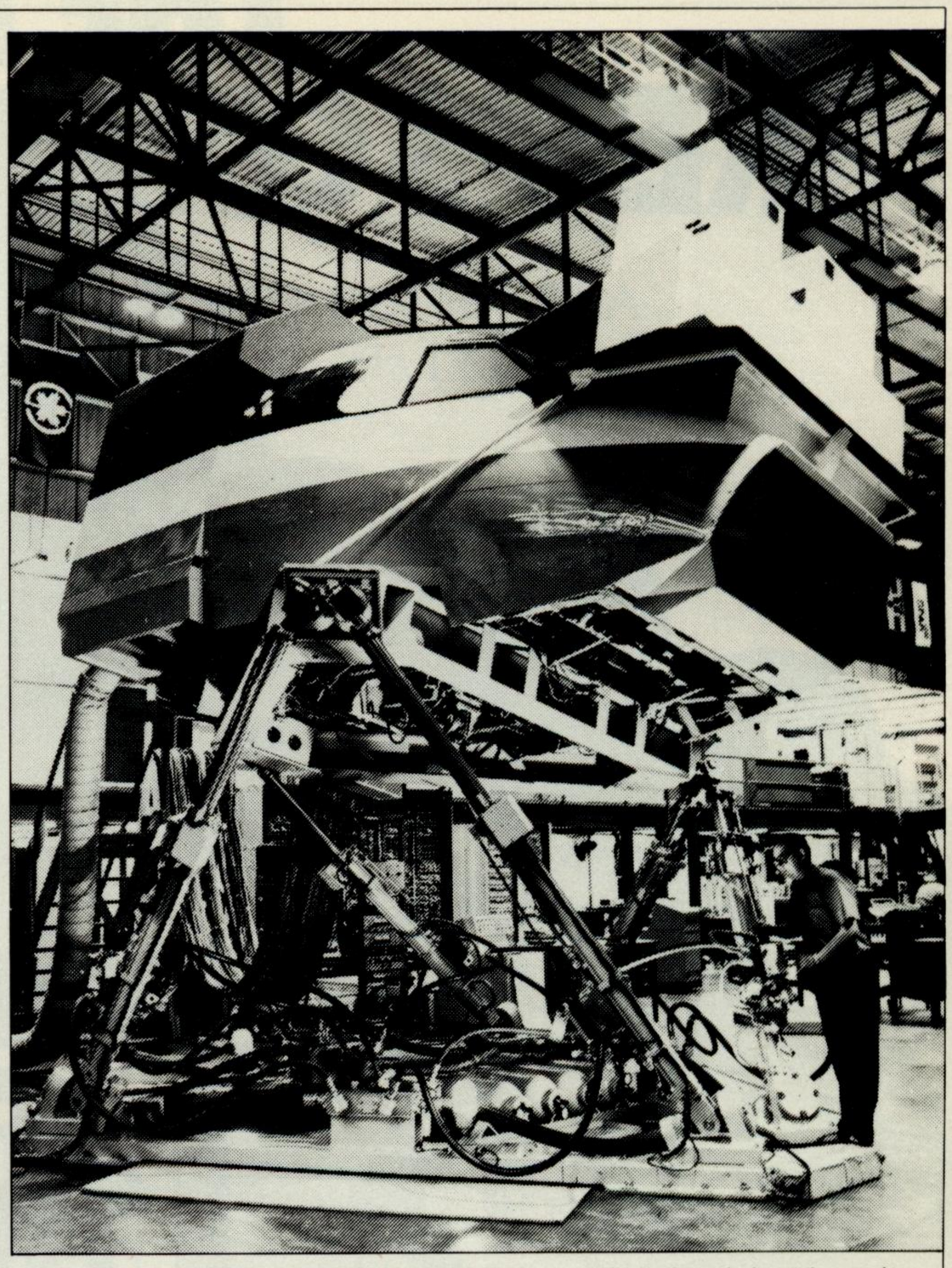

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In addition to being the largest manufacturer of commercial aircraft components in Western Canada, Northwest Industries Limited is one of the country's largest military and commerical aircraft maintenance, repair and overhaul centres.

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Happy Silver Anniversary

TO THE PERSONNEL OF

CANADIAN FORCES BASE COLD LAKE

Congratulations to the Canadian Forces people at Cold Lake Base, past and present, for 25 years of service to Canada and Canadians.

We wish you a happy Silver Jubilee and look forward to your airshow and celebrations.

It takes close teamwork to conduct aerial exercises and at the same time carry on safely a petroleum exploration program.

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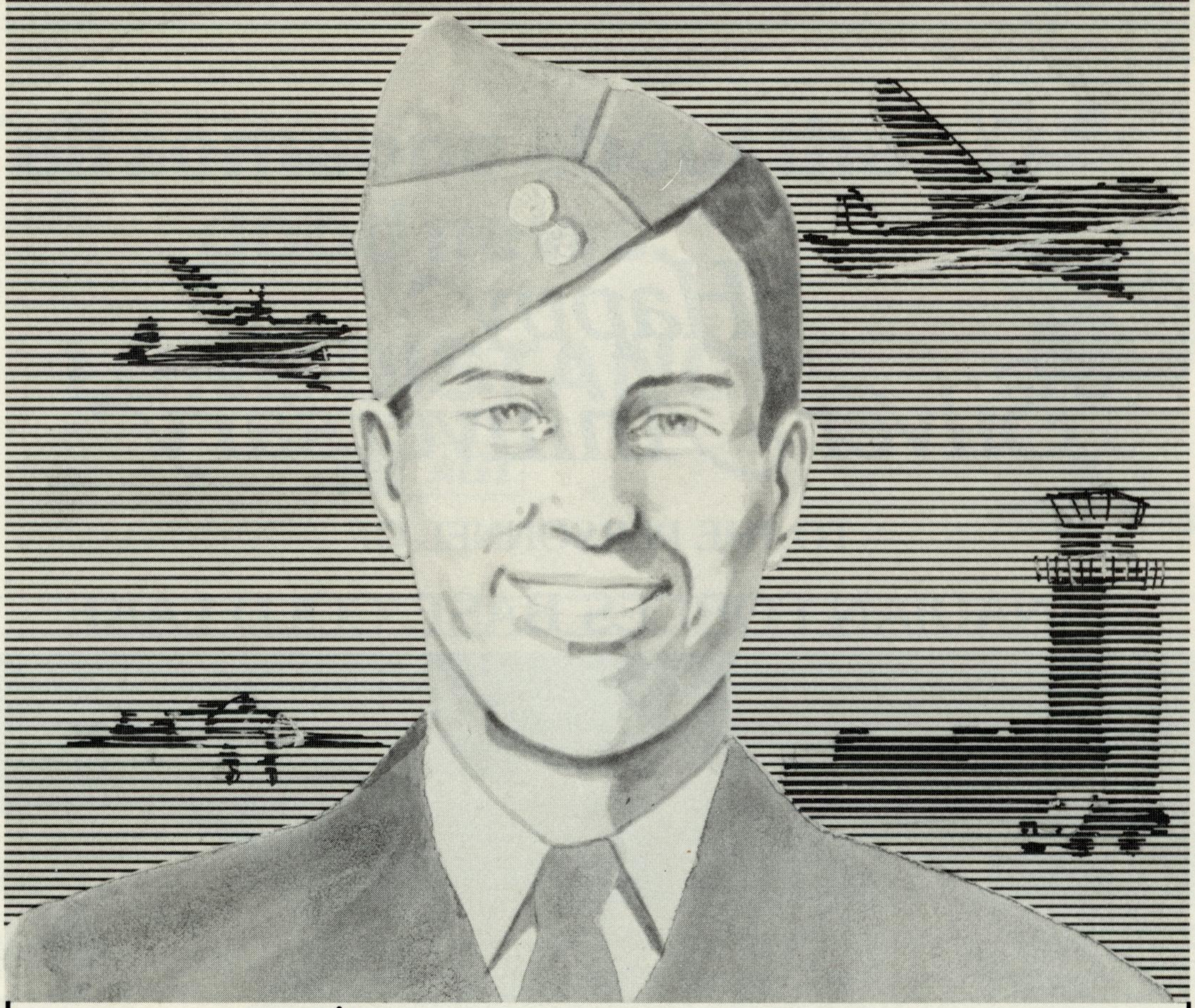

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Royal Canadian Air Force

Recruiting poster as it appeared in 1954

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MESSAGES

FOREWORD
FROM LIEUTENANT-GENERAL G.A. MacKENZIE

It is indeed a pleasure for me to be able to introduce the commemorative booklet which has been put together to document the 25th Anniversary of Canadian Forces Base Cold Lake

Those of you who are returning to re-capture memories of your time spent in service at Cold Lake will, I am certain, be most gratified to see that the traditions of excellence which you established still characterize the operation at the Base.

To Colonel Price and to the men and women who serve at Cold Lake today, let me express the pride that we, in Air Command, take in your accomplishments. As Commander I am appraised, on a daily basis, of the operational readiness you maintain and the effectiveness with which you discharge your training responsibilities. The success you enjoy in Operational Evaluations and in the conduct of major exercises such as Maple Flag is a further indicator of the excellence of performance of which I spoke earlier.

Equally as important, however, is one of the factors underlying your performance; namely the morale of the people. Cold Lake has traditionally been known as a happy Base; I know from my visits here that this description of your people continues to be valid today. Your high morale derives from a number of factors—knowing that you have an extremely important role to play, accomplishing that role with consistently excellent results and, at the same time, enjoying a good quality of life due to both the leadership and to a unique community spirit which exist at Cold Lake.

As you reflect on the successes of the past twenty-five years, you must also be mindful of the challenge you will face in the future—the challenge of NFA. It will, of course, be an exciting time—the introduction of a new airplane always is. It will also, however, be a most demanding time for you as you phase out the venerable CF-104 and bring an aircraft into the inventory which represents a quantum increase in both capability and technology. I know that you are equal to that challenge.

In closing, let me wish you, the people of CFB Cold Lake, a happy and enjoyable celebration of your twenty-fifth birthday—I know that you will have many, many more!

G.A. MacKenzie
Lieutenant-General
Commander

MESSAGE FROM COLONEL L.C. PRICE, CD
BASE COMMANDER
CANADIAN FORCES BASE COLD LAKE

On behalf of the officers, men and women of Canadian Forces Base Cold Lake, I welcome you to this, the Silver Jubilee Celebration of the Base.

Over the past twenty-five years we have seen this base grow from a patch of wilderness to the finest air base in Canada. Bases do not develop by pouring concrete and constructing buildings, they progress because of the dedicated people who strive to improve the facilities during their tenure. Fortunately for CFB Cold Lake we have had, and continue to have, many of these individuals. Those members, past and present, should be justifiably proud of their contribution.

The purpose of CFB Cold Lake is to train fighter pilots, and this it has done extremely well since its inception. We have seen two generations of fighters based here, and in the future we can look forward to the latest generation. This is our future challenge, and I am confident that together we will be prepared.

No message would be complete without expressing my thanks to all the personnel who have worked so hard to make this Jubilee the success I know it will be.

To those who are visiting, I hope you enjoy yourselves and find this celebration a rewarding experience.

Colonel L.C. Price Base Commander
Canadian Forces Base Cold Lake

MESSAGES

Mayor of Cold Lake

Cold Lake welcomes you! Any visit to northeastern Alberta is incomplete unless some time has ben spent in Cold Lake, the town on the south shore of the lake from which both CFB Cold Lake and Cold Lake tar sands get their name.

Cruise around on one of Canada's largest, deepest and purest lakes; learn the legend of Kinosoo; camp in the many beautiful campsites on its shores; and visit the new Cold Lake Provincial Park.

Residents say that "once you have drunk from Cold Lake you always return". Please come again. Grow with us, and become a part of this friendly community.

I congratulate Canadian Forces Base Cold Lake on their 25th Anniversary and look forward to many more years of community co-operation and involvement.

D.M Wold
Mayor
Town of Cold Lake

Mayor of Grand Centre

Congratulations on the Silver Jubilee of Canadian Forces Base Cold Lake.

As many of you know, Grand Centre was a small hamlet and later a village when the Base first opened.

The Base has grown as well as our town and in the meantime a large measure of co-operation and friendship has existed and continues to grow.

Base personnel form a large segment of our population and in many cases play a leading role in the operation of the services within the town.

May the many friendships that have been made and the spirit of being a part of one community continue to exist and grow.

R.G. Robinson
Mayor
Town of Grand Centre

Mayor of Bonnyville

Congratulations to you Colonel Price and to the personnel of the Canadian Forces Base Cold Lake, on your Silver Jubilee year. I have lived in this area for the best part of my life and have watched the progression from a muskeg wasteland to one of the most advanced military bases in Canada.

I have had the opportunity, through my personal business to familiarize myself with most of the various areas of the impressive Cold Lake installation.

The surrounding communities have benefited immeasurably by the presence of CFB Cold Lake. It has afforded us, over the last 25 years, with the opportunities of intermingling, and exchanging idea's and cultural heritage with people from across this great country of ours, over and above the employment and prosperity that has been gained for the civilian population and the business sector.

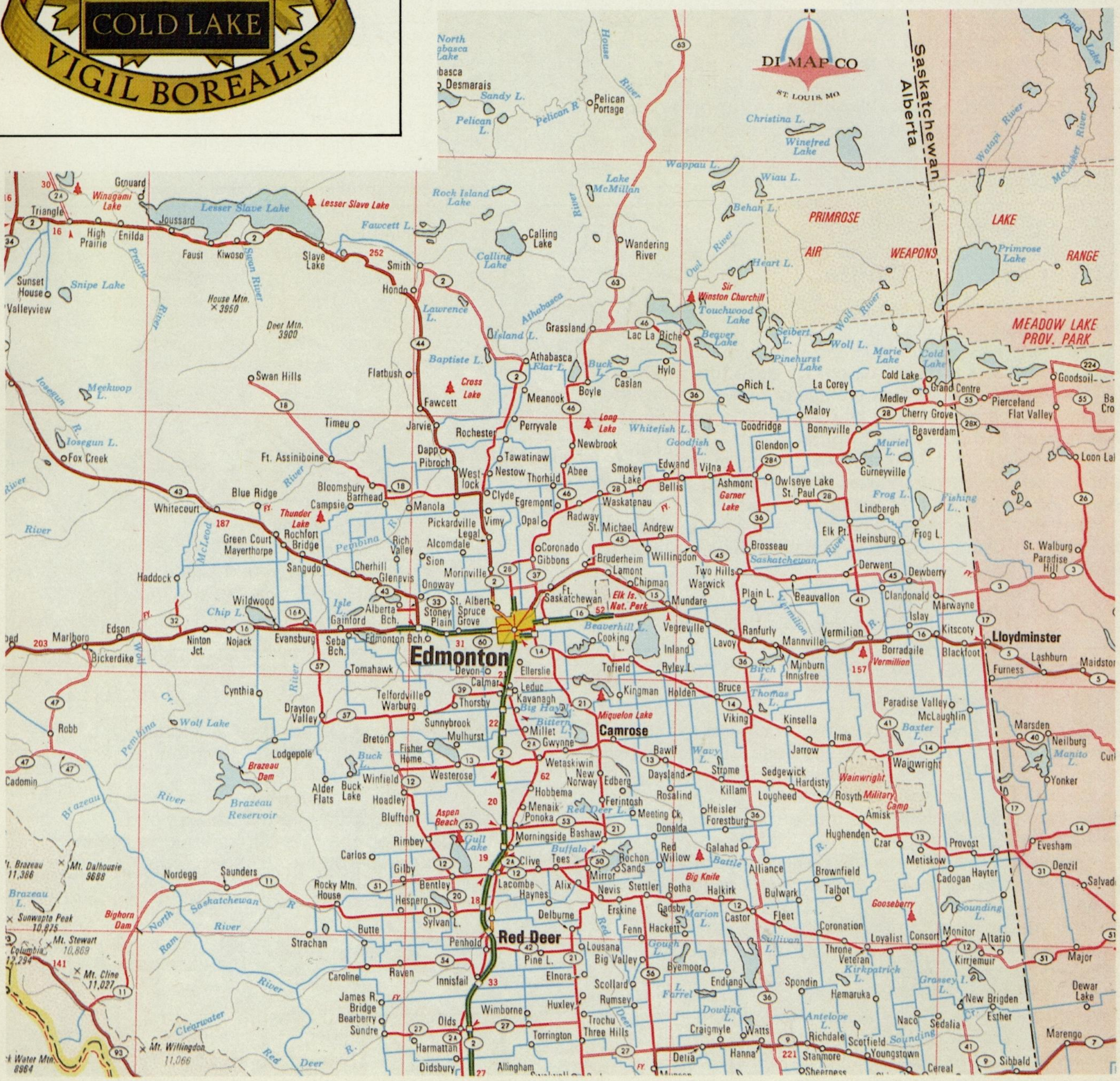
Your Silver Jubilee is not only a celebration of time, but also of accomplishment and contribution, not only to this area but to the whole of Canada.

On behalf of my wife and myself and the people of Bonnyville, we extend a heartfelt thanks and congratulations and may we all continue to live in harmony and prosperity for years to come.

Wm. Slawuta
Mayor
Town of Bonnyville

CFB COLD LAKE

VIGIL BOREALIS — Northern Sentinel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IN THE BEGINNING

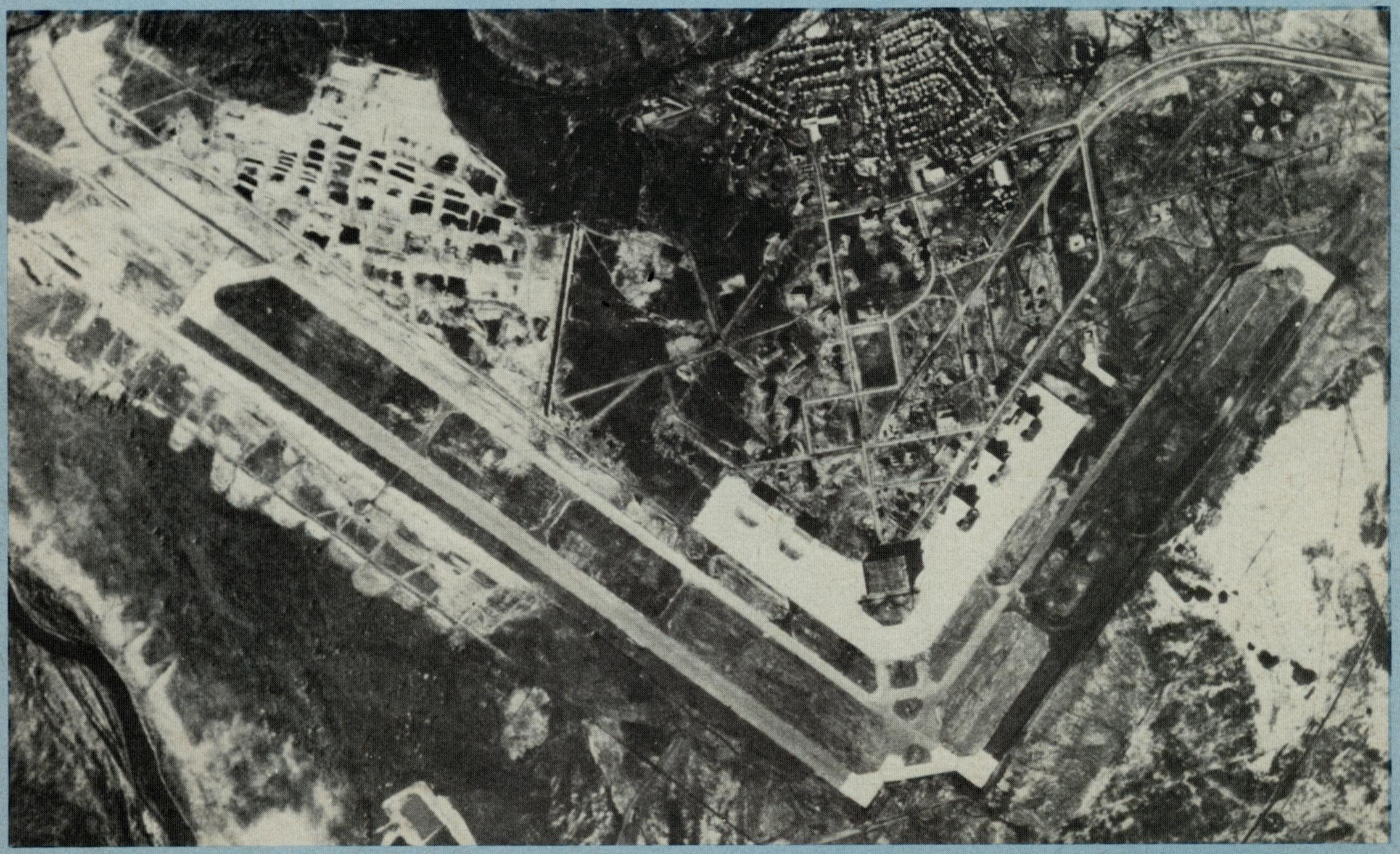
Soon after World War II, it became apparent that modern aircraft and air weapons could not be adequately tested or exercised on existing Canadian air weapons ranges. Most of the World War II ranges were not only too small for use by jet aircraft and rocket-propelled weapons but they were located in fairly heavily populated parts of the country. In 1950, a study was initiated to find an area in Canada suitable for the establishment of an adequate air weapons range. Many factors; population density, accessibility, weather, possible future development of resources, and the suitability of adjacent land for the construction of an aerodrome, had to be considered. Of the many areas studied, a tract of land approximately 33 miles deep by 104 miles long straddling the Alberta-Saskatchewan border and the 55th parallel was found to be most suitable.

This area offered several advantages; only a handful of people had to be relocated, the land was unsuitable for farming and therefore would not be required at some future date, and typical sunny Alberta weather prevailed for most of the year.

In April 1951, Defence Minister Brooke Claxton announced agreement with the provinces of Alberta and Saskatchewan for establishment of the new air weapons range. A sandy plateau some 40 miles south of the range was selected as the site of a huge new RCAF Station which would provide aerodrome facilities for aircraft using the range. Several areas had been considered for the location of the station prior to selection of this site, including Lac la Biche and Bonnyville, but the site near Grand Centre had several advantages; adequate drainage, flat terrain for many miles around, and nearby gravel deposits.

Construction of the aerodrome, to be known as RCAF Station Cold Lake, was a tremendous engineering feat. Before construction could start, the existing CNR rail line had to be extended six miles from its terminal at LeGoff so that material could be transported the 176 miles from Edmonton. In April 1952, the rail line was complete and construction of the station began. More that a dozen contracting firms and hundreds of workmen spent more that two years building the sprawling complex of runways, hangars and domestic facilities.

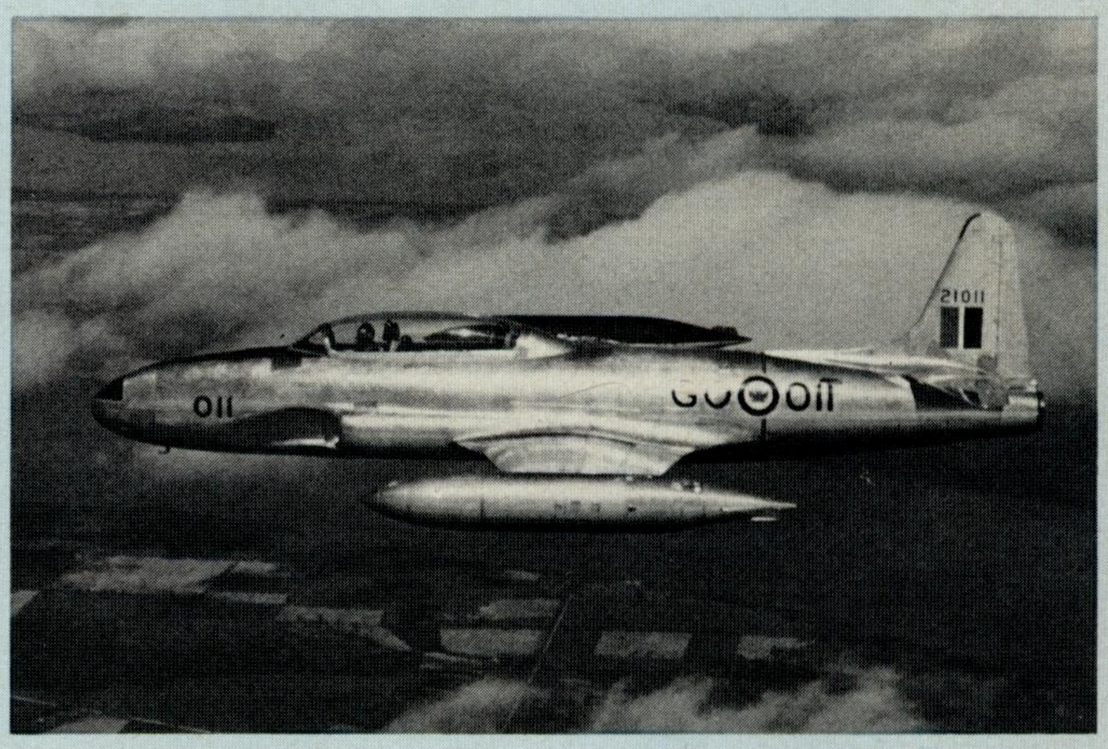
By the spring of 1954, the main runway, two hangars and sufficient barracks and domestic facilities were complete so that the RCAF could move in. An advance party headed by W/C J.H. Watts, and comprising himself, F/L L.W. Bradley and eight airmen, arrived on March 31, 1954 and on that day RCAF Station Cold Lake became a self-accounting unit. On April 9, a further 34 airmen arrived to complete the advance party.



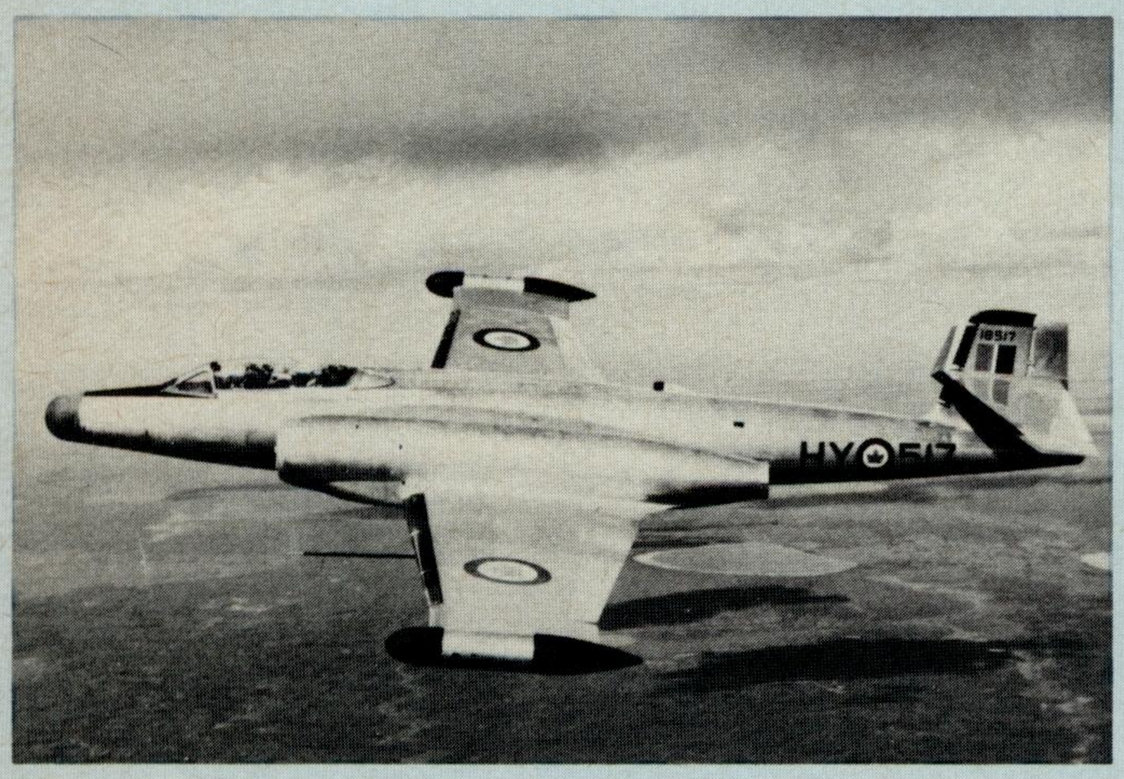
RCAF Station Cold Lake, 1954.

THE FIRST UNITS

The first unit to take up residence at Station Cold Lake was the Air Armament Evaluation Detachment (AAED) of the Central Experimental and Proving Establishment. AAED was officially formed in June of 1954 to carry out an evaluation of the CF-100 Canuck interceptor and its armament. The present day successor to this first unit, the Aerospace Engineering Test Establishment (AETE), is still a resident at CFB Cold Lake.



T-33 Silver Star on production test flight.



CF-100 with Rocket Pods.

In the operational field it had been decided, in September, 1954, that 433 (All Weather) Fighter Squadron would form at Cold Lake. Squadron personnel arrived during the fall and winter of 1954-55 with the first two aircraft, T-33 Silver Star jet trainers, arriving in December, 1954, and the first CF-100's in February, 1955.

To complete the ground facilities in support of the air weapons range, a radar was required. For this purpose, construction of a Ground Controlled Interception (GCI) site started in June, 1954. This site, now known as 42 Radar Squadron, is another unit still located at Cold Lake.

Squadron CF-100s.

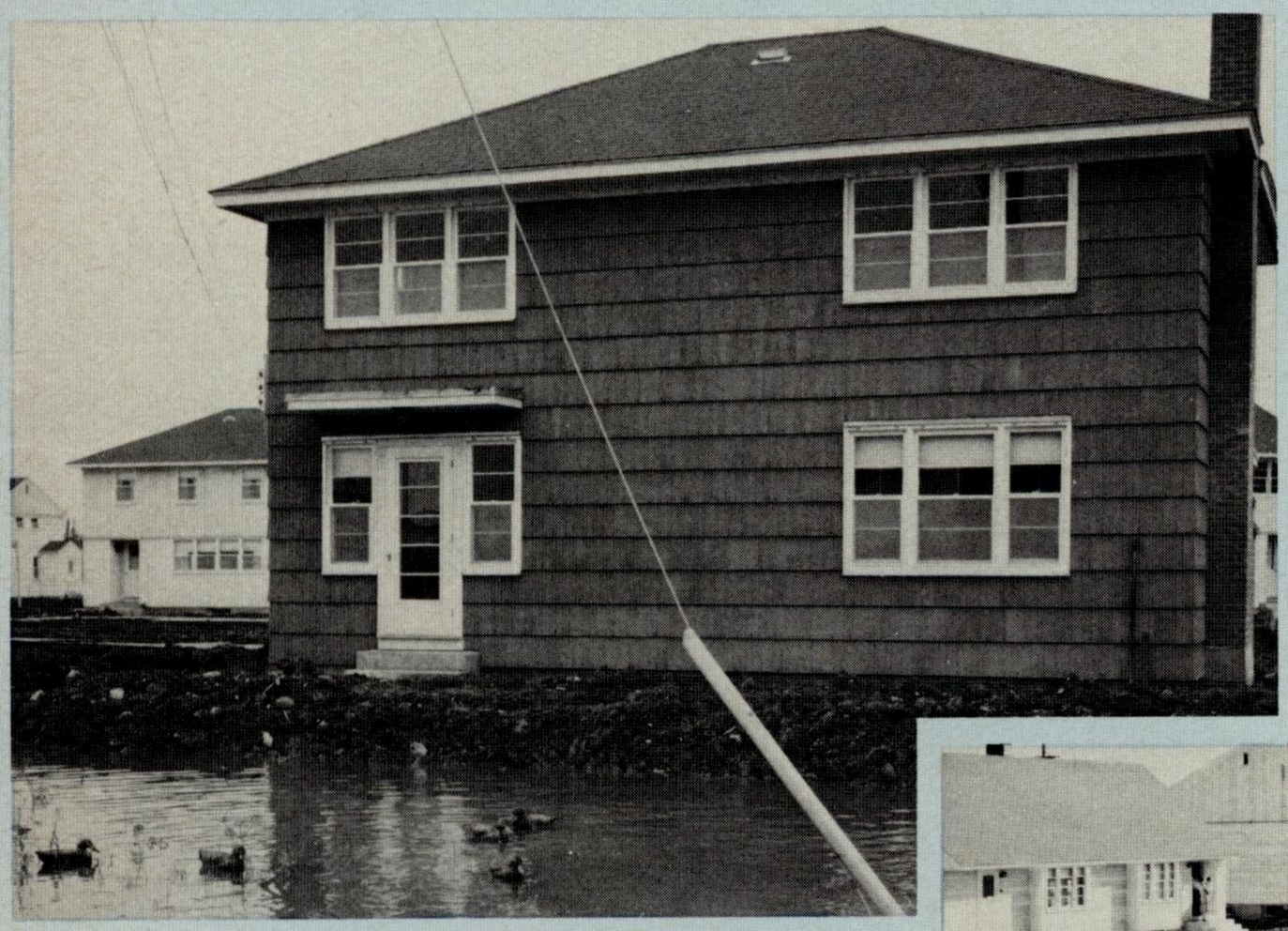
42 AC&W. Note inflatable domes.

In the spring of 1955, Air Force Headquarters announced that 3 (All Weather) Fighter Operational Training Unit (3(AW)F OTU) would move from RCAF Station North Bay, Ontario, to RCAF Station Cold Lake. The move was planned to take advantage of the Air Weapons Range; to remove the OTU from the air traffic congestion in Eastern Canada; and to gain the advantage of Alberta's excellent flying weather. The unit's aircraft, T-33's and CF-100's, arrived in April, 1955 and by mid May the OTU had recommenced training of CF-100 aircrews.

BASE HOUSING

On the domestic scene, in November 1953, under the supervision of Central Morgage and Housing, construction began on 355 Permanent Married Quarters, (PMQ's). Initial planning called for 50 homes to be completed by April 1, 1954, but the extraordinarily wet conditions slowed construction so that houses were not handed over to the RCAF until September and October, 1954.

Extraordinarily wet conditions.

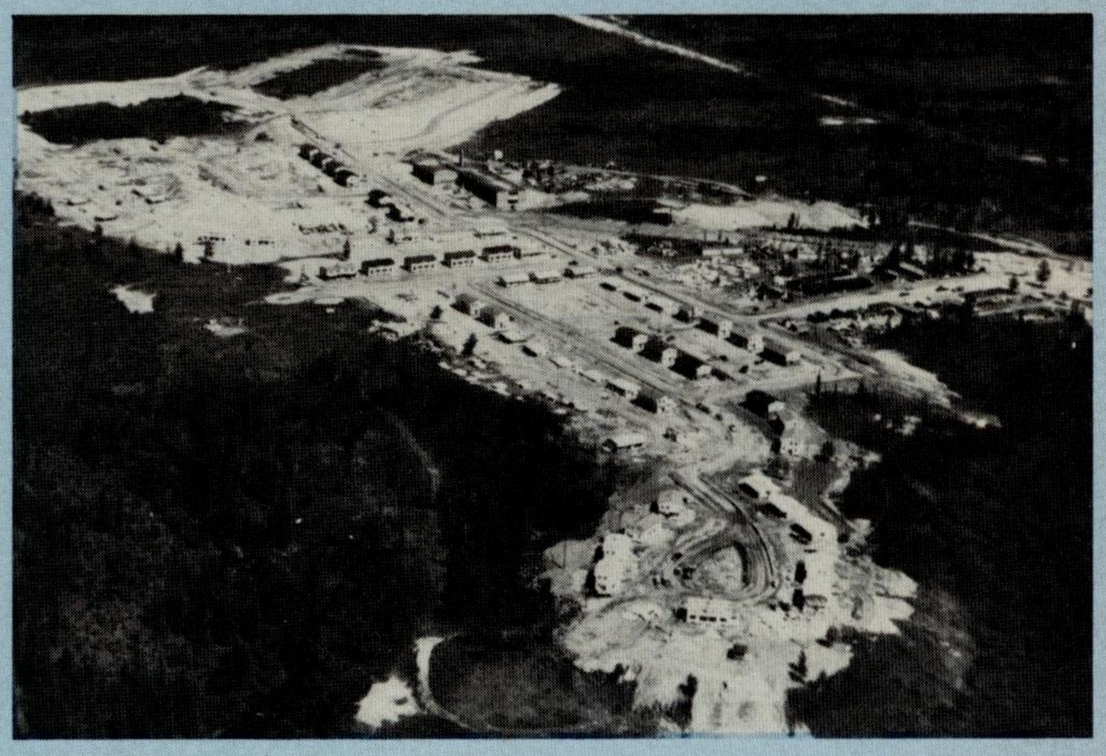


Athabasca area PMQs and school complete?

Even before the first PMQ's were completed, it was obvious more were required and in 1956 work started on the erection of an additional 200. By 1957 these were complete and immediately another contract was let for the construction of 300 more.

These PMQ areas, Athabasca, Beaver and Mackenzie, plus a trailer park in Mackenzie, were to be the only on-base housing for married servicemen for the first ten years of the base's existence.

1954 Trailer Park.



Beaver and MacKenzie PMQs under construction.

1959 — MacKenzie area Trailer Park - 1961

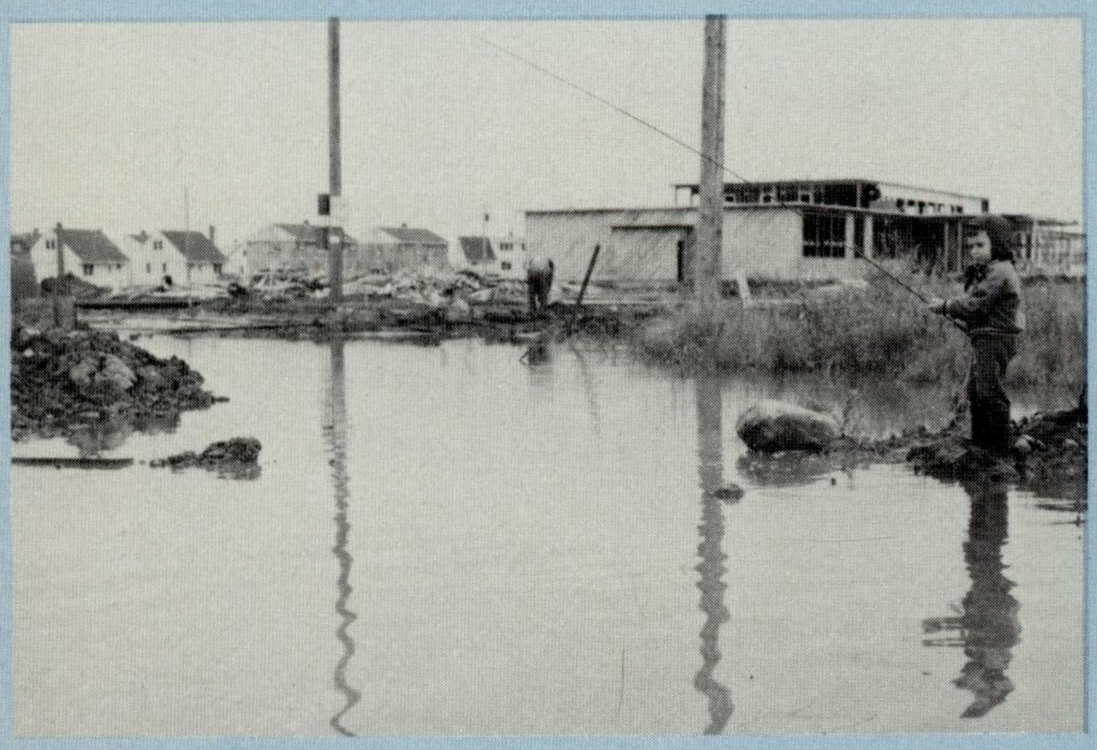
BASE SCHOOLING

Soon after the advance party arrived in early 1954, arrangements were made with the Alberta Department of Education to establish a school district for the base. W/C Watts found himself in the position of Official Trustee and set out to engage a staff and secure equipment to start school in the fall.

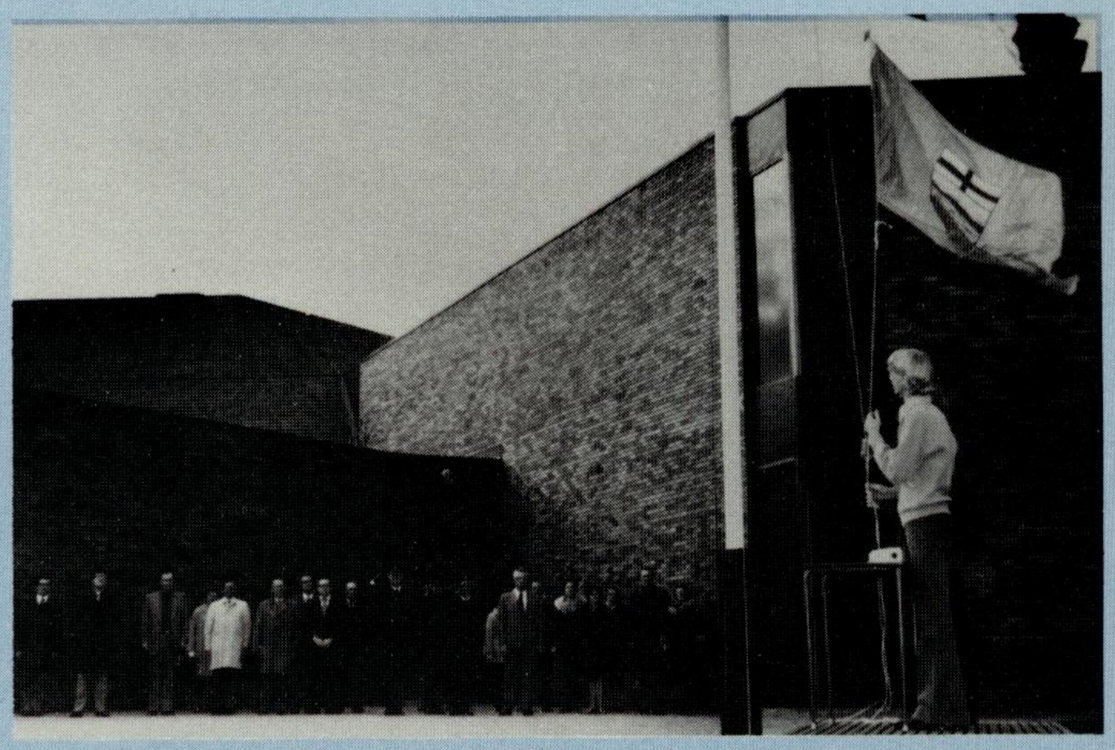
The wet weather, which slowed construction of the PMQ's, also slowed construction of the school. However, temporary accommodation was obtained in the Ground Instructional Building and school opened on schedule with a staff of 7 teachers and 67 students in Grades 1 to 8. On January 3, 1955, the school building was completed and staff and students moved in. During the winter of 1954-55, the school population rose steadily and at the end of the school year there were 12 teachers and 277 students in Grades 1 to 9.

With the construction of more PMQ's came more children. When the 1955-56 school year started, there were 16 teachers and 455 students. The original school became totally overloaded and for the 1956-57 school year the GIS building was again pressed into service to accommodate the overflow. With the completion of a second school, the 1957 school year opened under almost ideal conditions with a staff of 41 teachers and 800 students in Kindergarten to Grade 12.

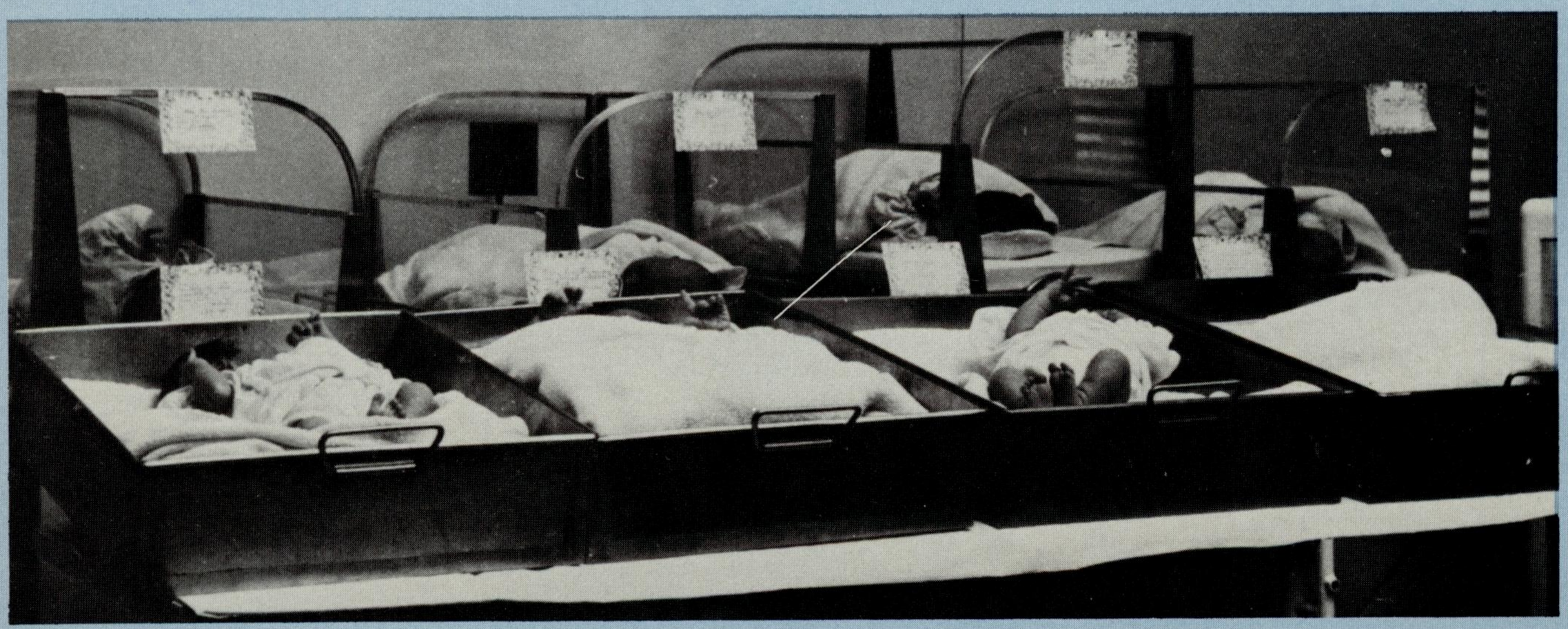
A third school was included when the third group of PMQ's were built and the base continued to provide schooling for dependants from Kindergarten to Grade 12 until, as a joint venture with the town of Grand Centre, in October 1972, the Grand Centre High School was opened. This relieved some pressure on the base school facilities and they are now effectively providing schooling for dependent children from Kindergarten to Grade 9.



Wet weather slowed construction. Who cares!



Grand Centre High School opening.



Not only the schools were overcrowed. The nursery was short of cribs.

THE (IN)EVER CHANGING WEATHER

One of the main reasons for the selection of Cold Lake for the Air Weapons Range was the weather. Climate records for this area have been recorded from January 1953 to the present. These records show that Cold Lake's climate is typically continental with wide monthly and annual variations in temperature and precipitation. For 93% of the year, air operations are conducted under Visual Flight Rules and, in an average year, Cold Lake has in excess of 2,100 hours of sunshine. That is clear sunny skies for 45% of the daylight hours.

Daylight hours vary greatly throughout the year with only 7 hours, 22 minutes of daylight on the shortest day and increasing to 17 hours, 9 minutes on the longest day. The extended hours of daylight during the summer months allow time for a round of golf, or some fishing or boating after the evening meal. It is not uncommon for ardent golfers to complete a round before the workday begins. The abundance of lakes and the long summer days explain why this area is increasing in popularity as a summer vacation land.

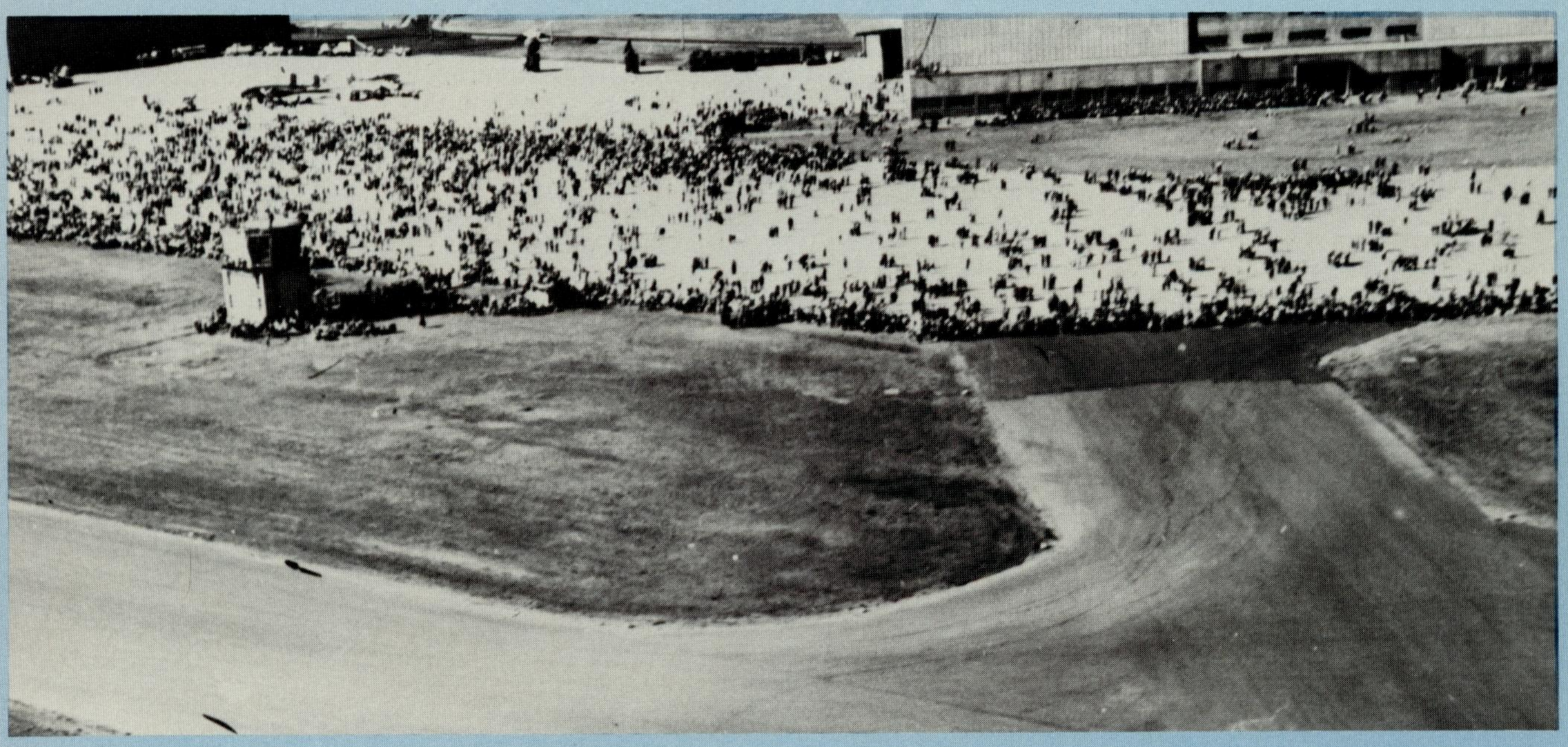
For the boating enthusiast, Cold Lake is usually ice-free from May 17 to November 15, a period of approximately 6 months.

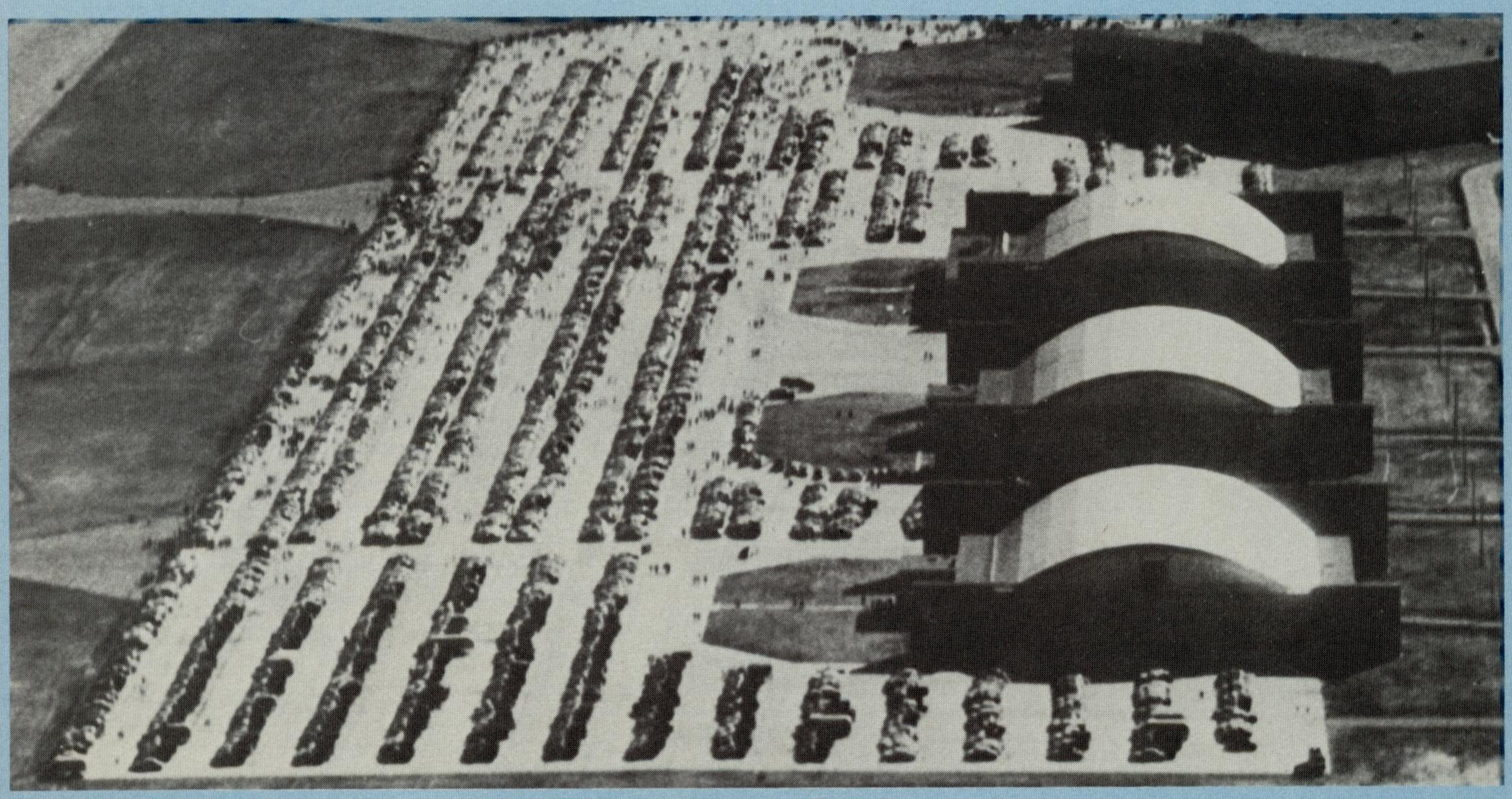
The records for Cold Lake, taken over the 25 year period provide a useful picture:

Mean January Temperature	-19°C (-2.2°F)
Mean July Temperature	17°C (62.6°F)
Mean Annual Temperature	1.2°C (34.2°F)
Highest Temperature on record	36°C (96.8°F) (July, 1964)
Lowest Temperature on record	-48°C (-54.4°F) (January, 1954)
Mean annual Precipitation	467 mm (18")
Mean annual Rainfall	330mm (13")
Mean annual Snowfall	135cm (53")
Mean date of last Spring Frost	May 26
Mean date of first Fall Frost	September 17
Mean Frost-Free Period	113 days
Mean Wind Speed	16 KM per HR (10 MPH)

FIRST AIR FORCE DAY

On June 11, 1955, RCAF Station Cold Lake held its first Air Force Day. The occasion was notable for the unexpectedly large number of people from the surrounding communities who turned out to see the station. The crowd was estimated to have been in excess of 30,000 and at one time a traffic jam stretched for 15 miles from the station gate.





Air Force Day — 11 June 1955

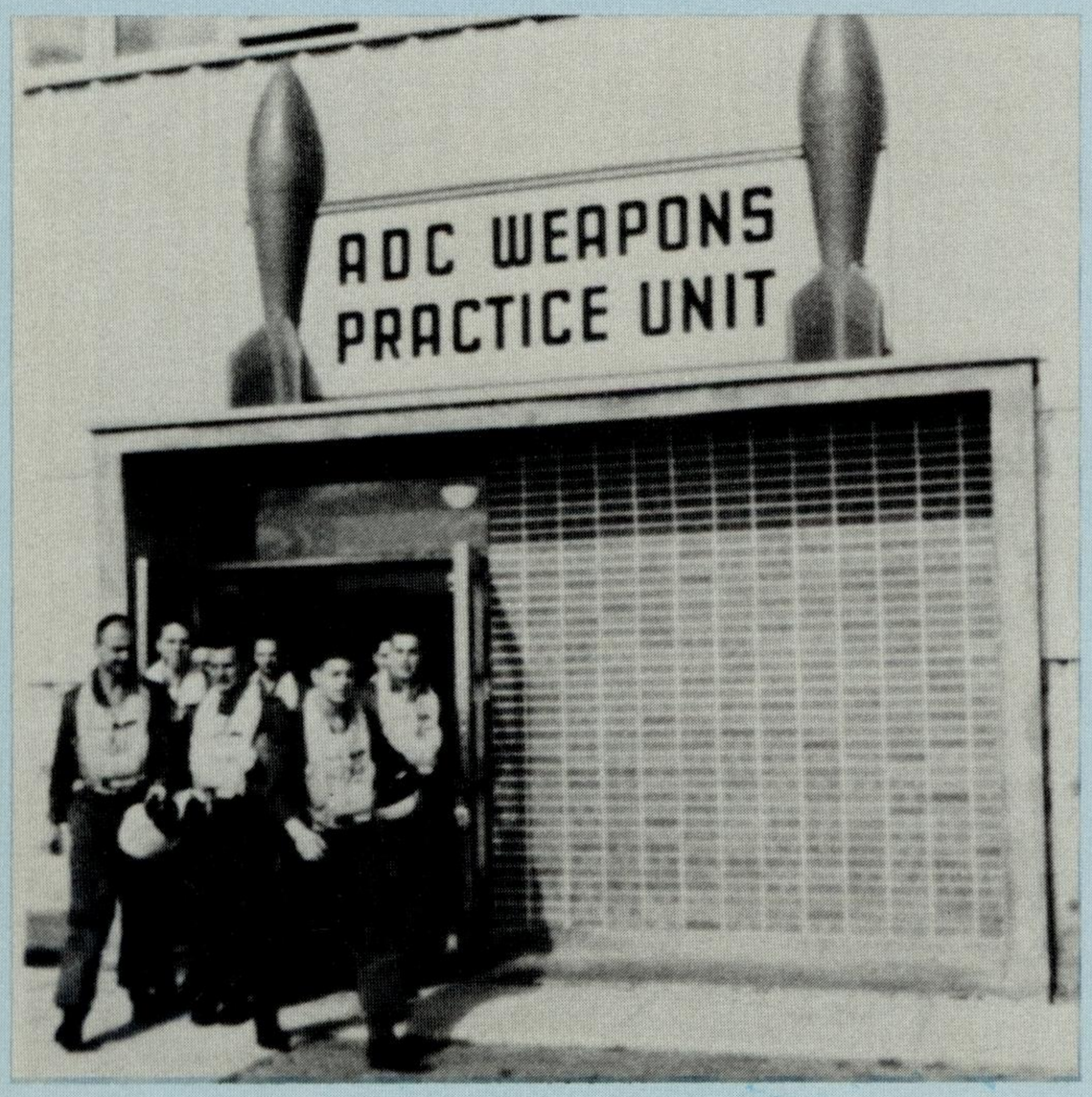
ON THE MOVE

The 13th of October 1955, marked the departure of one of the station's original flying units, when 433(AW)F Squadron, which had formed at Cold Lake and carried out intensive flight trials on the CF-100 Mk IVB aircraft, left for their new home at RCAF Station North Bay, Ontario.

An All Weather Squadron.

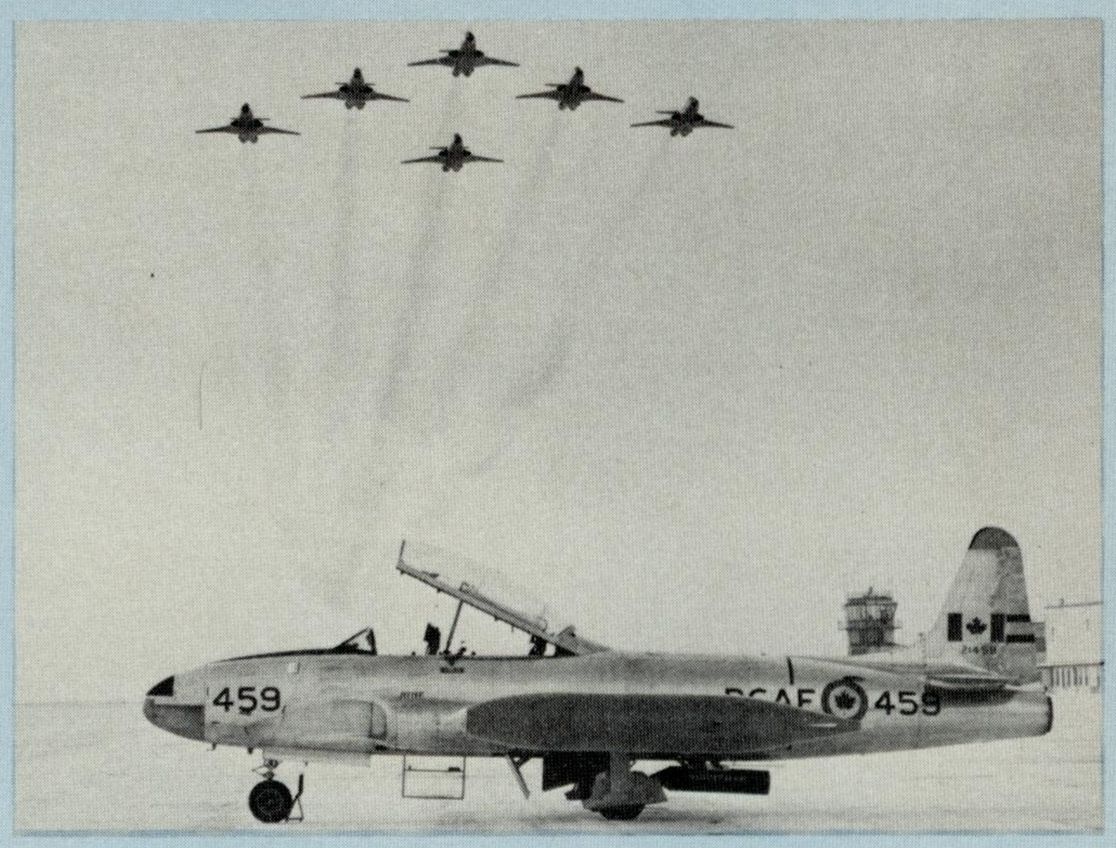
In 1956 the Air Defence Command Weapons Practice Unit and the Controller Proficiency Unit were formed at Cold Lake. These two units provided training for both ground controllers and CF-100 aircrew, and live rocket firing, at a target towed behind a T-33, was conducted. The erratic behaviour of early rockets made this a brave feat for all concerned.

These two units hosted Annual ADC Rocket Meets in 1957, 1958, 1959 and 1960. Meets in which all of Canada's CF-100 squadrons competed for top honours.



WPU Flight Line.

In the spring of 1961, with the planned replacement of the CF-100 by the CF-101 Voodoo, the WPU and the CPU were disbanded. Later that summer, 3(AW)OTU was moved to RCAF Station Bagotville, où il reste encore, mais il s'appel maintenant 410 All Weather Operational Training Squadron.



3 (AW)OTU CF-101s

Another aircraft, the CF-104, was also coming into inventory to replace the aging F-86 Sabre and, consistent with previous roles for RCAF Station Cold Lake, in the fall of 1961, 6 Strike/Reconnaissance Operational Training Unit (6 ST/R OTU) was formed at Cold Lake. This unit trained aircrew for the RCAF CF-104 squadrons in Europe. At the same time, 10 Field Technical Training Unit was formed to train groundcrew on the new aircraft. Both of these units are still in existence at Cold Lake, but with 6 ST/R OTU now renamed 417 Squadron and 10 FTTU giving training on the CF-5 aircraft as well as the CF-104.

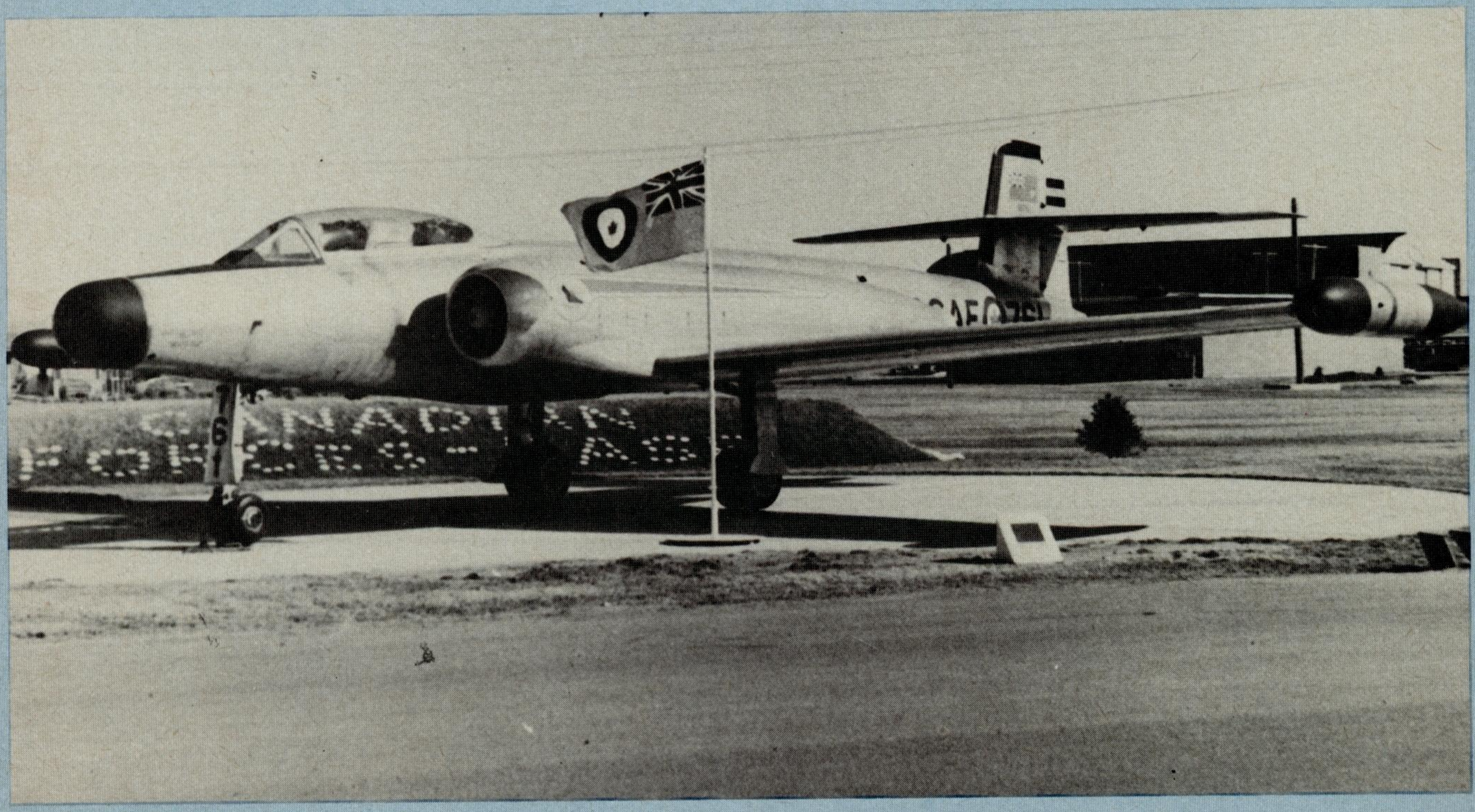
In May, 1961, construction began on a building to house a camera to be used for the tracking of satellites. The facility was located at Primrose Lake Evaluation

Retiring F-86 Sabres being replaced by the new CF-104.

Range and was at first manned by AAED personnel. By March, 1962, the project had proven its value and an independent unit, the Satellite Tracking Unit (SATTU), was formed. This unit is still in existence at CFB Cold Lake.

In the spring of 1968, 434 Squadron was reformed and based at Cold Lake. This unit became the first CF-5 squadron and in addition to its operational role it is tasked with the training of pilots for the other CF-5 squadron.

Although the CF-100 had departed from Base Cold Lake, its part in the formation of the Base was given tangible recognition with the installation, in 1968, of CF-100 serial number 761, complete with the 3(AW)OTU crest, on a concrete pad across the road from Base Headquarters.



CF-100 #761 on display.

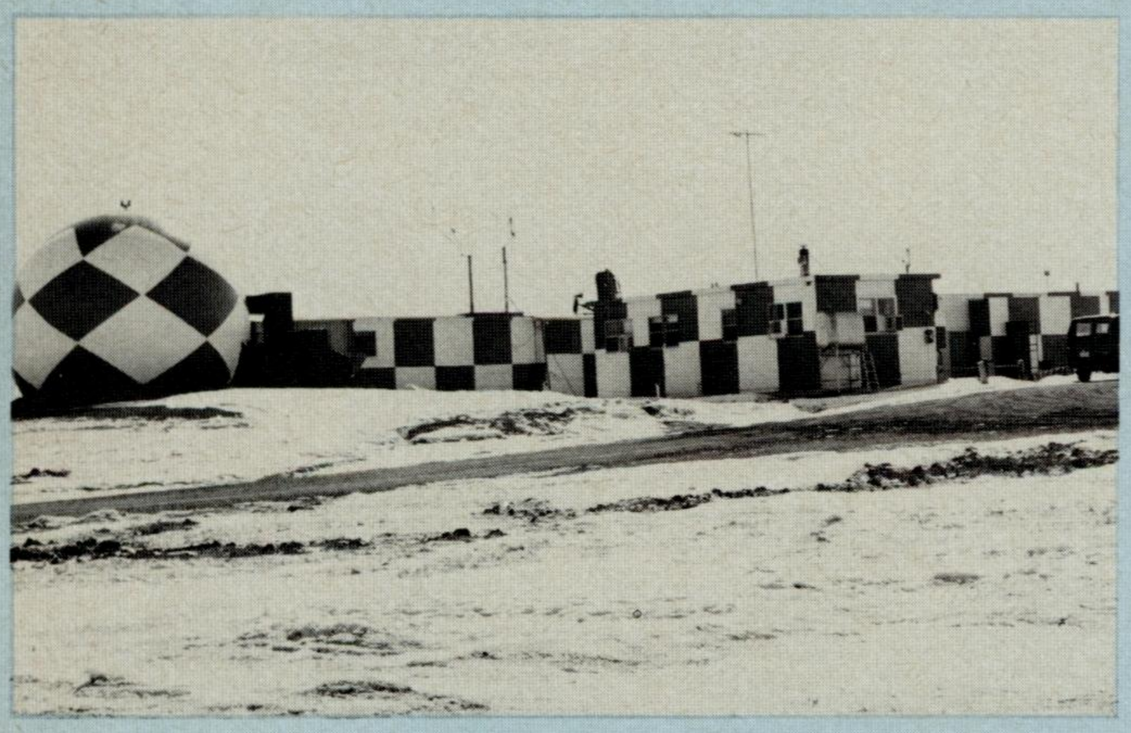
AIR TRAFFIC CONTROL

First Permanent Control Tower.

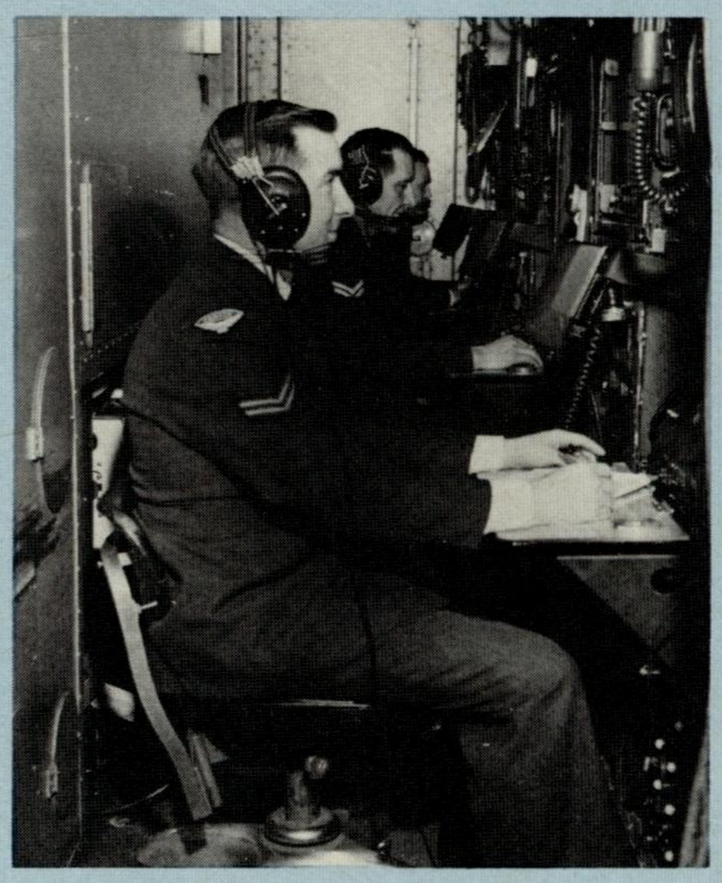
On any flying base the control of all aircraft, both on the ground and in the air, is the responsibility of the Air Traffic Control Section. When RCAF Station Cold Lake started flying operations in 1954, air traffic control was exercised from a temporary Control Tower. However, by 1955, a permanent Control Tower and a Ground Controlled Approach (GCA) Radar unit were in operation.

In 1963, the present Radar Terminal Control (RATCON) unit was built to replace the old GCA unit and this arrangement existed until 1975 when a new Control Tower was erected on top of #1 Hangar. This tower incorporates many improvements in both equipment and working conditions.

Future plans call for the completion of a new Instrument Flight Rules (IFR) Control Centre by the summer of 1980. The complex will include the latest in computerized radar and communications systems as well as vastly improved working conditions.



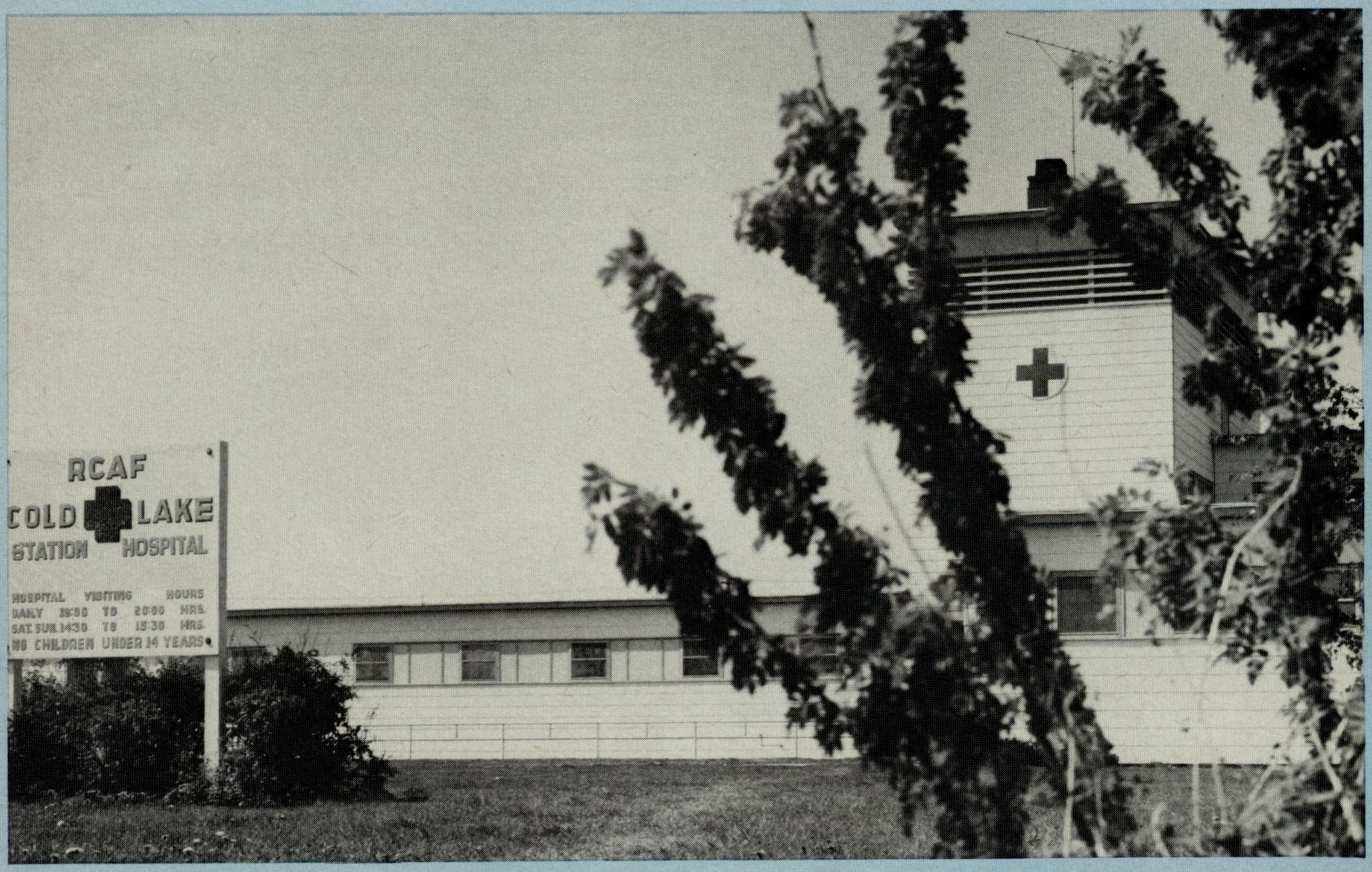
RATCON



GCA Controller.

Present Control Tower. IFR Control Centre under construction.

CANADIAN FORCES HOSPITAL



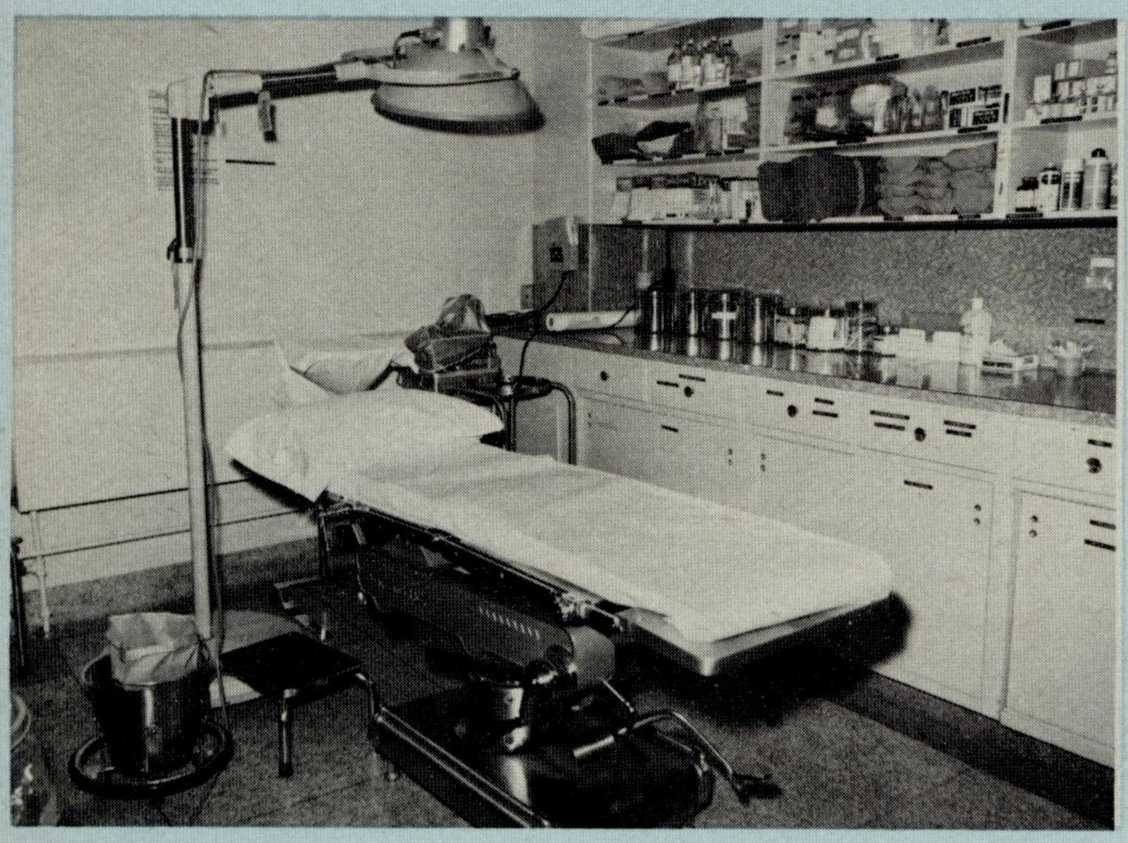
CFB Cold Lake supports a population equal to that of a sizeable town. This population of servicemen and their dependants would place an insupportable burden on the medical resources of an semi-isolated rural area unless some special provisions were made for delivery of medical care. This need has been met by establishing our own hospital, Canadian Forces Hospital Cold Lake, as a unit at this Base.

The hospital was opened early in 1954, as RCAF Station Hospital Cold Lake, in time for the arrival of the first servicemen and their dependants. It was the largest RCAF Medical Facility west of Ottawa and was one of the few RCAF hospitals to provide dependant medical care. Since the opening in 1954, this facility has provided constant definitive medical and surgical care to servicemen, dependants and other entitled civilians as well as providing emergency back-up medical facilities to the surrounding civilian communities.

The unit was entirely staffed by RCAF Medical Service personnel until the amalgamation of the medical services of the RCN, the Canadian Army and the RCAF early in 1959. Following this event the unit was designated Canadian Forces Hospital Cold Lake and has since been staffed by members of the former three services and Canadian Forces personnel.

Originally built as a 50 bed facility with an emergency potential of accommodating 65 beds this capability has seen no significant change. The original physical structure of the building and services provided remained relatively unchanged until 1971. In keeping with change in civilian health care delivery, with emphasis on outpatient care and health education, the hospital expanded their outpatient facilities and services with the addition of the outpatient wing. The wing was officially opened in July, 1971. New and modern services housed here included doctors offices, treatment rooms, physiotherapy, pharmacy, medical records, admission and discharge, public health, preventative medicine, opthalmology, reception and administrative areas.

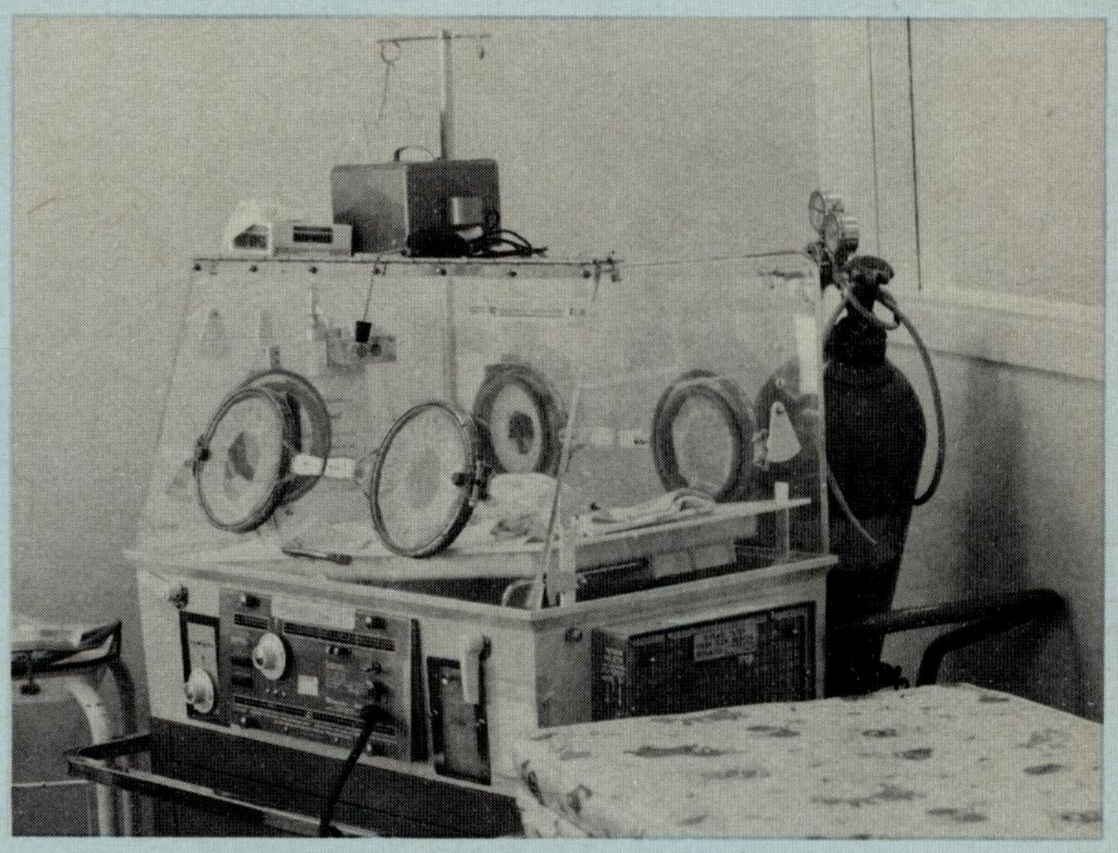
With the gradual increase in the Base population and the need for more specialists' services and modern diagnostic and treatment equipment, the hospital again underwent a period of new construction and extensive renovations in 1977. At this time an obstetrical suite was added and renovations were carried out in the ward areas, nursery and operating theatres. The facilities in the laboratory and X-ray departments were enlarged and renovated and emergency crash wards were added. In



conjunction with this, a major re-equipment program was launched to provide the facility with the most modern diagnostic and treatment equipment. In 1979, we saw our last change with the addition of the ATCO trailer to house the expanded administrative services.

The hospital staff includes 11 physicians of whom 6 are certified specialists in surgery, internal medicine, obstetrics/gynecology, psychiatry, anaesthesiology and radiology. The remaining 5 physicians are family practitioners. There are 20 registered nurses on staff with specialty training in the areas of public health, operating room, intensive care, cardiac, psychiatric, pediatrics, obstetrics, education, nursing administration, and flight nursing. The nursing staff also includes 27 medical assistants.

Since the opening of the hospital in 1954 there have been over 447,000 outpatient visits, 21,000 admissions to hospital, 14,000 operations performed, 3,000 births, and 1,000 air evacuations, all carried out by Canadian Forces Medical Service personnel in support of personnel of this Base and surrounding communities. For the past 25 years the hosptial has been staffed and maintained operational 24 hours a day, 365 days a year, by a competent and professional staff providing the highest possible standards of medical care.



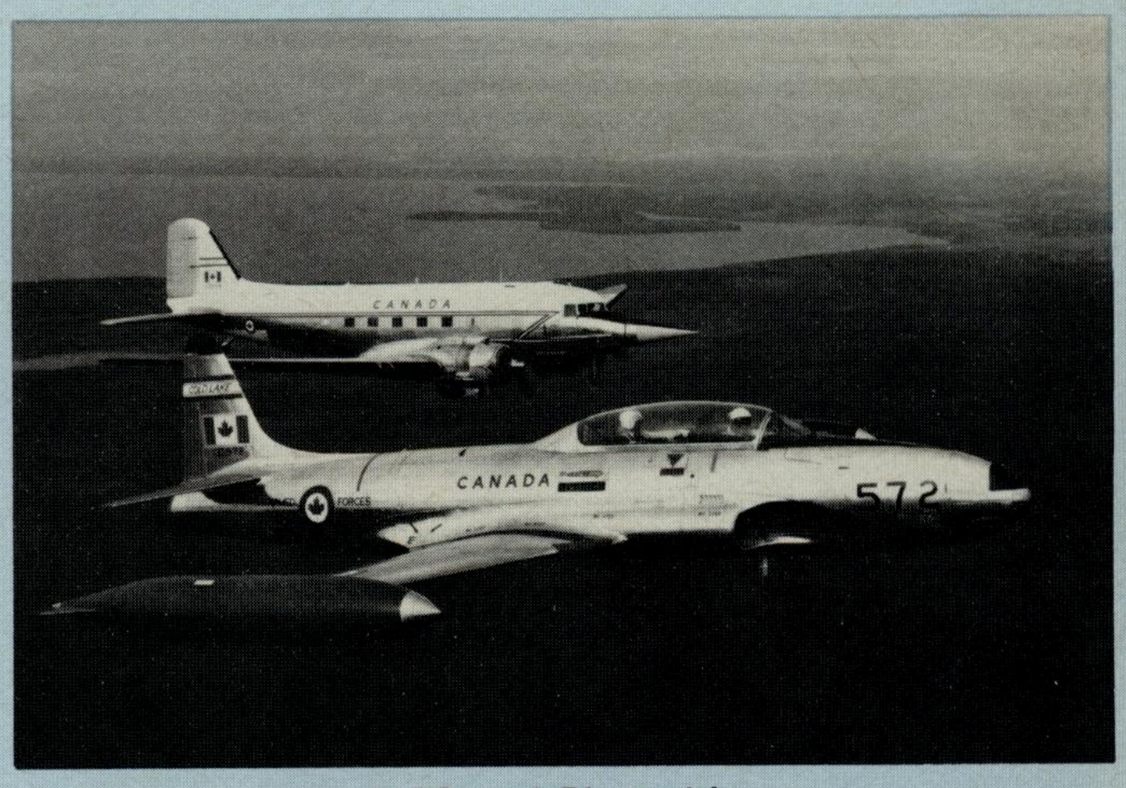
MODERN FACILITIES

BASE FLIGHT

RCAF Station Cold Lake "Station Flight" was formed on August 24, 1954 with a "fleet" of one C-45 Expeditor. In the early days, Station Flight provided a vital air link to Edmonton which, otherwise, was five hours away by car. It also provided the only access to the remote parts of the Cold Lake Air Weapons Range. To accomplish these and other tasks associated with the establishment and development of Canada's newest military airfield, the fleet soon grew to over a dozen aircraft, which included the T-33 Silver Star, C-47 Dakota, H-34 and H-5 helicopters, and De Havilland Otters.

H-5 Dragonfly

While used extensively for transport, the Dakotas, like the T-Birds, also performed a multitude of tasks; many that could only be done by the Dak. With the acquisition of the CF-104 Starfighter in 1961, Station Flight acquired three specially modified Dakotas to provide radar training for the new CF-104 pilots. These aircraft were easily identifiable by their pointed noses and were given names to reflect their uniqueness; Pinocchio, Woody Woodpecker and Dolly's Folly.

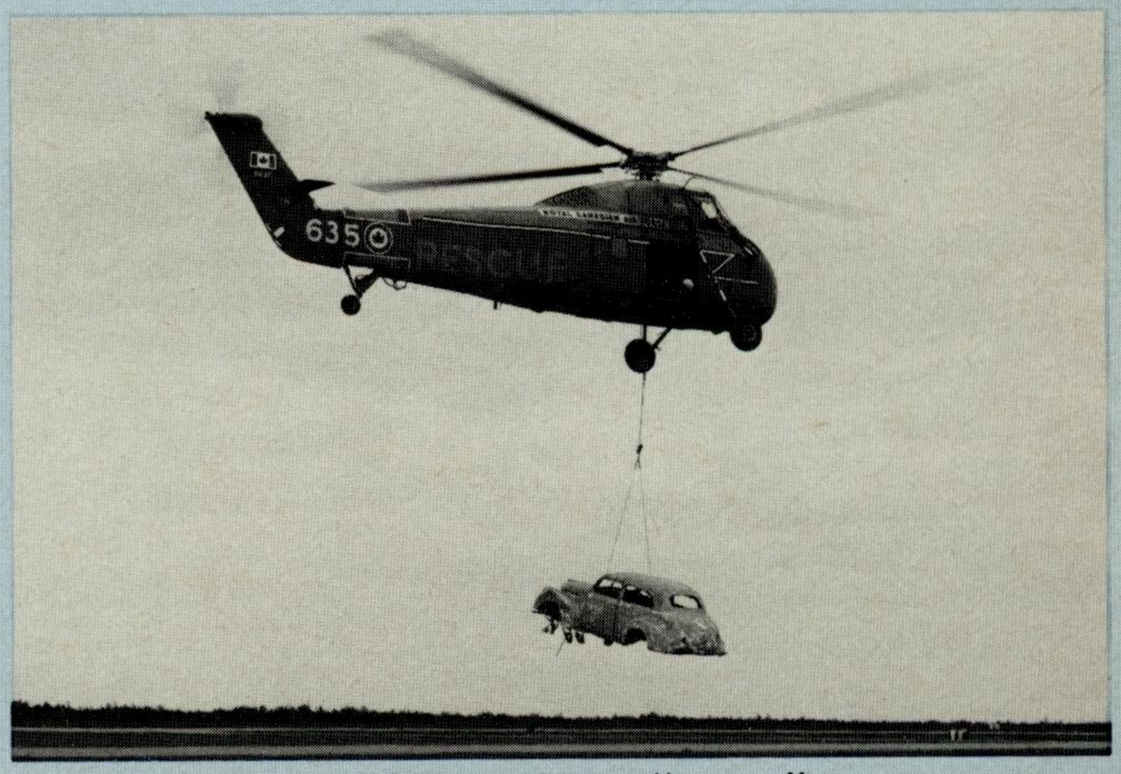


T-33 and Pinocchio

DeHavilland Otter

Station Flight also had several turbo-charged Dakotas which performed radar calibration runs for NORAD. An equally important and much appreciated task of the Dak was the bug spraying of the base, which helped control the mosquito and blackfly problem.

After the initial development of the station, Station Flight activities fell into a regular pattern. The T-33s, more commonly known as T-Birds, were used as instrument trainers, proficiency aircraft and for radar support. For the latter, the T-Birds acted as targets so radar controllers could practice their procedures and check their equipment. Aside from these tasks, the T-Bird was used as a do-anything, go-anywhere aircraft.



H-34 carrying a "target"

The H-34 helicopter provided a wide variety of services, mainly those that could not be done by fixed wing aircraft. The H-34s were instrumental in the development of the various targets in the weapons range and for the support of Canoe Lake, a target manned throughout most of the year. Perhaps the most important task of the H-34s was to provide an emergency rescue in the event of an aircraft crash.

With unification, only the name changed and Station Flight became Base Flight. Today, Base Flight has essentially the same role as Station Flight had. It still has one Dakota, "Pinocchio", which is used for general transport and radar training for CF-104 pilots. The T-Birds are used mostly for NORAD and base support and, instead of H-34s, it has twin Huey helicopters for range work.

Base Flight, like its predecessor, lacks the glamour of the jet fighter squadron, but it still continues to provide the quiet, behind-the-scenes support required to operate a large air base.

Twin Huey

A.R.A.F.

The Air Reserve Augmentation Flight (ARAF) developed as a result of a requirement indicated by Regular Force Base Commanders for some form of part-time augmentation. It is designed to provide the Base Commander with whatever aid he may need in the form of direct Reserve support to operations or support services on an "as required" basis.

The CFB Cold Lake Air Reserve was formed in April 1978 with Major John Callahan selected as Flight Commander. To aid Major Callahan, an Administration Officer and Chief Administration Clerk were also appointed.

Reserve personnel are divided into three classes; Class A, B and C. Class A reservists are normally called out for part of a day, a full day, or several days at a time, depending on the Base's requirement and the time that the reservist can make available. A maximum of 4 full days per week can be worked by Class A. Class B reservists are called out for continuous service for up to 330 consecutive days per year. Both Class A and B reservists are paid from the ARAF budget.

Class C consists mainly of ex-service personnel who join the ARAF and work with the Regular Force on a continuous basis and in a Regular Force position.

At CFB Cold Lake the ARAF consists of 31 reservists, 22 of these are women. It is hoped that in the near future, the ARAF will be able to bring its manpower up to 50 personnel, the maximum authorized for Cold Lake.

Not all those who join the ARAF are qualified in the trades in which they are employed, but these people receive excellent "on the job" training from members of the Regular Force. Jobs or trades in which ARAF members at CFB Cold Lake can be found are as follows: Photo Technician, Supply Technician, Administration Clerk, Pilot, Safety Systems Technician, Musician, Firefighter, Military Police, Metal Technician, Medical Assistant, Air Frame Technician, Weapons Technician, Finance Clerk, Dental Assistant and Nurse.

In order for members of the ARAF to be upgraded; to take service courses; or to qualify for a trade; classification General Military Training must be undertaken. For most personnel this is an experience in itself, but one that is enjoyed by all. The training is conducted on Base with the aid of Regular Force and Reserve personnel. The areas of instruction include drill, security, emergency first aid, nuclear defence, small arms (FNC 1), and customs and rank structure.

Although having been in operation for only a year, under the expert guidance of Major John Callahan, the Air Reserve Augmentation Flight has already achieved success.

1954–1979

Since its inception in 1954, RCAF Station Cold Lake/CFB Cold Lake has performed the tasks for which it was designed. In 1954, there was an operational squadron, a training squadron, a radar squadron and an armament evaluation detachment. Today there are two operational/training squadrons, a training squadron, a radar squadron and an aircraft/armament evaluation establishment.

It is logical to assume that CFB Cold Lake will play a key role in the introduction of the New Fighter Aircraft, being bought to replace the CF-104 and CF-101 aircraft. Because of the facilities already available, CFB Cold Lake is admirably suited as a base for the training of aircrew and groundcrew for operations with this new aircraft.

CFB Cold Lake, designed for training and weapons evaluation, is fulfilling the functions for which it was created and will continue to perform an essential role in future Canadian Forces activities.

VIGIL BOREALIS

STATION BASE COMMANDERS

W/C J.H. Watts
April '54 — July '54

G/C R.C. Stovel
August '54 — June '58

G/C C.G. Ruttan
July '58 — Oct. '61

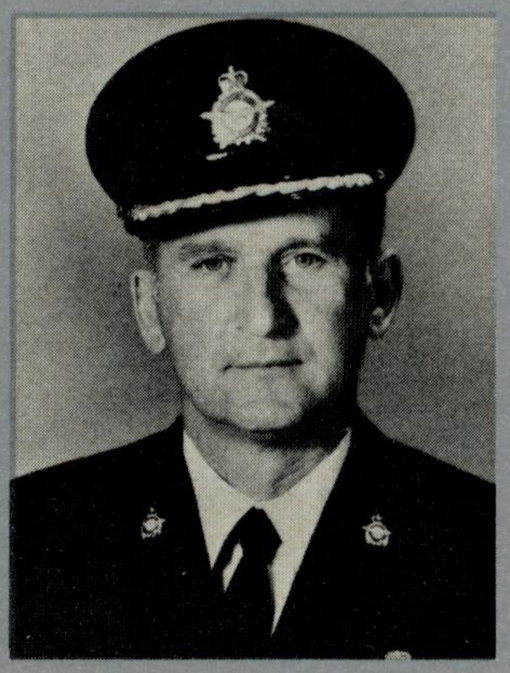
G/C C.H. Mussells
Nov. '61 — Feb. '62

G/C D.L.S. MacWilliam
March '62 — Jan. '65

G/C W.J. Buzza
Feb. '65 — July ' 67

G/C W.H. Vincent
July '67 — May ' 71

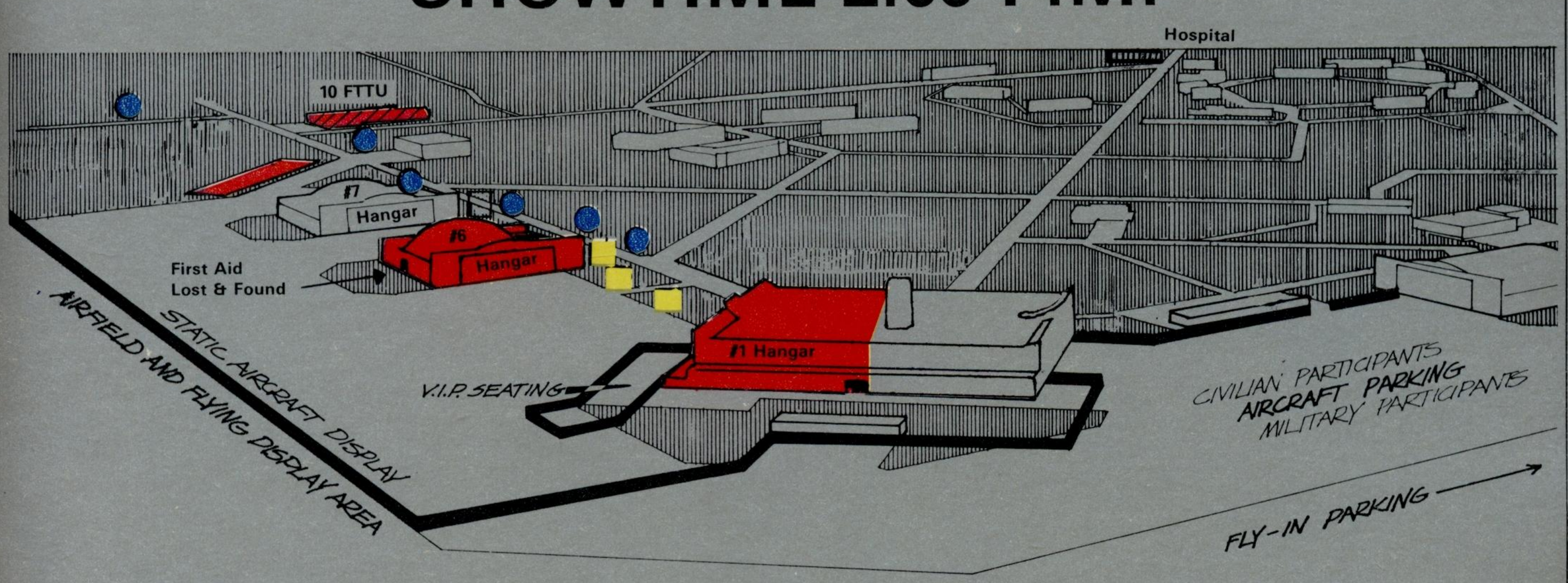
Col. J.F. Dunlop
May '71 — March '74



Col. S.P. Gulyas
April '74 — July ' 77

CFB COLD LAKE
SILVER JUBILEE
AIRSHOW

SATURDAY 16th JUNE 1979
GATES OPEN 9:00 A.M.
SHOWTIME 2:00 P.M.



Legend

- SECURITY FENCE
- GROUND DISPLAYS
- CONCESSIONS
- PUBLIC CONVENIENCES

Radio Broadcast by CHCL, 1450
continuously during the display
from #6 Hangar

CIVILIAN PARTICIPANTS

- Al Pietsch flying his Starduster Too
- Al Seitz flying his Pitts Special
- Russ Jantzen flying his Fleet Finch
- World War I re-visited with:
  - — Russ Jantzen flying his Fleet Finch
  - — Edward Bell flying his Fokker Triplane
- The Western Warbirds flying a Mustang and Harvards

CANADIAN FORCES FORMATION FLYPASTS

- CF-101 Voodoos
- CF-104 Starfighters
- CF-5 Freedom Fighters

CANADIAN FORCES FLYING DEMONSTRATIONS

- CF-5 Air-to-Air Refuelling
- CC-130 Hercules — Low Altitude Parachute Extraction System (LAPES)
  - — Jet Assisted Take Off (JATO)
- CC-138 Twin Otter — Short Take Off and Landing (STOL)
- CH-135 Iroquois — Lift and Water Drop
- CF-5 Weapons Delivery

PLUS:
Flypasts and Demonstrations by aircraft from the:
- United States Air Force
- United States Navy
- Royal Air Force.

After the show, visit the Bonnyville Trade & Commerce Fair.
Open until 9:00 pm in the Agriplex Wagner Shows (Midway) in attendance

SNOWBIRDS

The Snowbirds are charged with the task of performing a formation aerobatic display to demonstrate to the public, the skills and proficiency of the Canadian Armed Forces. Many long and dedicated hours of practice were required for the polished performance, but all team members demonstrate the basic skills which have become the hallmark of the Canadian Armed Forces. Whether representing sea, land or air elements, all exhibit the same high degree of professionalism and expertise that the Snowbirds seek to exemplify.

The team was formed in 1971 at Canadian Forces Base Moosejaw, Saskatchewan and in the fall of 1977, it was established as a permanent unit of the Canadian Armed Forces. The Snowbirds continue the tradition of aerial perfection established by such eminent predecessors as the "Golden Hawks" and the "Golden Centennaires". Except for the paint scheme, the Snowbirds fly the same aircraft, the Tutor, that all Canadian Forces trainee pilots fly.

DRAGONFLIES

The Dragon flies are an aerial display team consisting of four Kiowa helicopters flown by instructor-pilots employed at Canadian Forces Base Portage La Prairie, Manitoba.

The display team (using the call-sign "Dragonflies") demonstrates the great manoeuvrability of the Kiowa plus the skill and professionalism of CAF helicopter pilots, through a series of formation, solo and synchronized sequences.

The Kiowa is used to train all Canadian Forces helicopter pilots and some NATO Forces pilots as well. In addition to pilot-training, the aircraft is employed in aerial reconnaissance, aerial observation and direction of fire or tactical air support. It may also be used for command and liaison and observer training.

SKYHAWKS

Parachuting has come a long way in Canada since the first planned parachute descent was made over 50 years ago. Today, among the finest parachutists in Canada are members of the Canadian Forces parachute team, the Sky Hawks.

Each man on the team is an expert parachutist with 300 to 1,000 jumps to his credit. He can manoeuvre his body through the air under absolute control, performing aerobatics and formation flying as he falls.

Normal jump altitude is 10,000 feet above ground level, almost two miles high! To assist the spectators in following the descent of the Sky Hawks, jumpers trail smoke from canisters attached to their boots. Using an altimeter and stop-watch, the parachutist will freefall for up to 45 seconds before activating his manoeuverable canopy, at a height of 2,200 feet. With this steerable parachute the jumper then controls his descent for a pin-point landing.

GROUND EVENTS

- Radio Control Aircraft—on the airfield in front of the static displays—12 o'clock
- Gymnastics Display—inside #1 Hangar—continuous
- Square Dancing—inside #1 Hangar
- Karate—inside #1 Hangar
- Parachute Packing Demonstration (by members of the Skyhawks Parachute Team)—inside #6 Hangar
- CFB Cold Lake Brass and Reed Band—inside #1 Hangar

GROUND DISPLAYS

#1 Hangar, #6 Hangar, and 10 FTTU

- Edmonton Radio Control Society
- Transport Canada
- Alberta Government—Fire Prevention Display
- Canadian Forces Recruiting Unit
- Units of CFB Cold Lake
- McDonnell Douglas Canada Limited
- Litton Systems of Canada Limited
- Alberta Aviation Council
- Western Warbirds
- International Plastic Modelers Society

ACKNOWLEDGMENTS

CFB Cold Lake's Silver Jubilee was the product of tremendous co-operation and effort by numerous organizations and individuals. To list all of those who deserve our appreciation and thanks would be an impossible task, and to those who may be omitted, our sincere apologies.

Our most grateful thanks:

To the citizens of Cold Lake, Grand Centre, and Bonnyville for their encouragement and co-operation.

To our exhibitors, civilian and military performers, and flying guests for their contribution to the air display.

To the media who have demonstrated outstanding professionalism in promoting the Jubilee.

Last, but certainly not least, a special thanks to the personnel of CFB Cold Lake for their dedication and hard work in performing the innumerable tasks which were involved in hosting the Silver Jubilee.

Per Adrua Ad Astra

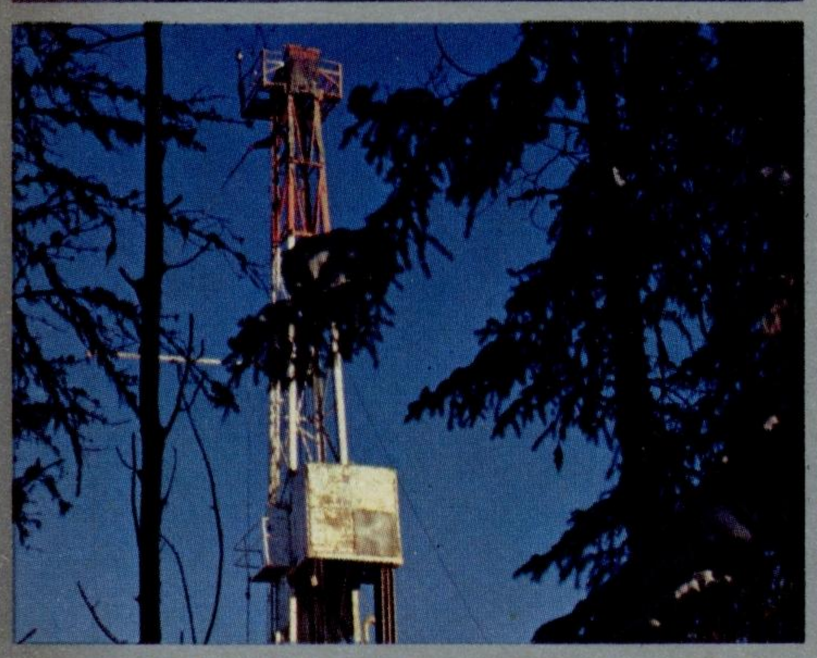
Major L. Campbell
and the Silver Jubilee Committee

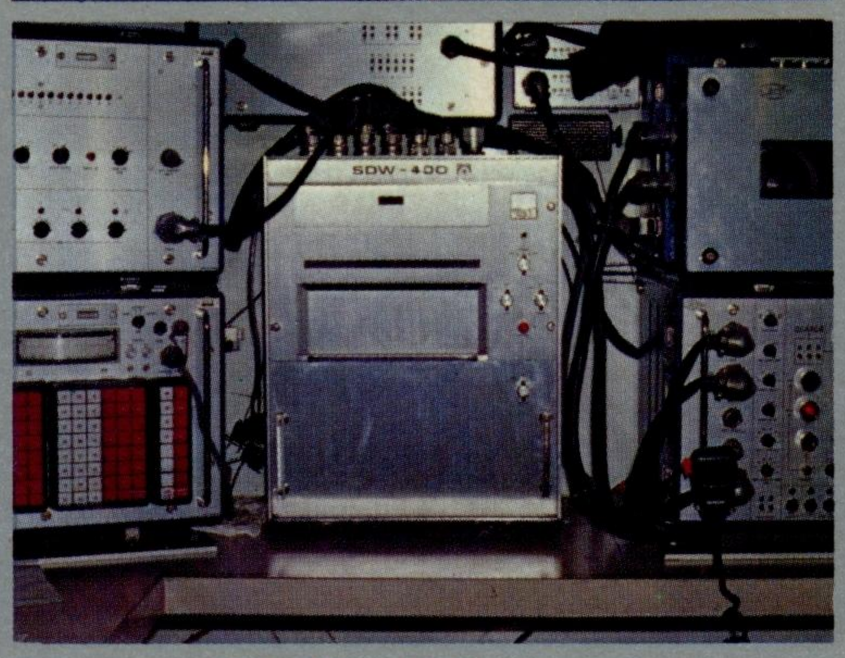
Congratulations

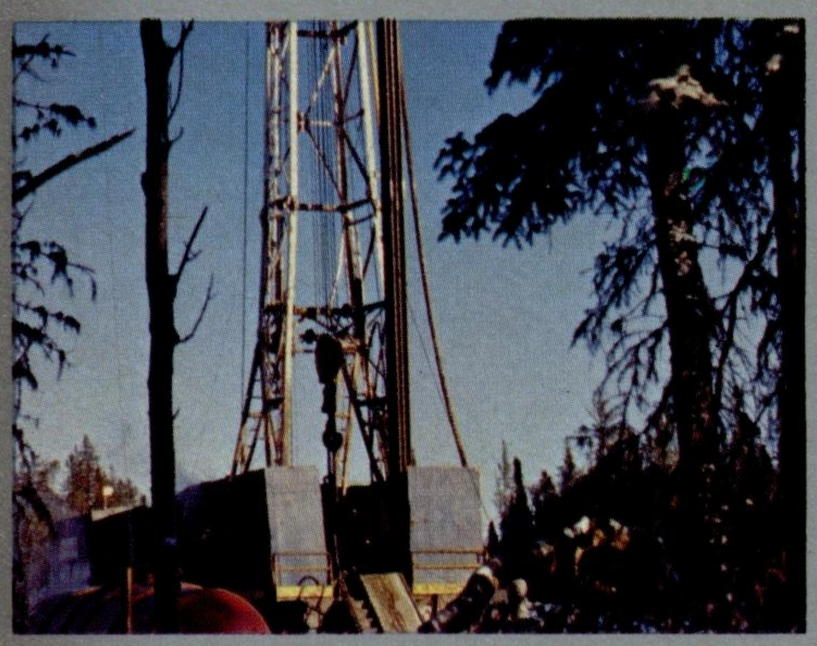
ON YOUR SILVER JUBILEE AND

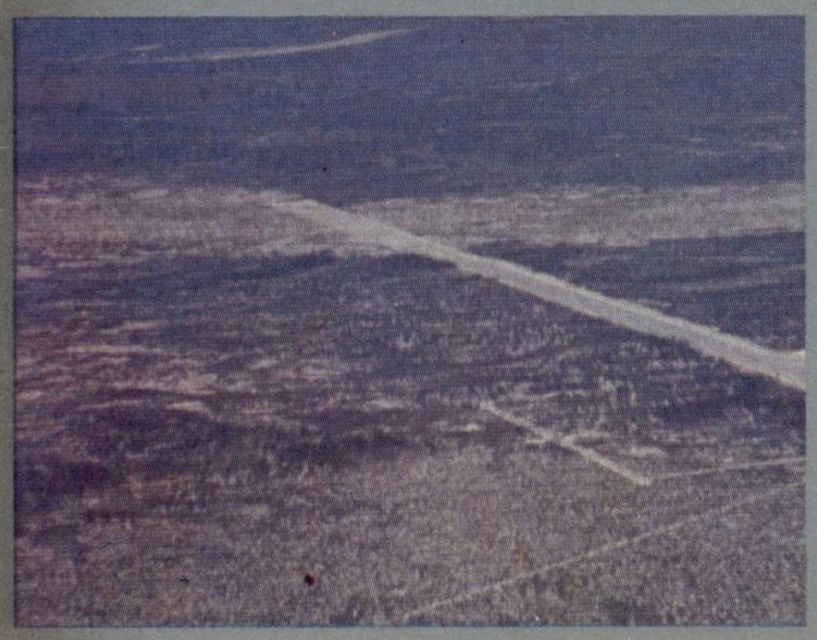
Best Wishes

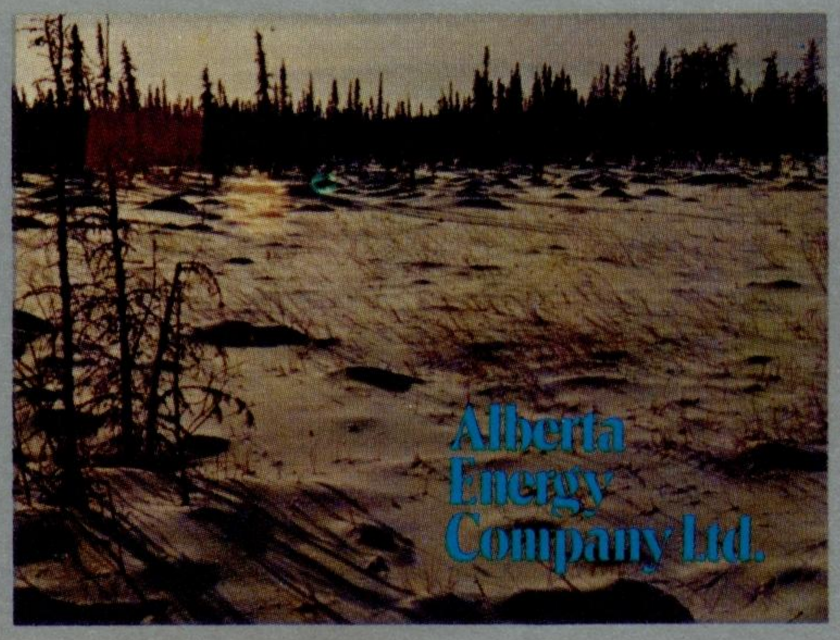
FOR THE NEXT TWENTY-FIVE!





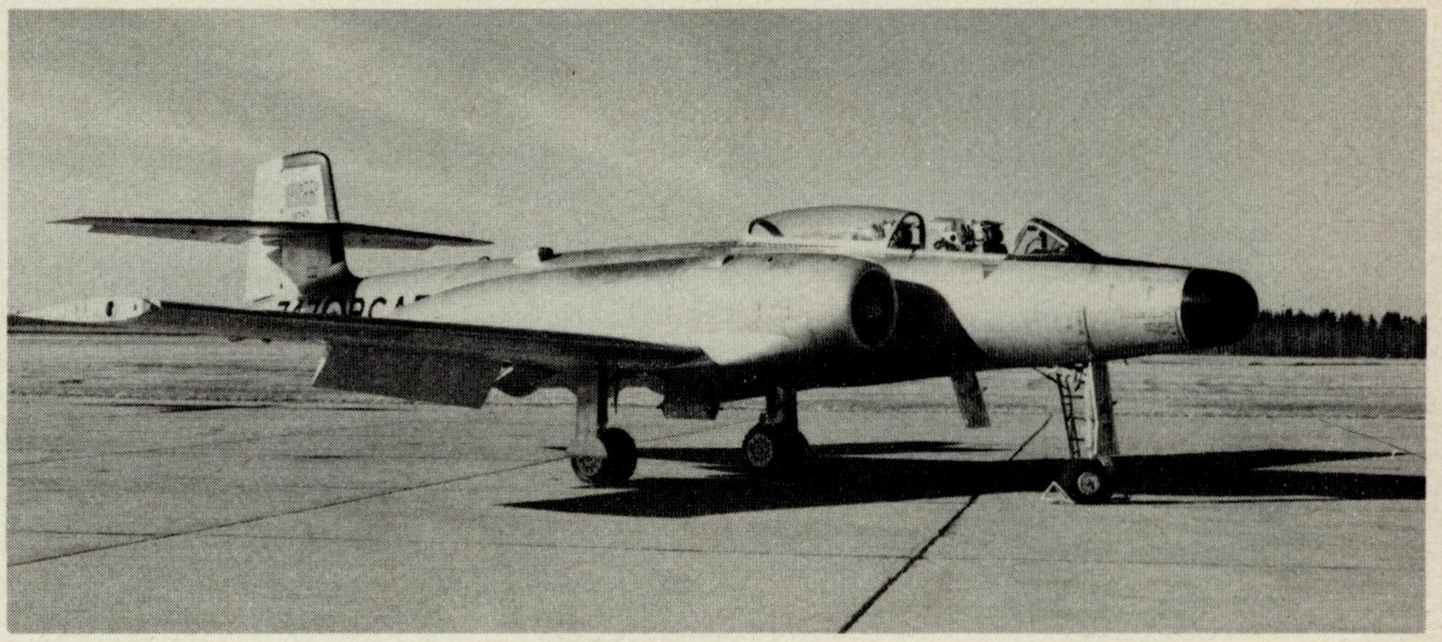






A.E.T.E

EXPERTO CREDE — Believe One Who Knows From Experience



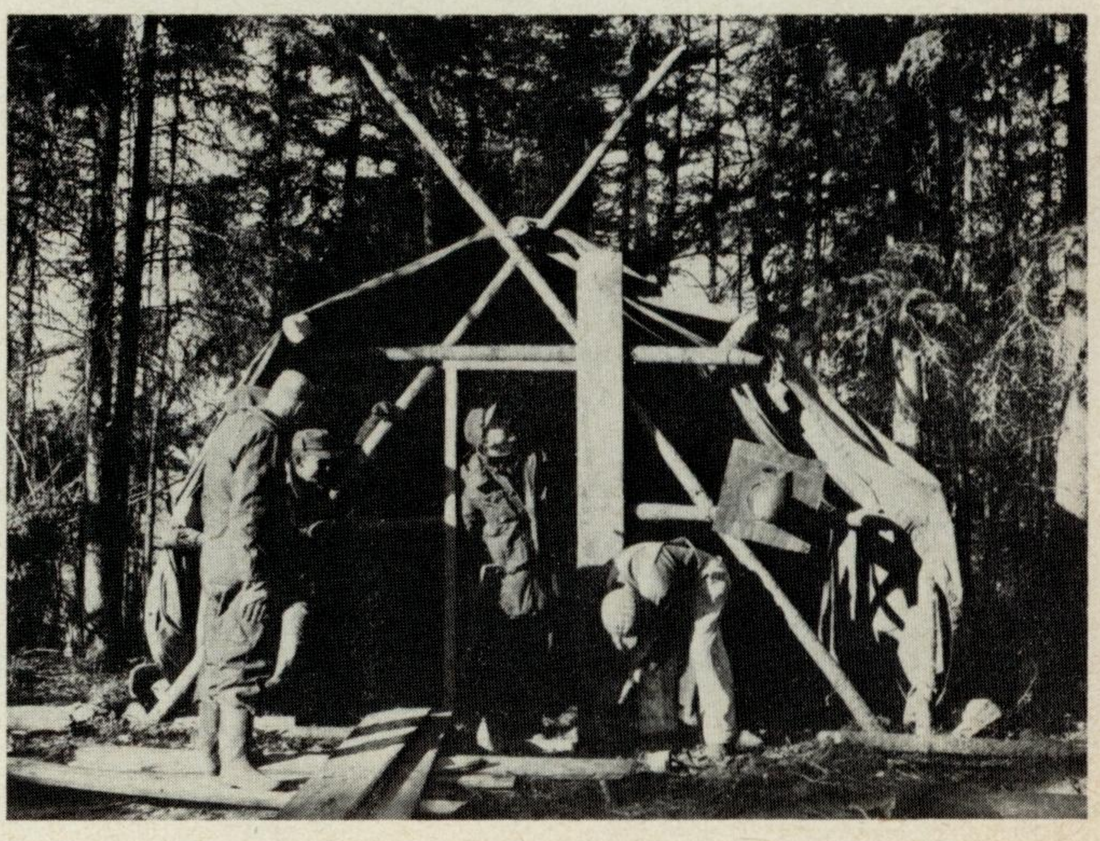
AAED's first evaluation, the CF-100.

In these days of rapidly advancing technology, the nation's Armed Forces wage a continuous war against obsolescence. From the moment a new aerospace system — be it a complex advanced fighter, bomber aircraft or a simple pyrotechnic marker — leaves the design board, advances are already in progress that will make it obsolete. Nevertheless, the new equipment must be fitted into the prevailing defence environment, and must be continuously improved and modified as this environment changes to stave off that inevitable time when it can no longer perform any useful purpose. Acceptance of new equipment into the Armed Forces inventory and the continuous updating that follows its introduction must be accomplished by specialized test agencies properly equipped to undertake this sort of work. For aircraft and associated equipment used by the Canadian Armed Forces, the test agency is the Aerospace Engineering Test Establishment (AETE).

A decision to centralize control of several test agencies formed during and after World War II resulted, on September 1, 1951, in the amalgamation of the Experimental and Proving Establishment at Rockliffe, the Winter Experimental Establishment at Namao, and the RCAF National Research Council unit at Arnprior, to form the Central Experimental and Proving Establishment (CEPE), with headquarters at Rockliffe. In addition to the two original detachments at Namao and Arnprior, three more detachments were formed in the next few years. One of these was the Air Armament Evaluation Detachment (AAED), which formed at Cold Lake in 1954.

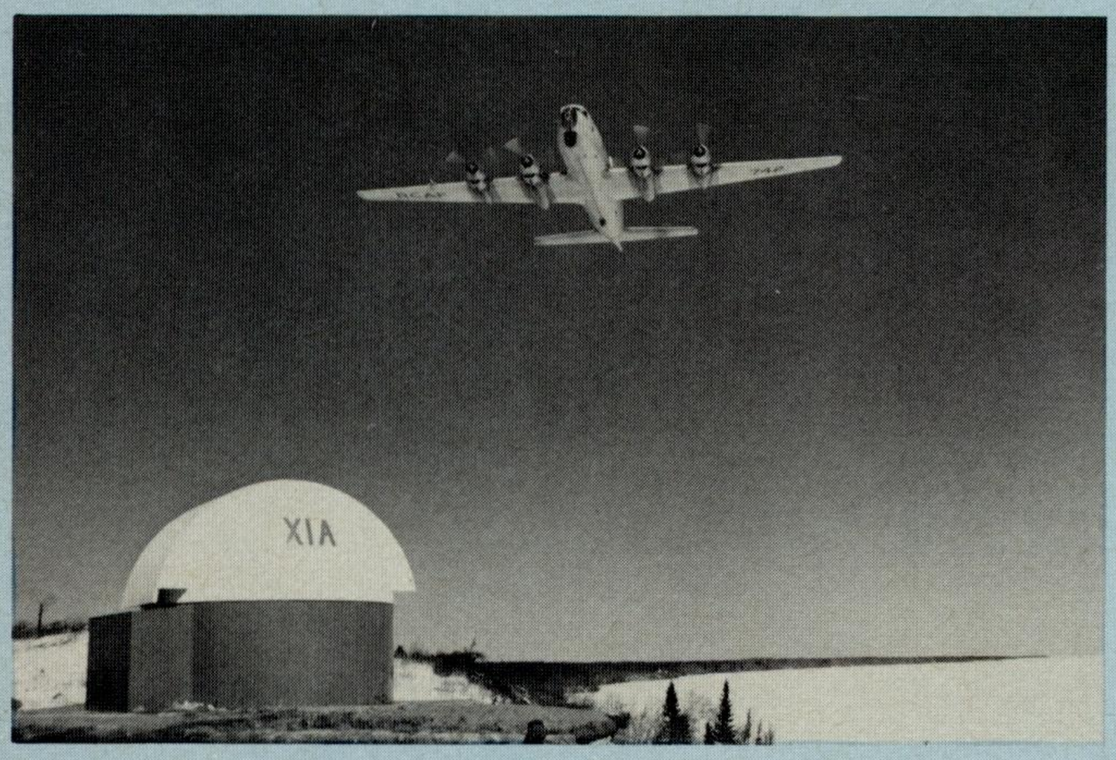
On April 24, 1954, an RCAF team, accompanied by some engineers from Avro Aircraft Ltd., came to the newly constructed airfield at Cold Lake to establish facilities for evaluating the CF-100 Mk IV Canuck all weather interceptor. This aircraft was equipped to perform what was at that time the advanced tactic of radar controlled lead collision interception, using air-to-air rockets, and its evaluation required the establishment of a new test environment of great complexity. Out of this requirement was born Primrose Lake Evaluation Range, usually known as PLER. This range, built around a panhandle shaped bay on Primrose Lake near the southern boundary of the Cold Lake Air Weapons Range, and consisting of a group of photo-optical measuring devices, radar installations, and trials control facilities was, and still is, unique in Canada. A test environment was created that was matched in very few places in the Western world. Past and present programs for updating its complex equipment have served to ensure that it will remain in the forefront as an aerospace equipment test centre. This is illustrated by the fact that, from time to time, test teams from the United States and as far afield as the United Kingdom and Germany make use of the test facilities at PLER. These range facilities, which were still under construction at the time, and facilities on base at Cold Lake, became the Air Armament Evalutation Detachment on July 1, 1954.

The first major assignment of the detachment was, as previously stated, the evaluation of the CF-100 interceptor aircraft. Other early projects included the testing of various drones and targets. Two significant



Early construction at Primrose Lake.

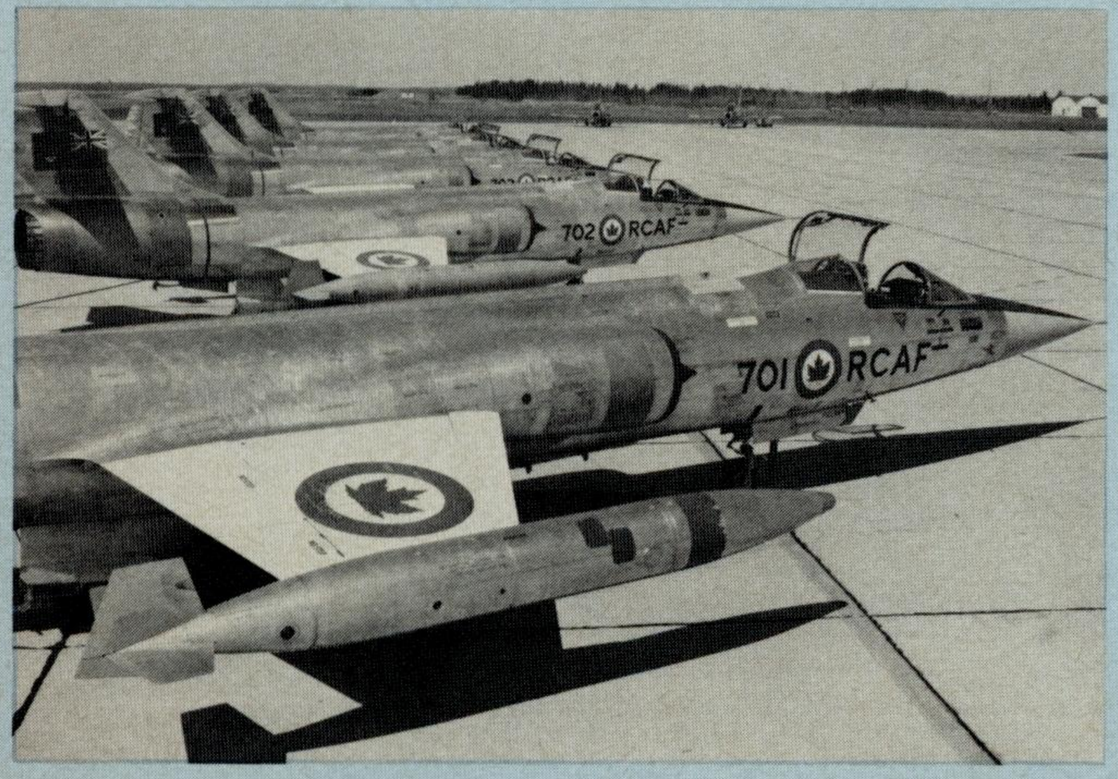
events occurred in 1957. One was the move of CEPE Headquarters from Rockliffe to Uplands. The other was the completion of an all-weather gravel road to PLER. Prior to this time, the only means of access to PLER was by float-plane in summer and by ski-plane during the winter. Two other additions to the facilities at PLER, both of which were constructed in 1958, included a ground launch site and an air-to-ground range. In 1958, the AAED took on the task of evaluating the anti-submarine warfare (ASW) weapons systems employed on the CP-107 Argus long range patrol aircraft. Argus



Argus weapons trials.

weapons testing was a major test activity which continued at AAED until 1964. Another major program for which the Air Armament Evaluation Detachment was responsible in the early '60's was the Category II testing of the newly acquired CF-104 aircraft. Cold weather testing of German and Canadian F-104 aircraft, and weapon systems testing on the Canadian aircraft were two important components of tests which took place at Cold Lake from 1962 to 1965.

Unification of the Canadian Armed Forces resulted in



CF-104 weapons trials.

H-34 support helicopter.

other organizational changes. On May 4, 1967, the Air Armament Evaluation Detachment became 448 Test Squadron, and the Central Experimental and Proving Establishment (CEPE) was renamed the Aerospace

CF-5 weapons trials.

Engineering Test Establishment (AETE). Headquarters of the organization remained at Uplands. The three AETE detachments which existed at the time were Experimental Squadron 10 at Shearwater, 129 Test and Ferry Flight at Trenton, and 448 Test Squadron at Cold Lake. 448 Test Squadron's major responsibility over the next few years, 1967-1971, was the commencement of Category II testing on the CF-5 aircraft. Important facets of this testing included cold weather testing, performance testing, and weapons systems testing. In 1970, Experimental Squadron 10 and 129 Test and Ferry Flight were amalgamated with 448 Test Squadron at Cold Lake, and the process of amalgamating all components of AETE at one location was completed in September 1971, when the AETE headquarters organization moved from Uplands to Cold Lake.

The amount of helicopter testing conducted at Cold Lake increased substantially after 1971. The bulk of this testing was the evaluation of various mission kits for the CH-135 Twin Huey and the CH-136 Kiowa helicopters. Examples of mission kits tested include floats, loudhailer and searchlight installations, the Minitat gatling gun,

Minitat gatling gun evaluation.

Sea King slung loads evaluation.

rocket pods, and 50 calibre door-mounted machine guns. Other more recent major helicopter projects have included CH-124 Sea King performance testing, and qualification of the Automatic Flight Control System (AFCS) on the CH-147 Chinook helicopter.

AETE's heavy involvement in external stores clearance work on fixed wing aircraft has continued and expanded since 1971. Conversion of the CF-104 aircraft to the conventional attack role resulted in extensive stores clearance work which has continued right up to the present time. CF-5 stores clearance programs, including investigation of external-store-induced flutter problems, and clearance of various rocket launchers for use with the CF-5, are still going on.

During the same time period, there has been a continual increase in the level of sophistication of aircraft test instrumentation, and in AETE's capability to collect test information: Information made available by aircraft mounted sensors and collected either by the use of telemetry to transmit the information to a ground data collection station, or by the use of on-board digital data recorders or cameras. At the same time, AETE's Data Processing Centre has developed the capability to accept the various types of data (film, magnetic tape) and convert it into the form most useful to members of the various test teams (tables, graphs).

Lately, one of AETE's more important and interesting tasks was the flight test program carried out by AETE test pilots and engineers to evaluate the six aircraft competing in the New Fighter Aircraft (NFA) competition. This test program was carried out in support of the NDHQ NFA Evaluation Team, and AETE's test results and recommendations assisted the NDHQ team in their decision making process. Their recommendations were presented to the federal cabinet

Northrop YF-17 at AETE.

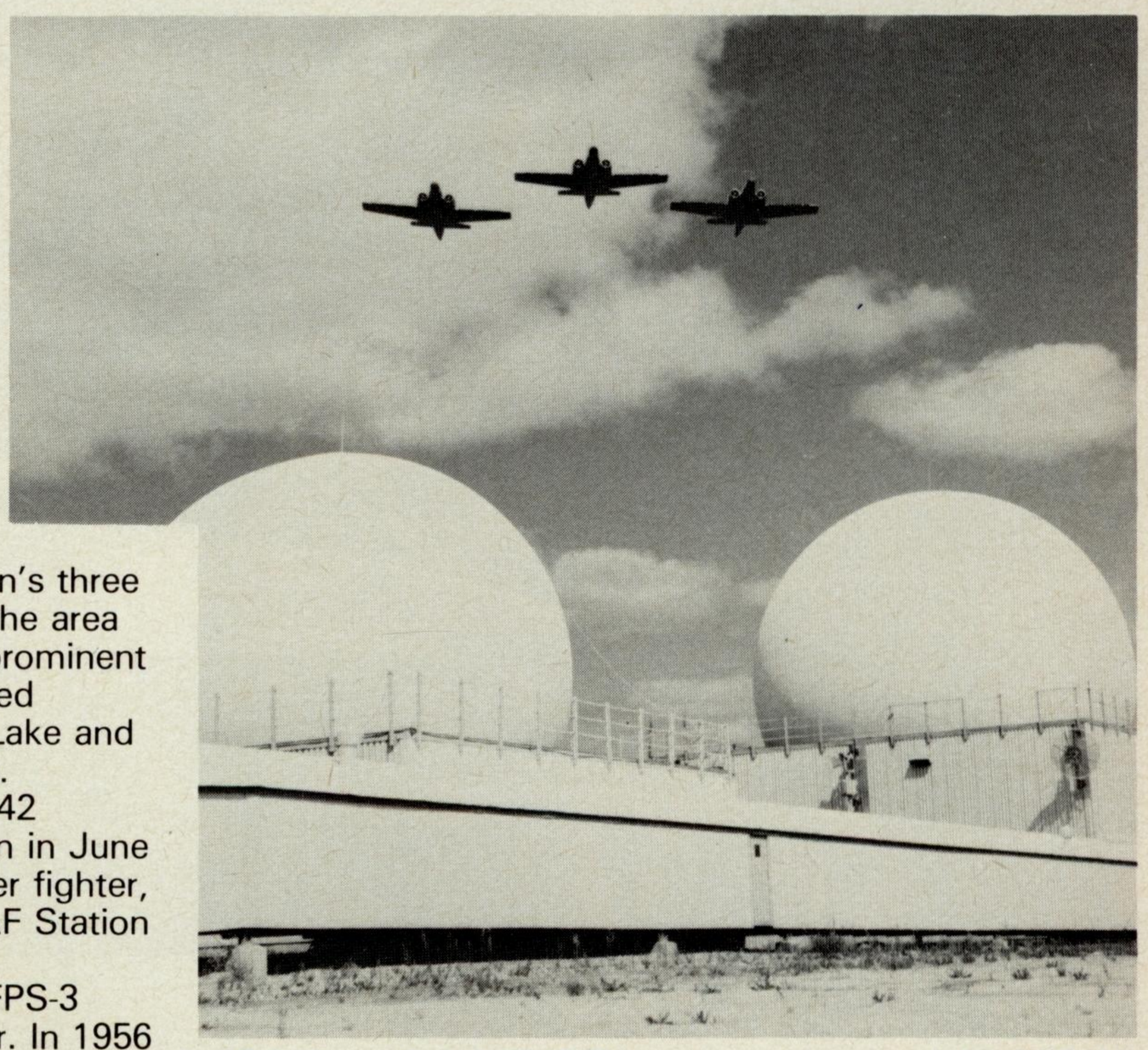
last fall, and the cabinet is now considering a "short list" composed of the two final NFA competitors, the F-16 and the F-18A. Once the final decision is made, on which aircraft is to be purchased to replace our three present front-line fighter aircraft, the CF-101, CF-104 and CF-5, AETE personnel expect to be heavily involved in testing this new aircraft.

As far as the future is concerned, AETE's tasking will fall into two general classifications. The first will consist of test programs to update and modify present Armed Forces aircraft, many of which are coming to the end of their service lives, so that they can continue to perform their roles within the Canadian Armed Forces until such time as new aircraft come into service. The second classification of tasking will involve testing of new aircraft acquired by the Armed Forces over the next few years. To be able to deal with the large advances in technology represented by such aircraft as the CP-140 Aurora long range patrol aircraft and the new fighter aircraft, AETE's capabilities will have to continue to expand. AETE's dedicated and highly trained personnel, who represent a broad spectrum of expertise and experience, have accepted this challenge, and are confident that the Aerospace Engineering Test Establishment can continue to fulfill the vital function for which it was established.

N.F.A. CONTENDERS

42 RADAR

DIRIGENTI MANU — With A Guiding Hand



CF-100s of 3 AW(F) OTU over the domes of 42 AC&W Squadron.

The radar domes housing 42 Radar Squadron's three radar antennae can be seen as one approches the area from Highway 28. Perched on one of the few prominent hills in the vicinity, 42 Radar Squadron is situated between the towns of Grand Centre and Cold Lake and is approximately 5 miles east of CFB Cold Lake.

The purpose of the unit, when it opened as 42 Aircraft Control and Warning (AC&W) Squadron in June 1955, was radar contol of the CF-100 all weather fighter, operated by 3 Operational Training Unit at RCAF Station Cold Lake.

Equipment at that time consisted of an AN/FPS-3 Search Radar and an AN/FPS-502 Height Finder. In 1956 a Fighter Controller School was established, offering a proficiency course for trained Fighter Controllers, and by 1961 the complete Fighter Controller course was being given here. When 42 AC&W subsequently became an operational Air Defence Command unit, all fighter controller training ceased.

In preparation for joining the Air Defence System, an additional Height Finder Radar was installed and the original radar equipment was replaced by more modern and sophisticated sets. Also installed at the same time was a diesel power plant, providing an in-house source of constant and reliable electrical power.

October 1962, saw the incorporation of 42 AC&W into the Great Falls Air Defence Sector and hence into North American Air Defence (NORAD). Prior to this the squadron was a lodger unit of RCAF Station Cold Lake, now it became an operationally independent squadron with its own Commanding Officer, responsible to the Air Officer Commanding, Air Defence Command.

Initially the operation was a manual one, but automation was not far off. A Semi-Automatic Ground Environment (SAGE) Annex, housing an AN/FST-2B Digital Data Processor, was soon added. After satisfactory completion of demanding and thorough tests on this processor and the radar equipment, the unit became part of the SAGE system and in April 1963, became known as 42 Radar Squadron. That this squadron was the first radar site in Western Canada to be SAGE'd is noteworthy.

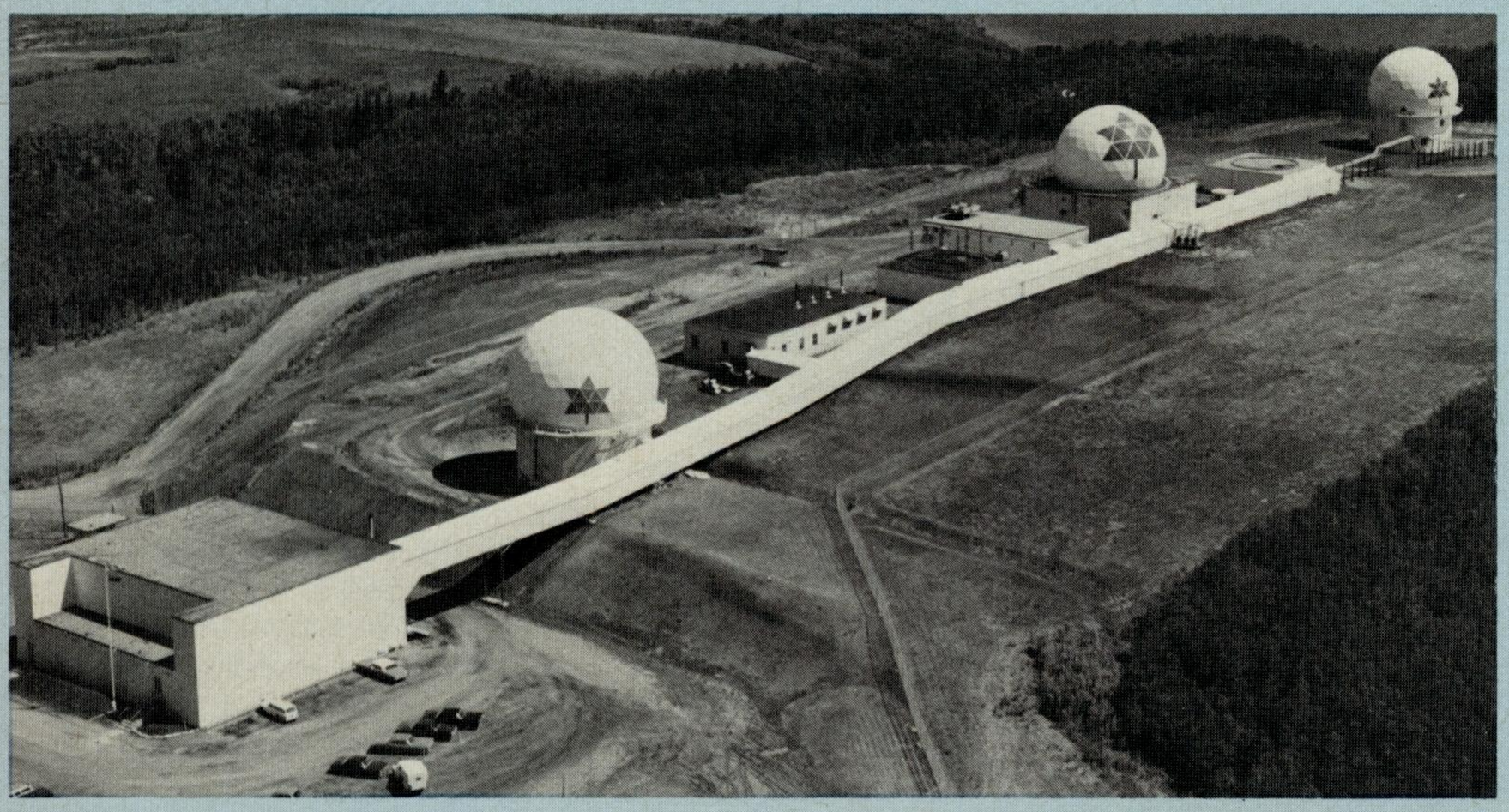
ROYAL CANADIAN AIR FORCE

Air Defence Command

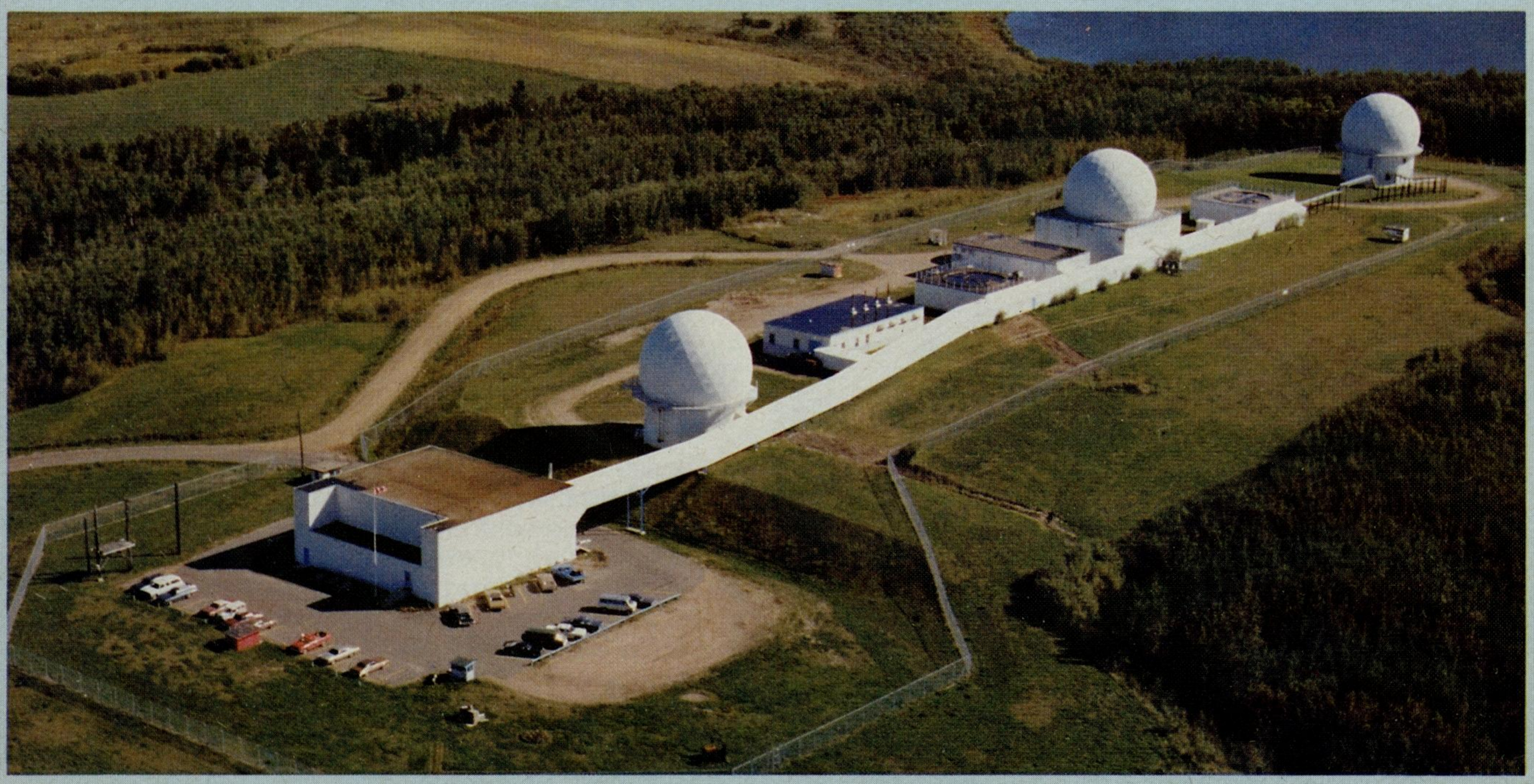
42 RADAR SQUADRON

Except for a Ground Air Transmitter Receiver (GATR) Site, located 17 miles south-west of the main site, just off Highway 28 between Grand Centre and Bonnyville, 42 Radar is self contained. The equipment found at the GATR site is identical to that found at low power ground air transmitter receiver sites and is used to provide air-ground-air coverage for 24th NORAD Region's use. Because of the unusually great distance from the squadron to the GATR site, a microwave communication is used to link the two. This facility is unique among Canadian radar squadrons.

As a NORAD Surveillance Site, the primary function of 42 Radar Squadron is to collect, process and disseminate search, identification and height radar data originating within its area of coverage; and to provide air-ground-air voice and data link communications to the NORAD system. Although operationally controlled by 24th NORAD Region, administrative control of the squadron is still vested with Air Defence Group at North Bay, Ontario. As the most northerly site within the region, 42 Radar is heavily relied upon by 24th NORAD Region for early warning data. In fact it is one of the most northerly heavy radar sites in NORAD.



42 Radar's
Centennial symbols.



SATELLITE TRACKING UNIT

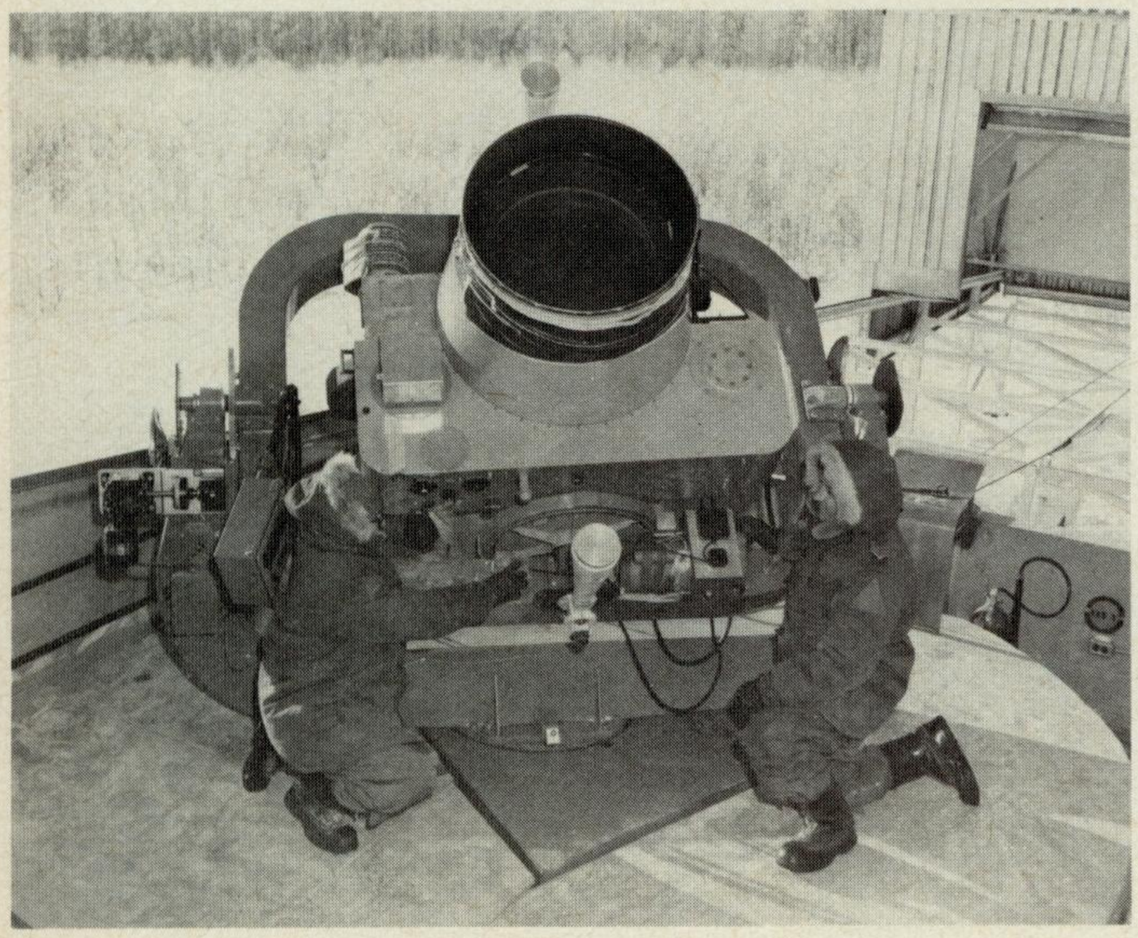
VIGILANT IN THE UNKNOWN

On October 4, 1957, a tiny aluminium sphere began orbiting hundreds of miles above the earth's surface. Although Sputnik 1 remained aloft only 57 days its successful launch jolted the world into the space age and was the forerunner of today's sophisticated satellites.

As early as 1955, scientists recognized that the age of satellites was close at hand and that a need to monitor their orbits would exist. Consequently, in early 1957, the Smithsonian Astrophysical Observatory agreed to assume the responsibility for establishing a world-wide network for the optical tracking of man-made earth satellites.

The pioneer camera for satellite tracking — the Baker-Nunn camera — was designed and built for the Observatory by James G. Baker and Joseph Nunn. This Super-Schmid camera, weighing approximately 3 tons, has an aperture and focal length both equal to 508 mm, thus effecting an f number equal to 1, and is capable of photographing the sunlight reflected off a 6 metre sphere at a distance equal to that between the earth and the moon. The associated timing system has an accuracy of plus or minus one ten-thousandth of a second. This accuracy enables highly accurate space object orbit determinations and the Baker-Nunn is one of the most sensitive optical means of observing satellites. For example, the first Vanguard satellite, a 6 inch sphere, was photographed at a range of 3500 miles; and on a number of occasions Baker-Nunn cameras have photographed satellites near apogees between 39,000 to 54,000 km.

Comet Kohoutek photographed with a Baker-Nunn in 1974.



Baker-Nunn camera.

Final testing of the prototype camera was completed one day before the launch of Sputnik 1. Less than two weeks later the satellite was under the watchful "eye" of the first operational Baker-Nunn camera.

In 1961, North American Air Defence Command (NORAD) assumed responsibility for the defence aspects of space surveillance. Recognizing a need to improve satellite surveillance, particularly over the polar region, the RCAF was asked to participate. The United States Air Force provided a Baker-Nunn camera to the RCAF. The RCAF provided the facilities, building and the operating personnel.

On April 13, 1961, Air Force Headquarters authorized the construction of a Baker-Nunn site in Canada. RCAF Station Cold Lake was found to be the most suitable site due to its geographical location and the availability of support facilities. Central Experimental and Proving Establishment, Air Armament Evaluation Detachment (CEPE AAED) was directed to provide sufficient staff to operate a satellite tracking facility 10 hours a week, in co-operation with the National Space Surveillance Control Centre (NSSCC), and to determine if the project was viable.

The site chosen for the Satellite Tracking Project was

Primrose Lake site, 1962.

on Primrose mountain within the limits of the Primrose Lake Evaluation Range (PLER).

Construction began in May 1961. The Baker-Nunn camera arrived during first stages of construction and was immediately put into service even though the building was not completed until February 1962.

CEPE AAED proved that satellite tracking in Canada with the Baker-Nunn camera was practicable and its information valuable. Consequently the project was removed from the aegis of CEPE and the Satellite Tracking Unit (SATTU) became a lodger unit of Station Cold Lake with its own identity. SATTU was assigned to Air Defence Command in November 1962, and began working in co-operation with the NORAD Space Detection and Tracking System (SPADATS).

In those early days the remoteness of SATTU from populated areas presented unusual problems. Every night of the year personnel were required to travel on 35 miles of questionable road from the Station to the PLER site. Winter travel was particularly hazardous as there were no farms along the way where help might be sought in the event of trouble. Therefore, it was standard practice for the crew to telephone the vehicle dispatcher upon their safe arrival at the site. If no call was received one hour after the crew left the Station, a search was instituted because a vehicle break-down at minus 50 degrees F might easily have proven fatal for a stranded crew.

With the passing of winter, dormant problems re-awakened to challenge crew members. Personnel arriving at the site during the spring and summer months frequently discovered evidence of visitors during the day. Bears regularly conducted sortie raids on the fridge and kitchen cupboards and some of these overbearing visitors were not very tidy.

In spite of the unusual conditions under which Satellite Tracking personnel worked, operations did not suffer. In 1968, the site earned the NORAD Achievement Award for extreme accuracy in field reduced satellite observations, "...previously considered impossible using existing star maps". This award was the first ever presented to a unit within SPADATS.

In June of 1971, SATTU moved from its site at Primrose Lake to its present location within the boundaries of CFB Cold Lake. There are 6 SPADAT Baker-Nunn Optical Sensors now operational throughout the world. The other Canadian site, Satellite Identification and Tracking Unit (SITU) St. Margarets, New Brunswick, opened in November 1976. The remaining four sites are located in New Zealand, Italy, Korea and the US.

Since the early days of Sputnik more than 11,200 space objects, consisting of instrumented satellites and debris fragments, have been detected in earth orbit by the various radar and optical sensors in the NORAD Space Detection and Tracking System. Although many of these objects have decayed and continue to decay back into the earth's atmosphere, over 4,600 objects are currently in orbit. Consequently, the monitoring of man-made earth satellites is more important than ever.

Present site.

417 SQUADRON

SUPPORTING LIBERTY AND JUSTICE

6 ST/R OTU Flight Line, 1966

Short of the arctic regions, there can be no less a hospitable spot for a tropical palm than northeastern Alberta. Nevertheless, it is at CFB Cold Lake that 417 "Palm Tree" Squadron thrives.

The palm tree, which forms the central motif of the squadron crest, recalls hotter times, in both a literal and figurative sense, for the unit. The emblem described in heraldic terms as "In front of a palm tree eradicated a sword and fasces in saltire", is symbolically descriptive of the squadron's wartime history. 417 Squadron RCAF flew Hurricanes and Spitfires in support of the British 8th Army in North Africa, in the Sicilian landings and in Italy. The palm tree suggests the desert; the sword, air support to the Army; and the fasces, the fighting in Italy. A unique crest for a unique squadron since 417 Squadron was the only RCAF squadron to operate in the North African campaign.

Disbanded at Treviso, Italy in June 1945, 417 (Fighter Reconnaissance) Squadron was reformed in June 1947 at Rivers, Manitoba. Equipped with P-51 Mustang aircraft, it operated for two years until it was once again closed down in April 1949.

Almost twenty years later, 417 was born again on the 23rd of March, 1968, when 6 ST/R OTU became 417 (Strike/Reconnaissance) Operational Training Squadron. The unit that 417 replaced, 6 ST/R OTU, had been in operation at Cold Lake since July 1961 and in the time between 1961 and 1968 had trained some 375 pilots to fly the CF-104 Starfighter. 417 Squadron took over the aircraft and the role from 6 ST/R OTU and for the next 3 years continued to train strike and reconnaissance pilots for the European based CF-104 squadrons.

In May 1971, the last strike/recce pilots graduated and the squadron became a conventional ground attack training squadron. LADDs, EMRs and EEIs were replaced by dive-bombing, strafing and air combat training — 417 Squadron had become a true fighter squadron again.

Since 1971 there have been significant changes made in both the CF-104 and in the tactical application of the

aircraft. The aircraft has been fitted with the M-61 gattling gun, the Lead Computing Optical Sight System (LCOSS), an Airborne Radar Warning and Receiving System (ARWRS), and a Twin Store Carrier (TSC). In addition, numerous minor modifications have been made, all designed to enhance the aircraft's conventional capability. A significant improvement in the Starfighter's capability is to occur over the next two years with the installation of a sophisticated attack/navigation system — the Litton LW-33CF. The LW-33 coupled with the ongoing Depot Level Inspection and Repair (DLIR) overhaul will ensure the CF-104 maintains its punch until it is replaced by the NFA.

The squadron, since it was reborn in 1968, has had 6 Commanding Officers, two official residences, and has belonged to four commands. In 1968, 417 lived in #6 Hangar and belonged to Air Defence Command, as had 6 ST/R OTU. In 1972 it briefly fell into the clutches of Training Command, until it was rescued from them in January 1973, to become part of 1 Canadian Air Group (CAG). Although in theory it seemed sensible to have the CF-104 training squadron work for the user command, there were substantial difficulties administering a unit from a headquarters in Lahr, Germany, 10,000 miles away. Therefore, in October 1975, upon the formation of Air Command, 417 Squadron came under the direct command of the Base Commander, CFB Cold Lake.

Today 417 Squadron operates from the USAF built SAC site. This building, located away from the main base complex, was constructed by the USAF in 1958 for staging and refuelling of Strategic Air Command KC-97 tanker aircraft. It was vacated in 1962 and remained vacant until February 1974 when 417 made the move there from #6 Hangar. .

The squadron presently has a complement of 20 instructor pilots (including the CO), 5 officers, 8 WOs, 110 NCOs, and 39 other ranks. As well as training ab initio CF-104 pilots, 417 Squadron instructor pilots are also tasked to augment the 1 CAG squadrons. To effectively perform the augmentation role it is required that each pilot annually spend approximately two weeks flying in Europe. In addition, 417 pilots must maintain their combat ready status.

Over the past 11 years, 417 has trained 220 pilots. The squadron has also participated in numerous exercises designed to increase or maintain the unit's operational capabilities. Although the CF-104 training role should wind down over the next few years, the squadron's future looks bright since it has been designated the New Fighter Aircraft OTU. 417 Squadron will, therefore, continue training pilots to help fulfill Canada's European tactical fighter committment to NATO.

10 F.T.T.U.

TO MAKE EFFICIENT

Introduction of the CF-104 Starfighter aircraft into the RCAF in 1961 made an immediate technical training programme mandatory and, as the time approached for the first aircraft to roll of the assembly line, plans were activated to provide the trained technicians required to service and maintain the aircraft. From the ranks of the RCAF were drawn the nucleus of a training staff and these men proceeded to factories and USAF bases for initial technical training on the aircraft. In April 1961, they began to arrive at RCAF Station Cold Lake and, under the direction of the then Commanding Officer, S/L W.D. Birch, number 10 Field Technical Training Unit, or "Ten-Foot-Two" as it is more popularly known, came into being. The purpose of the school was to provide technical training for all CF-104 pilots and groundcrew.

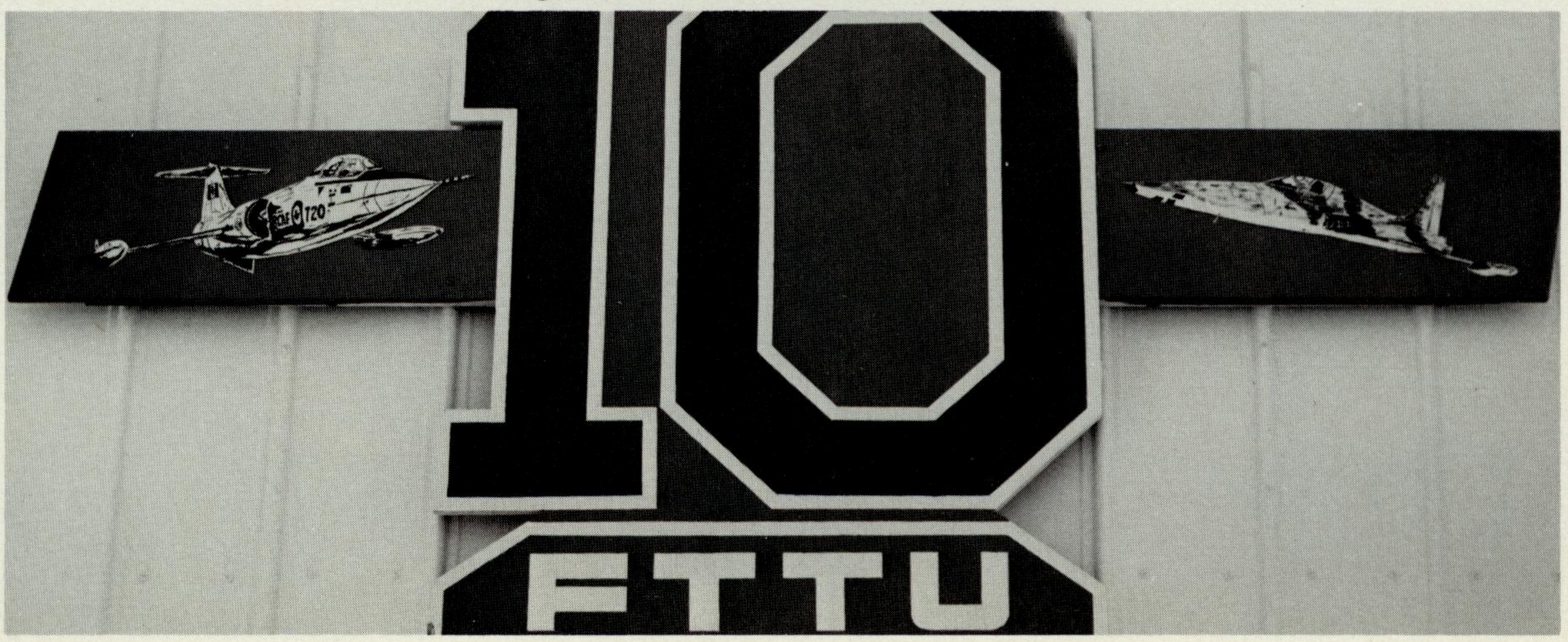
The first in-service course at the school started in September 1961, and the eleven member armament systems technical course graduated six weeks later. In November 1961, the first CF-104 aircraft, 12709, arrived at Station Cold Lake solely for the purpose of ground training and therefore it went directly to 10 FTTU. By 1962, the demand for trained personnel made it necessary to provide training on a round-the-clock basis and the staff operated a three shift training day. At this time the staff numbered 106, but later, in the fall of 1962, it was reduced when personnel were sent to man a second unit, 5 FTTU, formed at 3 Wing in Zweibruchen, Germany. The 5 FTTU operated for two years before disbanding and 10 FTTU again became the sole unit responsible for CF-104 Technical Training.

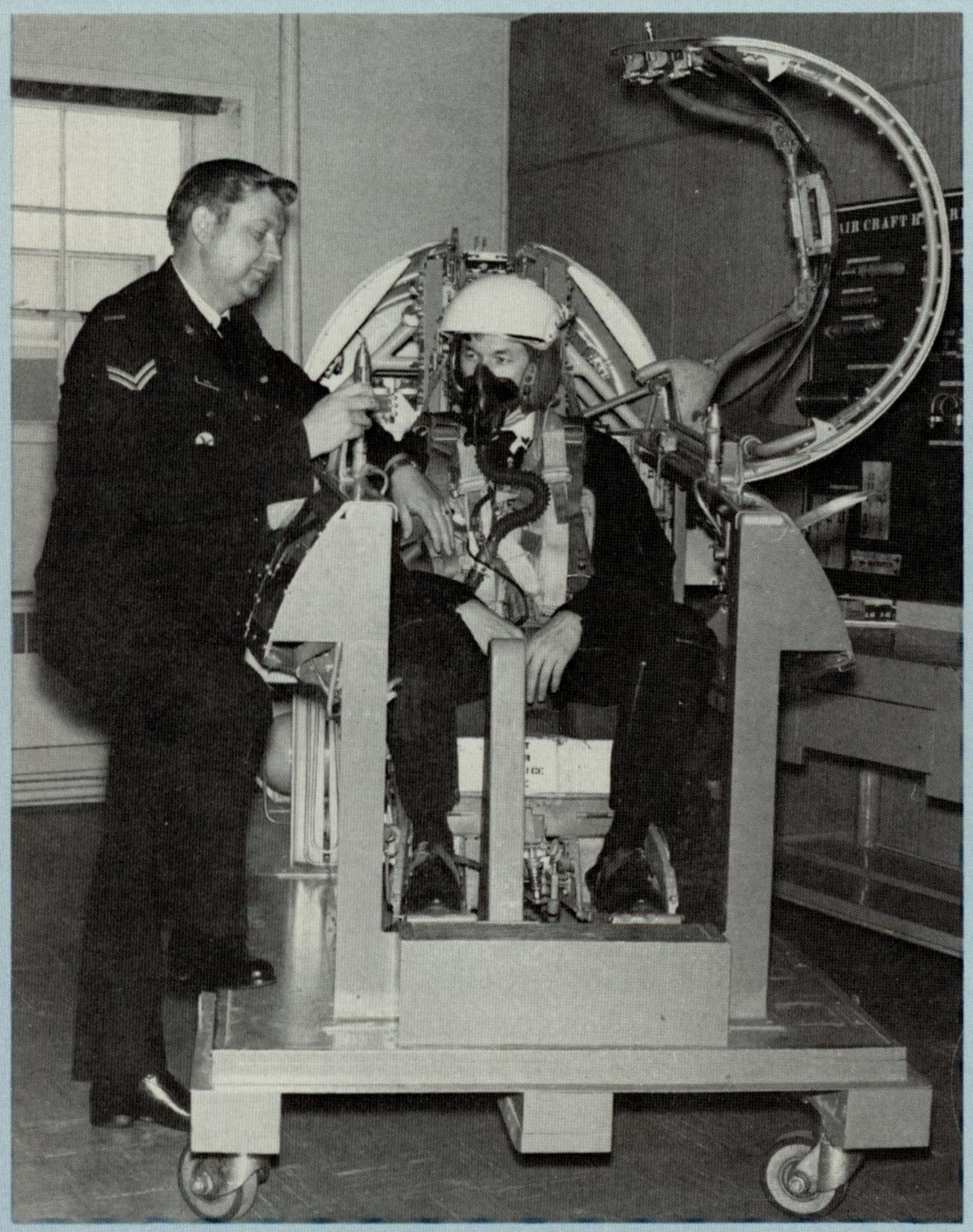
CF-5 training started in a new wing of the school in November 1968, and the present staff now instructs on the CF-104 and CF-5 aircraft, giving a total of 23 different courses.

Since the opening of the school, 10 FTTU has provided training for students from a variety of different countries including the United States, Venezuela, the Netherlands and Norway, as well as carrying out the day to day commitment of training Canadian Forces technicians. Over the past 25 years, 10 FTTU has trained in excess of 14,000 personnel. In 1978, for example, 84 courses were conducted with a student intake of 523.

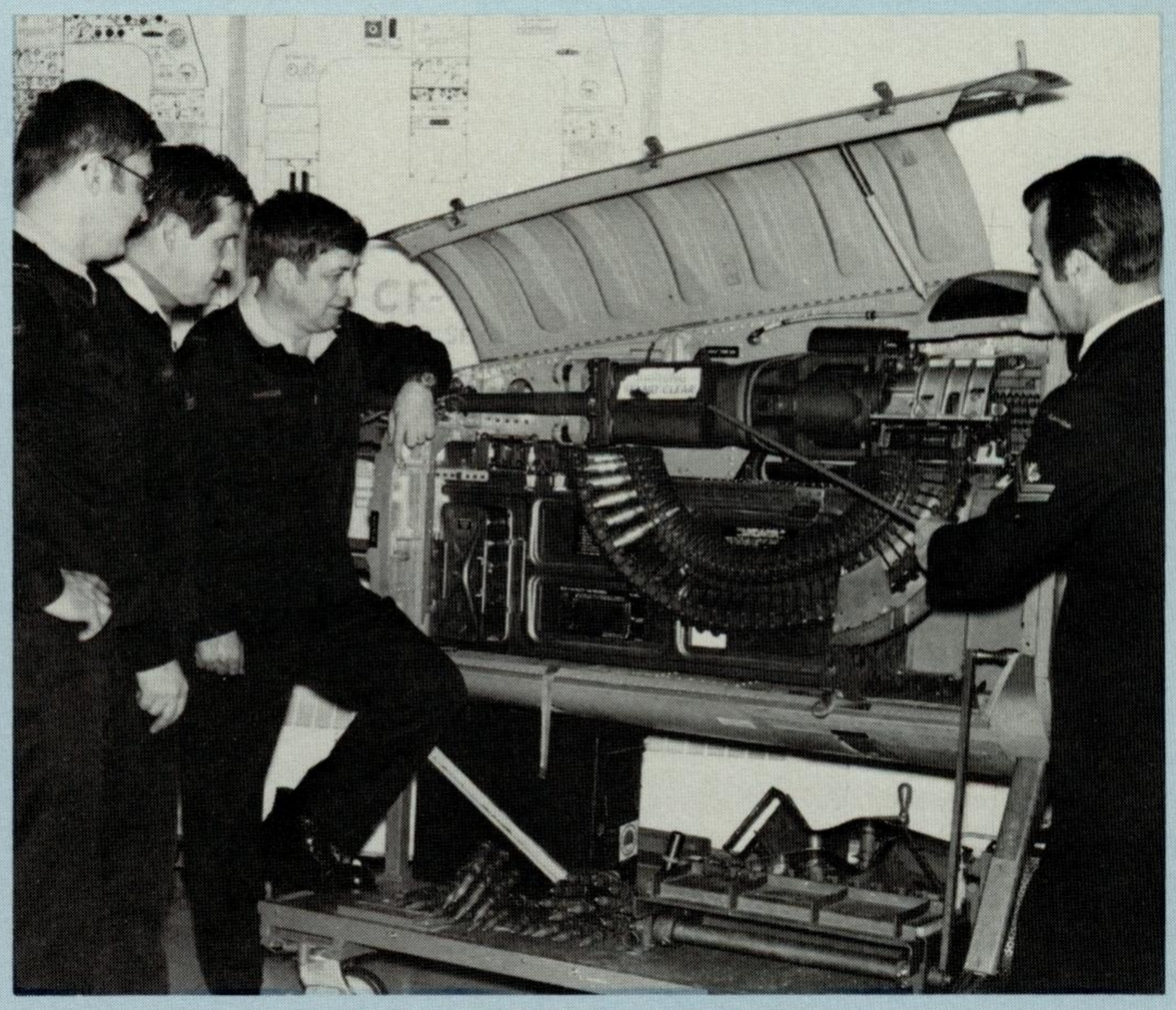
The school utilizes two serviceable aircraft and a vast array of functional static training aids to enable the technician to learn the many working systems of the trade he is required to master. Depending on the trade, Air Frame, Aero Engine, Armament, Photo, Safety Systems, Instrument/Electrical, Integral Systems, Communications and Radar Systems, students are on course from one to nine weeks. On completion of training they are sent to flight lines at Aerospace Maintenance Development Unit Trenton, CFB Cold Lake, CFB Bagotville, CFB Baden or to instruct at CFB Camp Borden.

The Unit's crest was approved by Her Majesty in March 1975. The falconer's glove and falcon hood depict the tools of a handler of a hunting bird. The handler is likened to the aircraft technician who receives special training at the school. The indented circle symbolizes the aurora borealis which is a common phenomenon in the geographical location of the Unit.

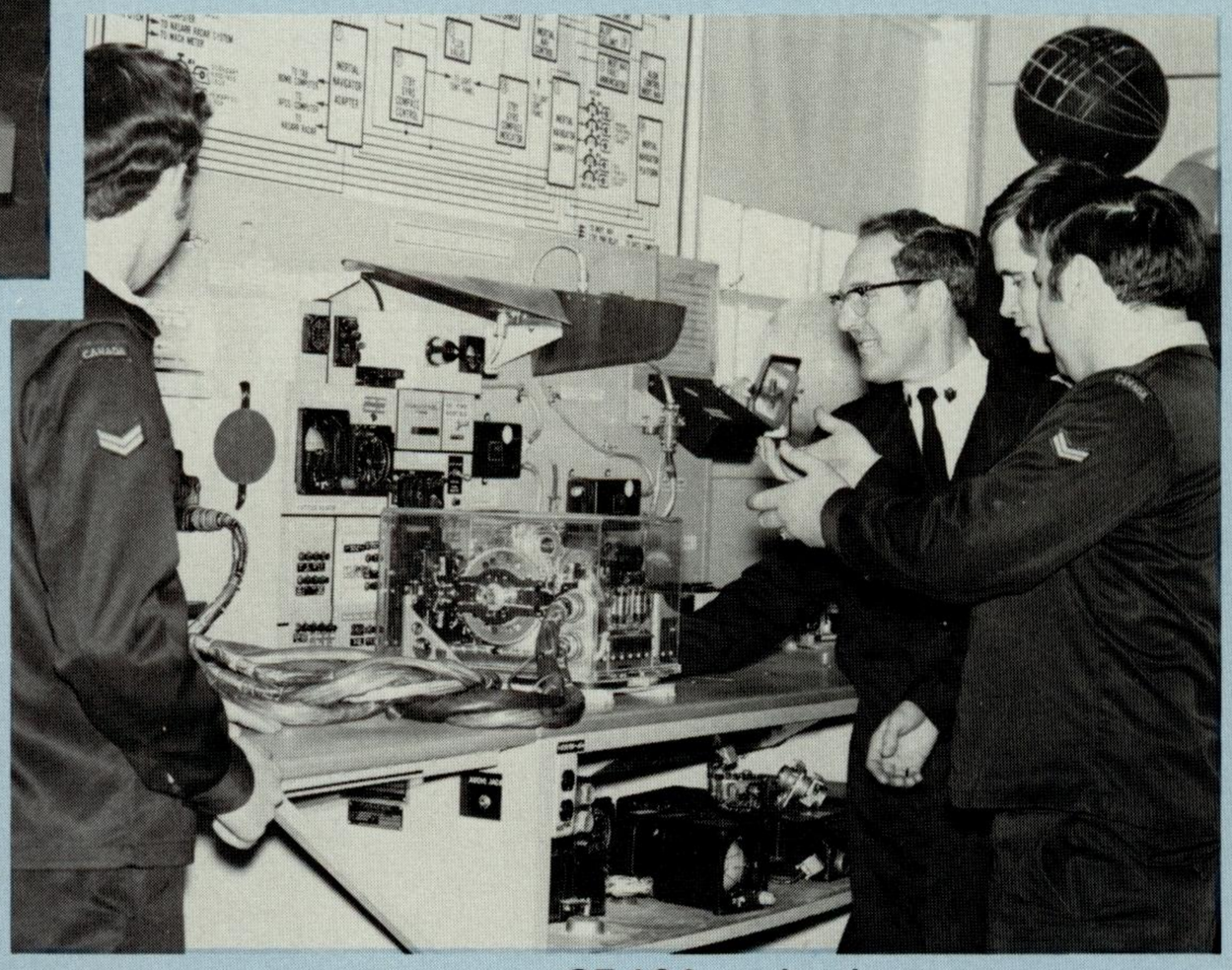




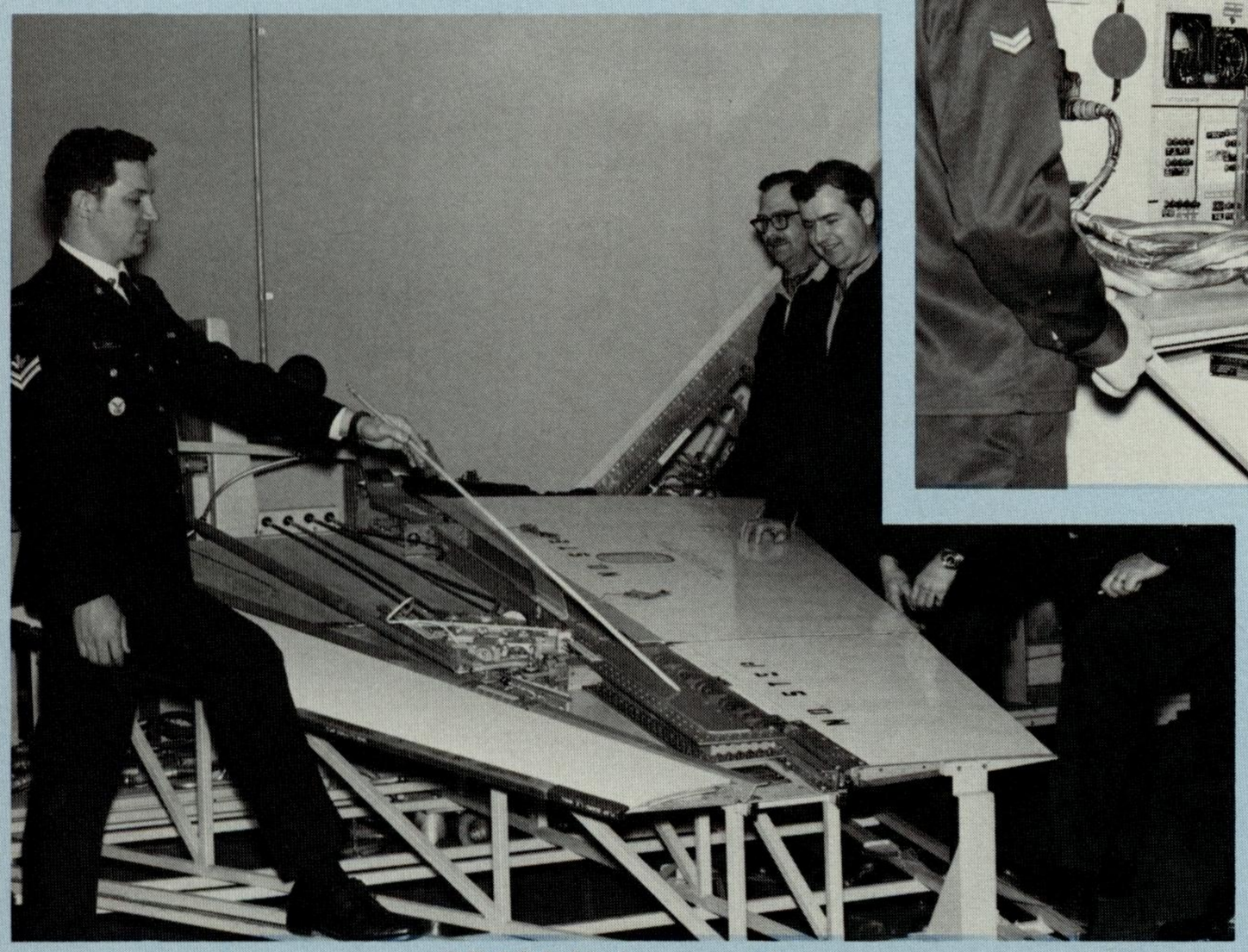
CF-104 escape systems.



CF-5 armament systems.



CF-104 navigation system.



CF-104 flight controls.

434 SQUADRON

IN EXCELSIS VINCIMUS — We Conquer In The Heights

On February 15, 1968, 434 Squadron was re-activated at CFB Cold Lake, flying the CF-5 Freedom Fighter, built by Canadair. 434's designation was that of Tactical Fighter (Operational Training) Squadron, working under the control of Mobile Command. The squadron's multi-purpose role included Close Air Support, Interdiction, Photo Reconnaissance, Air Superiority, and training for all of the above. All future CF-5 pilots were to be trained by 434 (OT) Squadron and pilots going on to the CF-104 were to be initiated in the realm of high performance using the CF-5.

The spring and summer of 1968 saw ten pilots proceed to Williams Air Force Base, Arizona, for a check-out in the Northrop F-5 at the USAF's 4441st Combat Crew Training Squadron. Each pilot flew 30 hours of transition, air combat, air gunnery, ground attack and night missions. During the summer of 1968, additional air and technical personnel arrived at Cold Lake in preparation for the delivery of the new CF-5 aircraft. The first CF-5 deliveries, scheduled for December, were delayed until January 1969, but from that point on, the squadron received three aircraft per month.

The first course to fly the CF-5 was a pre CF-104 course which began in April 1969. The following month, the initial cadre of pilots who were to form 433 ETAC, which was the CF-5 squadron to be based at Bagotville, Quebec, commenced their CF-5 training.

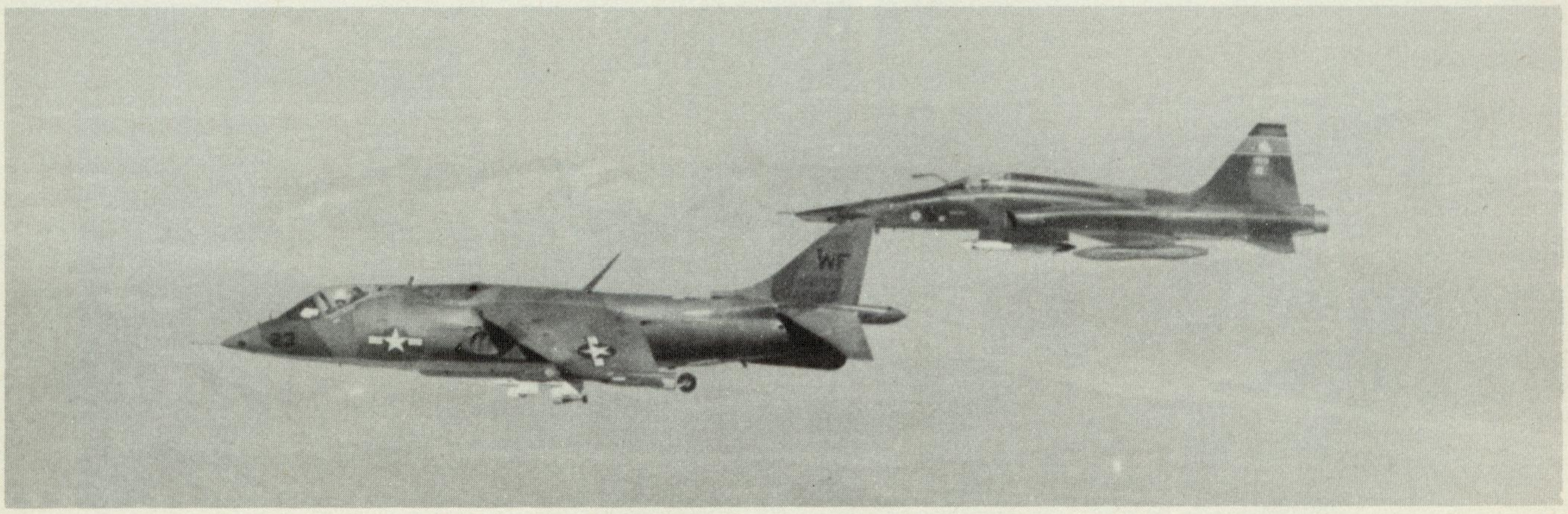
The summer and fall of 1969 proved to be extremely busy for 434 Squadron. At one time during this period the squadron had 25 pilots undergoing training, including four Dutch pilots of the Royal Netherlands Air Force.

During the next two years, 434 Squadron was to expand its role and venture into many new fields of tactical aviation. In 1970, "Operation Fencer Phase I" was conceived to determine the value of the CF-5 for the Northern Flank of Europe. The squadron flew to Baden, Germany, via Labrador, Greenland, Iceland and Scotland.

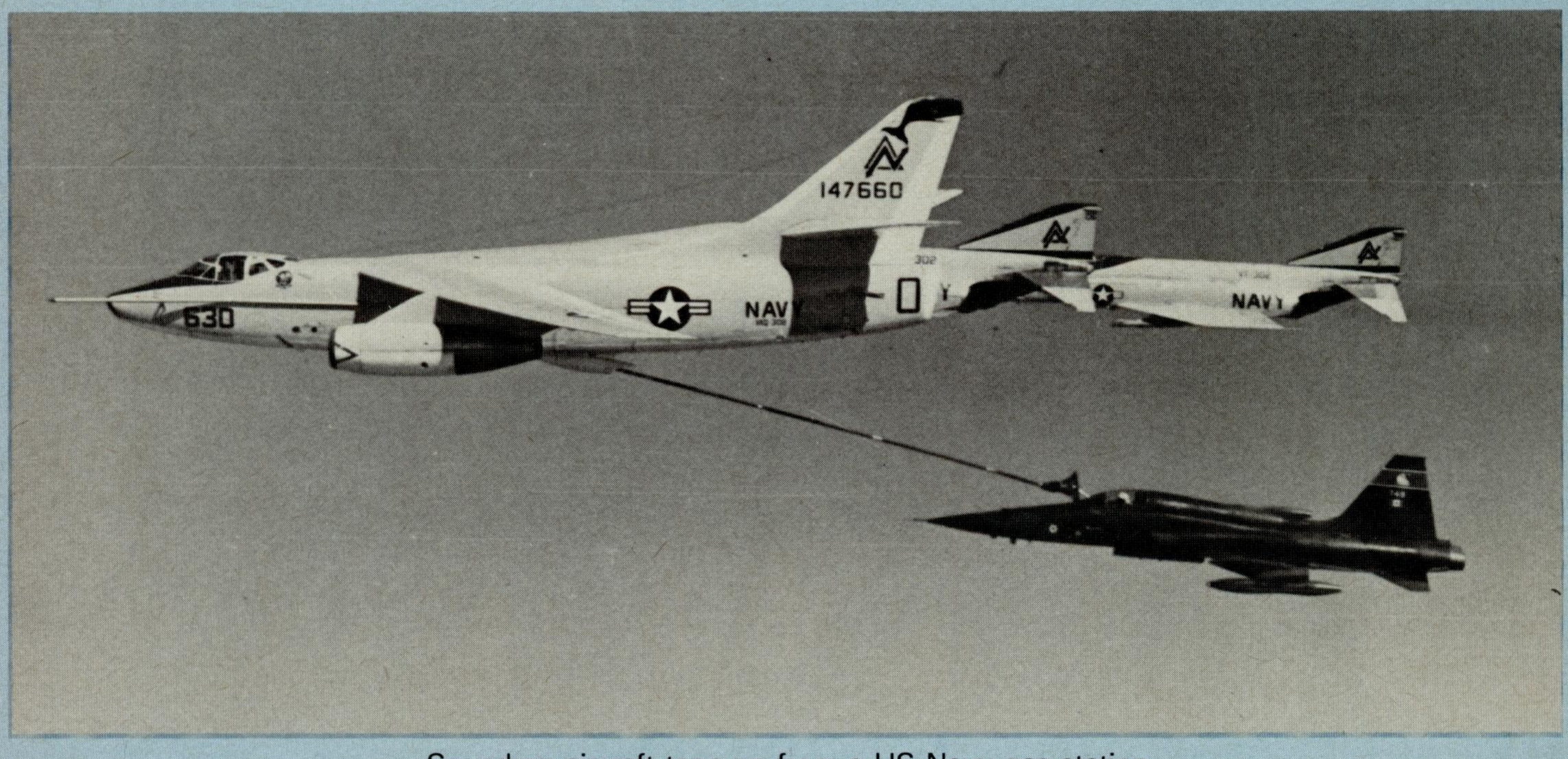
"Exercise Open Challenge I", the first CF-5 Tactical Air meet, was held at CFB Cold Lake from October 19 to 23, 1970. 434 Squadron won all individual awards in addition to the General F. Sharpe Trophy for the top tactical squadron. This trophy was won by 434 Squadron for the next four consecutive years.

The summer of 1970 saw pilots of 434 set two cross-Canada speed records. On Saturday, May 2, Captains (Jake) Miller and (Ron) Small flew from Victoria, B.C. to Shearwater, Nova Scotia, with Jake Miller setting a record of 4 hours, 24 minutes and 53 seconds. The distance was 2,800 miles and the average speed was 636 mph. On July 1, Captain (Pat) Pattison set an east to west record, flying from Shearwater to Victoria in 5 hours, 34 minutes and 21 seconds. This flight was to commemorate the 50th anniversary of the first cross-Canada mail flight which, in 1920, took 10½ days to complete.

In January 1972, the squadron began training three



434 Squadron CF-5 'Holding Hands' with a US Marine's Harrier over Yuma, Arizona



Squadron aircraft tops up from a US Navy gas station

Venezuelan pilots and 29 technicians in preparation for the purchase of a number of CF-5's by Venezuela from the Canadian Government. In addition, 13 officers and men of the squadron were sent to Venezuela for a period of six months to train their people in operating and maintaining a CF-5 OTU.

The highlight of 1972 was the introduction of air-to-air refuelling. The CC-137 (Boeing 707) tanker deployed from Trenton in November to check out half the squadron pilots and returned in December to check out the remaining half. 434 was now truly capable of being able to deploy anywhere in the world in support of the land element of the Canadian Forces.

In 1973, the Bluenosers achieved their fourth crossing of the Atlantic; their second in the CF-5. The exercise, "Long Leap I", began on June 6 with five CF-5s and a CC-137 tanker proceeding to CFB Bagotville. Then, on June 9, two CC-137 tankers, loaded with groundcrew and equipment, and eight CF-5s, four from 433 ETAC and four from 434 Squadron, departed Bagotville for RNAF Andoya, Norway. The mission was uneventful and at the end of 434's first non-stop overseas air-to-air refuelling exercise, the Bluenosers announced their arrival with a low pass over Andoya.

In June 1974, 434 deployed to Bermuda where they flew out of NAS Bermuda and provided anti-shipping strikes against ships of the Canadian Forces, the US Navy and the Royal Navy. September saw the squadron at CFB Comox to support "Exercise Potlatch I". This combined Canadian-United States exercise saw troops from 1 Combat Group, Calgary, and the US Marines stage the largest amphibious landing operation ever held in Canada.

1975 saw deployments both north and south. Air-to-air refuelling was carried out to Nellis AFB, Nevada, and over the geographic North Pole. The aircraft, north-bound, first proceeded to Thule, Greenland. This was the staging area from which the record making flight was made.

434's long association with the city of Halifax and the schooner Bluenose, was rekindled in August 1975. The 434 detachment that had just taken part in "Exercise Non-Nova" was greeted in Halifax by the Mayor, the Provincial Tourist Chief and the Skipper of the Bluenose II.

February 1976 was a memorable month for 434 Squadron. It was the 25th Anniversary for the Bluenosers. On April 2, 434 TAC(OT) Squadron officially became 434 TAC(F) Squadron. "Open Challenge V", the last held for several years, went not to 434 Squadron as it had for the past four years, but to 433 ETAC, the Porcupines.

On September 22, two squadron pilots, with the help of a Boeing tanker and a CC-130 Hercules, flew from Yellowknife, NWT, to a Soviet ice island in the high Arctic. The CF-5 spent twelve minutes low level over the island taking pictures.

On November 7 1976, with the aid of a 437 Squadron tanker aircraft, two CF-5s flew non-stop from CFB Comox to CFB Shearwater. L/Col. Scott Clements and Captain Rod Sword took 4 hours, 29 minutes and 17 seconds to complete the first ever non-stop coast-to-coast flight by a Canadian Fighter.

In 1977, as May and June approached, excitement arose for the upcoming Air Standard Presentation. All squadron members worked furiously to get ready for the big weekend. The taskings got lighter and the practice Air Standard Parades longer. The big day finally arrived

and the colours presentation ceremonies were a great success.

The summer was taken up with small exercises throughout Canada and in September it was off to Skrydstrup, Denmark, with four aircraft from both 434 Squadron and 433 ETAC. The return trip this time was not incident free. Major Mike Scott, of 434 Squadron, experienced an engine failure over the Atlantic but fortunately, with the help of Captain Norm Sinclair, found his way to Narssarssaug, Greenland, where a successful emergency landing was made.

In October 1977, 434 Squadron, along with other Canadian units, went to Nellis AFB, Nevada, to participate in "Exercise Red Flag", with units from Canada, the US and Britain involved.

Early in February 1978, "Operation Morning Light" took place on the occasion of the Russian satellite crash in the NWT. 434 Squadron, along with 437 Squadron, was called upon to provide high level photo reconnaissance of the suspected impact area.

With the approach of summer it was time for 434 to stay home and host many of the visiting Canadian and US Squadrons which arrive at Cold Lake only in the summer for some reason. Despite being a tactical fighter squadron supporting land forces, the Schooner Squadron does not always fly when deployed. In mid-August, 13 canoes and 28 members of 434 paddled 60 miles down the Churchill River, roughing it like true land oriented troops.

The deployment list goes on and on and will continue to do so for 434 Squadron. 434 Squadron deploys to all parts of Canada, the United States and to several countries in Europe, making them an extremely versatile and prepared unit.

CF-5s of 434 Squadron over Germany 1978

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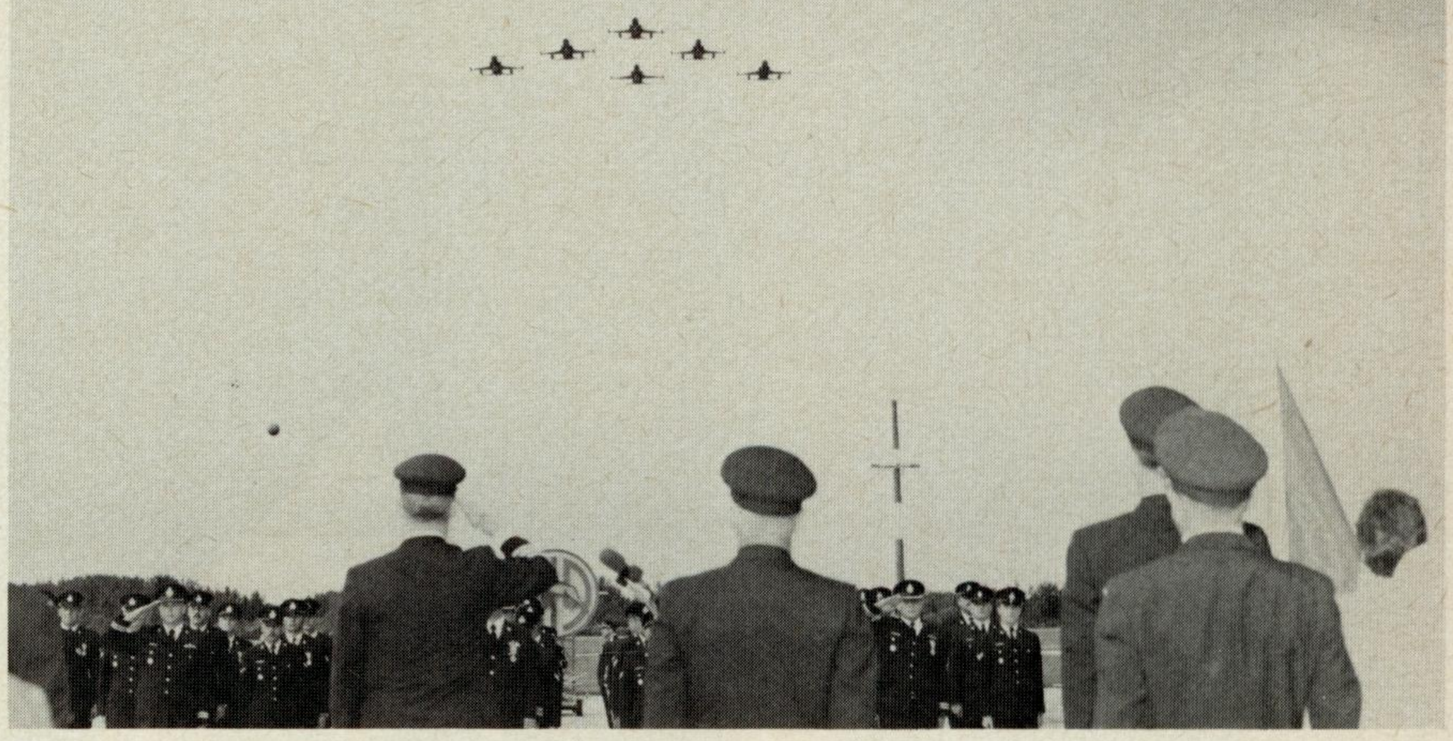
419 SQUADRON

MOOSA ASWAYITA — Beware The Moose



Hand over parade fly past

The predecessor to 419 Squadron was Number 1 Canadian Forces Flying Training School (1 CFFTS) which moved to Cold Lake from Gimli, Manitoba, in 1971. The decision to close CFB Gimli was made in 1970 and in December of that year one of the advanced training flights was disbanded and selected personnel started the move to Cold Lake. By the end of February 1971, about a third of the instructional staff were at Cold Lake laying the ground work for the movement of 1 CFFTS later that year. By mid 1971, the school was in full operation at Cold Lake continuing to train student pilots to wings standard.

419 Squadron's CF-5's

During the period 1 CFFTS was at Cold Lake, flying training was initially given on the T-33 Silver Star jet trainer but in early 1974, the school converted to the CF-5 Freedom Fighter, the aircraft 419 Squadron flies today.

Realizing there was a requirement to have a unit dedicated to conducting a Basic Fighter Pilots' Course and a Fighter Weapons Instructors' Course, it was decided to re-activate a dormant squadron. 1 CFFTS was to be disbanded and 419 "Moose" Squadron was the squadron selected for re-activation.

This squadron was initially formed during the Second World War but was disbanded at the end of the hostilities. In 1954 it was re-activated at RCAF Station North Bay where it flew the CF-100 aircraft. The squadron moved to Europe in 1957 but in 1962, coincident with the replacement of the CF-100, it was once again disbanded.

On November 1, 1975, 419 Squadron officially returned to active duty and took up the task of training basic fighter pilots, already qualified to wings standard, who would eventually continue on to fly the CF-104 Starfighter, the CF-101 Voodoo or the CF-5 Freedom Fighter. The first course started training in January 1976 and by the end of that year, 33 basic course members and 14 Fighter Weapons Instructors had been trained.

During 1977, in addition to its training role, the squadron began to participate in tactical exercises. This experience permitted the staff pilots to practice and keep informed of new developments in the tactical fighter world, thereby providing an instructional staff fully conversant and proficient in today's fighter tactics.

For example, in February 1977, squadron pilots visited the US Navy Topgun School at Mirimar Naval Air Station, California, to fly Air Combat training missions with that school. In October 1977, the squadron hosted a US Navy Fighter Squadron, VF 21, on a visit here for one week. During October and November of the same year, the squadron also participated in "Exercise Red Flag" at Nellis Air Force Base, near Los Vegas, Nevada; a simulated combat exercise providing extremely realistic scenarios. The squadron was also pleased to be able to participate in numerous airshows throughout 1977.

Pre-flight briefing

Pre-flight signing out

Pre-flight checks

By the end of 1978, 90 student pilots had been trained along with 12 Fighter Weapons Instructors. Numerous exercises also provided training for the staff instructors including "Exercise Sundown", another visit to Mirimar, California; "Exercise Cougar, a visit to 410 All Weather Training Squadron at Bagotville, Quebec, for Basic Fighter Manoeuvre training; and both "Maple Flag Exercises" held here at Cold Lake.

With the beginning of 1979 came more exercises, including again participation at "Red Flag" in February and another one week visit with the US Navy at Mirimar in March.

Dating back to the North Bay days, 419 Squadron has traditionally had a Moose mascot. The first, a mounted moosehead, was named "Herman". "Bruce Mk I" succeeded Herman and "Bruce Mk II" remained in Germany when the squadron left there in 1962. "Bruce Mk III" now holds his place of honour in the squadron's main briefing room. Squadron members affectionately refer to the Squadron's Commanding Officer as the Bull Moose.

419 Squadron's camouflaged aircraft

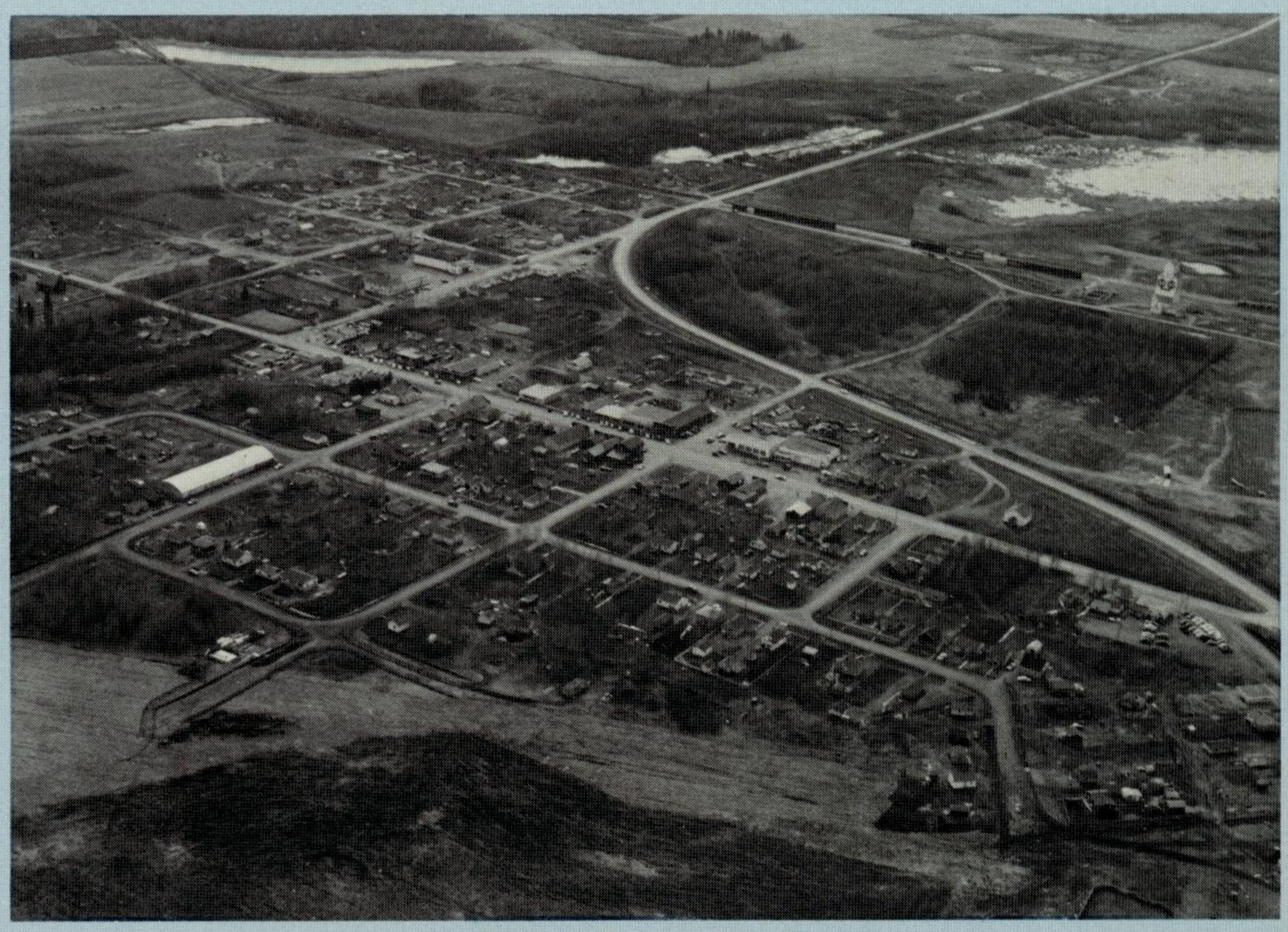
GRAND CENTRE

Grand Centre 1955

"Once everyday a train leaves Edmonton and chugs its way through the rolling hills and cattle country that lie to the north-east. It is a short train and a slow one, and it stops at innumerable tiny stations before, 176 miles later, it reaches the end of the line at Grand Centre. From here northward is nothing but wilderness.

Despite its name, Grand Centre was until quite recently no more than a hamlet of 150 people. But now it is an active prairie village. The explanation of its growth is provided by the Air Force bus that meets each train, for a short drive brings travellers to the unique world of Canada's newest air base, RCAF Station Cold Lake."

This quote from a news release of 1958 indicates the impact that the building of RCAF Station Cold Lake had upon Grand Centre.



Grand Centre 1959

Prior to the construction of the Station, Grand Centre was very much a subsidiary centre to the commercial sites of Cold Lake and Beaver Crossing. The hamlet was in the municipality of Bonnyville, but in 1952 it was incorporated into a town and Mr. F.W. Brady became the first mayor. Another name worthy of mention is that of Mr. J. Josvanger, who was a councillor for many years with the Municipal District of Bonnyville. He initiated and completed the project that drained Fontaine Lake, and consequently made available a large area of level land to enable the orderly development of the town. The town's development was enhanced and all vestiges of pioneer life removed with the introduction of water and sewer systems in 1959 and natural gas services in 1963.

Grand Centre's skyline was changed in 1955 with the erection of the United Grain Growers elevator and later the Alberta Wheat Pool elevator. Both these elevators were destroyed by fires in 1976 and 1978 respectively, however a new elevator has recently been constructed and can be seen behind the Rodeo Grounds.

Over the past 25 years, Grand Centre has been growing steadily. The first businesses here in 1953, consisting of a creamery and a garage, originally built in 1935, have been replaced with modern retail outlets representing almost every field of commercial enterprise.

Grand Centre 1976

COLD LAKE

Cold Lake 1955

Cold Lake first apeared on the crude maps drawn by the early fur traders as "Cold Water Lake" and the Beaver River, which forms the west boundary of the Base, was for many years the fur traders route to the Athabasca River region. The town was slowly growing in size, mainly due to the popularity of the area with fishermen, when the construction of RCAF Station Cold Lake began. Many of the construction workers brought into the area in 1952 remained and by 1954 the town had a population of 700, large enough to enable Cold Lake to become incorporated as a town under its first Mayor, Fabian B. Milaney.

Remembrance Day Parade 1960

Although the development of CFB Cold Lake had some effect on the growth of the town of Cold Lake, there is no doubt that the presence of the lake itself has been a major factor in attracting people to visit and live in and near the town.

Cold Lake is one of the largest bodies of fresh water this side of the Rockies and has become renowned for its limitless choice of outdoor pleasures; fishing, boating, water skiing, sailing, camping and swimming.

No account of Cold Lake would be complete without the legend of Kinosoo: Long before the coming of the white settlers, a young Wood Cree Indian set out in his canoe across Cold Lake to meet his betrothed. As young lovers do, he day-dreamed of his beloved, wielding his paddle ever faster as the moment of their meeting drew closer with every dip and thrust of its blade. Suddenly as he approached the mouth of French Bay, a huge fish rose and snapped the canoe in two, swallowing the young lover. Pieces of the canoe were found drifting on the lake the next day, but the Indian maiden never saw her young brave again. So was born the legend of Kinosoo — the big fish.

Cold Lake 1976

Congratulations

to Canadian Forces Base Cold Lake

on the occasion of your 25th Silver Jubilee Celebrations

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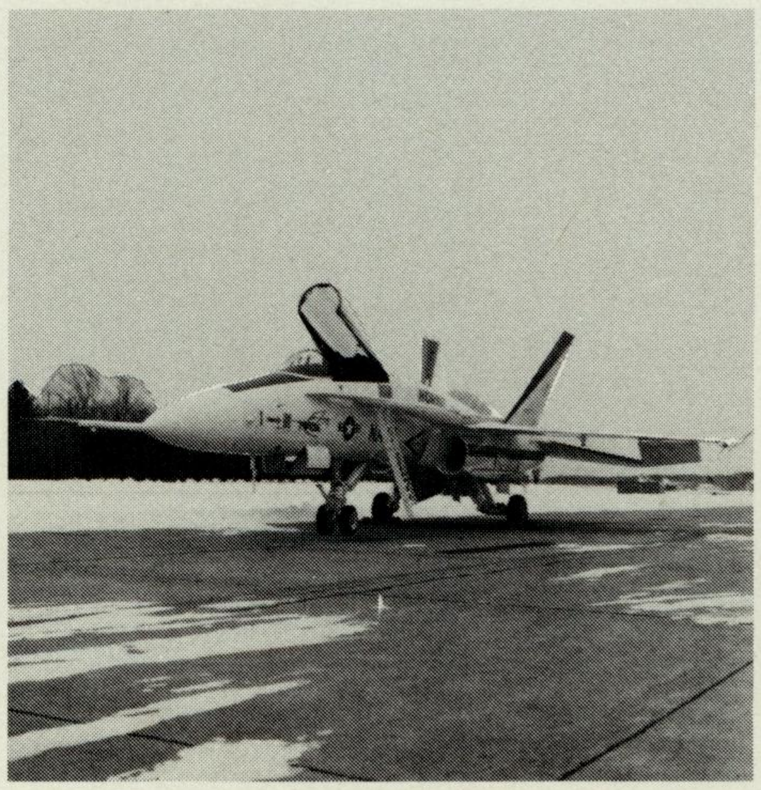
We are proud to have been associated with CFB Cold Lake since 1968 and we look forward to many more years together.

Foul-weather friend.

Because half the world is in darkness and two-thirds covered by clouds, Canada's new fighter should be a true all-weather aircraft. It must fight in bad weather as well as fly in bad weather. An aggressor will not wait for sunny skies.

F-18A Hornet's all-weather capability began on the drawing board with selection of the newest all-weather radar, advanced instruments in the cockpit, *and* all-weather Sparrow missiles that can strike through the clouds. The radar can look up or down, unhampered by ground clutter. It can sight and identify hostile aircraft and missiles at great distances. It can track eight targets at once while still looking for others. In addition to all-weather missiles, the Hornet carries close-in Sidewinder missiles to seek the heat of hostile engines in a dogfight. It also has a rapid-firing cannon in the nose to help settle a day-fight air battle or hit surface targets.



All-weather target tracking systems give the pilot the "eyes" he needs for quick, accurate, low-level attack against ground or sea targets. Fully-armed for attack, the Hornet can carry up to 19,000 pounds, including air-to-air weapons.

The Hornet is built to fly, fight and win in any weather. A "Foul Weather Friend," it's ideally suited to Air Command missions, both in NORAD and NATO. For more information, write McDonnell Douglas Canada, Toronto AMF, Ontario L5P 1B7.

The F-18A Hornet

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TO BE OPENED IN THE YEAR 2004

A monument in the form of a 12 foot high needle, similar to the Washington monument, mounted on a steel and concrete base will be erected in front of the CFB Cold Lake Headquarters.

The needle is brushed stainless steel and the base, steel and concrete. On the base will be inscribed appropriate dates and a bronze plaque with a dedication to all personnel of CFB Cold Lake, past, present and future.

The dedication will take place as part of the parade to be held on June 15, 1979.

The base of the monument will contain a time capsule, to be opened in 2004, the Golden Jubilee of CFB Cold Lake. One of the contents of the time capsule will be a copy of this book, the CFB Cold Lake Silver Jubilee Program.

The Editor wishes to express his appreciation to:

- All Base, Squadron and Unit personnel who submitted copy for the book. Without these inputs the units' part of the book could not have been presented.
- The personnel in CFB Cold Lake and AETE Photo Sections who provided the photographs.
- The staff of Douglas Printing Company who provided advice during conception, encouragement and guidance during gestation, and a smooth delivery.
- The Advertisers whose financial support helped defray publication costs.

Thank you all,
Major Brian Phipps (Ret'd)
Editor