

Northern hydrocarbon resources to be researched under NOGAP could be transported year-round by eastbound tankers through the Northwest Passage or by an underground pipeline through the Mackenzie River Valley.

The government plans to base its research on small demonstration projects designed to test new technology.

Canadian studies award

James Reford Watson, one of Canada's and Britain's most eminent geographers, has won the 1984 Northern Telecom international Canadian studies award.

Professor Watson, a resident of Edinburgh, Scotland, received the award at the annual meeting of the International Council for Canadian Studies (ICCS) in Grainau, West Germany.

The prize — first presented in 1983 — is part of Northern Telecom's commitment to the advancement of Canadian studies internationally. It is given annually in recognition of exceptional achievement in the field of Canadian studies by an academic, researcher, or scholar, anywhere in the world.

The gold medal and a \$10 000-cash prize is administered by the ICCS, which represents nine national and regional Canadian studies association: in Canada, the United States, Australia-New Zealand, France, Ireland, Italy, Japan, Britain, and one representing German-speaking nations.

Professor Watson was cited for his leading role in establishing departments

of geography at McMaster University in Hamilton, Ontario and at Carleton University in Ottawa, his service as Canada's chief geographer and director for the federal Department of Mines and Natural Resources, and his work as organizing chairman

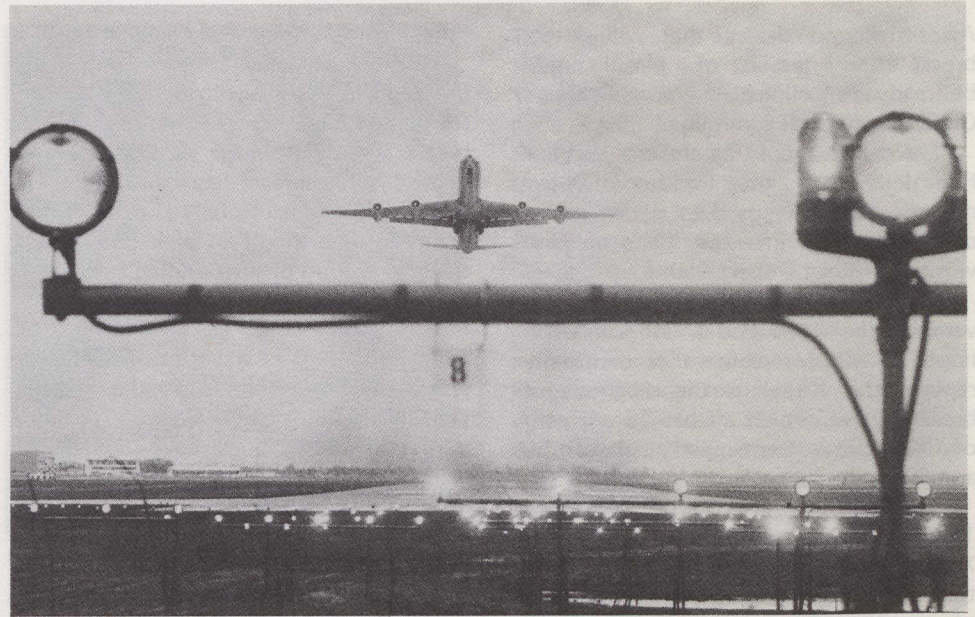
of the Canadian Association of Geographers.

Professor Watson, who was invited to the University of Edinburgh to fill the chair of geography in 1954, initiated the Centre of Canadian Studies in 1973 there, the first of its kind in Britain and the only one with its own degree major. He also served as first president of the British Association for Canadian Studies.



Professor Watson

Landing system aids airport navigation



A Canadian company, Micronav Limited, is in the forefront of navigation research.

High technology is flourishing in Cape Breton, Nova Scotia, where a Canadian company, Micronav Limited, is in the forefront of navigation research.

Incorporated in December 1980, Micronav was established to manufacture a microwave landing system (MLS), heir-apparent to the instrument landing system (ILS). Micronav is the only Canadian firm actively developing MLS units.

It is not surprising that this Cape Breton company should be a leader in Canadian navigation research and development. President John Currie is also president, founder and major shareholder of Internav Limited, the first company in Canada to manufacture Loran C receivers for shipboard use.

With the United Nations directive that ILS units be replaced by MLS units at designated airports around the world by 1995, John Currie founded Micronav for the development of Canadian-made and designed MLS units.

Electronic beams

Since the Second World War, airports have used ILS to guide aircraft landing in bad weather. ILS operates on two fixed electronic beams — one allows for proper alignment with the runway; the other shows the proper angle of descent. The system is limited to 40 frequency channels, is costly to install, and is not suited to airports located near high ground or mountains, which affect its electronic signals.

With the wide variety of aircraft in use today, a more flexible landing aid is required to achieve optimum use of facilities. MLS provides that flexibility. Two beams scan rapidly back and forth. One beam covers an 80-degree wide pie-shaped sector out from the end of the runway. The other beam covers a 0-15 degree sector up and down from the runway. Special cockpit equipment allows pilots of large jets to fly conventional "straight in" approaches while short take-off and landing (STOL) aircraft and helicopter pilots can fly in on steeper paths, angling in from left or right of touchdown point. With MLS, maximum runway use is achieved.

MLS offers 200 frequency channels at one site, allowing busy airports to install as many units as required. Microwave signals generated from MLS units are not affected by the surrounding terrain. Its light weight and low installation cost makes the MLS unit suitable for and attractive to smaller airports and offshore drilling rigs.

Work on a prototype is now underway at the Point Edward facility in Cape Breton and is expected to be completed by 1985.

Projected export market demand is for 5 000 units. In Canada, the Ministry of Transport has identified almost 200 airports which will convert from ILS to MLS. Not included in this figure are smaller airports and the ever-growing offshore exploration industry.

(Article from Canada Commerce.)