

the

OBSERVAIR

**Ottawa Chapter Newsletter
Canadian Aviation Historical Society**



Volume 51, Number 6

September 2014

CHAIRMAN'S MESSAGE

I'd like to welcome everyone to the 2014-2015 CAHS season. This year we'll be seeing some changes in the Ottawa chapter of CAHS, the first (as you may have already noticed) is the *Observair* going digital. While this was largely influenced by the rising costs of postage, the change will give us the chance to try out some new ideas. The second change is that our chapter executive is now an entirely new group of volunteers. As the new chairman, I'd like to thank all those outgoing executive members, especially Tim Dubé for his many years of dedication and hard work. There will likely be a few more changes in the coming year as we grow and adapt to the challenges that are currently facing our organisation, but I for one look forward to these opportunities. Feel free to contact me with any questions, concerns or comments you might have about any of the changes in the future.

To introduce myself, I have been interested in aircraft and aviation since I was young, buying my first book about the Avro Arrow when I was 10 years old. Since that time I have grown to love Canada's rich aviation history, and to appreciate how the aeroplane helped shape Canada. I am also a strong believer in the promotion and preservation of heritage. Recently I graduated with degree in museology and am currently working on building a career in that field. Some of the projects I've worked on in the Ottawa area include cleaning the War of 1812-era gunboat at Fort Wellington, creating artefact mounts for the Arnprior & District Museum, stabilizing archaeological finds for Parks Canada, building

educational models for Fairbairn House in Wakefield, and hanging paintings and photos in Carleton University's newly renovated MacOdrum Library.

This is now my fourth year as a member of the CAHS and one thing that continues to amaze me are the stories, experiences, and knowledge held by our chapter's members. I look forward to hearing more of these as I meet many more of you over the next coming year.

Kyle Huth
Chairman

MESSAGE FROM THE EDITOR

This is the first electronic version of the newsletter, it is also mailed out to members who do not have e-mail coordinates. The appearance might differ a little from previous print editions but hopefully the editorial content will approach that which readers have come to expect under Timothy Dubé's editorship. This issue is slightly shorter than previous issues but I am planning a few changes for the future, including a blog providing access to more photographs as well as longer editorial pieces.

This is your, the membership's, newsletter so your letters, photos and articles are always welcome.

Colin Hine
Editor

The Observair is the newsletter of the Ottawa Chapter, Canadian Aviation Historical Society and is available with membership. Membership fees are payable in September. Any material for *The Observair* Newsletter should be directed to the Editor, Colin Hine

All matters relating to membership or to receipt of the newsletter should be directed to the Secretary/Treasurer: Mat Joost

Kyle Huth	Chairman
Mathias Joost	Secretary/Treasurer
Colin Hine	Newsletter Editor
Don MacNeil	Program convener
Hugh Halliday	Official Greeter
George Skinner	Museum Liaison
Bill Clark	Refreshments

PAST MEETING

Alex Schmid

History and Current Operations of Sander Geophysics Limited



Speaker Alex Schmid, Sander Geophysics Limited © Rod Digney

On Thursday 29 May, 2014 members attended the Annual General Meeting of the Ottawa Chapter of the CAHS in the Bush Theatre of the Canada Aviation and Space Museum (CASM). Also that evening, Alex Schmid shared with members and guests some of his experiences as a pilot and geophysicist with Sander Geophysics Limited (SGL), detailing some of the company's history, the types of airborne surveys the firm undertakes and details of aircraft SGL owns, operates and maintains. Alex's talk was well received and he fielded a variety of questions, both during and after his presentation. The talk was of particular interest to many local CAHS members, several of whom have a history working for Ottawa based aerial survey firms.

SGL, founded in 1956 by Dr. George W. Sander (1924-2008) to provide ground geophysical surveys, the firm began performing airborne surveys starting in 1958 and by the mid/late 1960s airborne geophysical surveys became the firm's primary focus. Today SGL provides worldwide airborne geophysical surveys for petroleum and mineral exploration, as well as geological and environmental mapping. Interestingly the firm does little of the aerial photo survey work for topographical mapping that was commonly performed by other Ottawa based aerial survey firms in the past. The company is now led by co-presidents Luise Sander and Stephan Sander.

Unlike many aerial survey companies today that tend to lease aircraft for the duration of a contract or project, SGL owns and maintains its entire fleet of aircraft. The firm's head office and aircraft maintenance hangar are based at Uplands (Ottawa International Airport). SGL operates worldwide and under diverse conditions (tropical, desert, mountainous, Arctic/Antarctic as well as offshore).

Airborne survey services SGL provides include; gravity surveys; magnetic field and gradient surveys; electromagnetic surveys; as well as gamma-ray

spectrometer surveys, airborne scanning surveys and methane sensing for environmental monitoring. SGL also provides data processing services and provides clients with rapid result for evaluation while surveys are in progress as well as specialized processing to detect and measure natural and anthropogenic radiation.

The company owns and operates 17 aircraft, one of the largest fleets of dedicated geophysical survey aircraft. These include:

- Cessna 208B Grand_Caravan 8
- de Havilland DHC-6 Twin Otter 1
- Diamond Aircraft DA42 Twin Star 3
- Cessna 404 Titan 1
- Britten-Norman BN2B-21 Islander 2
- Airbus Helicopters AS350 B3 2

The fixed wing aircraft have been modified to reduce their magnetic effects. Further details on these aircraft and on the geophysical survey systems and equipment with which they are equipped can be found on the SGL web site <http://www.sgl.com>.

Since 1990, SGL has flown and compiled more than 5 million line kilometres of high resolution airborne geophysical data. All of this has been accomplished with no aircraft accidents or serious injuries. Safety is taken very seriously at SGL and is always a primary factor in any decision. The company is a founding and active executive member of the International Airborne Geophysics Safety Association (IAGSA), which promotes the safe operation of helicopters and fixed-wing aircraft on airborne geophysical surveys.

The company has a very relaxed and open culture. All members, management and employees, are know to each other on a first name basis and are encouraged to express their views and concerns on company issues and operations.

Colin Hine

PUBS & MAGS

Airliner World (June 2014)

- 2 pp. photo-spread on propliners at Shannon, Ireland, in the 1960s and 70s; includes a June 1967 visit by Canadair C-54GM North Star CF-SVP-X of the National Aeronautical Establishment

Aviation News (May 2014)

- 2 pp. on the Marriott Hotel at Pierre Elliot Trudeau International airport in Montreal, in their continuing series on great photo locations.

Aviation News (June 2014)

- 6 pp. on the Canadair Sabre F.4 in RAF service (based on the book *Cold War Shield, RAF Fighter Squadrons 1950-1960, Vol. 2: Vampire, Venom and Sabre Squadrons*, by Roger Lindsay – www.coldwarshield.co.uk)

Jets (Jul/Aug 2014)

- 6 pp. on flying the Turbo Otter seaplanes of Harbour Air in southern BC.

Bill Clark

RAMBLING THROUGH RECORDS

Dummy Parachutists

Many may recall the scenes in the movie "The Longest Day" involving British troops throwing dummy parachutists out of aircraft on the night of the invasion. Fitted with pyrotechnics, they were to lure German attention away from the real landing areas - and they may have worked briefly. As the dummies were pitched from the aircraft, they were called "Rupert" and exhorted to do their duty.

On-line browsing advised me that some 500 "Ruperts" were dropped that night. However, there was an earlier application of these devices, which I discovered when examining the service file of Flying Officer Gowan Vernon Gibson (Toronto), killed on the night of 11/12 July 1943. His documents included proceedings of an investigation into the loss of Dakota aircraft FD815 of No.267 Squadron, then based at El Aouins, Tunisia.

The unit had despatched four aircraft to carry out a special mission over Sicily, which had been invaded by the Allies the previous day. Three machines completed the operation, but FD815 caught fire three minutes after take-off, rapidly became a flying torch and crashed in flames. Four aircrew were killed including Gibson and his RCAF co-pilot, Flying Officer Harry Grant Spencer of Milverton, Ontario. Gibson had been with the squadron since July 1942 and Spencer since August 1942. Also aboard were an RAF Wing Commander acting as an Air Ministry observer and an officer of the Royal Army Ordnance Corps, described as being in charge of Fifteenth Army "Special Equipment."

Several witnesses testified as to having seen the aircraft burning fiercely in the air before it crashed. There was little mystery as to what had happened. The Dakota had been carrying twelve or thirteen dummy parachutists fitted with explosives and "pintails" (detonators). Major R.A. Bromley-Davenport declared that instructions had been to "withdraw the pins of the pintails when the aircraft was airborne" However, he also stated, "I did not specify how long after being airborne this should be done. I also warned them that the dummies would ignite if the pull ignition was operated and that they must take care to keep away from the attachment lines. I also said that after the pin had been removed the pintail would explode if dropped."

Final arming was to be done with static lines as the dummies were thrown out, but it was pretty obvious that many things could go wrong before then. In the case of FD815 they had either been loaded with pins already removed, or that the pins had been taken out soon after take-off. From that point on they were an accident waiting to happen.

The inquiry concluded that the dummy parachutists were "reasonably safe" but that "the pintails are unsafe in their present form and should not be carried in aircraft until

modified." Presumably, this was done before the mass drops of "Ruperts" eleven months later.

Hugh Halliday

COULD CANADIAN AEROSPACE TECHNOLOGY HAVE AIDED THE SEARCH FOR THE MISSING MALAYSIAN AIRLINES' FLIGHT MH370?

In light of the ongoing uncertainty surrounding the fate of the Malaysian Airlines' Flight MH370 in March 2014, and its possible location it is very likely that the International Civil Aviation Organization (ICAO) will introduce new regulations regarding the way in which aircraft radar transponders, Global Positioning Systems, aircraft data recording/reporting and other options are used.

This incident also reminds me of the effectiveness of a family of Crash Position Indicators (CPI) originally manufactured by Leigh Instruments Limited using technology developed by the National Research Council of Canada (NRCC). If these devices were still deployed routinely on aircraft, it is very possible that the missing plane's position could have been determined quickly and the cause of the loss confirmed.

The CPI incorporates a tumbling airfoil device that is ejected from the aircraft after impact allowing it to "fly" away from the plane's crash site and avoid destruction. The devices also incorporate flight data recorders and emergency locator beacons. The CPI can float on the ocean surface making the chance of its location much more certain and timely.

The CPI concept was first developed by inventor Harry Stevinson, before he joined the NRCC's National Aeronautical Establishment (NAE) and he convinced them to pursue its development. Other rescue beacon systems had already been developed and deployed, but Stevinson felt these were inadequate for a variety of reasons. If a crash occurred over water, other beacons would sink with the aircraft even if the crew escaped and were on the surface. Over land, the aircraft itself could block the signal if the beacon ended up buried under the fuselage. Also the crash itself or a post-crash fire might well destroy it.

Stevinson's system offered survivability, using an aerodynamic release system that would pull the system away from an aircraft quickly as well as a ruggedized radio system with an omnidirectional antenna. Survivability on both land and water was further enhanced by using lightweight foams in the construction.

CPI development was completed in 1959 and a production license was eventually settled at Dominion Scientific Instruments (DSI) of Ottawa. DSI in turn

contracted Leigh Instruments of Carleton Place to manufacture the system.

The CPI was made mandatory on Canadian Air Force aircraft working in the far north and it soon proved its effectiveness. In one instance, an aircraft lost in the Yukon mountains was found by CPI in a location where visual location would have been impossible; in another, a USAF aircraft crashed into the ocean at night, but its injured crew was rescued after the CPI broadcast was detected. Following this, even US Air Force One was equipped with a CPI.

By the 1970s, the CPI with a flight data recorder was a standard item on many Canadian and US aircraft. It was also selected for the Panavia Tornado, was optional on many other aircraft types and was commonly used on bush planes.

The CPI's success was such that Leigh Instruments eventually purchased DSI, and by 1978 yearly sales of modern CPI devices were in the millions of dollars. Total sales over the years topped \$100 million and Leigh became one of Canada's largest electronics firms and a darling of the Toronto Stock Exchange. The company's business interests diversified into other aspects of systems engineering for the Canadian Government; in particular vessel traffic management systems for the Canadian Coast Guard, TACAN systems for the Air Force and shipboard communications systems for the Canadian Navy. This writer was involved in development of these aspects of Leigh's business during the 1970s.

In 1988 the British firm Plessey announced it would purchase Leigh. Following the takeover Leigh was delisted (taken private), then in 1989 Plessey was subjected to a hostile take-over by a consortium formed by GEC and Siemens which split the assets of the Plessey group. The majority of Plessey's defence assets were amalgamated into BAE Systems (BAe) in 1999 when BAe merged with the defence arm of GEC, Marconi Electronic Systems (MES). The bulk of Plessey's telecommunications assets were acquired by Ericsson through its 2005 acquisition of Marconi Corporation plc, a successor company of GEC.

Over a two-year period, 1998 to 1990, following Leigh's privatization the company's borrowing increased from nil at the time of the take-over to over \$40 million. Bank lines of credit to Leigh were unsecured; the parent company had not formally guaranteed the loan and Leigh went into bankruptcy. Some of Leigh's outstanding contract commitment were taken over or seconded to other Canadian firms and some of the firm's assets and technology were sold off.

Today, most aircraft carry non-ejectable beacons, some incorporating technology originally used by Leigh, but ejectable versions featuring tumbling airfoil technology are seldom seen; one really has to wonder why. While the inclusion of CPI technology would not have prevented the loss of aircraft such as Malaysian Airlines, Flight

MH370 or Air France, Flight 447 over the Atlantic in 2009, it would surely have enhanced the probability of locating the planes' wreckage in a timely manner, thus giving family and friend of crash victims some answers and perhaps some closure.

As I noted earlier, it is inevitable that changes to flight safety rules, procedures and technology will result from these incidents, in particular from the uncertainty surrounding the loss of MH370. Perhaps the innovative Canadian technology used in Leigh's CPI will one day see a renaissance in modern aircraft systems?

Colin Hine

VINTAGE WINGS OF CANADA HADFIELD YOUTH SUMMIT

The 2014 CF-18 Demo team was there, the entire Snowbird team was there, and there was a static display of vintage and contemporary aircraft; but it was retired Canadian astronaut Colonel Chris Hadfield who captured the attention of everyone at Vintage Wings of Canada's Hadfield Youth Summit, held at Gatineau-Ottawa Executive airport on 30 June 2014. In an event sub-titled "A Day of Inspiration and Leadership Development for Youth", VWoC hosted a large contingent of air cadets, and VWoC members and their older children for a day of inspirational presentations by Hadfield and other present-day heroes, and a mini air show with a full aerobatic performance by CF-18 Demo pilot Capt Adam "Manik" Runge.

From the moment he arrived in VWoC's Curtiss P-40 Kittyhawk piloted by his brother Dave, Hadfield was the centre of attention. In a theatre-like setup inside the hangar, he described in animated and enthusiastic fashion not only his missions to the International Space Station, including his stint as Commander in 2013, but some of the character traits necessary to prepare oneself in advance for the kind of exciting career opportunities he has had. After listening to Hadfield, one comes away with the feeling that this guy could excel at absolutely anything he set his mind to. A question and answer period preceded a private lunch for all the youth with Hadfield, the Snowbird pilots and ground crew, Capt Runge, Michael Potter and numerous other inspirational achievers from the world of aviation and aerospace.

A photo session followed and a fantastic almost private show by this year's CF-18 Hornet completed the day. Surely the bright-eyed youth in attendance went away inspired to do great things with their lives (see <http://www.vintagewings.ca/Portals/0/Hadfield%20Photo/HadfieldSummitPhoto2.pdf>).

While flying activities have been scaled back at VWoC this year, and there will be no Wings Over Gatineau air show, VWoC continues to innovate with its youth oriented educational and inspirational programming. KUDOs to Vintage Wings of Canada and their cadre of dedicated volunteers.

Rod Digney



Col. Chris Hadfield and his brother, Dave, at VWoC, Hadfield Summit, 30 June 2014 © Don MacNeil



Capt. Captain Adam "Manik" Runge makes a high performance takeoff from runway 27 at the Gatineau-Ottawa Executive Airport at the start of his routine at the VWoC Hadfield Youth Summit. © Rod Digney



RCAF CF-188 Hornet 188761 in its special 2014 colour scheme that celebrates the 90th anniversary of the RCAF © Rod Digney



Capt Adam Runge following arrival in RCAF 2014 Demo-CF-18 at VWoC Hadfield Summit © Don MacNeil



Capt Adam "Manik" Runge makes dramatic touch-and-go landing upon arrival in the RCAF's 2014 Demo CF-18 Hornet at the Gatineau-Ottawa Executive airport. © Rod Digney



Tail markings detail, RCAF 2014 Demo-CF-18 at VWoC Hadfield Summit © Rod Digney

YOWza!

This month's YOWza! Photo-page features images of some recent sightings at the Ottawa Macdonald-Cartier International Airport (YOW) as well as photographs from other locations.



Air Canada wasted no time getting its new Boeing 787-8 Dreamliners into the air. Following delivery to the airline's Toronto base on 14 May, the first aircraft in the fleet, C-GHPQ (c/n 35257), FIN 801, immediately began crew training flights of several hours at a time, often touching down or doing approaches at Toronto, Ottawa, Montreal and Mirabel airports. Here, 801 is seen performing touch-and-go's off YOW's runway 07 on 22 May 2014.

© Rod Digney



As part of the National Day of Honour commemorating Canada's mission in Afghanistan on 9 May 2014, RCAF Boeing CH-147F Chinook 147310 was flown onto the central lawn at Parliament Hill for static display. The new Chinook fleet is operated by 450 Sqn based at CFB Petawawa ON.

© Rod Digney



Prototypes of Bombardier's largest aircraft project, the CSeries narrow-body, twin-engine, medium-range jet airliner have been visiting Ottawa on flight tests since the type's first flight on 16 September 2013. Here, the fourth flight test vehicle (FTV4) of the smallest CS100 version, registered C-GWXK (c/n 50004) performs a single missed approach to runway 25 on 20 May 2014.

The CS100 is intended to carry 108-125 passengers, while the larger CS300 will accommodate 130-160 passengers.

An uncontained failure of one of the type's new Pratt & Whitney PW1500G engines on 29 May curtailed further flight tests and prevented the company from exhibiting the CSeries at the Farnborough air show in July. Nonetheless, firm orders now exceed 200 aircraft and more than 150 options are penciled into the order book.

© Rod Digney



An impressive flypast took place over Parliament Hill on 9 May 2014 as part of the National Day of Honour commemorating Canada's mission in Afghanistan. The flypast comprised a CC-130J Super Hercules, CC-130H Hercules, CC-150T Polaris, CC-117 Globemaster III, CP-140 Aurora, and a gaggle of CH-147F Chinook and CH-146 Griffon helicopters.

© Rod Digney

MEL TAYLOR (1917-2014)

Melville (Mel) Taylor a veteran member of the Ottawa Chapter passed away on July 7, 2014 at the age of 97. I had the good fortune to meet with Mel and his wife Rita in Carleton Place in March of 2013 whilst interviewing him for a research project at CASM. The day of our meeting was likely not the best for Mel and Rita, as shortly before we met they had been in a minor traffic collision. However, we had an interesting discussion and I learned about some of Mel's flying experiences.

Mel began flying in 1936. Back then, making all of eight dollars (for a 60 hour week) working in a hosiery factory, finding money for flying lessons was a challenge. Flying solo was \$6 an hour, but somehow he managed it. He recalled flying from Barker Field in Toronto in a Piper Cub. He flew with brothers Walt, Clare and Art Leavens from Bellville Ontario who toured the country doing joy rides. Mel eventually took up parachute jumping with the Canadian Parachute Club to entertain crowds. "We used to walk out onto the wing then jump."

Early in the war he worked for the British Commonwealth Air Training Plan (BCATP) in navigator training, flying Ansons out of Barker field. Wilfrid "Wop" May, a famous first world war pilot, and pioneer bush pilot became general manager of the No.2 AOS Edmonton. He hired Mel to work in parachute training in Edmonton.

In the early 1940s BCATC opened up in Quebec City. Mel got transfer there and got his pilot license. General manager Mike Dubliqui, a bush pilot, took Mel on as a civilian pilot. He worked there till 1945 training navigators, then got a \$500 per month job with Quebec Airways. After the war Mel worked for a training school in Toronto then later got into gliding with Gatineau Gliding Club. "They used a Tiger Moth to tow/launch gliders, release at 1 or 2 thousand feet."

He remembers flying Ansons in all kinds of weather conditions while training navigators. "On one occasion while following a railway track to for guidance I spotted another Anson below me and I was flying at 500ft! Another time approaching with flaps and wheels down I spotted a plane taking off towards me and had great difficulty (fun) taking evasive manoeuvres."

Mel didn't work in the air business after war, but did a lot of civil recreational flying. He flew out of Arnprior for a while and held onto his pilot's license until quite recently. He logged about 2,000 hours total flying time.

Mel commented that "At breakout of war the air force did not have many pilots, they only built up after 1942. Most pilots had university degrees and were commissioned; less qualified pilots became Pilot Sergeants. I have no regrets and I'm happy with what I did." Mel met Rita in Cornwall, they married in 1944.

Colin Hine

CLAUDE LAFRANCE (1929-2014)

Life presents us with many challenges and opportunities. In his life, Claude Lafrance made the most of them. Enlisting in the RCAF in 1947 he showed his skill as a pilot and served as an instructor. His flying skills were noted and he was selected to serve in Korea where he was awarded the American DFC and Air Medal.

Transferred to 441 Squadron in Germany, one of his duties was an attachment to the French Air Force at Dijon before he became the executive assistant to AVM HB Godwin, AOC of the Air Division. In 1969 he formed the first truly French-language unit in the Canadian Armed Forces - 433 Squadron.

Integration brought its own challenges during the formative years. Claude was involved in the early years, being appointed Deputy Commander of No. 10 Tactical Air Group, Commander of CFB Winnipeg and ADM (Policy) and finally Director General Plans and Policy. His final position was as 1979 Chief of Plans policy and Programs at NORAD. When he retired in 1981 as a Major General, he was the last fighter pilot in the CAF to have been in combat.

Retirement was not one of inactivity for Claude. In 1985 he accepted the position of assistant deputy minister for aviation for Transport Canada. He then became a consultant for the ICAO and president of EADS Canada. He remained active with the military and civilian organizations, being Honorary Colonel of 1 Wing for over four years. Having been active in the Korean Veterans Association, he returned to Korea in 2011 as a guest of the Korea government. Claude passed away in July 2014. He left behind him a legacy of service and a wealth of friends proud to have known him at the many stages of his life.

Mathias Joost



LCol Lafrance, as CO 433 Squadron, in CF-5 cockpit: © CAF-Directorate History & Heritage

**NEXT MEETING OF THE OTTAWA CHAPTER,
CANADIAN AVIATION HISTORICAL SOCIETY**

Ernest (Ernie) Cable

ARGUS-The RCAF Maritime Champion

The talk will cover events that led to the procurement of the Argus and some notable Argus operations.

We are attempting to gather an entire Argus flight crew to answer questions after Ernie does the overview presentation of the aircraft - its acquisition, mission, operations, etc.

Everything you ever wanted to know about the Argus fleet, from the people who crewed them.



RCAF CP-107 Argus No. 10728, Ottawa (YOW) 1975 © Rod Digney

Location: Bush Theatre, Canada Aviation and Space Museum, Rockcliffe

Date/Time: Thursday, 25 September 2014, 1930 Hours

Meetings include guest speakers, films, slide shows, coffee and donuts.

Visitors and guests are always welcome.

Landing Fees: \$1.00