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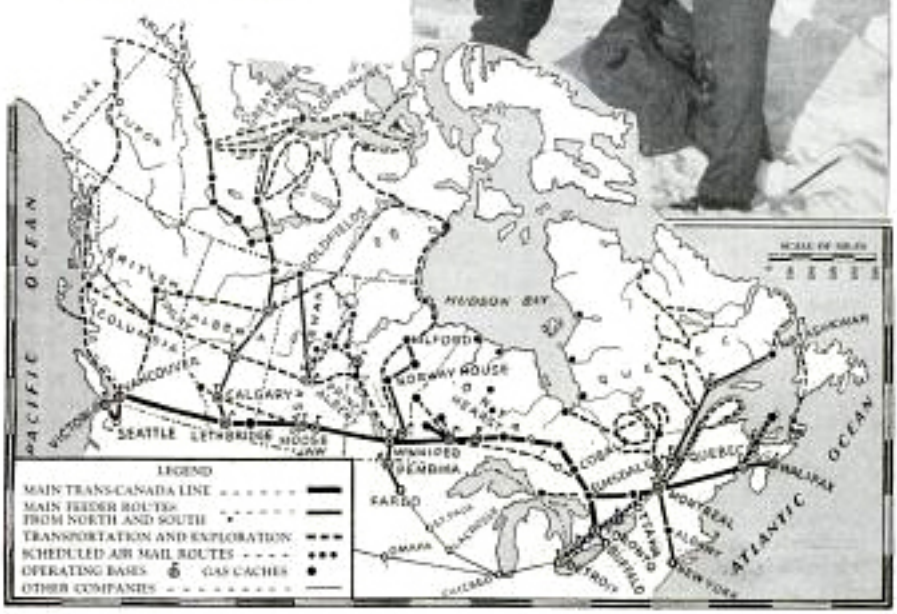
CROSS-CANADA AIRWAY *Next*

FROM Halifax on the Atlantic coast to Vancouver on the Pacific, modern pioneers have blazed a 3,500-mile trail and in the summer of 1937 Canada will open her transcontinental airway.

The first regular flight will signal a victory over vast stretches of wilderness and towering mountains. Northern Ontario, a region of lakes and bush where few people live, has been bridged by the construction of nearly fifty intermediate airports.

Right, Canadian mail pilot hands the mail to northern trapper. Below, map of transcontinental airway, showing connections with United States and Arctic lines



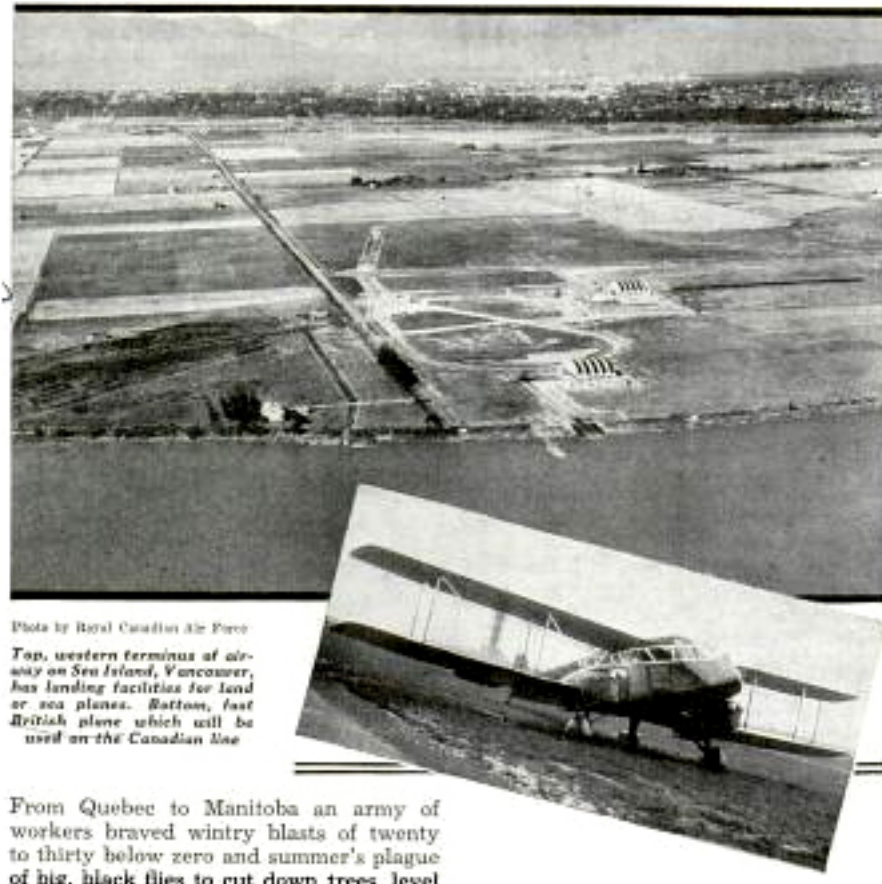


Photo by Royal Canadian Air Force

Top, western terminus of airway on Sea Island, Vancouver, has landing facilities for land or sea planes. Bottom, fast British plane which will be used on the Canadian line

From Quebec to Manitoba an army of workers braved wintry blasts of twenty to thirty below zero and summer's plague of big, black flies to cut down trees, level off fields, dynamite and burn stumps and fill muskeg swamps with rocks and boulders. Even after the fields had been cleared it was no small task to prevent the fast-growing bush from reclaiming the land. Thus were created small oases in the desert of forests where planes might land.

Through the Rocky Mountains, where the lowest practical pass is 4,500 feet above sea level and surrounded by peaks towering to 10,000, the trail blazers fought their way, building twenty-five airports, at twenty-five to thirty mile intervals, so that a pilot might always be within sight of one. When radio beacons for beam flying were installed it was found that the mountains caused an echo in the directional radio signals. Instruments in test planes showed "on course" when the ships were far off their path. So instead of one beacon at each location, two or more were installed to balance the echo. More radio beacons than ordinarily required were placed in service to increase safety.

Almost all the flying in Canada has been done with planes equipped with pontoons in summer and skis in winter to take advantage of the large number of lakes scattered through the country. But twice a year, at "freeze-up" and during the spring thaw, all operations had to be halted for a period of three to six weeks because planes could not land on the lakes. Since no air line could operate under such conditions the Canadian airway will have 100 air fields, many of them built beside the lakes where planes formerly landed, so that aircraft with wheels may land the year round. The lakes still may be used by planes with suitable landing gear.

Top, typical stretch of sparsely inhabited country in northern Ontario over which airway planes will speed. Bottom, water end of Toronto's airport is within five minutes walk of business district

While the new line will rely on the latest antenna from the United States other radio equipment, designed and built in Canada, will be used in planes and on the ground. Four-way directional signals will be provided at all times by the radio-beam stations. Pilots will talk to and hear ground stations over efficient two-way communication systems, and weather data will be transmitted by teletype. Pilots will rely entirely on the radio beam for guidance, finding their position from information relayed by ground stations scattered from one end of the airway to the other.

The entire chain of emergency and terminal airports from Halifax to Lethbridge will be illuminated by the latest type of lighting. The mountain route, from Lethbridge to Vancouver, will be flown only in daylight, as a safety measure. Telephones will link all emergency fields and weather service will be available instantly to pilots forced down at any intermediate field.

Close to $10,000,000 has been spent in the construction of ground facilities for

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the airway by the Canadian government. Safety has been stressed at every point. For instance, when surveyors found that fog was prevalent near Lake Superior the route was changed to run farther north through a region known to be free from such weather. Because of Canada's low temperatures in winter the operators do not expect interference with flights from ice forming on the wings. This condition, which has caused serious difficulties in the Great Lakes and Atlantic coast regions of the United States, occurs when the temperature is hovering around freezing point and the atmosphere is heavily charged with moisture.

The Canadian airway will operate for the first year as a mail carrier, although some express may be accepted. Passenger service may be offered on limited sections of the line. The operators will be a private company, with railway and Canadian government helping financially. Ground operations will be under direction of the air-service branch of the Dominion department of transport.

Mail has been taken off inbound ships by government planes for several years, saving twenty-four to forty-eight hours in delivery as far west as Winnipeg. This service has been operated only in summer. But the new airway will send faster planes to meet all ships coming to Canada on the Atlantic and the Pacific and will accept first-class mail at no extra cost for faster delivery to any point in the Dominion. When transatlantic service from England is begun air-mail costs within the empire, which includes Canada, will be three cents per half ounce.

The route of the airway will be from Halifax to St. John, New Brunswick, across the state of Maine, to Montreal, where the transatlantic and United States routes will connect. From Montreal via Ottawa, Elmsdale and Cobalt the air liners will speed west across northern Ontario to Winnipeg. At Elmsdale planes from Toronto and Buffalo connect. Then the route touches Regina, Lethbridge, Cranbrook and Princeton before arrival at the Pacific coast destination, Vancouver. Connections with United States lines are made at Winnipeg and Vancouver and with Arctic routes at Winnipeg and Lethbridge.