

CA. 1. 2227

DEC 1 1961

*News on the* **DOT**

DEPARTMENT OF TRANSPORT STAFF PUBLICATION—NOVEMBER-DECEMBER 1961



## ABOUT TWO MOIRAS, A "STOOMBOOT", AN OPTICAL ILLUSION AND A DOTLESS DOT

If this issue of News on the DOT is not quite up to your magazine's usual standard of excellence, it's because its editor, Yvonne McWilliam, is on leave of absence. Mrs. McWilliam gave birth to a baby girl in September and called her Moira.

The dramatic shot of Canada's largest and newest icebreaker on our cover was made by another Moira, Canadian ice scientist Moira Dunbar, on the trip during which she also photographed the installation of the automatic weather station on Axel Heiberg Island.

The cover ties in with the pen-fruits of Ken Parks and Captain Kelso on ice-breaking and ice observing.

Coming at Christmas, the picture reminds me of a Santa Claus song I learned as a child in Holland. To Dutch children, Santa Claus is a bishop who goes under the more dignified name of Saint Nicholas and comes to the Low Countries by "stoomboot uit Spanje" (steamboat from Spain) every year. He rides a white horse and is accompanied by his Moorish helper, Zwarte Piet (Black Peter).

The song, in a free translation, goes somewhat like this:

Look, there is the steambot,  
It's coming from Spain.  
It brings us St. Nicholas  
To visit us again.  
On deck is his white horse,  
I can see it at last.  
And look at those gay flags  
Flying high from the mast!

In the barren Arctic, where there are no trees or other landmarks to judge distances by, and where the air is as pure as an incubator except for radio-active fallout, far-away things always seem closer than they are.

A good illustration of this is the photo of the installation of the robot weather eye on page 4.

Here's a test to amaze your friends, educate the kiddies and solicit suspicious looks from your wife: Put your finger on the John A. Macdonald seen in the background, and have someone guess how far away the water's edge is.

Ten to one the answer will be "a few hundred yards." In effect the installation took place one full mile inland. Take your finger off the "John A." and you'll see how small the ship seems—an indication of the distance.

Rescued from my circular file: a scrap of paper with two lists of Canadian place

names. One list starts with Halifax, B.C., the other with Victoria, Nfld.

The idea was to begin the "DOTs on the Map" column in this issue with some statement to the effect that D.O.T. offices are found across the nation from Halifax to Victoria—Halifax, B.C. that is, and Victoria, Newfoundland.

Trouble was, though B.C. does have a Halifax and Newfoundland a Victoria, the department has no establishment in either place.

The same proved true of the other East-West pairs of odd place names culled from a gazetteer: Ta Ta Creek, B.C. and Witless Bay, Nfld.; Cinema, B.C. and Monroe, Nfld.; Likely, B.C. and Prospect, N.S.; Hydraulic, B.C. and Electric, Ont.; Leechtown, B.C. and Mouse Island, Nfld.; Big Bar Creek, B.C. and Gin Cove, Nfld. or even Virgin's Arm, Nfld. and Bridesville, B.C.

However, what really made me slide from the summit of expectation to the pit of disappointment was the discovery that there is no D.O.T. office in a dot on the map called Dot, B.C.!

John de Bondt

### "Canada's First Weatherman" reprinted from The Beaver

Through an oversight, the excellent article on Peter Fidler, "Canada's First Weatherman," by A. Burnett Lowe in the September-October issue of News on the DOT appeared without credit to the magazine from which it was reprinted.

The article first appeared in *The Beaver*, published by the Hudson's Bay Company, Winnipeg.

News on the DOT reprinted it with the kind permission of *The Beaver's* editor, while the company's librarian kindly furnished the accompanying illustrations.

#### News on the DOT

Staff magazine for the  
Department of Transport  
Published under the authority  
of the Minister,  
Hon. LEON BALTER, O.C.  
by the Information Services Division,  
Ottawa.

Editor: Yvonne McWilliam

Vol. XII No. 6

November-December 1961

*Christmas is traditionally a time to renew old acquaintances and make new friends, to sow good cheer and reap goodwill.*

*To all of you who make up the Department of Transport I want to say "Thank you" for your co-operation in making my first year as your Minister one of the pleasantest and most rewarding of my career.*

*In sending you my best wishes I emphatically include those who serve the Department away from home on ships, in lighthouses and in lonely outposts.*

*A very Merry Christmas and a happy, prosperous New Year to all of you!*

*Le temps des Fêtes donne l'occasion de renouer avec les vieux amis et de s'en faire de nouveaux, de semer de la joie, de récolter des marques de bonne volonté.*

*A vous tous du ministère des Transports, j'adresse mes remerciements pour la collaboration que vous m'avez accordée. Grâce à cette collaboration, ma première année à titre de ministre des Transports a été l'une des plus agréables et des plus enrichissantes de ma carrière.*

*J'offre à tous mes meilleurs vœux, sans oublier ceux qui, loin de leur foyer, sont de service sur les navires, dans les phares, dans les postes éloignés.*

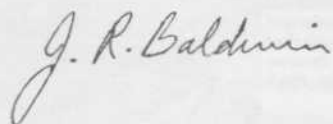
*Joyeux Noël! Bonne et heureuse année!*



*I am pleased to have this opportunity to extend to you and your families my warmest Christmas greetings and sincere good wishes for a peaceful and happy New Year.*

*During this season, when being "home for Christmas" is a joy sought by all, my thoughts go out to those who have to spend the holiday separated from family and friends.*

*Wherever you may be at Yuletide, thank you for serving the Department so well during the past year. May your Christmas be filled with cheer and may the New Year bring you nothing but happiness.*



On August 17, 1961 at 1500 GMT, automation came to the Canadian Arctic.

At that moment the world's first radioisotope-fuelled weather station on Axel Heiberg Island started transmitting weather data, fulfilling a dream meteorologists had dreamed for years.

The Canadian head of the party that put the unmanned station on the island was D. C. Archibald, chief of the basic weather division of the department's meteorological branch.

Here Mr. Archibald tells readers of News on the DOT of his historic mission to install a

# Weather Eye At Sherwood Head

by D. C. Archibald



**ARCTIC WEATHER EYE**—Volunteer workers from CMS John A. Macdonald help with installation of world's first isotope-powered automatic weather station. Steel cylinder (centre) containing electronic deck and isotope unit is partially buried in permafrost on Axel Heiberg Island in High Arctic. Icebreaker is seen in background.

Meteorologists had long dreamed of having unmanned weather stations operating automatically in remote or inaccessible areas from which reports were important. Their vision has now come into focus with the installation of a fully automatic station designed to operate unattended for two years.

Basically this station consists of meteorological instruments, electronic equipment, transmitters, antennae and towers, and a reliable power source. It reports dry bulb temperature, barometric pressure and wind direction and speed averaged for eight-minute and one-minute intervals.

The housing for the automatic weather station is a cylindrical shell eight feet long and 26 inches in diameter with a weather-proof flange bolted to the upper end.

The cylinder is set vertically five feet in the ground. A snorkel-like tube attached to the shell protects the cable connected to the meteorological instruments mounted on a 35-foot tower in the immediate vicinity.

A three-cup anemometer and wind vane top the tower. A radiation-shielded thermometer and junction box are attached to the side of the tower.

The electronic data processing and transmitting equipment, called the electronic deck, is located in the upper part of the cylinder. The barometer is mounted on the electronic deck.

The isotope power source is housed at very bottom of the steel shell with the nickel cadmium batteries above it. A precision mechanical chronometer, electrically rewound, activates the data processing system. The data are then automatically transmitted on two frequencies to the receiving station at Resolute.

The high speed transmission lasts approximately six seconds. The information picked up at the receiving station is converted into our regular synoptic meteorological code for transmission on the continental teletype network.

One unusual part of this equipment is the power unit. A radioisotope of strontium-90 securely locked in the compound strontium-titanate is used as the power source. The compound has been made into checker-like pieces approximately two inches in diameter and one inch thick. These are stacked in a special alloy cylinder capable of withstanding very high temperatures.

About three-quarters of a ton of lead is used for the major portion of the biological shielding. The heat energy of the decaying isotope flowing through the thermo-electric elements produces a direct current.

Five watts of electrical power is generated and recharges the nickel-cadmium batteries which power the transmitter. Each transmission—every three hours—uses about 1,000 watts.

Although the equipment had been developed and built in the United States, there was a desire to install it and try it out

under rugged Arctic conditions, an opportunity welcomed by Canada.

For meteorological purposes a site on Graham Island in Norwegian Bay, about midway between Resolute and Eureka, was selected as first priority. However, we had learned from experience in siting the joint Arctic weather stations that one must have alternate plans. Three other possible locations were, therefore, selected in order of priority.

Mr. J. G. Dyer, chief of polar operations in the United States Weather Bureau, and technicians Al Sullivan and Ed Mills joined me on an RCAF flight from Edmonton to Resolute. The total installation party of 13 assembled in Resolute and boarded the D.O.T. icebreaker CMS *John A. Macdonald*.

Aboard ship a keen interest was displayed by captain, officers and crew and one could easily sense an air of urgency associated with this historic expedition.

All of the meteorological equipment, the isotope-powered unit, the test gear and ancillary equipment had been carefully loaded aboard the icebreaker in Montreal.

The isotope-fuelled unit particularly had to be handled very carefully and for this reason it had been transported by escorted truck from Baltimore to Montreal at a speed of about 30 m.p.h. In order to give it a softer ride the tires of the truck were only partially inflated.

Our careful preparations included high-powered rifles, sleeping bags, tents and food rations. Since ten holes had to be dug to a depth of four to five feet and we expected difficulties with the permanently frozen ground, a steam jenny to melt the permafrost was included in the installation gear.

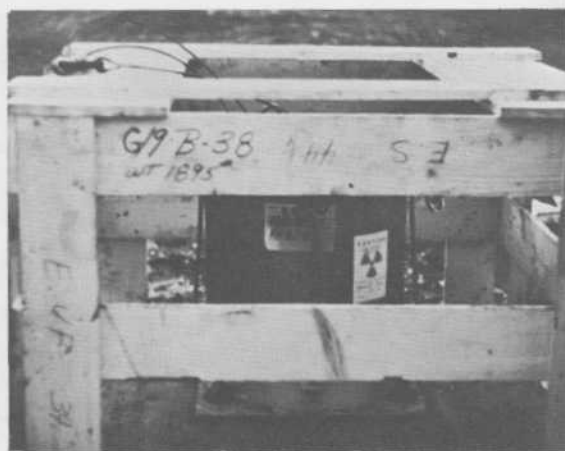
With comparative ease the *John A. Macdonald* came abeam of Graham Island in the early morning of August 15.

About an hour before breakfast Mr. Dyer in one helicopter and I in the other went ashore to examine the possible installation site. Captain Cuthbert and his first officer, Mel Lever, came ashore to examine the approaches to the beach with respect to the possibility of landing the equipment.

From a meteorological point of view Graham Island appeared an ideal site. Although the depth of the active layer of soil was only 11 inches, there were a couple of small streams which would provide adequate fresh water for the operation of the steam jenny.

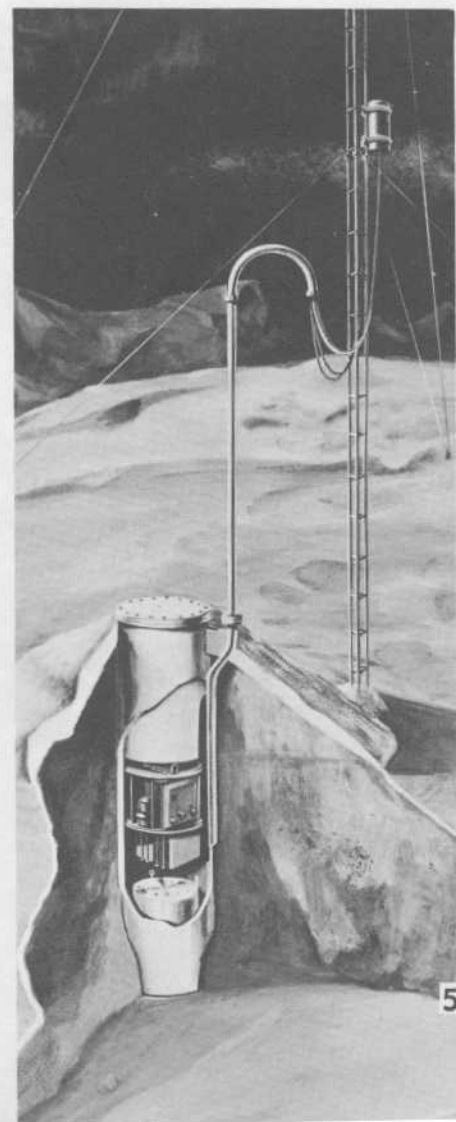
Unfortunately there were shallow approaches to the shore where the water depth was approximately 2½ feet at a distance of 200 feet from shore. This, coupled with the fact that a considerable amount of ice blocked the direct access by barge from ship to shore, made it impossible to land the equipment.

(Continued on page 16)



WHAT MAKES IT TICK—Lead-shielded isotope-powered unit in its packing case. Note weight on crate: 1,895 lbs.

ARCTIC ROBOT—Cut-away drawing shows how cylinder containing isotope-powered unit (bottom) and electronic instruments (centre of cylinder) is half-buried in permafrost. Nearby tower contains meteorological instruments (top).





**CUTTING THE RIBBON**—Hon. Leon Balcer, Minister of Transport, snips the ribbon officially opening the new airport at Trois Rivières on Oct. 22, while other dignitaries lend a helping hand. In the photo from left, are Mayor Achille Lupien of the municipality of St. Michel des Forges, in which the airport is located; Mayor J. A. Mongrain of Trois Rivières, Hon. Mr. Balcer, and H. J. O'Connell, contractor whose firm paved the airport.

## VAST CROWD ATTENDS TROIS RIVIERES AIRPORT OPENING

**THEY CAME BY THOUSANDS**—Seen here is but a part of the crowd, estimated at more than 16,000 persons, that viewed the official opening of Trois Rivières airport. Before the affair had ended, the incoming traffic had completely jammed the three main roads leading to Trois Rivières for a distance of several miles. Not shown in this photo are some 4,000 cars parked on an old airstrip located near the airport, and more than 100 aircraft on hand for the ceremony.

More than 16,000 residents of Trois-Rivières, Que., and the surrounding countryside were on hand on October 22 to witness the official opening of the city's new airport by Transport Minister Balcer.

For Mr. Balcer, the occasion was a particularly pleasant one, for Trois-Rivières is his home town. There were smiles all 'round and cheering applause as the Minister, wielding the scissors and ably advised by Mayors Lupien of St. Michel des Forges and Mongrain of Trois-Rivières, and H. J. O'Connell, contractor whose firm paved the airport, cut the ribbon that signified the flying field officially open. The airport was blessed by Mgr. F. X. St. Arnaud of Trois-Rivières.

So great was the crowd attending that some 4,000 cars were parked in the old airstrip nearby and the lines of incoming traffic were backed up all the way to the city, several miles distant, along three highways. A Department of Transport helicopter flown by Bill Glennie finally was pressed into service by police officials and provided them with a flying observation platform from which to figure out a system of control that restored the flow of traffic.

Around 100 aircraft, business and private, were on hand for the event. The Royal Canadian Air Force, TCA, Canadair and the Quebec Government's air services staged an air show which, aided by perfect weather, made the day truly memorable for the entire district.



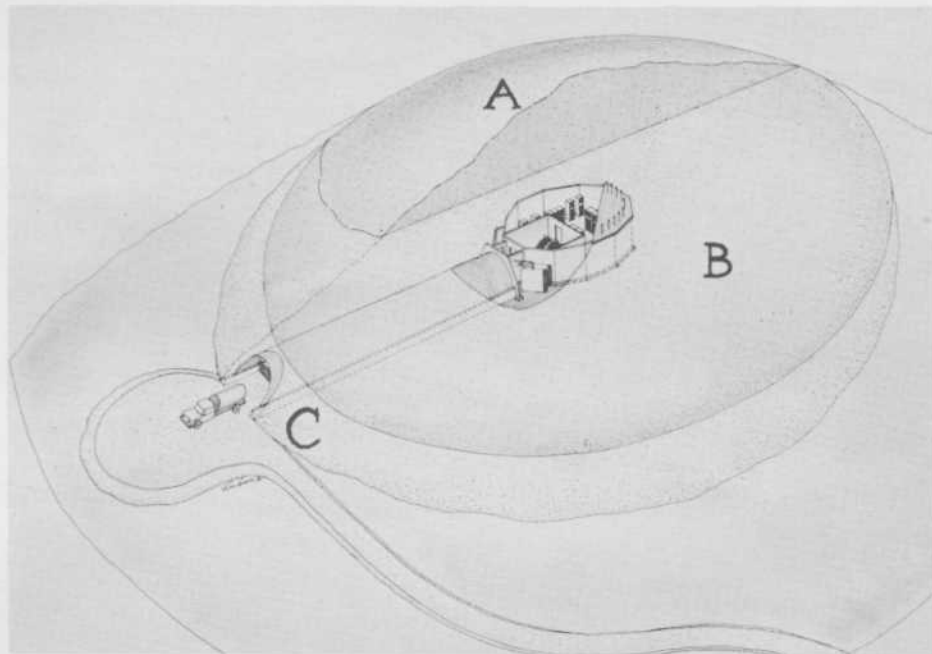
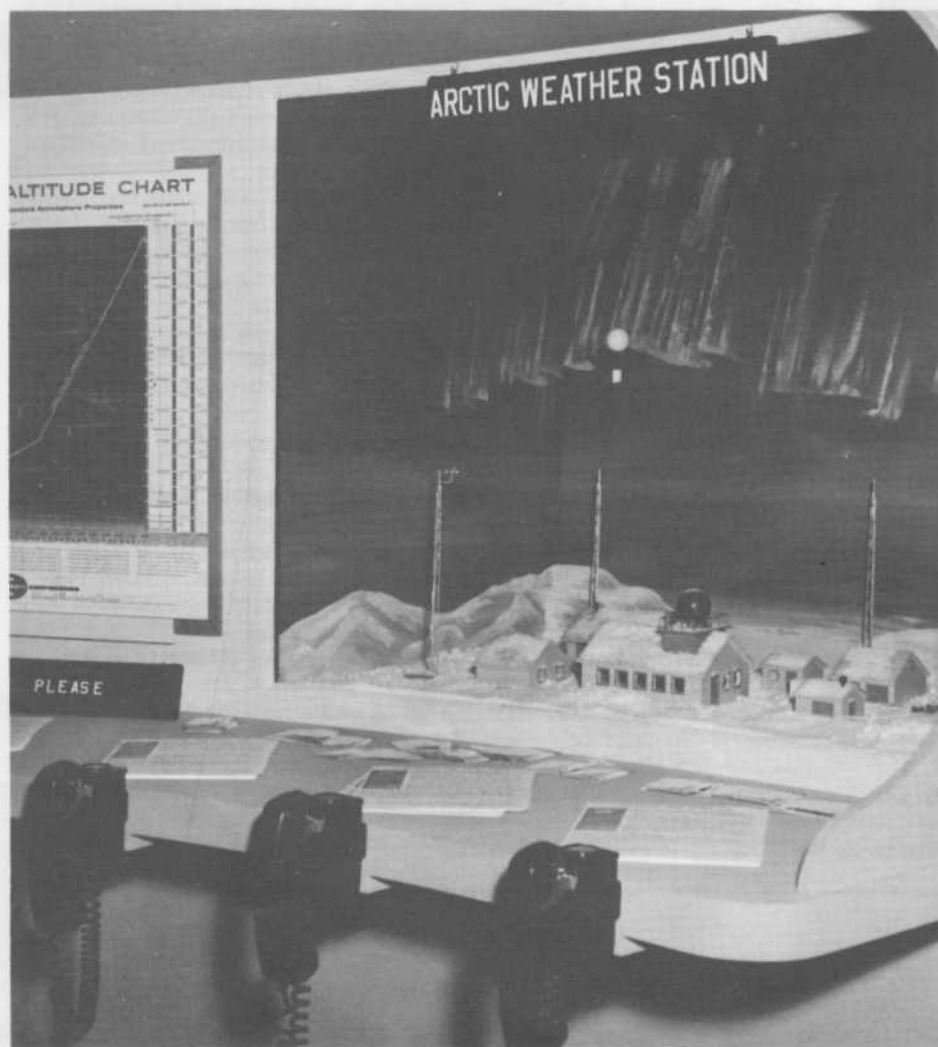
# DOTS ON THE MAP

Take any map of Canada and chances are that most of the towns shown are places where the Department of Transport has one or more employees. We also have foreign establishments and something's always happening somewhere. Here is the latest round-up of events at those DOTs on the map:

At ENDERBY, B.C., the department plans to build the world's first underground radio range. Located just below the surface at the top of a 7,000-foot mountain 16 miles northwest of Enderby, the very high frequency omni-directional range (VOR) guiding aircraft on the Edmonton-Vancouver airway will be combined with a military TACAN station.

Like all of Canada's 36 VOR installations

**MET MINIATURE**—Scale model of Arctic weather station, complete with northern lights and miniature radiosonde balloon was major attraction at CNE display designed, built and manned by met branch, Toronto.



**HIDDEN RADIO RANGE**—Artist's sketch shows how mountain top (A) near Enderby, B.C., will be sheared off to make unobstructed platform (B) under which VOR station will be buried. Tunnel is to connect range with side of mountain (C).

(and 14 more under construction) it will be unmanned.

The equipment to be housed in the structure calls for a round, flat, unobstructed platform 300 feet in diameter. Rather than extending the building's flat roof to that

size, the department found it will be cheaper to shear the peak off the mountain and bury the station beneath it.

It is expected to be operational late in 1962.

At TORONTO the meteorological branch had its weather display at the CNE for the 14th consecutive year.

The centre of the exhibit was a console with 36 switches corresponding to 36 questions on weather and climate. When a switch was pressed, the answer appeared on a board in front of the visitor.

Popular, too, was the model of an Arctic weather station (see photo), complete with a tiny balloon periodically rising above the station in simulation of a radiosonde release.

Other features of the Met display included Weatherfax and teletype machines and a current weather map.

ANTICOSTI ISLAND is the new site for the master station of the DECCA navigator equipment formerly located at Quebec.

The chain will henceforth be known as the Anticosti Chain and will provide radio navigation facilities for vessels in virtually the entire Gulf of St. Lawrence and the lower St. Lawrence River.

The master station is located at Port Menier on Anticosti Island and the "slave" stations, which are an integral part of the position-fixing system, are being established at Seven Islands and Natashquan on the north shore of the Gulf, and at Shippegan Island, N.B. at the entrance to Chaleur Bay.

It is expected that in the new location the chain will be more useful and be of particular service to icebreaking and other Winter shipping operations in the Gulf.



## OF ICE AND MEN

**E**VER since the first adventurers entered Cabot Strait and other Canadian waterways, ice has been a major hazard to shipping. Finding a safe channel was dependent upon sheer good fortune and the sharp eyes of the masthead lookout.

In the past several years, however, use of ship-based helicopters, reconnaissance aircraft and radar—all in support of the department's icebreakers—has made winter navigation—and Arctic navigation in summer—an easier matter.

The Department now has a fleet of 10

heavy icebreakers, as well as eight other vessels classified as "light icebreakers", capable of working in limited conditions of ice.

Nine of the heavy icebreakers are deployed in Eastern waters, including the St. Lawrence River and Gulf and around the coasts of the Maritimes and Newfoundland. The other, CMS "Camsell", serves as a supply and buoy vessel on the Pacific Coast during most of the year and in summer makes a trip to the Western Arctic, for which she was specially designed.

To support the icebreaking operations, the meteorological branch provides ice information to shipping, with experts from the meteorological branch trained for the work. They report on ice conditions from the various ships and carry out regular aerial ice surveys over the river and gulf shipping lanes, by means of chartered aircraft.

An "Ice Central" office has been established at Halifax, from which ice charts, based on the observers' findings, are made available to shipping and the public.

### It Pays To Increase Your Word Power

(wĭth e pŏl' e jēz tŏŏ tŭe rē' derz dī' jēst)

Check the word or phrase you believe to be the nearest in meaning to the key word or words. Answers are on page 12.

(1) FRAZIL (frā zĭl')—A: Ice spicules. B: Dutch gin. C: ruler. D: lip-like part.

(2) PANCAKE (pān' kāk')—A: Form of cosmetics. B: Newly formed ice. C: Dutch gin. D: Heavy sea ice.

(3) STAMUKHA (stah mŏŏ' ke)—A: Atomic cannon (U.S.S.R.) B: Literary style marked by inversion and antithesis (Hindu). C: Dutch gin. D: Piece of ice grounded on shore.

(4) POLYNYA (pŏ lĭn' ye)—A: water entirely surrounded by pack ice. B: Walt Disney character. C: Polish province. D: Dutch gin.

(5) ROPAK (rŏ' pāk')—A: Dutch gin. B: Dutch resistance fighter. C: East German police. D: Vertical piece of ice.

(6) BORREL (bŏrl)—A: Non-metallic solid element. B:

sea ice pushed ashore. C: Dutch gin. D: South African antelope.

(7) HUMMOCK (hŭm' ek)—A: ridge in icefield. B: hanging bed. C: footstool. D: Dutch gin.

(8) MANICE (mān' ĩs)—A: Shaving lotion (Trademark). B: Dutch gin. C: Capital of the Seychelles Islands. D: D.O.T. ice observers' manual.

(9) ICE FOOT (ĭs' fŏŏt')—A: ice bridge along shore. B: Frozen limb. C: Dutch gin. D: stiletto for cutting table ice (bar accessory).

(10) BERGY BIT (bŭr' gĭ bĭt)—A: small cheeseburger. B: Chunk of ice the size of a small cottage. C: Servants' role in TV play (after Samuel V. Berg, American actor often playing the butler). D: Dutch gin.

*Vocabulary rating:* 10-9 rare; 8-7 medium; 6-5 well done.





by Ken Parks

The year 1961 was the fourth in which aerial ice surveys were made over the Gulf region by ice observers based at Seven Islands, Que. An ice information officer, who is also an experienced deep-sea captain, is stationed at Sydney, N.S.

The ice information officer has the sizeable task of co-ordinating the operations of the icebreakers with the day-to-day shipping requirements. He acts as advanced operations officer for Capt. E. S. Brand, director of marine operations at Ottawa headquarters, so that the headquarters staff is fully posted at all times on the location and undertaking of all the icebreakers.

The ice observer, on completing a flight over the Gulf and lower St. Lawrence, prepares a chart of the ice he has seen and sends it by "Weatherfax" facsimile system to the Ice Central at Halifax. Additional copies are also made and forwarded to a regular list of subscribers, such as shipping companies and port officials.

In Halifax, the ice experts consolidate the information submitted by the observer with that obtained from observers on the icebreakers, from other ships and from other sources such as lighthouse keepers. They then prepare new charts giving detailed data for the entire area and these are broadcast by radio facsimile to shipping and all other interested parties. They also prepare ice forecasts which are transmitted both by facsimile and by mail to persons requiring them.

In summer, the ice observers are at work in the Hudson Bay—Hudson Strait area and across the High Arctic. During the past summer they reported on Arctic ice conditions from four northern field locations and eight icebreakers.

Their observations provided tactical support to vessels plying the shipping lanes to the grain port of Churchill, to the department's icebreakers, and to ships supplying various posts throughout the Arctic.

Their reports also added to the store of knowledge necessary in the development of the Canadian North.

Ice observations made on board and by helicopter from the eight icebreakers supplemented aerial ice reconnaissance carried out from field units at Frobisher Bay, Churchill, Cambridge Bay and Resolute Bay. Some of the field units operated until as late as mid-November.

Besides reports on the actual presence of ice, 30-day, five-day and one-to-two-day forecasts were provided by ice forecast offices at Cambridge Bay and Frobisher Bay and by the ice forecast central at Halifax.

Similar to Gulf and East Coast operations, ice information was broadcast at scheduled times by the department's marine radio stations and was also available on request.

Ice charts were broadcast regularly in radio facsimile form from Halifax and Frobisher Bay.

## THEY DISCOVER ISLANDS, TOO!

by Capt. E. L. Kelso

Ice Information Officer, Churchill

*The efforts of the department's ice observers and icebreakers not only increase trade and winter employment, but rescuing vessels in distress and discovering new islands is all in a day's work, too.*

*During the past four years the department's assistance has brought about the breaking of several cargo tonnage records on the Churchill route and placed confidence in masters of commercial vessels, several of whom are now annual visitors through the "route".*

*Aerial ice reconnaissance aircraft and other aircraft have saved two vessels in distress on the "route", although neither incident was caused by ice.*

*The ice reconnaissance aircraft had the unusual distinction of discovering an uncharted island in Hudson Bay. It was named Awrey Island, after a decorated Canadian war veteran.*

*During the winter of 1960-61 a promise to handle 1,000,000 tons of cargo through ice-infested waters of the Gulf of St. Lawrence and the river of that name was not only achieved but almost doubled.*

# THE BEST WAY OF DOING THINGS

"There is always a best way of doing things," Emerson once said.

In the past two months, 21 D.O.T.-ers were awarded a total of \$610 in cash as well as handsome other prizes for showing the department the best way of doing things.

## Ideas Unlimited in Edmonton

There is probably no one in the department who has had more suggestions accepted than Edmonton meteorologist R. G. Stark. He just received his 10th and 11th awards.

One was a camera outfit for suggesting a revision in the blue coloring of cities on aeronautical charts, to avoid pilot confusion, the other a cash prize of \$40 for proposing that form 9127 (Pilot's Report) henceforth include a box to indicate whether or not the temperatures observed aloft have been corrected for air speed and altitude.

## Cost-Saving Idea Pays \$170

It was a cool weather suggestion that paid off to the tune of \$170 for William R. Woolton of North Bay during the heat of the summer.

Mr. Woolton, who assists in the maintenance and overhaul of airport equipment, found that the best way to repair worn or damaged impeller casings on the airport's snow blowers was to use a replaceable liner. His method costs approximately \$28 per blower, including labor, whereas buying a new casing costs \$208.

## Simplifies Files—Gets Stove

M. Rimentberg, an aeronautical engineer at Winnipeg, chose a two-burner camp stove as his reward for recommending a change in the filing code for regional aircraft files. His amendment, since adopted at all offices where aircraft files are kept, simplifies operations.

## Barometer for Numbering Proposal

M. Lenko of the Port Hardy, B.C., control tower received a barometer air-guide for his suggestion to change the numbering on runway 7 at Port Hardy Airport to "07" in conformity with all published data about the airport.

## Pen Set for Simplified Statements

Gordon A. Funnell, a radio technician at the Kenora, Ont., aeradio station, selected a pen and pencil set as his award for pointing out that it is unnecessary to show in monthly statements of communications service charges to airlines what flights received this service, since the airlines know what flights they schedule.

## Gives Voltage Regulator Tip

A design for a by-pass switch to be installed with voltage regulators to maintain service to radio equipment while the regulator is being repaired, and a modification to the regulator facilitating maintenance won William F. McInnis, a radio technician at the Deming, N.S., Loran station, a power driver.

## Gets Field Glasses for Tag Idea

Mrs. Evelyn M. Warren of air services stores, Winnipeg, found that articles were often returned to stores without any indication as to size, voltage, gauge, strength, or what have you, causing confusion and, sometimes, the unnecessary ordering of new stock.

She suggested that an order be issued requiring field stations to tag and identify all usable items returned to stores—and received a pair of binoculars as her award.

## Joint Suggestion Pays \$140

Technician Frank W. Hartley and radio technician Norman H. McCrae were awarded \$70 each for their joint suggestion that prefabricated double jacks be used in the installation of house cables in airport terminal buildings.

A double jack is cheaper than two single ones and provides better line checking capabilities. The department will save an estimated \$1,700 during the first year of putting the proposal of Messrs. McCrae and Hartley into effect.

## Brings Lamp Problem to Light

Fletcher L. Woodworth, an airport attendant at Moncton, proposed the use of electric lights coupled with an extension cord to replace obstruction lanterns placed around aircraft parked after dark.

The department agreed that lanterns constituted a fire hazard and were not reliable, but found that it would be cheaper to buy battery-powered lights than to implement Mr. Woodworth's extension cord scheme.

Credited with bringing the problem to light, Mr. Woodworth received a barometer for his idea.

## Proposes Prepunched Pads

Mrs. Helen M. Walker, a typist in the telecommunications and electronics branch in Ottawa, won a travel iron for advocating that work orders in her branch be prepunched for easier filing.

## Chooses Clock for Radio Idea

Mrs. C. Danis, a clerk at Montreal International Airport (Dorval), recommended that the meaning of meteorological terms used in public weather broadcasts be explained to the public at the conclusion of each broadcast. She chose a ladies' alarm clock as her suggestion award.

## Baffles Don't Baffle Him

J. T. Hart, a radio operator at Sarnia marine radio station received \$30 for a technical proposition.

Apparatus deterioration has been retarded and maintenance time reduced as a result of Mr. Hart's plan to place an aluminum baffle between the ranks of tubes and transformers on the rear of Northern Electric duplex terminal equipment. This prevents heat radiated by the tubes from being directly absorbed by the transformers.

## EAC\* for SPDT on AVT-22B(4-T6)

Howard Baker, a radio technician at Gander, suggested the installation of an extra SPDT switch in the AVT-22B(4-T6) transmitter control unit for locally testing "key down" and "modulation in" carrier conditions. The modification has provided a local "test key". Mr. Baker selected an Electric Alarm Clock\*.

## Gets Third Award

C. A. Bambrick, a radio technician at Strathburn, Ont., won his third award—\$30—with the suggestion that an official standard transcription form be printed in view of the increased volume of verbatim transcription reports necessary at monitoring stations.

Mr. Bambrick mentioned in his suggestion that the majority of the staff at Strathburn station had collaborated on the idea.

## Interference Cars Get Outside Mirrors

J. J. Reid, a radio technician at the radio regulations engineering laboratory in Ottawa chose a briefcase for his proposal to install outside rearview mirrors as standard equipment on all radio interference cars, since radio equipment in the back of the cars obstructed vision through the inside mirror.

## Takes Manual Sweep at \$25

James A. Dunstan, a radio operator at the Resolute Bay ionosphere station, won \$25 for his proposal to add a switch and resistor in series between the starting pulse line and ground on the Cossor portable ionospheric recorder model 7562C—Mark 2.

With this modification an operator can now take either a manual sweep or a three sweep gain run at any programmed time rather than only at hourly intervals as before.

## Electricity Saver Awarded \$90

Joseph K. Blackburn, an air traffic controller at Ottawa Airport, devised a change in taxi strip lighting circuits at that airport to reduce power consumption. It was estimated that his idea would save the department \$880 during the first year and he was awarded \$90.

(Continued on next page)

# Anyone You Know?

## Name Paquette Sorel Marine Agent

Noel Paquette, 39, district engineer in the Sorel marine agency since August, 1957, has been promoted to the post of district marine agent.

Mr. Paquette's appointment became effective on October 10, the date on which the former district marine agent, Hector Beauchemin, went on retirement leave.

Mr. Paquette, who received his degree in engineering on graduating from the Ecole Polytechnique at Montreal in 1951, was town manager of St. Joseph de Sorel, Que., for more than three years, prior to entering the service of the Department of Transport. Before that, he was assistant plant engineer at Marine Industries Limited at Sorel, for two years. He began his professional career as an engineer with the firm of L. P. Marcotte, Ltée., of Ville St. Michel, Que.

Mr. Beauchemin is widely known in marine circles, particularly to those engaged in shipping activities on the St. Lawrence River. He entered the public service in 1927 and was employed for various periods with the departments of Public Works, Marine and Transport from that time until October, 1937.

From that date to May 31, 1943, he was supervisory inspector of dredging with Public Works, and during the same period was on loan to the Department of Transport as assistant to the superintendent of lights at Montreal. In October, 1944, he was named overseer of the buoy depot at Sorel, Que. and in February, 1946 was promoted to superintendent of lights and resident engineer at Montreal.

In July, 1947, he was promoted to the position of Marine Agent. In 1951 the agency headquarters was moved to Sorel and Mr. Beauchemin took up residence there at that time. He has since resided in Sorel.

## BEST WAY (from page 10)

### Prompts Action, Receives \$30

Robert A. Keenan, a met. technician in the radiosonde office at Edmonton Municipal Airport, devised a new method of checking equipment and batteries before a radiosonde flight.

Although his system was not adopted in the form submitted, his suggestion did prompt a revision to basic procedures and for this Mr. Keenan was awarded \$30.

### Urges Radiosonde Identification

Last year, a radiosonde instrument was picked up near Buckingham, Que. An Ottawa newspaper reporting the incident commented that it had probably been re-



TEN OF THE "WIRELESS CROWD"—Assembled in Gander to swap reminiscences and say bon voyage to T.V. (Vince) Myrick, senior operations supervisor at Gander Aeradio, on his transfer on promotion to the Emergency Telecommunication Measures Organization, Ottawa, were 10 pioneers of the North-Atlantic proving flights.

All were originally stationed at Botwood and part of what was known as "the wireless crowd." They are, from left, standing: Pat Fleming, Jack W. P. Robertson, W. H. (Bill) Heath, Jim Dempsey and J. G. T. (Gordon) Stanley; seated: W. J. G. (Jim) Strong, W. J. (Bill) Lahey, Vince Myrick, C. B. (Charlie) Blackie and Abbie C. Knee.



VANCOUVER—Captain John Fagerland (with book) of the MY "Ellen Bakke" received the 1960 Greatest Improvement in Marine Weather Observing Award from Gordon E. McDowell, (second from left) acting regional director air services, Vancouver. Also shown on the wing of the Ellen Bakke's bridge in Vancouver harbor are Jack R. Hamilton (left), port meteorological officer, and A. R. McCauley, regional meteorologist.

leased somewhere in the U.S. because the case had U.S. markings.

Roy T. Tsuda, a met. technician at Maniwaki, didn't think so. Upper wind directions indicated it had probably been released from his station.

To publicize Canada's meteorological branch, why not put a sticker or stamp on each radiosonde indicating where it was released, Mr. Tsuda asked.

Dandy idea, the department found, and gave him \$30.



INUVIK—Airport Manager R. J. Aubrey and Mrs. Aubrey chat with Prime Minister John Diefenbaker and Mrs. Diefenbaker during the latter's visit to the Northwest Territories and Yukon last summer.

### Appoint MacKay Telecom Design Chief

James Robert MacKay has been appointed chief of the design and construction division in the department's telecommunications branch.

He succeeds H. E. Walsh, who recently retired on superannuation.

Mr. MacKay joined the radio division in 1938 and has been closely associated with the development and expansion of air navigation radio aids. He had been associate chief of the design and construction division for the past two years.

Born in Kentville, N.S., Mr. MacKay is a graduate of Dalhousie University.

### Herb Brockington Retires

A craftsman of the old school, Herb Brockington, airport maintenance foreman at Ottawa Airport, was feted by his friends and co-workers on the occasion of his retirement on September 14.



Born in England, Herb came to Ottawa at the age of 10 and received his education here. During the First World War he served with the Third Field Engineers and the Mechanical Transport Group.

During his service with the latter he was frequently detailed to act as chauffeur to two Canadian Prime Ministers as well as to J. A. D. McCurdy who was then acting Minister of Militia.

Following his war-time service, he was employed by the Department of National Defence at Rockcliffe and Trenton. After a brief period with a construction firm and the Royal Canadian Mint, he joined the Department of Transport in 1940 and has been connected with airport maintenance ever since.

A winner of a suggestion award, Herb has made no small contribution to the high standard of maintenance which prevails on the Ottawa Airport.

R. A. Joberty, Manager of the Ottawa Airport, in presenting Mr. Brockington with a "value-packed" wallet, expressed the warm good wishes of all those associated with Herb in the past.

Mrs. Brockington, who accompanied her husband, was presented with a bouquet of flowers by Miss Betty Thomson on behalf of the gathering.

The second of a new class of pilot boats designed for service in various Canadian pilotage districts was launched by Ferguson Industries, Limited, Pictou, N.S. in October.

### Answers to

## It Pays To Increase Your Word Power

The list of key words was, as many will have suspected, inspired by the peculiar "ice language" the department's ice observers employ to indicate the size, shape, type and location of ice.

However, to fool those who caught on too quickly, we inserted one word that has nothing to do with ice. It is a colloquial expression for a glass of geneva, which is taken straight, without even so much as a frazil of ice in it.

(1) FRAZIL—A: Fine spicules of ice suspended in water—the first sign of freezing.

(2) PANCAKE ICE—B: Pieces of newly formed ice between one and six feet in diameter. Constant rotation and collision with each other result in raised rims and circular appearance.

(3) STAMUKHA—D: A lone piece of ice grounded on a shore or shoal often mushroomed by tide.

(4) POLYNIA or POLYNIA—A: Lake or pond of open water in the midst of pack ice.

(5) ROPAK—D: A singular piece of ice forced into vertical position, sometimes reaching a height of 25 feet.

(6) BORREL—C: What you order when you are with Dutch ice observers.

(7) HUMMOCK—A: Hard remnants of old ice ridges usually snow-covered.

(8) MANICE—D: The name of the "Manual of Standard Procedures and Practices for Ice Reconnaissance", from which these words and their meanings were taken.

(9) ICE FOOT—A: Heavy ridges of ice formed along a shore, caused by tidal action and spray.

(10) BERGY BIT—B: A medium-sized piece of ice, mainly originating from glacier ice, and, according to Manice, "about the size of a small cottage."

## Attend Northern How-To-Supervise Courses

In the living room of an unoccupied departmental house at Norman Wells, 100 miles from the Arctic Circle, a group of supervisory personnel spent the week of October 16 to 20 discussing with Reg Schroeter of the training and welfare division, Ottawa, the difficult job of supervising people.

This was one of a series of four supervisory training courses held in the Edmonton Region last autumn. The first course, held at Watson Lake, included the following airport managers: Dave Devlin, Smith River; Dick Jameus, Snag; Leo Martell, Watson Lake; Rene Rizzoli, Teslin, as well as Earl Francis and Ray L'Heureux, maintenance foremen, from Watson Lake and Whitehorse respectively. Senior Mechanics, Lloyd Sampert and John Weins of Snag and Watson Lake also attended. Lloyd, incidentally, is to be the new airport manager at Beatton River. The OIC's of radio, Bob Davidson, Smith River, Keith Jorgensen, Watson Lake; Dave McCrea, Teslin; and Don MacKenzie, Whitehorse, were the others.

Attending the course at Edmonton were Art Graae, airways inspector; Bruce Marshall, chief controller, ATC centre; Jack Stickle, supervisor, mechanical maintenance; Bill Walls, assistant superintendent, airways; Ron Waterhouse, supervisor of automotive equipment; and Dick Wood, chief controller, ATC tower. Telecommunications were represented by Frank Bruce, shift supervisor; Bob Poirier, OIC Grande Prairie radio inspection office; Murray Watson, OIC Edmonton radio inspection office; and Owen Williams, another shift supervisor at Edmonton. Leo Lafranchise, radiosonde inspector from Edmonton and "Tommy" Thompson, senior forecaster, Edmonton DAFO, completed this group.

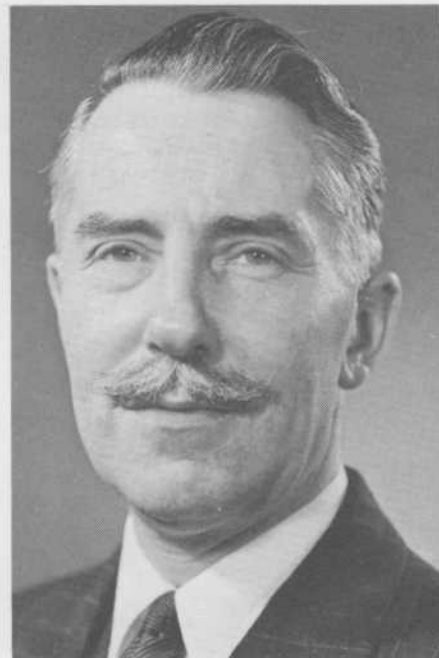
At Fort Smith, the airport managers from Fort Smith, Embarras and Fort Resolution—Archie Bevington, Ed Campbell and Doug Holloway—attended the course. Ray Knight and Les Johnson, senior equipment operator and senior mechanic respectively also sat in. Attending part of the time were Jim Hutchinson, airways serviceman and Wes O'Donnel, the clerk at the airport.

Kevin Coyne, OIC radio at Fort Smith and Merv Rutherford, one of his shift supervisors, along with Mike Dhont, OIC radio from Fort Resolution attended, as did Bob Ryan, acting OIC, Met., Fort Smith.

At Norman Wells, Doc Aubrey and Ed Hietala flew in from Inuvik to join a small group from Norman Wells made up of "Suds" Sutherland, the airport manager, Russ Burtch, OIC of radio; Bill Krause, acting OIC of the rawinsonde station; Cy



Dr. T. G. How



C. M. Brant



H. J. Williamson



G. E. McDowell

## EXECUTIVE CHANGES IN AIR SERVICES

The department has just made the last appointments in a six-year program under which senior officers in air services have received special training on a rotating basis.

The latest moves:

*Dr. T. G. How*, regional director air

Fielding, the senior equipment operator and Dick McCaffrey the senior radio operator. Flight difficulties prevented Mandy Manderfield and Mark Fairbrother from flying in from Wrigley and Fort Simpson.

services, Vancouver, who was on temporary duty at Ottawa headquarters as deputy director air, has returned to his Pacific post.

Substituting for him as DDA for two years is *Cecil M. Brant*, chief of technical and policy co-ordination in the telecommunications branch.

Replacing Mr. Brant in an acting capacity is *H. J. Williamson*, RDAS, Edmonton.

Filling Mr. Williamson's shoes in Edmonton as acting RDAS is *Gordon E. McDowell*, regional aids engineer, Toronto, who had been acting RDAS in Vancouver during Dr. How's absence.



**Dr. P. D. McTaggart-Cowan**

### DOCTORATE FOR "MR. WEATHER"

Canada's No. 1 weather man received an honorary degree the other day.

P. D. McTaggart-Cowan, 49, director of the meteorological branch, was honored October 26 when his Alma Mater, the University of British Columbia, conferred upon him the degree of Doctor of Science, Honoris Causa.

Dr. McTaggart-Cowan graduated from U.B.C. in 1933 with first class honors in mathematics and physics. A Rhodes scholar, he subsequently attended Oxford, where he received an honors degree in Natural Sciences in 1936.

He was responsible for the organization and development of meteorological services in Newfoundland for experimental transatlantic flights prior to World War II. During the period of hostilities he served as chief meteorologist at Gander, Newfoundland and Dorval, Quebec to provide transatlantic meteorological services for RAF Transport Command operations over the Atlantic. He won the respect of pilots with what the citation accompanying his new degree terms his "uncanny accuracy" in plotting the weather for transatlantic flights. His organizational abilities received the acclaim of the military authorities.

After World War II Dr. McTaggart-Cowan came to meteorological branch headquarters in Toronto as chief of the forecast services division and assistant director and subsequently, in 1959, he became director of the branch.

Recognition of his services to Canada was made when he was awarded the MBE and Coronation Medal and his part in aviation was recognized when he received



**THEY HELPED D.O.T. GROW**—These veterans of radio regulations all joined the department before 1936, when it got its present name. They are, seated, from left: G. B. Gard, now retired, Miss A. F. Bennet, also retired, W. A. Caton, controller of radio regulations, and Miss A. B. Warner. Standing, from left: G. Guy, F. Richards, J. J. McWatters, R. M. Graham, H. M. Cox, A. G. E. Argue, H. R. Newcombe, A. P. Stark, R. L. Bunt and C. J. Acton.

### 15 RECEIVE LONG SERVICE AWARDS

The Department of Transport was 25 years old in November, but many staff members have been associated with the work of the department for longer than that.

Among them are 13 active and two retired employees of the radio regulations division (telecommunications branch) in Ottawa who received long service awards and pins the other day.

All 15 had been with the department before it got its present name.

The man with the longest service record among present radio regulations staff was C. J. Acton, superintendent of radio regulations and international agreements. He joined the department in 1919.

the Robert M. Losey Award from the Institute of Aeronautical Sciences in the United States for his "outstanding contributions to the science of meteorology as applied to aeronautics".

Dr. McTaggart-Cowan is vice-president of the American Meteorological Society and serves as a member of the executive committee of the World Meteorological Organization, a United Nations agency located in Geneva, Switzerland.

The citation accompanying the awarding of the degree presented him as an undergraduate at the University, "a wartime legend and a dedicated public servant".

The others receiving their pins and awards, listed with their present occupation and year of entry into the department, were:

Miss A. F. Bennet, retired (1918); Miss E. V. M. Riendeau of administration, who was absent due to illness (1927); Miss A. B. Warner, who is in charge of the master Canadian frequency record unit (1925);

A. G. E. Argue, head of the regulations and licensing policy development unit (1931); R. L. Bunt, in charge of the general radio inspections and suppression of inductive interference unit (1925); W. A. Caton, the division's chief (controller of radio regulations) (1924);

H. M. Cox, a technical officer in radio regulations engineering (1924); G. B. Gard, retired (1920); R. M. Graham, international representation and agreements office (1936); G. Guy, in charge of the aeronautical radio licensing unit (1935); J. J. McWatters, radio inspections field office, Ottawa (1926);

H. R. Newcombe, superintendent of radio authorization and enforcement (1928); F. Richards, head of the domestic radio frequency unit, allocation planning section (1926); and A. P. Stark, who is in charge of enforcement of the Radio Act and of those portions of the Shipping Act relating to radio (1928).

### Wins Medal

G. Y. Sebastyan, head of the engineering design section, airport development, construction branch, air services, Ottawa, was awarded the President's Medal by the Canadian Good Roads Association at the association's annual dinner at Banff.

The medal is awarded annually for the best technical paper of the previous year's convention. Mr. Sebastyan's paper, "The Benkelman Beam Deflection as a Measure of Pavement Strength," was one of more than 50 papers considered.



D. B. Rees

### Built Edmonton-Calgary Highway, Retires

The man who built the 200-mile Edmonton-Calgary highway, helped design Canada's standard airport crash truck and wrote a text book on placer mining retired on superannuation from the department October 31.

He is D. B. (Bryn) Rees, superintendent of field and equipment maintenance in the civil aviation branch.

A professional engineer and a member of the Engineering Institute of Canada, Mr. Rees wrote the D.O.T. maintenance bulletins governing the \$21,000,000-a-year task of keeping Canada's airports clean and snow-free.

He has written extensively about snow handling at airports and has delivered a paper on the subject before the U. S. Research and Development Board at Washington, D. C.

As chairman of the Transport Department's fire prevention committee, air services, Mr. Rees also supervised safety at some 360 establishments and in 45 aircraft throughout the country. He helped design a simple-to-operate rescue truck now in use on most D.O.T. airports.

Mr. Rees was a member of numerous committees, including the Dominion Fuel Board, the Government Motor Vehicles Committee and several National Research Council committees engaged in writing

#### IN MEMORIAM

Hans A. Pederson, a technical officer in the airport and property management division at head office, died in Ottawa September 26.

Mr. Pederson was airport manager at Frobisher Bay at one time, and a winner of several suggestion awards.

specifications for tools, equipment and materials.

His activities ranged from chairing a committee on presenting a picture of Canada through art at airports to delivering a technical paper for the international congress of the Society of Automotive Engineers in Detroit.

David Brinley Rees was born in Llandilo, Wales, and came to Canada as a young lad in 1920.

From 1924 to 1935 he was resident and district engineer for the Alberta Public Works Department. He located, designed and built many projects, from the Edmonton-Calgary, Edmonton-Jasper and Calgary-Medicine Hat main highways to railroad tracks and asylum buildings.

In 1935, shortly after Alberta's natural resources were transferred from the federal to the provincial government, Mr. Rees joined the provincial Department of Lands and Mines, where he assisted in supervis-

ing the preparation of mining regulations.

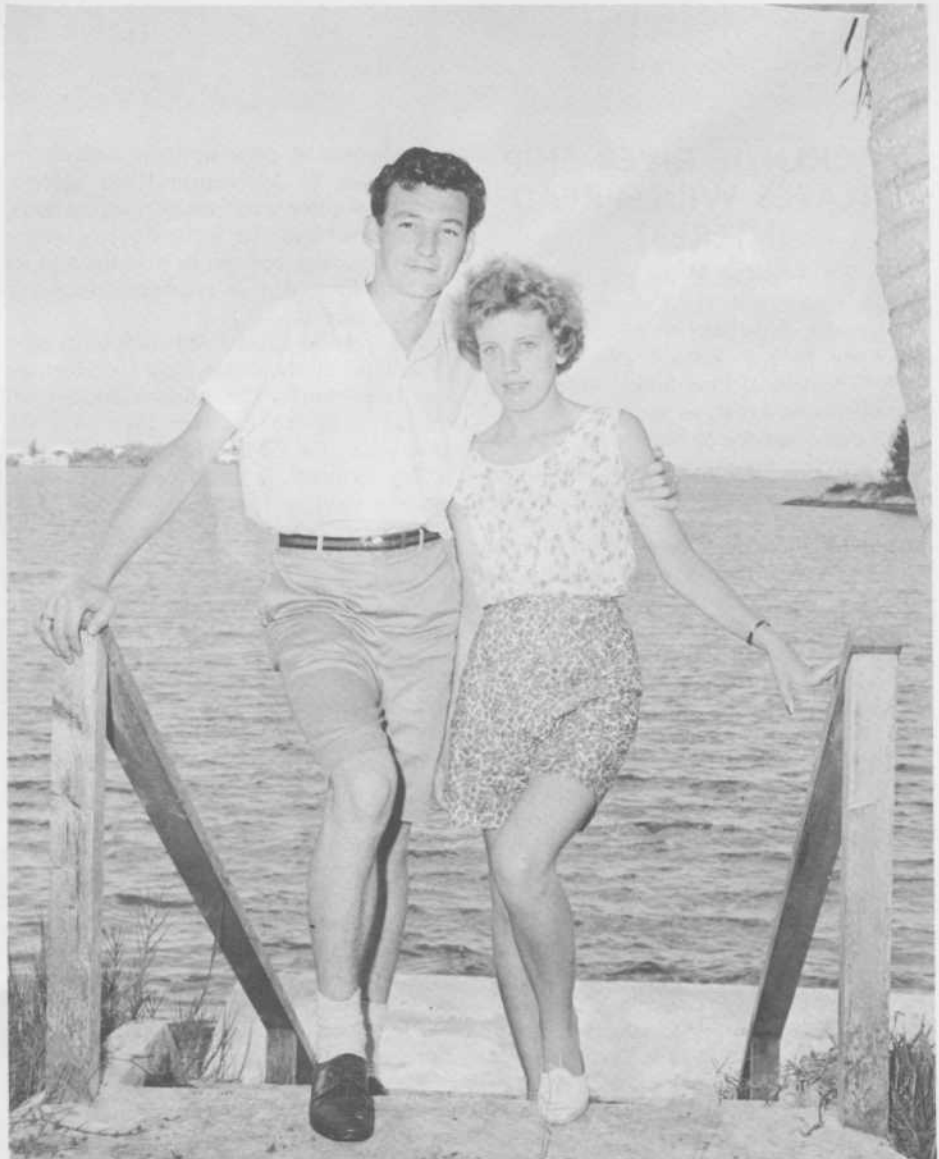
He also wrote a text book on placer mining in Alberta.

From 1940 to 1946 Mr. Rees served in the RCAF. He started as a Flying Officer in the construction engineering branch, Calgary headquarters, No. 4 Training Command, was promoted to Squadron Leader within 18 months and became a Wing Commander in 1942, when he was made chairman of an interdepartmental board to wind up cost-plus construction contracts of Air Force and joint tri-services projects.

He was later appointed deputy director of construction engineering at RCAF headquarters.

In 1946 Mr. Rees rejoined the Alberta Department of Lands and Mines but resigned that same year to become Alberta branch manager of the Central Mortgage and Housing Corporation.

He came to the Department of Transport in 1947 as airport maintenance engineer.



BERMUDA HONEYMOON . . . And from the ever-active Bermuda News Bureau comes this sunny, in fact overexposed picture to set us dreaming of a green Christmas. Shown are Mr. and Mrs. John Parry honeymooning at Paget Parish, Bermuda. Mr. Parry, who was on the staff of the Montreal marine-aeradio before his marriage, is now with Goose marine-aeradio.



## MACKENZIE RIVER SHIP CREATES WIDESPREAD INTEREST

The CMS *Eckaloo*, one of the most remarkable ships in the Canadian Marine Service was christened at a ceremony at Bell Rock, N.W.T., last summer with Mrs. J. R. Goodwin of Fort Smith, wife of the district marine agent, as sponsor.

The event was one of widespread interest, both among the population along the Mackenzie River system and to shipping circles in general. The ship is a specially-designed shallow-draft vessel, built to meet the peculiar demands of waters in which it will travel. Evidence of the attention paid to it is the fact that letters from Great Britain and from Italy were among the requests the department has received for information concerning the craft.

At the christening ceremony, residents from a wide area around Fort Smith were on hand to see Mrs. Goodwin break the bottle of champagne across the bow of the vessel. The ship, which was built by Allied Builders of Vancouver and broken down into sections for shipment north, was relaunched and the gathering then moved to the local hotel for serving of refreshments.

The *Eckaloo* was built to meet the increasingly heavy job of tending buoys and related work in the Mackenzie River system, down which almost all the supplies for the Western Arctic are moved each summer by barge.

The Fort Smith Marine Agency will be its headquarters.

The craft, which is 84 feet long, was designed by the firm of Milne, Gilmore and German, naval architects, of Montreal, and

was planned to cope with the difficult requirements of Mackenzie River system, with its shallow water and strong currents. It has two 8-cylinder Rolls Royce engines, its twin screws operate in tunnels, and its four rudders help in providing necessary manoeuvrability.

The *Eckaloo* is the third craft of its type to be built by the department for Mackenzie River work. The other vessels, each smaller than the *Eckaloo*, are the CMS *Dumit* and the CMS *Miskinaw*.

The *Eckaloo* is fitted with the most modern devices for operation, including radar, radio telephone, depth sounder, gyro compass and other related equipment. A 4,000 pound hydraulic buoy crane is located on the forward deck.

*Eckaloo* is Slave Indian for "track" or "trail".

### WEATHER EYE

(Continued from page 5)

We reluctantly abandoned further consideration of this location, but once the decision had been made Captain Cuthbert proceeded without delay across Norwegian Bay toward our alternate at Sherwood Head.

We encountered some heavy ice during this passage. However, the helicopter with ice observer Geoff Meek aboard flew ahead of the ship, relaying ice information and making occasional landings on the ice as a target for the ship.

We eventually entered a lead in the ice which took us right to our destination. We arrived at Sherwood Head at 7.30 p.m.—almost a week ahead of schedule.

I went ashore in the first helicopter to make an aerial reconnaissance. Mr. Dyer followed immediately in the second 'copter.

We conferred and decided on the precise location of the station.

We conveyed our decision to Captain Cuthbert and immediately the helicopters started ferrying the work party and the equipment ashore.

The location selected was on a sort of saddle, 200' above sea level and a mile inland. As soon as the position of the antenna towers and guy wires were staked out we selected a suitable route from the shore to the station site so that the tractor could haul a sled loaded with equipment.

The first officer supervised the unloading of all the equipment. This work went on simultaneously with the work of excavating the holes for the antenna towers and the instrument tower.

Voluntary work parties from the ship's crew worked around the clock and within 40 hours of the first landing ashore the automatic station was sending signals on schedule to Resolute. The equipment has performed faithfully ever since.

After we had cleared the area of the debris of packing cases and returned tractor, sled and equipment to the ship, we gazed across at the result of our labors for the past two days.

There it was, its modest appearance—just a tiny storage building and three towers—belying the fact that a blank spot on the Canadian weather map had just been filled in by the wonders of modern science.

At CHURCHILL, Captain E. L. Kelso, the department's ice information officer, guided the Lebanese vessel SAN JOHN free the day after it stranded on a reef 24 miles Northwest of Churchill October 4.