

Mr. MCGREGOR: Well, this is going back a long way and they were rather troublesome at first like the others are. I think it is true to say that the Super Constellations will never be as cheap to operate per ton mile as the North Star has been even when it finishes this shake-down period.

Mr. HAMILTON (*York West*): Assuming the shake-down period to have been completed of the North Stars and the shake-down period of the Super Constellations to have been completed the Constellation is more expensive?

Mr. MCGREGOR: We are speaking prior to my experience but I think that is probably true.

Mr. HAMILTON (*York West*): It may be it will affect your over-all financial picture in another year. Can you tell us the operating costs using these newer types of planes?

Mr. MCGREGOR: No, because I think our shake-down period on the Super Constellation is pretty well behind us.

Mr. HAMILTON (*York West*): So it should be shaken down before the end of the year and you should know the financial set-up?

Mr. MCGREGOR: Yes.

Mr. HAMILTON (*York West*): You talked earlier on the question of the helicopter, which has interested me a great deal because we have seen large-scale expropriations of land in the neighbourhood of airports. Has Trans-Canada Air Lines any long-range plans or has it investigated following through the new principles of aerodynamic design and boundary layer control which I think will shorten our landing space, and take-off distances—have you any indication of what effect these things may have on helicopters in the future?

Mr. MCGREGOR: We are really going into the future but the tendency naturally is that new developments such as boundary layer control all have advantages in a commercial sense. There is—and I am speaking about fifteen years ahead perhaps—a development being considered in which jet type aircraft would in fact blow themselves off the ground by vertical jet thrust.

Mr. HAMILTON (*York West*): In other words this is not a “Buck Rogers” idea. It is something we may anticipate in the next 10 to 15 years.

Mr. MCGREGOR: It may prove practical. Yes.

Mr. HAMILTON (*York West*): And those planes will be able to use much shorter runways for both take-off and landing?

Mr. MCGREGOR: I think that would be a broad statement because it would be necessary for safety purposes to be able to land those aircraft in a normal manner, but with everything functioning satisfactorily it would not be necessary to use a great proportion of the runway, and the planes could attain a satisfactory altitude very shortly after leaving the runway.

Mr. HAMILTON (*York West*): Would it be fair to say that you do not anticipate a continuance of the development of the past, which, with each stage of aircraft development has seen the lengthening of runways.

Mr. MCGREGOR: I think that will continue for at least another five years.

The CHAIRMAN: Shall the heading “property and equipment” carry?
Carried.

The CHAIRMAN: Airport and airway facilities. Mr. Churchill.

Mr. CHURCHILL: My questions arise out of the accident at Malton and have to do with the facilities provided at the airport for landing of aircraft. From the report on that accident, I understand that the aircraft was coming in under extremely difficult weather conditions and was using instruments.