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SCIENCE INSTITUTE
OF THE NORTHWEST TERRITORIES

The Science Institute of the Northwest Territories was incorporated under the Science Institute of the Northwest Territories Act in 1984.

The Science Institute's mandate is to assess the scientific, engineering and technological resources of the Territories, and to develop programmes to assist the maturation of these resources so that the social and economic goals of the people of the Northwest Territories may be realized.

Directives are established by a Board of seven to thirteen Members appointed by the Minister Responsible for the Science Institute. The majority of these Members must be resident in the Northwest Territories.

Four programmes have been established to carry out the Board's directives: Scientific Services Directorate, Science Advisory Services, Information/Education, Technology Development.

In 1988 the Institute assumed management of three Research Centres from the Department of Indian and Northern Affairs. These Centres are located in Iqaluit, Igloolik and Inuvik.

The Institute administers the Industrial Research Assistance Program of the National Research Council.

All researchers are required to hold a valid licence issued Under the Scientists Act of the Northwest Territories by the Institute with the exception of archaeological and land animal researchers.

For more information you are welcome to contact:

Science Institute of the Northwest Territories
Box 1617
Yellowknife, NT
X1A 2P2

SCIENCE INSTITUTE
OF THE NORTHWEST TERRITORIES

SCIENCE INSTITUTE OF THE NORTHWEST TERRITORIES

BOARD MEMBERS

The Board of Directors of the Science Institute of the Northwest Territories is chaired by *Mr. John H. Parker*. Currently there are seven members.

John H. Parker OC, P.Eng.
Chairman of the Board

Mr. Parker came north in 1949 as a geologist. He became active in Territorial Administration and retired as Commissioner of the N.W.T. in 1989. He is also chairman of the Arctic Institute of North America and a member of the Board of the NWT Power Corporation. In 1986 Mr. Parker was made an Officer of the Order of Canada and a Member of the Aboriginal Order of Canada.

Ms. Joanne Barnaby, Executive Director of the Dene Cultural Institute, is active in native affairs. Ms. Barnaby participated in the Mackenzie Valley Pipeline Inquiry, developed a Community Development Training Program for the Dene Nation and has been a key player in land and water management and devolution issues.

Mr. George Hobson, recent recipient of the Massey Medal of the Royal Canadian Geographical Society for distinguished achievement in geography, brings to the Board considerable interest in the public presentation of Arctic Science. Mr. Hobson has extensive field experience as a geophysicist and has acted as Senior Advisor for the Polar Continental Shelf Project.

Dr. Kaye MacInnes, an environmental scientist with Indian and Northern Affairs Canada, Yellowknife, specializes in environmental protection, predominantly for the oil and gas industry. Dr. MacInnes is also a Director of the Royal Canadian Geographical Society and a past Director of the Canadian Botanical Association.

Mr. John Jamieson is a dynamic northern educator whose innovative techniques in the sciences and cultural development have been both popular and effective. Mr. Jamieson has conducted original research with the International Biological Program in the Eastern Arctic, with the Fisheries Research Board of Canada and with the East African Institute of Malaria and Vector Borne Diseases, Amani, Tanzania.

Dr. Malcolm Ramsay specializes in polar bear, narwhal and whales and has worked extensively in the Northwest Territories. Dr. Ramsay is an Associate Professor at the University of Saskatchewan, Saskatoon.

Dr. Noah Carpenter, from Sachs Harbour, NWT, is one of the very few native doctors in Canada. One of Canada's foremost thoracic surgeons, Dr. Carpenter practices at St. Joseph's Hospital, Comox, British Columbia.

August 1991

Recycled Paper

SCIENCE INSTITUTE
OF THE NORTHWEST TERRITORIES

ᓄᓇᑦᓯᐊᕐᒥᑦ ᓱᓇᑐᐃᓐᓇᕐᓂᒃ ᖃᐅᔨᓴᖅᑎᓕᕆᔨᒃᑯᑦ

ᑲᑎᒪᔨᖏᑦ

ᓄᓇᑦᓯᐊᕐᒥᑦ ᓱᓇᑐᐃᓐᓇᕐᓂᒃ ᖃᐅᔨᓴᖅᑎᓕᕆᔨᒃᑯᑦ ᑲᑎᒪᔨᒃᑯᖏᑦ ᓴᓐ H. ᐹᑯᒥᒃ ᐃᒃᓯᑯᐅᑕᖃᖅᑐᑦ. ᑲᑎᒪᔨᖏᑦ 7-ᖑᓪᓗᑎᒃ.

ᒥᔅᑐ ᐹᑯ ᐅᑭᐅᖅᑕᖅᑐᒧᑦ ᑎᑭᓚᐅᖅᓯᒪᔪᖅ 1949-ᖑᑎᓪᓗᒍᒃ. ᓄᓇᑦᓯᐊᖅ ᒐᑭᒪᒃᑯᑦ ᐊᐅᓚᑦᓯᔨᒃᑯᖏᓐᓃᖃᑕᐅᓕᕐᓗᓂᒃ ᐊᒻᒪᓗ ᑕᒪᓂᑦ ᓄᓇᑦᓯᐊᕐᒥᑦ ᑲᒥᓴᓇᒋᔭᐅᔪᓃᓚᐅᖅᓯᒪᔪᖅ 1989-ᒥ. ᐅᑭᐅᖅᑕᖅᑐᓕᕆᔨᒃᑯᑦ ᑲᓇᑕᒥ ᐊᒥᐊᓕᑲᒥᓗ ᑲᑎᒪᔨᒃᑯᖏᓐᓂᑦ ᐃᒃᓯᑯᐅᑕᕆᔭᐅᖏᔪᖅ ᐊᒻᒪᓗ ᓄᓇᑦᓯᐊᕐᒥᑦ ᐆᒪᖅᑯᑎᓕᕆᔨᒃᑯᑦ ᑲᑎᒪᔨᒃᑯᖏᓐᓃᖃᑕᐅᒋᓪᓗᓂᒃ. 1986-ᒥ ᑲᓇᑕᒥᐅᑕᑦᑎᐊᑭᐅᓂᖓᓂᒃ ᐃᓕᓴᕆᔭᐅᔾᔪᑎᒥᒃ ᐊᒻᒪᓗ ᓄᓇᖅᑲᖅᓯᒪᔪᓂᑦ ᑲᓇᑕᒥᐅᑕᑦᑎᐊᑭᐅᓂᖓᓂᒃ ᐃᓕᓴᕆᔭᐅᔾᔪᑎᒥᒃᓗ ᐱᑎᑕᐅᓚᐅᖅᓯᒪᖓᑦ.

ᒥᔅ ᔪᐊᓐ ᐹᓇᐱ, ᐊᐅᓚᑦᓯᔨ ᐃᖅᑭᓖᑦ ᐃᓕᖅᓯᑐᖅᑲᒃᑯᕕᖓᓂᑦ, ᓄᓇᖅᑲᖅᓯᒪᔪᑦ ᒥᒃᓴᓄᑦ ᐱᓕᕆᐊᕆᔭᐅᓯᒪᒋᐊᖅᑲᖅᑐᓂᒃ ᐱᖅᑲᑕᐅᓯᒪᔪᖅ. ᐱᖅᑲᑕᐅᓚᐅᖅᓯᒪᖓᑦ ᒪᑲᓐᓯ ᐹᓖᒥ ᐅᖅᓯᐊᓗᒃᓴᒧᑦ ᓯᓪᓗᓕᑯᑦᖅ ᐱᓕᕆᐊᕆᔭᐅᓯᒪᓂᐊᖅᓂᖓᑦ ᖃᐅᔨᓴᖅᑕᐅᓚᐅᖅᓯᒪᑎᓪᓗᒍᒃ, ᐊᖅᑭᒃᓱᓚᐅᖅᑕᖓᑦ ᐱᓕᕆᐊᒃᓴᒃ ᓄᓇᓕᖕᓂᑦ ᐱᓐᓯᓪᓕᐊᑎᑦᑎᓂᖅᓗᑦ ᐃᓕᓐᓂᐊᕈᑎᒃᓴᒥᒃ ᐃᖅᑭᓕᖕᓄᑦ ᐊᑐᖅᑕᐅᓯᒪᓂᐊᖅᓂᖅᑐᒥᒃ ᐊᒻᒪᓗ ᓄᓇᓕᕆᓂᖅᒥᒃ, ᐃᒪᓕᕆᓂᖅᒥᒃ ᐊᒻᒪᓗ ᓇᖅᒥᓂᖅ ᒐᑭᒪᑖᕐᓯᐊᕐᓂᖅᒥᒃ ᐃᓱᒪᒋᔭᐅᓯᒪᒋᐊᖅᑲᖅᑐᓂᒃ ᐱᓕᕆᖅᑕᐅᓯᒪᐃᓐᓇᖅᑐᖅ.

ᒥᔅᑐ ᔪᐊᔾᔨ ᐺᐊᑦᓴᓐ, ᐃᓕᓴᕆᔭᐅᔾᔪᑎᒥᒃ Massey Medal of the Royal Canadian Geographical Society-ᖑᓂᕐᖅᑕᐅᔪᒥᒃ ᖃᐃᑎᔭᐅᕐᑖᓚᐅᖅᑐᖅ ᓄᓇᓕᕆᓂᕐᒥᒃ ᐱᓕᕆᐊᕆᓯᒪᓕᖅᑕᖏᑦ ᐃᓕᓴᕆᔭᐅᓪᓗᑎᒃ, ᑲᑎᒪᔨᒃᑯᖏᓐᓃᖃᑕᐅᑎᓪᓗᒍᒃ ᑭᒃᑯᓕᒫᓄᑦ ᐅᑭᐅᖅᑕᖅᑐᒥ ᓱᓇᑐᐃᓐᓇᕐᓂᒃ ᖃᐅᔨᓴᕐᓂᖅ ᓴᖅᑭᑎᑕᐅᓂᖓᑦ ᐱᖏᓪᓕᐊᓯᒪᓂᐊᕐᒪᑦ. ᖃᓄᐃᑐᕈᓗᔭᓗᖕᓂᒃ ᓄᓇᒥᒃ ᖃᐅᔨᓴᕐᓂᕐᒥᒃ ᐱᓕᕆᐊᒃᓴᓂᒃ ᐃᓚᐅᓯᒪᓂᑯᔪᖅ ᐊᒻᒪᓗ ᐅᖅᐅᔾᔪᐃᔨᕆᔭᐅᓚᐅᖅᓯᒪᖏᔪᖅ ᐅᑭᐅᖅᑕᖅᑐᒥᑦ ᒐᑭᒪᒃᑯᑦ ᓄᓇᓕᕆᔨᒃᑯᖏᓐᓄᑦ ᓄᓇᒥᖅᑲᖅᑐᑦ ᖃᐅᔨᓴᖅᑕᐅᓯᒪᓂᐊᕐᓂᖏᓐᓄᑦ ᐱᓕᕆᐊᒃᓴᐅᓚᐅᖅᑐᒥᒃ (ᖃᓪᓗᓈᑎᑐᑦ Polar Continental Shelf Project-ᒥ).

John H. Parker OC, P.Eng. Chairman of the Board

ᑕᒃᑐ ᑲᐃ ᒪᑭᓂᔅ ᐊᑭᑎᓕᕆᓂᕐᒥᒃ ᖃᐅᔨᓴᖅᑎᐅᔪᖅ ᓄᓇᒥᖕᒐᖅᑐᓕᕆᔨᒃᑯᓐᓂᑦ ᐃᓄᓕᕆᔨᑐᖅᑲᒃᑯᑦ ᐱᓕᕆᑦ ᕕᖓᓂᑦ, ᓴᓗᓇᐃᑦᒥ, ᐊᒥᓱᓂᒃ ᐊᔾᔨᒌᖏᑦᑐᓂᒃ ᐱᓕᕆᐊᖅᓴᖅᑲᓲᖕᒍᔪᖅ ᐱᓗᐊᖅᑐᒥᒃ ᐊᑭᑎᒥᒃ ᓴᐳᔾᔨᓂᕐᒥᒃ, ᐅᕐᓯᐊᓗᒃᓯᐅᕐᓂᖅ ᐃᓱᒪᒋᓗᐊᕐᓗᓂᐅᒃ. ᐊᐅᓚᑦᓯᔨᐅᔪᖅ ᑲᓇᑕᒥ ᓄᓇᓕᕆᓂᕐᒥᒃ ᖃᐅᔨᓴᖅᑎᒃᑯᑦ ᑲᑐᔾᔨᖃᑎᒌᒃᑯᖏᓐᓂᑦ ᐊᒻᒪᓗ ᐊᐅᓚᑦᓯᔨᐅᓚᐅᖅᓯᒪᔪᖅ ᑲᓇᑕᒥ ᐱᕈᖅᑐᓕᕆᔨᒃᑯᑦ ᑲᑐᔾᔨᖃᑎᒌᒃᑯᖏᓐᓂᒃᓗ.

ᒥᔅᑐ ᓴᓐ ᓴᐃᒥᓴᓐ ᐅᑭᐅᖅᑕᖅᑐᒥ ᐃᓕᓴᐃᔨᐅᔪᖅ ᐃᓕᓐᓂᐊᖅᑎᑦᑎᓂᕐᒧᑦ ᓄᑖᓂᒃ ᐊᑐᖅᑕᐅᓚᐅᖅᓯᒪᖏᑦᑐᓂᒃ ᐊᑐᖅᑲᑦᑕᓯᒪᑦ ᓯᓇᑐᐃᓐᓇᕐᓂᒃ ᖃᐅᔨᓴᕐᓂᕐᒥᒃ ᐊᒻᒪᓗ ᐃᓕᖅᑯᓯᑐᖅᑲᓕᕆᓂᕐᒥᒃ ᐱᑭᑦᓕᐊᑎᑦᑎᓯᒪᓕᖅᑐᓂᒃ ᑕᒪᒃᑯᐊ ᐊᑐᖅᑲᑦᑕᓕᖅᑕᖏᑦ ᖁᕕᐊᕆᔭᐅᑭᒃᑐᑦ ᐊᒻᒪᓗ ᐃᓕᓐᓂᐊᖅᑎᑦᑎᒍᓐᓇᑦᑎᐊᖅᑐᑦ. ᐊᔾᔨᕆᔭᐅᖏᑦᑐᓂᒃ ᖃᐅᔨᓴᕐᓂᑰᔪᖅ ᐃᓚᒋᓪᓗᓂᕆᑦ ᓯᓚᕐᔪᐊᓕᒫᕐᒥᒃ ᐆᒪᒪᔪᓂᒃ ᖃᐅᔨᓴᖅᑐᓕᕆᔨᒃᑯᑦ ᐱᓕᕆᔪᑦ ᐅᑭᐅᖅᑕᖅᑑᑦ ᑲᓇᖕᓇᖕᒐᓂᑦ, ᑲᓇᑕᒥ ᐃᖃᓗᖕᓂᒃ ᖃᐅᔨᓴᖅᑐᓕᕆᔨᒃᑯᑦ ᑲᑎᒪᔨᒃᑯᖏᑦ ᐊᒻᒪᓗ Africa-ᒥᐅᓂᑦ ᕿᒃᑐᕆᐊᓃᓐᖕᒐᖅᑐᑦ ᐊᓐᓂᐊᖅᑖᕆᔭᐅᔪᓐᓇᖅᑐᓂᒃ ᖃᐅᔨᓴᕐᕕᖓᑦ, ᐊᒫᓂ, ᑖᓐᓴᐃᓂᐊᒥ.

ᑖᒃᑐ ᒫᓪᑲᒻ ᕿᓯ ᓇᓄᕐᓂᒃ, ᕿᓚᓗᒐᓂᒃ ᑐᒫᓕᖕᓂᒃ ᐊᒻᒪᓗ ᖃᓚᓗᒐᓂᒃ ᖃᐅᔨᓴᖅᑐᖅ ᓄᓇᑦᓯᐊᕐᒥᒃ ᐊᒃᓯᐊᓗ ᐱᓕᕆᓯᒪᓂᑰᔪᖅ. ᑖᒃᑐ ᕿᓯ ᓵᓴᒃᔾᔪᑦᓐ, ᓵᓴᒃᑑᓐ ᓯᓚᒃᑐᓴᖅᕕᖓᓂᑦ ᐃᓕᓴᐃᔨᐅᔪᖅ.

ᑖᒃᑐ ᓄᐊ ᑲᐱᓐᑐ, ᐃᒃᑲᐺᐅᑦᒥᐅᑕᖅ, ᓄᓇᑦᓯᐊᕐᒥᑦ, ᑲᓇᑕᒥ ᓗᒃᑖᖕᒍᔪᖅ ᓄᓇᖅᑳᖅᑳᖅᓯᒪᓪᓗᓂᒃ ᑕᒪᓂᑦ ᑲᓇᑕᒥ ᓄᓇᖅᑳᖅᑳᖅᓯᒪᔪᑦ ᓗᒃᑖᖕᒍᔪᑦ ᐊᒥᓱᖏᑦᑐᑯᓗᑎᓪᓗᒋᑦ. ᑲᓇᑕᒥ ᐊᔪᖏᓛᖕᒍᔪᓂᖅᑕᐅᔪᖅ ᖃᑎᒐᓂᒃ ᐱᓚᒃᑐᐃᔨᐅᔪᓂᑦ, ᑖᒃᑐ ᑲᐱᓐᑐ ᓗᒃᑖᖕᒍᔪᖅ St. Joseph's ᐋᓐᓂᐊᕐᕕᖓᓂᑦ, ᑰᒪᒃᓯ, ᐳᓇᑕᔅ ᑲᓚᒻᐱᐊᒥ.

ᐊᒋᓯ 1991

SCIENCE INSTITUTE
OF THE NORTHWEST TERRITORIES

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VACANT, EXECUTIVE SECRETARY

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INFORMATION/EDUCATION

Coordinator (Vacant)

Headquarters staff: Left to Right – Gwen Cochrane, Anna Buss, Elaine Riddell, Yvonne Leonardis, Jane McMullen, Craig d'Entremont, Doug Heyland, Joe Ahmad, Dave Sherstone. September 1991.

Iqaluit Research Centre Staff: Left to Right – Bob Longworth, Panik Lynn Cousins, Mary Anne Issakiark, Eric Coleman. Summer 1991.

Copies of the Institute's Annual Report, the Research Centres Annual Report and annual summaries of research are available from our Yellowknife headquarters.
4th floor Scotia Centre, P.O. Box 1617 Yellowknife, NWT, X1A 2P2

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Photos: Science Institute of the Northwest Territories

SCIENCE INSTITUTE
OF THE NORTHWEST TERRITORIES

ᓯᓇᑐᐃᓐᓇᕐᓂᒃ ᖃᐅᔨᓴᖅᑎᓕᕆᔨᒃᑯᑦ ᐅᑯᓂᖓᑦ ᐱᓕᕆᐊᒃᓴᖃᖅᑐᑦ ᐃᑲᔪᖅᑐᓪᓗ:

ᑕᒡᓚᓯ ᐸᐃᓚᓐᑦ, ᐊᐅᓚᑦᓯᔨ, ᓯᓇᑐᐃᓐᓇᕐᓂᒃ ᖃᐅᔨᓴᖅᑐᓕᕆᓂᕐᒥᒃ ᐅᖃᐅᔾᔪᐃᔨ
ᐧᐃᓄᖃᖏᑦᑐᖅ, ᐊᐅᓚᑦᓯᔨᐅᑉ ᑎᑎᕋᖅᑎᖓ

ᐃᖅᑲᓇ ᐃᔭᖅᑏᑦ

ᓯᓇᑐᐃᓐᓇᕐᓂᒃ ᖃᐅᔨᓴᖅᑐᓕᕆᓂᕐᒥᒃ ᐅᖃᐅᔾᔪᐃᓂᖅ
ᒥᔅᓴᔅ ᐊᓇ ᐸᔅ, ᓯᓇᑐᐃᓐᓇᕐᓂᒃ ᖃᐅᔨᓴᖅᑐᓕᕆᓂᕐᒥᒃ ᐊᐅᓚᑦᓯᔨ

ᓄᑖᖑᖅᐸᓪᓕᐊᔪᓂᒃ ᐱᑯᓪᓕᐊᑎᑦᑎᓂᖅ
ᑖᒃᑐ ᔫ ᐊᒪᑦ,
ᓄᑖᖑᖅᐸᓪᓕᐊᔪᓂᒃ ᐱᑯᓪᓕᐊᑎᑦᑎᓂᕐᒥᒃ
ᐱᓕᕆᐊᖑᔪᒥ (TDP) ᑲᒪᔨ

ᓴᓇᔪᓕᕆᓂᕐᒥᒃ ᖃᐅᔨᓴᕐᓂᕐᒧᑦ ᐃᑲᔫᓯᐊᑦ (IRAP)
ᒥᔅᑐ ᑯᕋᐃᒃ ᑖᓐᑐᕋᒪᓐᑎ
ᓴᓇᔪᓕᕆᓂᕐᒥᒃ ᓄᑖᖑᖅᐸᓪᓕᐊᔪᓂᒃ ᐅᖃᐅᔾᔪᐃᔨ

ᑮᓇᐅᔭᓕᕆᓂᖅ ᐊᐅᓚᑦᓯᓂᕐᓗ
ᒥᔅᓴᔅ ᐃᑯᓐ ᓕᐊᓈᑎᔅ, ᑲᒪᔨ
ᒥᔅ ᐃᓚᐃᓐ ᓇᑕᓪ, ᑎᑎᕋᖅᑎ/ᐊᓪᓚᒃᑎ |||
ᒥᔅ ᒍᑯᓐ ᑲᑯᓇᓐ, ᑎᑎᕋᖅᑎ/ᐊᓪᓚᒃᑎ ||
ᒥᔅ ᓴᓐᑎ ᑯᐃᓕᖅ, ᑎᑎᕋᖅᑎ/ᐊᓪᓚᒃᑎ ||

ᓯᓇᑐᐃᓐᓇᕐᓂᒃ ᖃᐅᔨᓴᖅᑐᓕᕆᓂᕐᒧᑦ ᐃᑲᔫᑎᑦ
ᒥᔅᑐ ᑕᐃᕕᑦ ᓱᓯᑑᓐ, ᐊᐅᓚᑦᓯᔨ

ᐃᒡᓗᓕᖅᒥ ᖃᐅᔨᓴᕐᕕᒃ
ᒥᔅᑐ ᔭᓐ ᒪᒃᑖᓐᓄᓪ, ᐊᖃᑭᒃᓯᐃᔨ
ᒥᔅᑐ ᔪᐊᔾ ᖁᓚᐅᑦ, ᐊᐅᓚᑕᐅᓂᖅᒪᓄᑦ ᑲᒪᔨ
ᒥᔅᑐ ᒧᓇᔅ ᐊᕐᓇᑦᓯᐊᖅ, ᓴᓇᔨ

ᐃᖅᓗᖅᓂᑦ ᖃᐅᔨᓴᕐᕕᒃ
ᒥᔅᑐ ᐹᔅ ᓛᖑᔅ, ᑲᒪᔨ
ᒥᔅ ᐸᓂᒃ ᓕᓐ ᑲᓴᓐᔅ, ᓴᓇᔨ

ᐃᓄᕕᒃᒥ ᖃᐅᔨᓴᕐᕕᒃ
ᒥᔅᑐ ᒋᐊᓇ ᑯᐃᑦ, ᑲᒪᔨ
ᒥᔅᑐ ᓚᔅ ᑲᑦᓂ, ᓴᓇᔨᓂᑦ ᖁᑦᑎᓐᓂᖅᐸᖅ
ᒥᔅ ᒪᐃᐸᓪ ᑯᓪᓚᒃ, ᑎᑎᕋᖅᑎ/ᐊᓪᓚᒃᑎ

ᑐᓴᒐᒃᓴᐃᑦ/ᐃᓕᓐᓂᐊᕐᓂᖅ
ᐃᓄᖃᖏᑦᑐᖅ, ᐊᖃᑭᒃᓯᐃᔨ

ᐱᓕᕆᕝᕕᐅᑉ ᐃᖅᑲᓇᐃᔭᖅᑎᖏᑦ: ᓴᐅᒥᖏᑦ ᑕᓕᖅᐱᖓᑦ ᒍᐃᓐ ᑲᒃᑯᓇᓐ, ᐋᓐ ᐸᔅ, ᐃᓚᐃᓐ ᓇᑕᐅᓪ, ᐃᑦᓐ ᓕᓄᐊᑎᔅ, ᔭᐃᓐ ᒪᒃᒧᓚᓐ ᑯᓇᒃ ᑦᐃᓐᑐᓇᒪᓐᑦ, ᑕᒡ ᐸᐃᓚᓐᑦ, ᔫ ᐊᒪᑦ, ᑕᐃᕝ ᓱᕐᑕᓐ, ᓯᑎᐱᓇ 1991.

ᐃᖅᓗᐃᑦ ᖃᐅᔨᓴᕐᕕᖏᑦ ᐃᖅᑲᓇᐃᔭᖅᑏᑦ, ᐹᔅ ᓛᖑᐅᐊᑦ, ᐸᓂᒃ ᓕᓐ ᑲᓯᓐᔅ, ᒥᐊᓇ ᐋᓐ ᐃᔅᓴᑭᐊᖅ, ᐃᐅᓇᒃ ᑰᒪᓐ, 1991 ᐊᐅᔭᖓᓂᑦ.

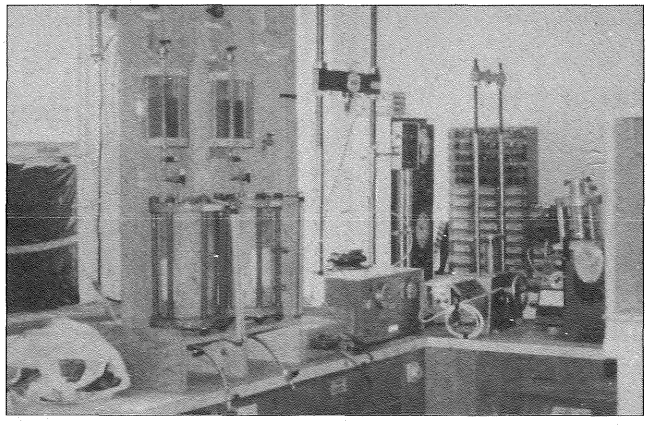
ᐊᔭᖏᓐᓂᒃ ᖃᐅᔨᓴᖅᑎᓕᕆᔨᒃᑯᑦ ᐊᕐᕋᒍᑕᒪᑉᐳᑏᑦ ᐅᓂᒃᑳᓕᐅᖅᑕᐅᓯᒪᔪᑦ, ᖃᐅᔨᓴᕐᕕᑦ ᐊᕐᕋᒍᑕᒪᑦ ᐅᓂᒃᑳᓕᐊᖏᑦ ᐊᒻᒪᓗ ᐊᕐᕋᒍᑕᒪᑦ
ᓇᐃᓪᓕᒋᐊᖅᑎᑕᐅᓯᒪᔪᓂᒃ ᐅᓂᒃᑳᓕᐅᖅᑕᐅᓯᒪᔪᓂᒃ ᐱᔭᐅᔪᓐᓇᖅᑐᑦ ᔭᓗᓇᖏᕐᒥᑦ ᐱᓕᕆᕝᕕᑦᑎᓐᓂᑦ.
4th floor Scotia Centre, P.O. Box 1617 Yellowknife, N.W.T. X1A 2P2

SCIENCE INSTITUTE
OF THE NORTHWEST TERRITORIES

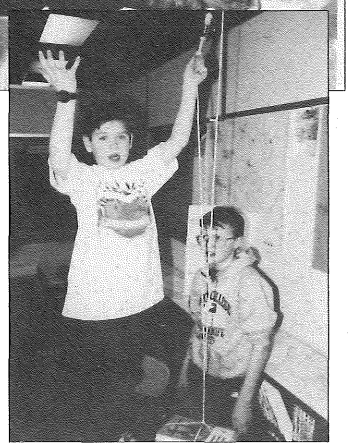
Introducing the Science Institute of the Northwest Territories

Northern residents, northern researchers, visiting researchers and the curious all benefit from the services of the Science Institute of the Northwest Territories. In 1985 the Institute was established under legislation of the Government of the Northwest Territories to provide scientific, engineering and technological perspectives to the Legislative Assembly on the social and economic needs of the people.

The Institute, a non-profit organization, is governed by a *Board* of seven to thirteen Members, at least half of whom must be resident in the Northwest Territories. The Institute's goals are achieved through an Executive Director, Program and Research Centre Managers, a Finance/Administration Manager and support staff. The Science Institute is a non-profit organization and donations of funds or services-in-kind are accepted.



Researchers are supported with laboratory facilities and logistical support through our three Research Centres.



Science is shared ... among all our residents.

To achieve the Institute's mandate of fostering science and technology, four complementary programs have been developed as the Institute has matured: Science Advisory Services, Scientific Services, Information/Education and Technology Development (including the N.W.T. component of the Industrial Research Assistance Program of the National Research Council of Canada).

The *Science Advisory Services* program issues licenses for research conducted within the N.W.T. Through this registration process, information is shared amongst researchers and the northern populace. Program involvement in cooperative groups, such as the federally funded National Health Research Development Program North of 60 Initiative, and a Traditional Knowledge Working Group, helps to ensure that northern research needs are met.

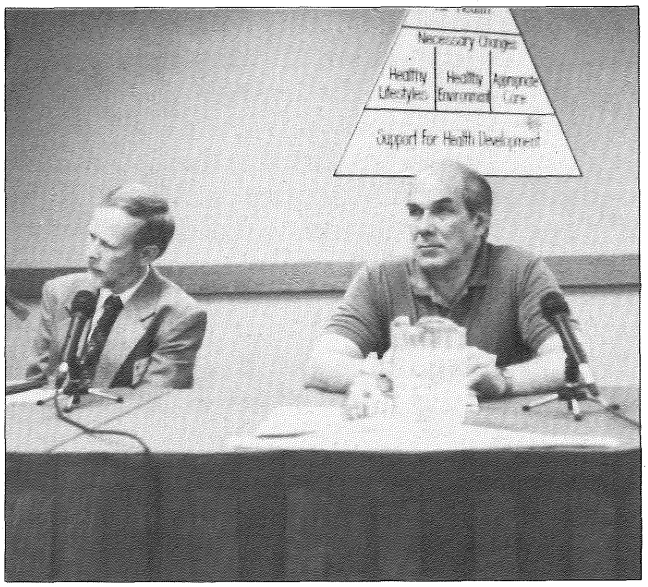
Introducing the Science Institute of the Northwest Territories

The *Scientific Services* program offers logistical support to researchers from all parts of the globe while in the field in the Northwest Territories. Since 1988 three research centres, formerly operated by the Department of Indian and Northern Affairs, have been operated on a year-round basis in Igloolik, in Foxe Basin, Iqaluit, in the south Baffin, and Inuvik, in the Mackenzie Delta Region.

The Institute assists in developing a science culture within the northern society. Through projects of the *Information/Education* program, youth and the general public increase their awareness and knowledge of modern and traditional science of particular significance to Northerners. Producing science and technology educational resource materials, coordinating Cross-cultural Science Camps for children and promoting national science education initiatives, such as science fairs, are some of the program's activities.

The *Technology Development Program* (TDP), organized in late 1990, brings viable technology to northern businesses and assists northern industry to develop unique technologies for the domestic and international marketplace. Initial research has led to five technological foci: alternative energies, environment, food production, engineering/building science and traditional knowledge database/artificial intelligence.

The *Industrial Research Assistance Program* (IRAP) of the National Research Council has been administered in the N.W.T. by the Institute since 1989. The IRAP Industrial Technology Advisor and the Manager of the TDP work closely to integrate the program.



Northern research needs are identified.

A Construction Research Advisor will be hired in 1992. This position will add a third dimension to this important initiative. The Program is also entering into cooperative projects with agencies such as Energy, Mines and Resources Canada.

The Institute is expanding its scope and its resources. All programs are striving to coordinate and facilitate science in the North. Cooperation with many groups is the cornerstone of our successful programs.

Photos: Science Institute of the Northwest Territories

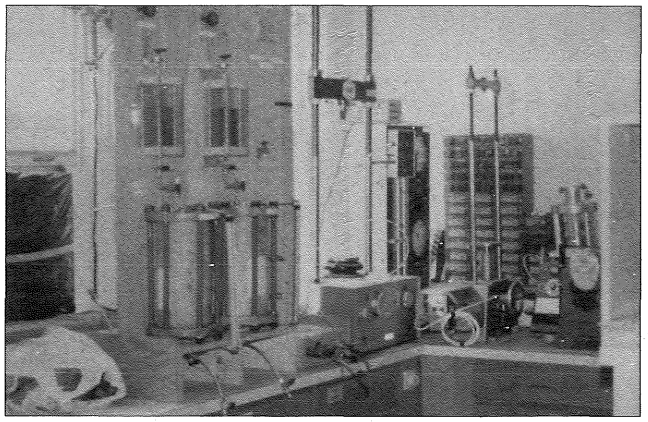
SCIENCE INSTITUTE
OF THE NORTHWEST TERRITORIES

ᐱᑕᖃᓕᖅᑎᑦᑎᓂᖅ ᓄᓇᑦᓯᐊᕐᒥᑦ ᓱᓇᑐᐃᓐᓇᕐᓂᒃ ᖃᐅᔨᓴᖅᑎᓕᕆᔨᒃᑯᓐᓂᒃ

ᐅᑭᐅᖅᑕᕐᑐᕐᒥᑦ ᓄᓇᓖᑦ, ᐅᑭᐅᖅᑕᕐᑐᒥᑦ ᖃᐅᔨᓴᖅᑏᑦ, ᐅᒡᓚᖅᓯᒪᔪᑦ ᖃᐅᔨᓴᖅᑏᑦ ᐊᒻᒪᓗ ᖃᐅᔨᔪᒪᔪᓕᒫᑦ ᐃᑲᔪᖅᑕᐅᖃᑦᑕᖅᑐᑦ ᑖᒃᑯᓇᖕᒐᑦ ᐃᑲᔫᑎᒋᖃᑦᑕᕐᑕᖏᑕ ᓄᓇᑦᓯᐊᕐᒥᑦ ᓱᓇᑐᐃᓐᓇᕐᓂᑦ ᖃᐅᔨᓴᖅᑎᓕᕆᔨᒃᑯᓐᓂᑦ. 1985-ᒥᑦ ᖃᐅᔨᓴᖅᑎᓕᕆᔨᒃᑯᑦ ᐋᖅᑭᒃᑕᐅᓚᐅᕐᓯᒪᔪᑦ ᒪᓕᒐᓕᐊᕆᔭᐅᔪᒥᒃ ᓄᓇᑦᓯᐊᑉ ᒐᑦᒪᒃᑯᖏᑦ ᐱᑕᖃᕐᑯᕝᕙᑎᒃ ᓱᓇᑐᐃᓇᕐᓂᒃ ᖃᐅᔨᓴᖅᑐᓕᕆᓂᕐᒧᑦ, ᓴᓇᔭᐅᓯᒪᓂᐊᖅᑐᓂᒃ ᐋᖅᑭᒃᓱᐃᓂᕐᒧᑦ ᐊᒻᒪᓗ ᓄᑖᖑᖅᐸᓕᓕᐊᔪᓂᒃ ᐃᓱᒪᒋᔭᐅᔪᓄᑦ ᓄᓇᑦᓯᐊᕐᒥᑦ ᒪᓕᒐᓕᐅᖅᑎᒃᑯᑦ ᑐᓴᐅᒪᕐᑯᕝᕙᒋᑦ ᐃᓕᖅᑯᓯᒧᖕᒐᔪᓂᒃ ᐊᒻᒪᓗ ᐱᑉᓕᐊᔪᖃᕆᐊᖃᕐᓂᖏᓐᓂᒃ ᐃᓄᖏᑦ.

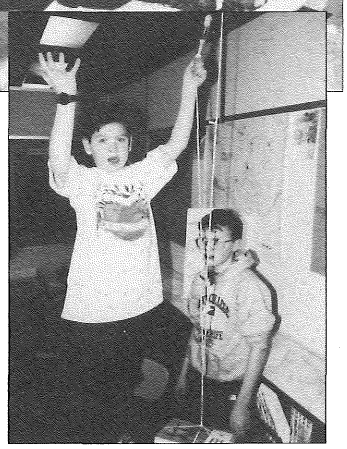
ᑖᒃᑯᐊ ᖃᐅᔨᓴᖅᑎᓕᕆᔨᒃᑯᑦ, ᑮᓇᐅᔭᓕᐅᖃᑦᑕᖏᑦᑐᑦ ᐋᖅᑭᒃᑕᐅᓯᒪᓂᖕᒐᑦ, ᐊᐅᓚᑕᐅᔪᖅ ᑲᑎᒪᔨᓂᑦ 7-ᒥᑦ 13-ᒧᑦᓗᓐᓂᑦ ᐃᓚᒋᔭᐅᓯᒪᔪᓂᒃ, ᐊᑉ ᑯᓇᔭᖏᑦ ᓄᓇᑦᓯᐊᕐᒥᑦ ᓄᓇᖃᓇᐊᖃᖅᑐᑦ. ᖃᐅᔨᓴᖅᑎᓕᕆᔨᒃᑯᑦ ᐱᓕᓇᐊᓇᓄᓱᒃᑕᖏᑦ ᐊᐅᓚᑕᐅᖃᑦᑕᖅᑐᑦ ᐅᑯᓇᖕᒐᑦ ᐊᐅᓚᑦᑎᔨᓂᑦ, ᑐᑭᒧᐊᕐᑎᑦᑎᔨᓂᑦ, ᐱᓕᓇᐊᖅᓴᐅᔪᓂᒃ ᐊᒻᒪᓗ ᖃᐅᔨᓴᕐᓂᕐᒧᑦ ᑲᒪᔨᓂᑦ, ᑮᓇᐅᔭᓕᓇᓂᒃᒧᑦ/ᐊᐅᓚᑦᑎᓂᕐᒧᑦ ᑲᒪᔨᓂᑦ ᐊᒻᒪᓗ ᐃᖅᑲᓇᐃᔭᖅᑎᓂᑦ. ᑕᒪᓐᓇ ᓱᓇᑐᐃᓐᓇᕐᓂᑦ ᖃᐅᔨᓴᖅᑎᓕᕆᔨᒃᑯᖅ ᑮᓇᐅᔭᓕᐅᖃᑦᑕᖅᓗᓂ ᐋᖅᑭᒃᑕᐅᓯᒪᖕᒐᑦ ᑮᓇᐅᔭᓂᒃ ᑐᓂᓯᔪᒪᔪᑦ ᐅᑉ ᑯᓗᓐᓂᑦ ᐃᑲᔪᕈᒪᔪᑦ ᑐᖕᒐᓱᒃᑎᑕᐅᖃᑦᑕᖅᑐᑦ.

ᐱᐊᓂᒐᓱᒃᓗᒍ ᑕᒪᓐᓇ ᖃᐅᔨᓴᖅᑎᓕᕆᔨᒃᑯᑦ ᐱᔭᕆᐊᖃᕐᑕᖏᑦ ᐱᓕᓇᓇᓱᒃᓗᓂᒥᑦ ᓱᓇᑐᐃᓐᓇᕐᓂᒃ ᖃᐅᔨᓴᕐᓂᕐᒧᑦ ᐊᒻᒪᓗ ᓄᑖᖑᖅᐸᓕᓕᐊᓂᑦ, ᑎᓴᒪᐃᑦ ᐃᑲᔪᖃᑦᑕᐅᑎᔪᑦ ᐱᓕᓇᐊᓇᔭᐅᓯᒪᓂᖕᒐᓄᑦ ᐱᑉᓕᐊᑎᑕᐅᓚᕐᑐᑦ ᑖᒃᑯᐊ



ᖃᐅᔨᓴᖅᑎᓂᖅᑐᑦ ᐃᑲᔫᑎᒋᔭᐅᔪᑦ ᖃᐅᔨᓴᕐᓂᕐᒧᑦ ᖃᐅᔨᓴᕐᓂᕐᒧᑦ ᐊᒻᒪᓗ ᐋᖅᑭᒃᓱᐃᓂᕐᒧᑦ ᐊᑐᖅᑐᓴᑦ ᐱᖓᓱᓂᑦ ᐱᓕᓇᕐᓂᕐᒥᖅᑎᓂᕐᒧᑦ.

ᓱᓇᑐᐃᓐᓇᕐᓂᒃ ᖃᐅᔨᓴᖅᑐᓕᕆᓂᕐᒥᒃ ᖃᐅᔨᔭᐅᔪᑦ ᓄᓇᑦᓯᐊᕐᒥᐅᑕᓕᒫᓄᑦ ᐊᑐᖅᑕᐅᔫᑦ



ᖃᐅᔨᓴᖅᑎᓕᕆᔨᒃᑯᑦ ᐱᐅᓇᕐᑎᓪᓗᒋᑦ: ᓱᓇᑐᐃᓐᓇᕐᓂᑦ ᖃᐅᔨᓴᖅᑐᓕᕆᓂᕐᒧᑦ ᐅᖃᐅᔭᔪᐃᓂᖅ, ᓱᓇᑐᐃᓐᓇᕐᓂᒃ ᖃᐅᔨᓴᖅᑎᓕᕆᓂᕐᒧᑦ ᐃᑲᔫᑎᑦ ᑐᓴᒐᓴᖃᖅᑎᑦᑎᓂᖅ ᐊᒻᒪᓗ ᐃᓕᓐᓂᐊᖅᑎᑦᑎᓂᖅ ᐊᒻᒪᓗ ᓄᑖᖑᖅᐸᓕᓕᐊᔪᓂᒃ ᐱᑉᓕᐊᑎᑦᑎᓂᖅ ᐃᓚᐅᒋᓪᓗᑎᒃ ᐱᓕᓇᐊᓇᔭᐅᔭᓇᐊᓕᑦ ᐊᒻᒪᓗ ᓴᓇᔪᓕᓇᓂᕐᒥᒃ ᖃᐅᔨᓴᕐᓂᕐᒧᑦ ᐃᑲᔫᑎᑦ ᑖᒃᑯᓇᖕᒐᑦ ᑲᓇᑕᓕᒫᕐᒥᑦ ᖃᐅᔨᓴᖅᑎᒃᑯᑦ ᑲᑎᒪᔨᒃᑯᖏᓐᓂᑦ.

ᑕᒪᓐᓇ **ᓱᓇᑐᐃᓐᓇᕐᓂᒃ ᖃᐅᔨᓴᖅᑐᓕᕆᓂᕐᒧᑦ ᐅᖃᐅᔭᔪᐃᓂᖅ** ᐱᓕᓇᐊᓇᔭᐅᓯᒪᓂᖕᒐᓄᑦ ᐋᖅᑭᒃᓯᖃᑦᑕᖅᑐᑦ ᐱᔪᓐᓇᐅᑎᓂᒃ ᖃᐅᔨᓴᕈᑕᐅᓂᐊᕐᑐᓂᒃ ᓄᓇᑦᓯᐊᕐᒥᑦ. ᑖᒃᑯᐊ ᑎᑎᕋᓇᐊᖃᕈᑎᑦ, ᑐᓴᒐᓴᑦ ᐊᑐᖅᑕᐅᖃᑦᑕᖅᑐᑦ ᑖᒃᑯᓇᖕᒐᑦ ᖃᐅᔨᓴᖅᑎᓂᑦ ᐊᒻᒪᓗ ᐅᑭᐅᖅᑕᕐᑐᒥᐅᑕᓂᑦ. ᐱᓕᓇᐊᓇᔭᐅᓯᒪᓂᖕᒐᓄᑦ ᐃᓚᐅᖃᑦᑕᕐᓂᖅ ᐃᑲᔪᖃᑦᑕᐅᑎᔪᓂᒃ ᑲᑎᕐᓱᕐᓯᒪᔪᑦ, ᓱᕐᓗ ᑲᓇᑕᒥᑦ ᒐᑦᒪᒃᑯᖕᓂᑦ ᑮᓇᐅᔭᕐᑖᖃᑦᑕᖅᑐᑦ ᑲᓇᑕᒥᑦ ᐋᖕᓂᐊᖃᕐᓇᖏᑦᑐᓕᕆᓂᕐᒥᒃ ᖃᐅᔨᓴᕐᓂᕐᒧᑦ ᐊᒻᒪᓗ ᐱᑉᓕᐊᓂᕐᒧᑦ ᐱᓕᓇᐊᖅᓴᖅ ᐅᑭᐅᖅᑕᖅᑑᑉ ᑭᒡᓕᖕᒍᐊᖕᒐᑦ ᐅᖕᒐᑖᓐᓂᑦᑐᓄᑦ ᐱᓕᓇᐊᓇᔭᐅᓇᓱᒃᑐᑦ (North of 60), ᐊᒻᒪᓗ ᐃᓕᖅᑯᓯᑐᖃᕐᓂᒃ ᖃᐅᔨᒪᔪᓕᓇᓂᕐᒧᑦ ᓴᓇᖃᑎᒌᒃᑐᑦ, ᐃᑲᔪᖃᑦᑕᖅᐳᑦ ᐅᑭᐅᖅᑕᖅᑐᒥᐅᑦ ᖃᐅᔨᓴᖅᑕᐅᔭᓇᐊᖃᕐᓂᖏᑦ ᐱᔭᐅᕐᑯᕝᕙᒋᑦ.

ᖃᐅᔨᓴᖅᑎᓂᖅᑐᓂᑦ ᐃᑲᔫᑎᒋᔭᐅᔪᑦ ᖃᐅᔨᓴᕐᓂᕐᒧᑦ ᖃᐅᔨᓴᕐᓂᕐᒧᑦ ᐊᒻᒪᓗ ᐋᖅᑭᒃᓱᐃᓂᕐᒧᑦ ᐊᑐᖅᑐᓴᑦ ᐱᖓᓱᓂᑦ ᐱᓕᓇᕐᓂᖅᓴᖅᑎᒋᕝᕙᒋᑦ.

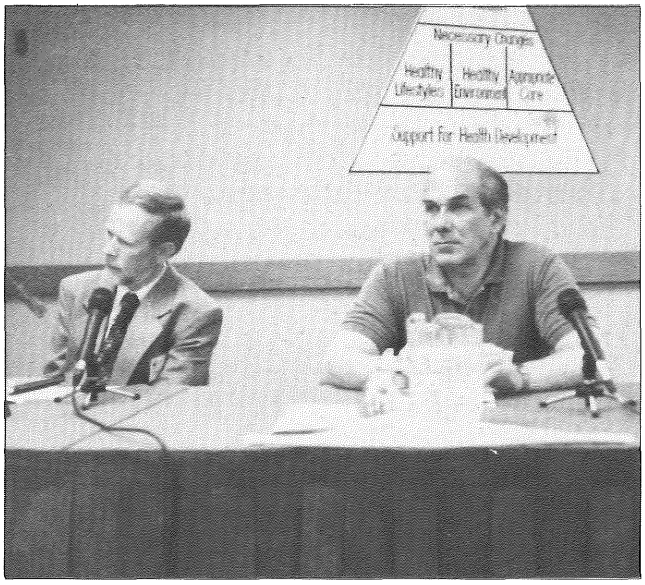
ᐱᑕᖃᓕᖅᑎᑦᑎᓂᖅ ᓄᓇᑦᓯᐊᕐᒥᑦ ᓱᓇᑐᐃᓐᓇᕐᓂᒃ ᖃᐅᔨᓴᖅᑎᓕᕆᔨᒃᑯᓐᓂᒃ

ᑕᒪᒃᑯᐊ **ᓱᓇᑐᐃᓐᓇᕐᓂᒃ ᖃᐅᔨᓴᖅᑎᓕᕆᓂᕐᒧᑦ ᐃᑲᔫᑏᑦ**
ᐱᓕᕆᐊᕆᔭᐅᓯᒪᓃᑦ ᐊᑐᕈᓐᓇᐅᑎᖃᕐᖅᐳᖅ ᐋᖅᑭᒃᓱᕐᓯᒪᔪᓂᒃ
ᐃᑲᔪᕈᑕᐅᔪᓐᓇᕐᑐᓂᒃ ᖃᐅᔨᓴᖅᑎᓂᒃ ᓇᑭᓕᒫᖅ ᓄᓇᕐᔪᐊᕐᒥᓐᖓᖅᑐᓂᒃ
ᖃᐅᔨᓴᖅᑎᓪᓗᒋᑦ. ᑕᐃᒪᖓᓂᑦ 1988-ᒥᑦ ᐱᖓᓱᐃᑦ ᐱᓕᕆᑉ ᕖᑦ,
ᐊᐅᓚᑕᐅᓚᐅᕐᓯᒪᔫᒐᓗᐊᑦ ᐃᓄᓕᕆᔨᑐᖃᒃᑯᓐᓂᑦ,
ᐊᐅᓚᑕᐅᖃᑦᑕᓕᖅᑐᑦ ᐊᕐᕌᒍᓕᒫᖅ ᐃᒡᓗᓕᖅᒥᑦ, ᕿᑭᖅᑖᓗᒃ ᐅᐊᖕᓇᖅ,
ᐃᖃᓗᖕᓂᑦ, ᕿᑭᖅᑖᓗᒃ ᓂᒋᖅ, ᐊᒻᒪᓗ ᐃᓄᕕᒃ, ᐅᐊᓕᓂᕐᒥᐅᑦ.

ᑖᒃᑯᐊ ᖃᐅᔨᓴᖅᑎᓕᕆᔨᒃᑯᑦ ᐃᑲᔪᖃᑦᑕᖅᐳᑦ ᐱᑉᓕᐊᑎᑦᑎᒡᓗᑎᒃ
ᓱᓇᑐᐃᓐᓇᕐᓂᒃ ᖃᐅᔨᓴᕐᓂᕐᒧᑦ ᐃᓕᖅᑯᓯᓂᒃ ᐅᑭᐅᖅᑕᕐᑐᒥᐅᑕᓂᑦ.
ᑕᒪᒃᑯᐊ ᐱᓕᕆᔭᐅᔭᕆᐊᖃᕐᑐᑦ ᑖᒃᑯᓇᖓᑦ **ᑐᓴᒐᒃᓴᖃᖅᑎᑦᑎᓂᖅ**
ᐊᒻᒪᓗ ᐃᓕᓐᓂᐊᖅᑎᑦᑎᓂᕐᒥᒃ ᐱᓕᕆᐊᕆᔭᐅᓯᒪᓂᒃᑯᑦ, ᒪᒃᑯᒃᑐᑦ
ᐊᒻᒪᓗ ᑭᒃᑯᓕᒫᑦ ᐅᔾᔨᕆᔭᖏᑦ ᐊᒻᒪᓗ ᖃᐅᔨᒪᓂᕆᔭᖏᑦ ᓄᑖᖕᒍᔪᓂᒃ
ᐊᒻᒪᓗ ᐃᓕᖅᑯᓯᑐᖃᕐᓂᒃ ᓱᓇᑐᐃᓐᓇᕐᓂᒃ ᖃᐅᔨᓴᕐᓂᕐᒥᒃ
ᖃᐅᔨᒪᓂᖅᓴᐅᓕᖃᑦᑕᖅᑐᑦ ᑕᒪᒃᑯᓂᖓ ᐱᒻᒪᕆᐅᔪᓂᒃ
ᐅᑭᐅᖅᑕᕐᑐᕐᒥᐅᑕᓄᑦ. ᓴᓇᖃᑦᑕᖅᓱᑎᒃ ᓱᓇᑐᐃᓐᓇᕐᓂᒃ ᖃᐅᔨᓴᕐᓂᕐᒧᑦ
ᐊᒻᒪᓗ ᓄᑖᓐᖑᖅᐸᓪᓕᐊᔾᔪᑎᓂᒃ ᐃᓕᓐᓂᐊᕈᑎᓕᐅᖃᑦᑕᕐᓗᑎᒃ,
ᐋᖅᑭᒃᓯᕙᒃᑭᓪᓗᑎᒡᓗ ᐊᔾᔨᒌᖏᑦᑐᓂᒃ ᐃᓕᖅᑯᓯᖃᖅᑐᓄᑦ ᓱᓇᑐᐃᓐᓇᕐᓂᒃ
ᖃᐅᔨᓴᓂᕐᒧᑦ ᐊᐅᓪᓚᕐᕕᖃᖃᑦᑕᕆᓪᓗᑎᒃ ᓄᑕᕐᕐᓄᑦ ᐊᒻᒪᓗ
ᐃᓕᑕᕆᔭᐅᑎᑦᑎᓇᓱᒃᐸᒃᓗᑎᒃ ᑲᓇᑕᒥᑦ ᓱᓇᑐᐃᓐᓇᕐᓂᒃ ᖃᐅᔨᓴᕐᓂᕐᒧᑦ
ᐃᓕᓐᓂᐊᕐᓂᕐᒧᑦ ᐱᓕᕆᔭᐅᓇᓱᒃᑐᓂᒃ, ᓲᕐᓗ ᓱᓇᑐᐃᓐᓇᕐᓂᒃ
ᖃᐅᔨᓴᕐᓂᕐᒧᑦ ᓴᓇᔭᐅᓯᒪᔪᑦ, ᐃᓚᒋᕙᖏᑦ ᑕᒪᑐᒪ
ᐱᓕᕆᐊᕆᔭᐅᓯᒪᓂᐅᑉ ᐱᓕᕆᖃᑦᑕᖅᑕᖏᓐᓄᑦ.

ᑖᒃᑯᐊ ᓄᑖᖕᒍᖅᐸᓪᓕᐊᔾᔪᓂᒃ ᐱᕙᓪᓕᐊᑎᑦᑎᓂᕐᒧᑦ ᐱᓕᕆᐊᖑᔭᐅᐃᑦ
(TDP), ᐋᖅᑭᒃᑕᐅᓂᑯ 1990-ᐅᑉ ᐃᓱᐸᓗᐊᓂᑦ,
ᐱᑕᖃᓕᖅᑎᑦᑎᖃᑦᑕᖅᑐᖅ ᐱᕙᓪᓕᐊᔾᔪᓐᓇᖅᑐᓂᒃ ᓄᑖᖕᒍᖅᐸᓪᓕᐊᔾᔪᓂᒃ
ᐅᑭᐅᖅᑕᖅᑐᕐᒥᐅᑕᓄᑦ ᓇᖕᒥᓂᖅ ᑮᓇᐅᔭᓕᐅᖅᑐᓄᑦ ᐊᒻᒪᓗ
ᐃᑲᔪᖅᐸᒃᓗᑎᒃ ᐅᑭᐅᖅᑕᖅᑐᒥᑦ ᓴᓇᔪᓕᕆᓂᕐᒥᒃ
ᐱᕙᓪᓕᐊᑎᑦᑎᓕᖅᓗᑎᒃ ᐋᔾᔨᐅᖏᑦᑐᓂᒃ ᓄᑖᖕᒍᖅᐸᓪᓕᐊᔾᔪᓂᒃ
ᑕᒪᑐᒧᖕᖓ ᓇᔪᖅᑕᑦᑎᓐᓄᑦ ᐅᑉ ᕙᓗᓐᓂᑦ ᓇᒥᓕᒫᖅ
ᓂᐅᕕᐊᒃᓴᖃᕐᓂᕐᒧᑦ.

ᖃᐅᔨᓴᖅᑕᐅᓂᑯᑦ ᑕᓪᓕᒪᓂᒃ ᓄᑖᖕᒍᖅᐸᓪᓕᐊᔾᔪᓂᒃ ᐋᖅᑭᒃᓱᓯᒪᓕᖅᑐᑦ
ᐅᑯᓂᖓ: ᐊᔾᔨᖏᑕᖓᓂᒃ ᐊᐅᓚᔪᓐᓇᐅᑎᒥᒃ, ᓄᓇᐅᑉ ᐊᕙᑖᓂᒃ,
ᓂᕿᓂᒃ ᓴᓇᓂᕐᒥᒃ, ᓴᓇᔭᐅᓯᒪᓂᐊᖅᑐᓂᒃ ᐋᖅᑭᒃᓱᐃᓂᖅ/
ᐱᕈᖅᑎᑦᑎᕙᓪᓕᐊᔪᑦ ᓱᓇᑐᐃᓐᓇᕐᓂᒃ ᖃᐅᔨᓴᕐᑐᓕᕆᓂᕐᒥᒃ ᐊᒻᒪᓗ
ᐃᓕᖅᑯᓯᑐᖃᕐᓂᒃ ᖃᐅᔨᒪᔾᔪᑎᓂᒃ ᑐᑭᓯᒋᐊᕈᑎᓂᒃ/ᖃᓇᓴᐅᔭᒃᑯᑦ.



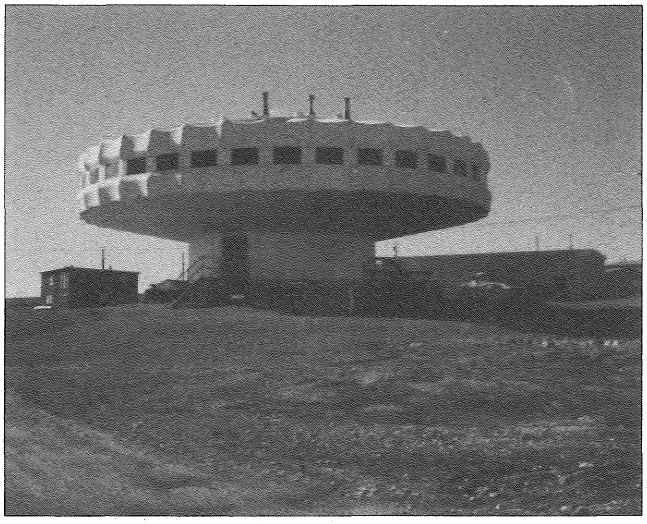
ᐅᑭᐅᖅᑕᖅᑐᒥᑦ ᖃᐅᔨᓴᕐᓂᕐᒧᑦ ᐱᔭᕇᓕᕐᑐᑦ ᓇᓗᓇᐃᖅᑕᐅᔪᑦ

ᑕᒪᓐᓇ ᓴᓇᔪᓕᕆᓂᕐᒥᒃ ᖃᐅᔨᓴᕐᓂᕐᒧᑦ ᐃᑲᔫᑏᑦ (IRAP) ᑲᓇᑕᒥᑦ
ᖃᐅᔨᓴᖅᑎᓕᕆᔨᒃᑯᑦ ᑲᑎᒪᔨᖏᑦ ᐊᐅᓚᑕᐅᖃᑦᑕᖅᓯᒪᓕᖅᑐᖅ ᑖᒃᑯᓇᖓᑦ
ᖃᐅᔨᓴᖅᑐᓕᕆᓂᕐᒧᑦ 1989ᒥᑦ ᐱᒋᐊᕐᓗᓂ. ᑕᒪᓐᓇ IRAP
ᓴᓇᔭᒃᓴᐅᔪᓂᒃ ᓄᑖᖕᒍᖅᐸᓪᓕᐊᔪᓂᒃ ᐅᖃᐅᔾᔪᐃᔨ ᐊᒻᒪᓗ ᑲᒪᔨ
ᑕᒪᑐᒧᖓ ᓄᑖᖕᒍᖅᐸᓪᓕᐊᔪᓂᒃ ᐱᕙᓪᓕᐊᑎᑦᑎᔨ ᓴᓇᖃᑎᒌᖃᑦᑕᖅᑑᒃ
ᐃᓚᒋᔭᐅᓕᖅᑎᓐᓇᓱᒃᓗᒋᑦ ᐱᓕᕆᐊᕆᔭᒃᓴᓂᒃ.

ᐃᒡᓗᓕᐅᕐᓂᕐᒧᑦ ᖃᐅᔨᓴᕐᓂᕐᒧᑦ ᐅᖃᐅᔾᔪᐃᔨᒥᒃ
ᐊᑐᓕᖅᑎᑦᑎᓚᓕᓪᓗᑎᒃ 1992-ᒥᑦ. ᑕᒪᓐᓇ ᐱᓕᕆᑉ ᕖᒃᓴᖅ
ᐱᖓᓱᒋᔭᐅᔪᒥᒃ ᐱᑕᖃᓂᖃᓕᕋᔭᑯᖅᑐᖅ ᑕᒪᓐᓇ ᐱᒻᒪᕆᐅᔪᒥᒃ
ᐱᓕᕆᐊᕆᔭᐅᓇᓱᖕᓂᕐᒧᑦ. ᑕᒪᓐᓇ ᐱᓕᕆᐊᕆᔭᒃᓴᖅ
ᐃᑲᔪᖃᑦᑕᐅᑎᖃᓕᒫᓕᕐᒥᔪᖅ ᐱᓕᕆᐊᒃᓴᓂᒃ ᐱᓕᕆᑉ ᕖᖕᓂᒃ ᓲᕐᓗ
ᐅᔭᕋᓯᐅᕐᕕᖕᒧᑦ ᓄᓇᒥᖕᒍᕐᑐᓂᒃ ᑲᓇᑕᒥᑦ.

ᑕᒪᒃᑯᐊ ᖃᐅᔨᓴᖅᑎᓕᕆᔨᒃᑯᑦ ᐊᖏᒡᓕᕐᑐᓕᕆᑎᑦᑎᓕᖅᑐᑦ
ᐱᓕᕆᖃᑦᑕᖅᑕᒥᓂᒃ ᐊᒻᒪᓗ ᖃᐅᔨᒪᔾᔪᑎᒋᔭᖏᓐᓂᒃ ᐊᕐᕌᒍᑕᒪᑦ.
ᑕᒪᒃᑯᐊ ᐱᓕᕆᐊᕆᔭᐅᓯᒪᓕᖅᑐᑦ ᐱᕈᕐᓕᕐᓕᐊᔪᑦ ᐊᐅᓚᑦᑎᓇᓱᒃᓗᑎᒃ
ᐊᒻᒪᓗ ᐃᓂᖃᕐᑎᑦᑎᓇᓱᒃᓗᑎᒃ ᓱᓇᑐᐃᓐᓇᕐᓂᒃ ᖃᐅᔨᓴᖅᑐᓂᒃ
ᐅᑭᐅᖅᑕᕐᑐᒥᑦ. ᐃᑲᔪᖃᑦᑕᐅᑎᓯᒪᔪᑦ ᑲᑎᕐᓯᕐᓯᒪᔪᑦ
ᐱᒋᐊᕐᓂᕆᔭᐅᖃᑦᑕᕐᑐᑦ ᐱᐊᓂᑦᑎᐊᕐᓯᒪᔪᓂᒃ
ᐱᓕᕆᐊᕆᔭᐅᓯᒪᓕᖅᑐᓂᒃ.

Science Institute of the Northwest Territories



Igloolik has a population of about 1000 and is accessible only by air. Currently, air service is provided from Yellowknife by First Air, and from Iqaluit by Canadian North and First Air.

Igloolik Research Centre

Opened in 1975, the Igloolik Research Centre occupies a unique, fibreglass building of 485 square metres. The centre has three permanent staff. Operation is on a year-round basis.

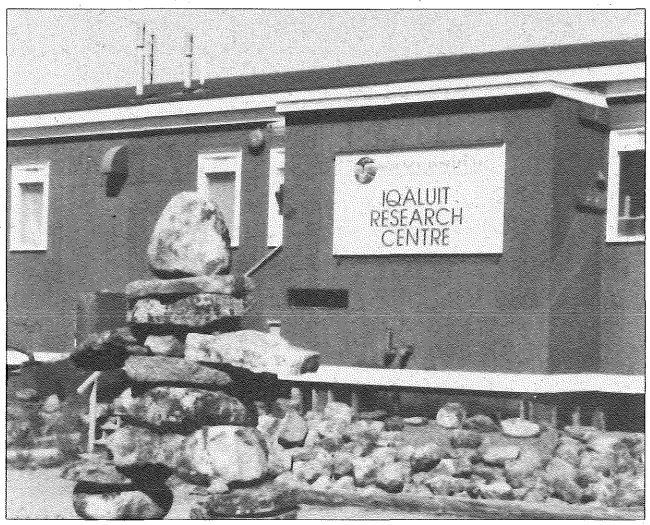
The Igloolik Research Centre is equipped with laboratories, storage, a workshop and accommodation for visiting researchers. The Centre operates a weather station for Environment Canada and a regional seismograph station for Energy, Mines and Resources Canada. In addition to the Igloolik facilities a field station on the Melville Peninsula, at Sarcpa Lake, is operated during the summer months.

For more information contact:
The Coordinator
Igloolik Research Centre
Box 210
Igloolik, N.W.T.
X0A 0L0
Phone (819) 934-8836
FAX (819) 934-8792

Iqaluit Research Centre

The Iqaluit Research Centre is staffed by two permanent employees and is open throughout the year. During the summer the Iqaluit Research Centre can provide up to 18 researchers with cooking and sleeping facilities. During the winter 8 researchers can be accommodated. There are six small laboratories, a reading room, a workshop and cold storage space. A variety of basic scientific equipment is available including field equipment, fume hoods, a convection oven, office equipment, all-terrain vehicles, snowmobiles, and field HF radios.

For more information contact:
The Manager
Iqaluit Research Centre
Box 1198
Iqaluit, N.W.T.
X0A 0H0
Phone (819) 979-6734
FAX (819) 979-4681



The Town of Iqaluit has a population of about 3000 and is accessible by air and sea. Currently, Northwest Territorial Airways offers Yellowknife-Iqaluit jet service. First Air also provides service from Ottawa. Canadian Airlines flies to Iqaluit from Montreal. Commercial airlines connect to other Eastern Arctic communities.

Photos: Science Institute of the Northwest Territories

SCIENCE INSTITUTE
OF THE NORTHWEST TERRITORIES

SINT Research Centres: Support For Researchers

Researchers must obtain a Scientific Research Licence from SINT before they receive support from a Research Centre

Requests for general information about the Research Centres may be sent to the Science Institute in Yellowknife. Researchers with specific questions on support, availability of equipment, accommodation, office and laboratory space should contact the Research Centre Managers directly.

Because the Research Centres are well used we encourage potential users of any of these facilities to contact the relevant Centre well in advance. It may be necessary to refuse support during the summer.

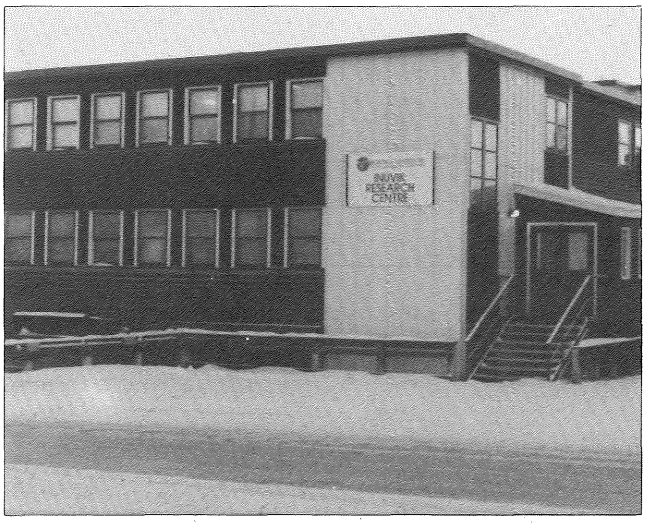
The Science Institute controls three facilities located at Inuvik, Igloolik and Iqaluit (Frobisher Bay). These Centres have provided significant support to researchers operating in the Mackenzie Delta, Foxe Basin and Southern Baffin Island regions over the past twenty-five years.

The Research Centres assist governn nt, university and industrial scientists, as well as other researchers. The Centres are available to anyone conducting genuine research, regardless of the sponsoring agency.

Inuvik Research Centre

The Inuvik Research Centre has operated since 1964. It is ideally located to support researchers working in the northwestern N.W.T. and northern Yukon. To date more than 1300 research projects, involving more than 700 researchers, have been conducted using the Inuvik facilities and equipment. The Centre operates year-round.

The Inuvik Research Centre provides office space and equipment, a dark room, a drafting room, a research library and accommodation for up to 24 researchers. In addition, the Centre is equipped with storage and freezer space, field equipment including snowmobiles and toboggans, boats and motors, tents, radios, sleeping bags, firearms and other camping accessories.

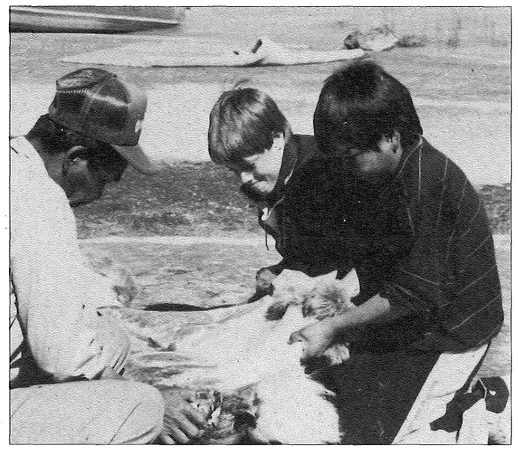


Inuvik is the headquarters for the Mackenzie Delta region. Inuvik has a population of 2,800. It has road access to the South via the Dempster Highway. Currently Canadian North and Northwest Territorial Airways service Inuvik.

For more information contact:
The Manager
Inuvik Research Centre
Box 1430
Inuvik, N.W.T.
X0E 0T0
Phone (403) 979-3838
FAX (403) 979-3570

RICHNESS OF MIND AND MATTER

Science and Technology have been part of Northern life for thousands of years. Aboriginal peoples have perfected technologies to provide food and shelter for their families. These have been based on science and knowledge of the world around us, gained from observation. Modern science builds upon this knowledge to help northerners to meet their needs more easily. Modern medical techniques ensure a greater survival of our northern populace; current construction methods provide more durable shelters; transportation modes move people and goods more readily across our vast northern land and telecommunications effectively reduce the size of the Northwest Territories. There is still more to be learned and, once learned, applied. The Science Institute of the Northwest Territories (SINT) assists in coordinating groups and individuals involved at the leading edge of technological development and the users or beneficiaries of these technologies. SINT is helping the North ensure that there is a spirit of cooperation which uses our RICHNESS OF MIND AND MATTER.



Cooperation brings all of the past into the future.

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All Photos: Science Institute of the Northwest Territories

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Acknowledgements

The Science Institute of the Northwest Territories is a non-profit corporation and welcomes contributions of funds or services in kind. We gratefully acknowledge donations from the following organizations which supported our programs throughout the 1990-91 fiscal year:

- Chevron Canada Resources
- Foothills Pipe Lines Ltd.
- Strathcona Mineral Services
- Esso Resources Canada
- Northwest Transport Limited
- GNWT Department of Culture and Communications
- GNWT Department of Renewable Resources
- Government of Canada: Science Culture Canada Program
- Yellowknife Education District No. 1
- Dogrib Divisional Board of Education

We also thank:

- GNWT Department of Public Works; Energy Division
- Department of Fisheries and Oceans Canada
- Navigator Inn, Iqaluit
- Northwest Territorial Air
- and the myriad of others who contributed time, space and services to the Science Institute of the Northwest Territories.

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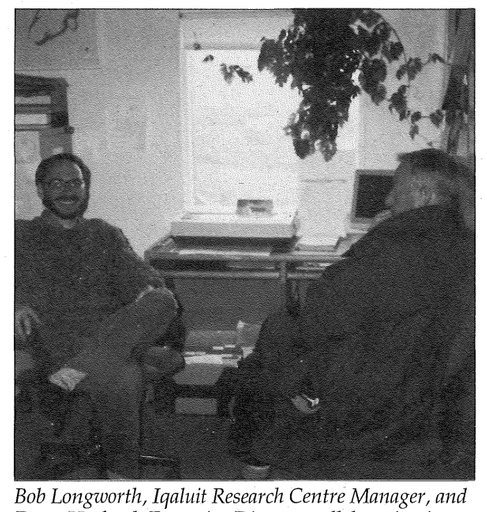
Remarks of the Chairman and Executive Director

Cooperation and collaboration, whether in business, education or science and technology - these are passwords to success in the North. Although there are still many individuals who make their way through life "doing their own thing", corporations tend to depend more and more on each other to master their tasks. The Science Institute of the Northwest Territories recognizes the need, and desire, to work with others.

This report highlights the cooperative and collaborative endeavours of all of our programs: Science Advisory Services, Scientific Services, Information/Education, and Technology Development including the Industrial Research Assistance Program of the National Research Council which is administered for the NWT by the Institute.



Bob Longworth, Iqaluit Research Centre Manager, and Doug Heyland, Executive Director, collaborating in Iqaluit.

As Manager, Finance/Administration, Mrs. Yvonne Leonardis liases with all managers so that the Institute runs smoothly. Regular financial reporting to program managers and the Board of Directors has greatly assisted Institute operations. Funds derived from a number of contracts and agreements with a variety of agencies augmented Institute resources. A benefits plan for staff, paid from the Institute's budget, and efforts towards additional office accommodations for an expanded SINT headquarters were major administrative undertakings.

Ms. Gwen Cochrane joined the Science Institute staff as Clerk/Secretary in August of 1990. Ms. Elaine Riddell moved from Receptionist to Administrative Clerk/Secretary. Both the Executive Director and the Board were capably supported by Mrs. Jeanne Gagnon, Executive Secretary.

With the growth and expansion of the science and technology profile within the North, all of our staff are striving to work together. In a busy environment, this in itself is a challenge, albeit one which we are meeting.

The Science Institute's Board of Directors

The Institute's Board of Directors met twice during the year. The meeting in Iqaluit in August included, in addition to a full agenda of business, an evening reception for a number of community representatives and associates. The second meeting was held in Yellowknife in February; an in-depth discussion of the mandate and future course of the Institute was considered during a day-long workshop.

Mr. John H. Parker continued as Chairman of

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the Board. Dr. Kaye MacInnes, an environmental scientist with Indian and Northern Affairs Canada, Ms. Joanne Barnaby, Executive Director of the Dene Cultural Institute, Mr. Bob Hanson, an Iqaluit businessman and Chairman of the Board of Arctic College, Ms. Sally Kusugak, a Keewatin resident with an interest in science and youth, Mr. George Hobson, an active scientist and volunteer, and Mr. John Jamieson, an innovative northern educator, were our Board Members.

Mr. Bob Hanson completed his term of office as Member and Vice-Chairman of the Board on March 31, 1991. During his term in office, Mr. Hanson brought a businessman's point of view to the undertakings of the Institute. We are grateful for the time which he devoted to the Board and wish him every success.

Ms. Sally Kusugak, Rankin Inlet, also completed her term on the Board. Ms. Kusugak, active within a number of community organizations including the Inuit Silattuqsarvingat and the Inuit Cultural Institute, was a helpful contributor to discussions and we wish her good luck in her endeavours.

Mr. George Hobson, Manotick, Ontario, was appointed to the Board on October 2 and will serve until March 31, 1993. Mr. Hobson, a geophysicist, recently retired after a distinguished career with the Federal Public Service. Paramount among his many accomplishments was the 17 years (1972-1989) during which he was Director of the Polar Continental Shelf Project. It was a pleasure to welcome Mr. Hobson to the Board, where he will be able to bring his years of science and northern experience to the Institute's programs.

Mr. John Jamieson was appointed to the Board on October 17 and will serve until March 31, 1993. Mr. Jamieson is a teacher with many years of experience, including posts in Sanikiluaq, Igloolik and Iqaluit. He currently teaches in Wrigley. Mr. Jamieson has impressive credentials, including the Marshall McLuhan Award presented in recognition of his development of cultural enhancement projects in Sanikiluaq and Iqaluit. Mr. Jamieson has special interests in traditional knowledge and the relationship between traditional and modern scientific methods. His contributions to the Institute in this and other areas will be significant.

Committee Participation

The Executive Director participates in a number of territorial, national and international committees. As Science Advisor to the Government of the NWT, he accompanies the Territorial Minister responsible for scientific matters to meetings of the Council of Science and Technology Ministers, and collaborates with colleagues across Canada on related committees. As part of the task, Mr. Heyland continues to participate in preparing the National Action Plan for Science and Technology. The purpose of the Plan is to work towards integrating all sectors of the economy to advance Canada's capabilities in science and technology. Ministers are expected to approve the Plan in June of 1991.

Late in the year the Honourable Bernard Valcourt, Minister of Fisheries and Oceans, invited the Science Institute to assume chairmanship of an *ad hoc* committee to investigate the status of the beluga in southeast Baffin. The invitation came in response to a request by the Honourable Dennis Patterson, Member of the Territorial Legislature for Iqaluit and Government Leader, to Mr. Valcourt because of a conflict between beluga hunters in southeast Baffin and the Department of Fisheries and Oceans (DFO). The dispute arose after DFO imposed a quota of five beluga on each of the communities of Lake Harbour, Iqaluit and Pangnirtung

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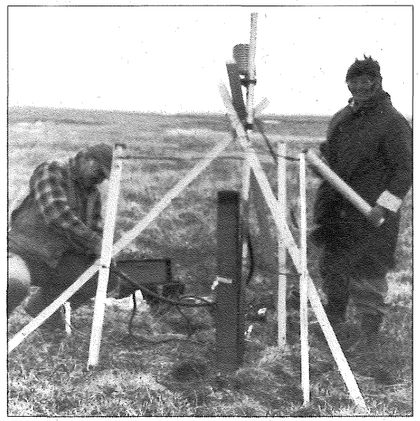
in June 1990. This was the first time that a quota on beluga had been introduced in the region. DFO claimed that, based on population estimates, the beluga stocks in southeast Baffin were being over-harvested and that unless the harvest was drastically reduced the stocks might be wiped out. Local hunters disagreed with the need for such a control. The issue erupted into controversy in the early summer, creating rifts in the relations between Inuit hunters and Fisheries and Oceans and threatening the social fabric of the region. The Science Institute, because of its interest and experience in science and traditional knowledge, was called upon to resolve the dispute.



Dr. Kaye MacInnes and Dr. Ross Mackay cooperating in the field to record permafrost data.

The Committee included representatives from Lake Harbour, Iqaluit, Pangnirtung, the Baffin Regional Council and Fisheries and Oceans. The Committee will report its findings and recommendations to the Minister of Fisheries and Oceans early in the new fiscal year. A genuine spirit of cooperation, and collaboration prevailed during the Committee meetings, an attitude vital to the success of the talks.

Mr. Heyland also sits on the Arctic Contaminants Technical and Policy Advisory Committee, the Northern Scientific Training Program Adjudication Committee, the International Arctic Science Committee, the GNWT Remote Sensing Committee, the Churchill Northern Studies Advisory Committee and the Advisory Committee for the Canadian Circumpolar Institute.

Committee work is time consuming. It does, however, emphasize the spirit of collaboration and cooperation so necessary in this day and age. Continued work of this nature will only benefit the Science Institute and thus science in the North.

The Science Institute of the Northwest Territories continues to build its profile. It is recognized more and more as an agency which can be depended upon to deliver. Our success derives from collaboration within the Institute, between the Institute and our clients and with those third parties who can provide the information and expertise we need. This is a winning formula which is working. We therefore intend to continue to build on this approach.

Sincerely,

John H. Parker OC, P. Eng.
Chairman, Board of Directors

J. Douglas Heyland
Executive Director

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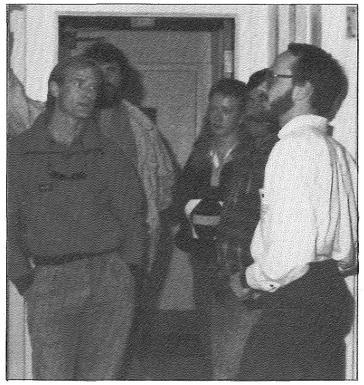
SCIENCE ADVISORY SERVICES

The Science Advisory Services Program is a focal point for all people interested in research in the Northwest Territories. Researchers from universities, interest groups, governments and the private sector are guided through the administrative requirements for conducting research in the Northwest Territories. Using this arm of the Science Institute, government departments, non-government agencies, communities and individuals keep abreast of what research is being done. The Science Institute works closely with these groups to ensure that all licence requirements are met. Individuals and groups also have the opportunity to identify future research needs in the North. Meeting these diverse needs requires cooperation and collaboration of the highest scale. Administering this program has been a major responsibility of Mrs. Anna Buss, Science Administrator.



"A network of researchers is being established." Bob Longworth, Iqaluit Research Centre Manager, discusses the community with visiting researchers.

SCIENTIFIC LICENCING

In 1990 the Science Institute, acting in its capacity as Science Advisor to the Government of the Northwest Territories, issued 221 licences for research conducted in the NWT. The number of reports submitted by licenced researchers has increased considerably over previous years. Managing this important database is a cooperative effort within the Science Institute. Information is shared with the Arctic Institute of North America.

In Canada, only Yukon and Northwest Territories require a licence to conduct scientific research. Over the years researchers have raised a myriad of questions related to the licencing process. To address these questions and confront the often time consuming and unfamiliar process of obtaining a scientific research licence in the NWT, a comprehensive document, *Handbook for Research in the Northwest Territories*, was prepared. This publication contains information on the Science Institute and its field support services for researchers, a consolidation of the Northwest Territories Scientists Act, reference to ethical principles for conducting research in the North and a section on the involvement of northern residents in research projects. There are also notes on the community consultation process including the names and addresses of other bodies issuing permits, and key community contacts. The handbook is available from the Science Administrator.

The licencing process, in place to deal with the changing needs of both researchers and residents of the NWT, is not static. In fact the dynamics are significant. Through dialogue with NWT and federal agencies it was determined that some overlaps and duplications in research licencing exist. To overcome this and facilitate information sharing, cooperation between all other permit-issuing agencies, aboriginal land claims committees and community organiza-

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tions has been increased. Some of the organizations consulted regularly are the Inuvialuit Land Administration, the Dene Cultural Institute, the Inuit Cultural Institute, the Environmental Impact Screening Committee, Department of Fisheries and Oceans, Prince of Wales Northern Heritage Centre, Department of Renewable Resources, Department of Health, Polar Continental Shelf Project, and the Circumpolar and Scientific Affairs Directorate, Indian and Northern Affairs Canada.

Committee Membership

The Science Administrator sits on two committees which examine specialized areas of research within the Northwest Territories. In June 1989 the Health Research North of 60 Workshop was a tremendous cooperative effort to ensure that health research in the NWT meets the needs of the clients. Following this, a National Health Research Development Program (NHRDP) North of 60 Review Panel was formed to administer federal funds for health research in Yukon and the Northwest Territories. The Science Administrator is a non-voting member of this committee. The program is currently undergoing an evaluation to identify its strengths and weaknesses and its ability to meet unique northern needs.

A Working Group on Traditional Knowledge was established in October 1989 by the Government Leader to define traditional knowledge, examine its current and potential use, and identify obstacles and solutions which will increase its influence in northern society. The Science Administrator is the Science Institute's representative on this committee. The Institute recognizes the value of the traditional knowledge database, encourages all researchers to do the same and strives to integrate this knowledge with that gained from modern scientific techniques.

Through Science Advisory Services, the Science Institute assumes the challenging role of facilitator to enable a cohesive body of scientific knowledge to grow in the NWT. Knowledge gained using modern investigative tools and techniques can complement that known as traditional knowledge. Cooperation on the part of all concerned is necessary to enhance the quality of life in the NWT.

SCIENCE ADVISORY SERVICES

- issued 221 scientific research licences. Licencing facilitates consistency in community consultation and networking among researchers.
- assisted the Traditional Knowledge Working Group to identify areas of existing and potential integration of traditional aboriginal knowledge and knowledge gained through modern investigative techniques.
- worked in conjunction with the NHRDP North of 60 Committee to help ensure the health research needs of Northerners are identified and addressed.

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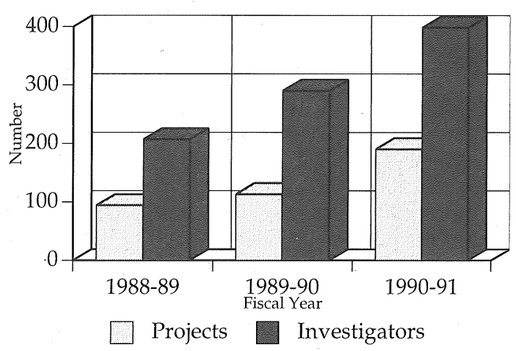
Scientific Services

Many researchers conducting field work in the Northwest Territories count on logistical support from one or more of the Science Institute's three research centres in Igloolik, Iqaluit and Inuvik. These Centres are coordinated through a Directorate located at headquarters in Yellowknife headed by Mr. David Sherstone, Director of Scientific Services. The Directorate ensures that managerial efforts complement each other, financial and administrative tasks are facilitated and that the high standards of the Science Institute are achieved in all locales. Through camaraderie in the field, assistance at the three Research Centres and the provision of information and guidance from Scientific Services and the Science Advisory Services programs, the network of Northern researchers is strengthened.

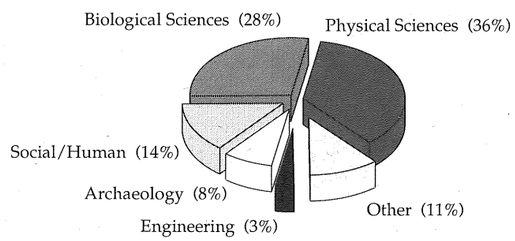
Use of the three Research Centres increased again this year. From April of 1990 through March of 1991, 181 projects were supported, an increase of about 50% over 1989-90. This growth trend has continued since the Science Institute took over the three Centres from Indian and Northern Affairs Canada in 1988 (Figure 1). The Iqaluit and Inuvik Centres were filled to capacity during most of the summer field season.

FIGURE 1
Research Centres Support Synopsis
PROJECTS AND INVESTIGATORS



Fiscal Years 1988-89 to 1990-91

FIGURE 2
Research Projects By Category
PERCENTAGES



Research projects spanned a variety of disciplines (Figure 2, Table 1) There was a significant increase in physical science projects supported by the Centres. Activity increased to the levels of earlier years. A decrease in oil and gas exploration, attributed to the drop in petroleum prices, and the lack of land claim settlements led to a reduction in geological studies. There has been, however, an increase in the number of environmental studies designed to gather baseline data which can be used for future comparative analyses.

It is encouraging that the number of Canadian university researchers using the Centres has increased following a decline throughout most of the 1980s. Circumpolar cooperation was evident in the number of researchers from other countries using the Centres. Scientists came from the U.S.S.R., the United States, Denmark, Japan,

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Great Britain, the Netherlands, Greenland and Sweden. More comprehensive analyses of Centre users and facility management data are contained in the *Annual Report of the Research Centres*, available from the Director of Scientific Services.

The Directorate

There is little doubt that research field work in the Northwest Territories is expensive. Vast geographic distances, extreme cold and restrictive transportation and communication systems dictate the need for advanced planning and field support. To enhance the logistical support and communications assistance provided to researchers working in isolated regions, the Director and Research Centre Managers participated in discussions with personnel of the Polar Continental Shelf Project of Energy, Mines and Resources Canada. The groundwork was laid for a Memorandum of Understanding between the two agencies. The agreement, when finalized, will allow both agencies to plan cooperative ventures to the benefit of Arctic researchers.

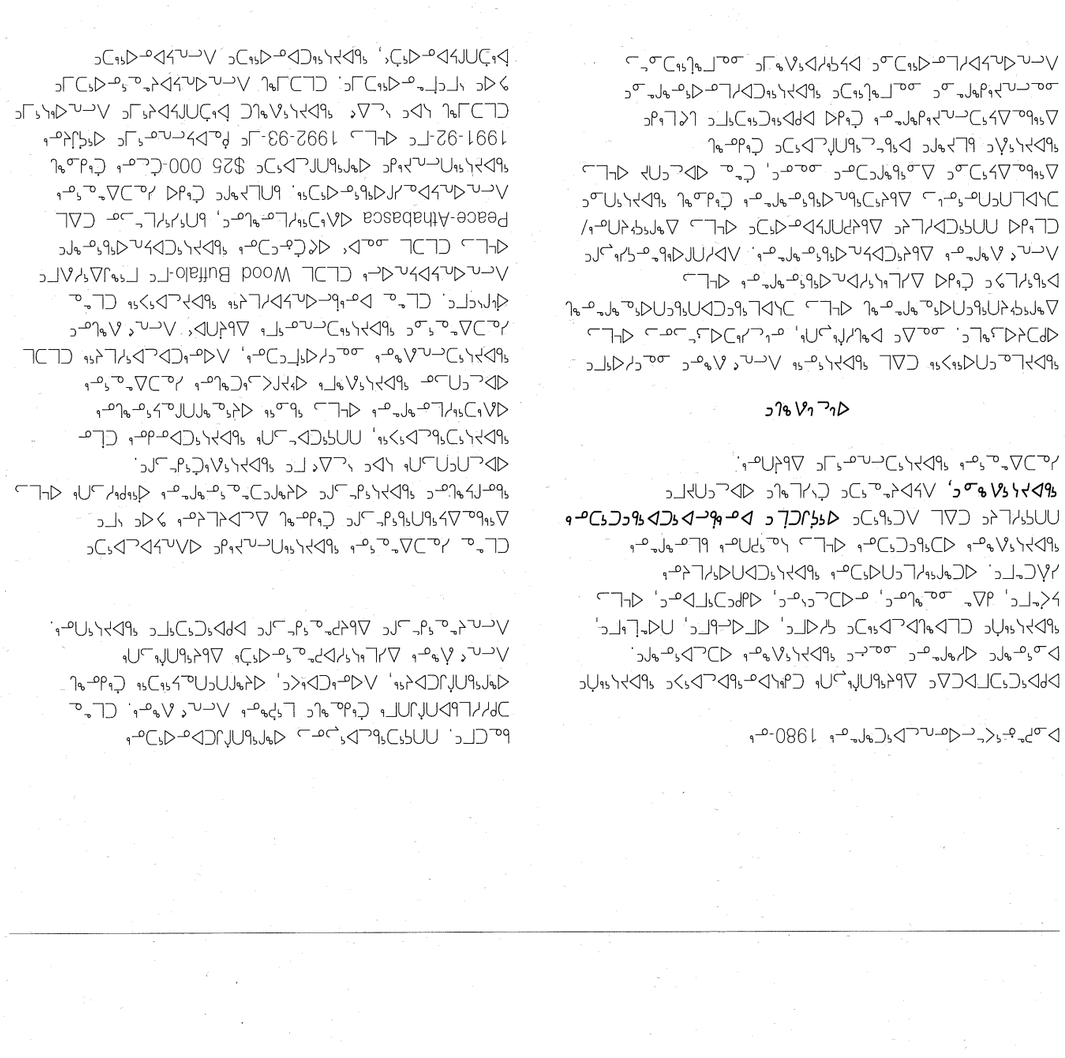
The Science Institute was asked to work with interested parties in the Fort Smith area to examine the potential for creating and operating a South Slave Research Centre. A study, documenting past research projects in the region and the feasibility of operating a Research Centre similar to the other Science Institute Centres, was completed by the Directorate of Scientific Services in August. The report concluded that to meet the interests of Wood Buffalo National Park and environmental research needs in the Peace-Athabasca Region, a joint-venture approach was necessary. The Board of the Science Institute approved $25,000 over the 1991-92 and 1992-93 fiscal years for a South Slave Research Centre Pilot Project to be located in Fort Smith. Within the scope of the Pilot Project, research programs will be coordinated and a strategy for establishing a permanent facility in Fort Smith will be developed. The Science Institute will provide administrative services and will direct personnel for this project. The Pilot Project will be managed by a Steering Committee composed of representatives of the co-operating agencies. Currently these include: the Town of Fort Smith, Arctic College, the Science Institute of the North-

TABLE 1
Research Centres Scientific Support Profile
Fiscal Year 1990-91

Program	
Total Number of Projects Supported	181
Total Number of Investigators Supported	399
Total Person-Days of Support Provided	12,777

By Research Centre and Study Categories

Category	*Inuvik*	*Igloolik*	*Iqaluit*	*Total*
Physical Sciences	45	3	16	64
Biological Sciences	19	9	23	51
Social/Human	5	11	10	26
Archaeology	6	1	8	15
Engineering	3	0	2	5
Other	9	3	8	20
	87	*27*	*67*	*181*



west Territories, Parks Canada, the Departments of Economic Development and Tourism and Renewable Resources, Government of the Northwest Territories.

To facilitate the transfer of technical information to an interested general public, the Scientific Services Directorate initiated a series of scientific reports for general readership. Researchers are encouraged to contribute papers for the series. The first report, published in January, included two papers entitled, "Guidebook to Geological Localities in the Vicinity of Inuvik, N.W.T." by Dr. L. Dyke and "Pingos of the Western Arctic Coast" by Dr. J.R. Mackay.

Laura Lynn McCulloch, Summer Student Iqaluit Research Centre, talks to researchers in the field.

Staff Changes

Joining the Scientific Services team this year are Ms. Mabel Kudlak, Clerk/Secretary at the Inuvik Research Centre and Ms. Panik Lynn Cousins, Technician, at the Iqaluit Research Centre. Mr. George Qulaut, Operations Manager, Igloolik, returned from a one year personal development leave-of-absence. During his absence, Ms. Leah Otak acted as Operations Manager after completing training under the Northern Careers Program.

Ms. Laura Lynn McCulloch, a student in the Environmental Technology Program (ETP) of Arctic College, acted as Operations Assistant during the summer in Iqaluit. Mr. Eric Coleman, also an ETP student, was hired on a part-time basis in Iqaluit to assist during the winter.

Mr. Paul Irngaut resigned as Research Centre Technician in Iqaluit, to take a position with CBC North in September 1990. We thank Paul for his service to the Institute and for his efforts in promoting Science in Inuktitut and wish him success.

The Research Centres

Managers, Bob Longworth, Gary White and John MacDonald, of the Iqaluit, Inuvik and Igloolik Research Centres, actively support science in their respective communities. Staff at the Centres regularly collaborated with educators, researchers, government and non-government agencies and community groups to promote science awareness in the Northwest Territories and to inform other Canadians about science in the North.

A variety of audiences including northern school children, university and college students and professional organizations enjoyed presentations throughout the year. These included workshops, tours, talks and displays on topics such as geology, science careers, northern research and the Research Centre facilities. Visiting researchers were encouraged to discuss their research through science clubs, such as the Northwinds Science Club in Inuvik, and community talks or through the news media.

In addition to hearing about northern science, budding scientists were given the opportunity to try their own hand at research. Research Centre personnel assisted with learning outside of the classroom by:

- coordinating a Grade 10 Archaeology Field Course near Igloolik,

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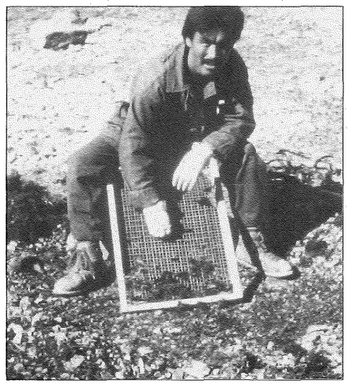
- leading a group of Grade 8 students from Samuel Hearne Secondary School on a geology field trip to an Inuvik limestone quarry,
- participating in a Grade 5/6 science camp at Rengleng River near Inuvik,
- supporting student field courses, based out of Iqaluit, offered by Arctic College and Bates College of the United States, and
- judging science fairs in Iqaluit and Inuvik. This year's fair in Inuvik was its largest ever.

The Research Centre facilities are ideal for use by outside agencies needing specialized accommodation.

- In Inuvik and Iqaluit, laboratory space was used by visiting veterinary clinics.
- The Igloolik Research Centre hosted a six-week dental therapy course run by the National School of Dental Therapy, Prince Albert, Saskatchewan.
- Sarcpa Lake field station was used as a base for the tenth year of a long-term ecological study by researchers from Queen's University under the direction of Dr. Robert Montgomerie.
- The Pearce Point field station, near Paulatuk, was used by a research team from the University of British Columbia. Dr. Charles Krebs, project leader, is currently investigating lemming population cycles.



George Qulaut, Operations Manager Igloolik Research Centre, assists with an experiment of the National Museum of Canada to grow domestic grasses in Igloolik.

Practicing Science at the Institute

As well as supporting visiting and local researchers, Scientific Services personnel conduct original research and collect data for visiting researchers. Many of the studies are long-term. One such study is the Igloolik Oral History Project (see page 13).

Original research studies undertaken this year by Centre staff included:

Mackenzie Delta Ice Regime, D. Sherstone
Hay River Ice Regime, D. Sherstone
Geology Guidebook to the Dempster Highway, G. White
Inuvik Culvert Ice Thawing Study, L. Kutny
Turton Bay Ice Measurement, J. MacDonald
Igloolik Oral History Project, G. Qulaut
Inuit Astronomy and Cosmology, J. MacDonald

Sometimes the public believes that research is conducted in a vacuum with little regard to the needs of residents of a region. However, collaboration does exist at the community level. For instance, the Mackenzie Delta Coordinating Committee, with membership including government and industry researchers, annually reviews research activities in the Mackenzie Delta and identifies research gaps. Mr. Gary White, Inuvik, chaired the February 1991 meeting of this committee in Edmonton.

Communities can pull together, recognize the value of all sources of scientific knowledge and use this to best solve a local problem. Mr. Bob Longworth and his Iqaluit Research Centre staff

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committed a great deal of time to assisting south Baffin residents during the beluga quota crisis in the southeast Baffin. Meetings of the Nunavut Wildlife Management Advisory Board were attended; Science Institute staff from Yellowknife were briefed; help was given to develop positions and strategy for the formation and operation of the Southeast Baffin Beluga Review Committee and meetings were hosted at the Centre.

An example of a beneficial collaborative research project was one by Dr. Andris Rode, who this year followed up his study into the effects of acculturation on the fitness and health of Igloolik Inuit. Initial assessments were made twenty years ago. For the past ten years, twice each year, personnel from the Igloolik Research Centre took body measurements of 6 to 18 year olds to assess normal growth rates. Incidental to this study was an opportunity for the Centre staff to alert health personnel of slow growth among Inuit. Health officials were able to investigate possible pathological causes of the zero growth. The data gathered may be supplemented with periodic measurements in the future.

The cooperative efforts of the Institute are highly visible through Scientific Services. Via the Research Centres, many northerners learn about science and how it may improve our quality of life.

A SUMMARY OF PROJECTS AT OUR RESEARCH CENTRES

INUVIK

- Approximately 220 researchers working on 87 projects were supported.
- Renovations included painting the interior and exterior of the main research centre and upgrading accommodation facilities.
- Approximately one third of the library titles were entered into a D-base III database.
- A computer centre, for use by visiting researchers, was established.
- Winter research projects were monitored weekly on behalf of Dr. Chris Burns, University of British Columbia, Dr. Ross Mackay, UBC and Mr. David Sherstone, Science Institute.
- Cosmic ray detection equipment was monitored daily under contract to the National Research Council Canada.

IQALUIT

- Approximately 130 researchers working on 67 projects were supported, nearly doubling the use level over previous years.
- Service improvements included acquisition of scientific, computer and field equipment, and additional library titles which have been entered into a database. Construction began on a large warehouse/workshop.
- With the assistance of Centre personnel, CBC "Eastern Arctic" radio and CBC North television broadcast science stories weekly to an audience throughout the NWT and northern Quebec. These included interviews with visiting researchers, Simply Science columns in English and Inuktitut and other science news stories.
- Field researchers benefitted from an increased collaboration with the regional Emergency Measures Organization.

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- 50-ᓄᒃᑐᑦᐸᓄᒃᑐᑦ ᖃᐅᔨᓴᖅᑐᖅᑐᒥᒃᑐᑦ ᐃᓂᖅᓴᐅᖅᑐᖅᑐᒥᒃᑐᑦ 27-ᓄᒃ ᐃᓂᖅᓴᐅᖅᑐᖅᑐᒥᒃᑐᑦ.
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IGLOOLIK

- Approximately 50 researchers working on 27 projects were supported.
- Archaeology Field Course, a three-week Grade 10 credit course involving the excavation of a late Dorset culture site on Igloolik Island, was taught by Dr. Susan Rowley, University of Alberta. Carolyn MacDonald, an Igloolik school teacher, assisted.
- The oral history of Igloolik elders was recorded and transcribed. Records are stored at the Prince of Wales Northern Heritage Centre.
- Inuit astronomy legends, as told by Harve Paniaq and Niviatsian Aqatsiaq of Igloolik, were transcribed for use in conjunction with the Mobile Astronomy Program in Yellowknife.
- Daily monitoring of weather for Environment Canada and seismic data for Energy, Mines and Resources Canada continued.

Igloolik Oral History Project

Cooperation and collaboration of the highest calibre occurred in a community project coordinated by the Igloolik Research Centre. Inuit elders of the community identified a pressing need which the resources of the Centre could help meet.

The *Igloolik Oral History Project* began in 1986 when a group of Igloolik Inuit elders met to discuss ways of preserving something of their knowledge, language and accumulated experience for the benefit of future generations. There was a recognition that the rapidly changing conditions of life in northern communities acted against the natural transmission of traditional knowledge between generations. Immediate steps had to be taken to describe, explain and preserve many important elements of Inuit heritage now in danger of being lost forever.

With the assistance and support of the Igloolik Research Centre, a decision was made to embark on a long-term project whereby the elders' knowledge and experience would be recorded on audiotape. Virtually all aspects of Inuit traditional knowledge would be explored. Successive interviews on each topic would be increasingly detailed until the subject had been covered thoroughly. All interviews would be conducted in Inuktitut to capture the language's remarkable power of expression and extensive technical vocabulary. In addition to establishing a source of practical information and instruction, the accumulated material offered by the elders would foster a sense of pride in heritage and help affirm, for future generations of Inuit and for others reading the English translations, the richness, variety and uniqueness of Inuit culture and language.

About twenty-five elders participate in the project. Together they represent the final generation of Igloolik Inuit who have lived most of their lives "on the land", sustaining themselves through the application of traditional skills, knowledge and wisdom. Never again will there be such a group whose accumulated experience encompasses so much of traditional Inuit values and culture. It is this fact which makes the project so important and so urgent.

Over one hundred and fifty interviews, each averaging about an hour in length, have been

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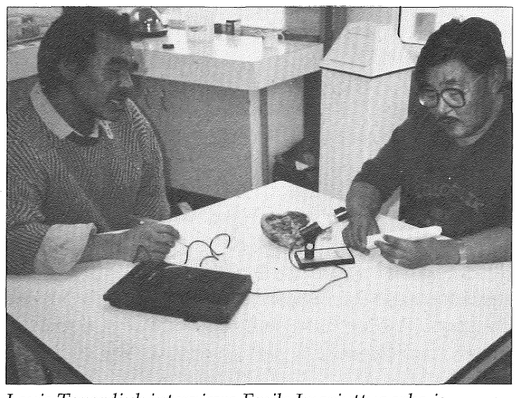
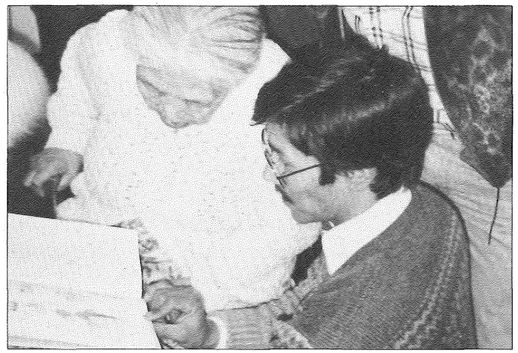
recorded. The range of topics covered to date include:

- life histories and genealogies
- child-care
- socialization
- traditional beliefs and values
- hunting technology and techniques
- animal ecology
- skin preparation, clothing and sewing techniques
- treatment of illness
- weather prediction
- snow and ice conditions
- astronomy
- local geography
- dog-team management, travel and navigation
- kayak building and shelter construction.

The interviews are translated into English, word-processed and indexed. During the translation process, technical and archaic words and expressions in Inuktitut are gathered and sorted; these will be compiled into specialized lexicons. Arrangements are being made to transcribe the interviews into Inuktitut standard syllabic and "Roman" orthographies. Copies of all project materials - audio tapes, translations, transcriptions and computer disk files are deposited in the archives of the Prince of Wales Northern Heritage Centre in Yellowknife. The historical material will add significantly to a growing body of information on aboriginal knowledge and traditions. This material will be of immense value to researchers and will also have implications for a wide range of current NWT developments in such areas as education, justice, economics, renewable resource management, tourism and social services.

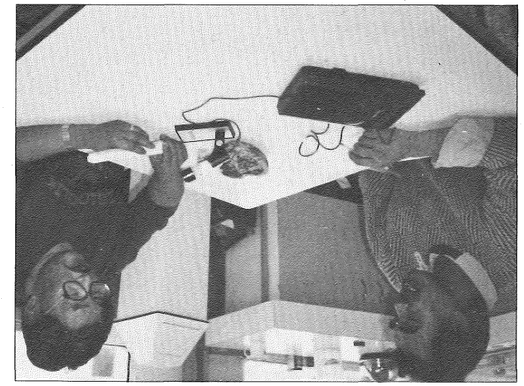


Louis Tapardjuk interviews Emile Imariuttuq who is explaining how traditional Inuit tools and harpoons were made and used.



Rosie Iqallijuq examines a volume of Knud Rasmussen's, Fifth Thule Expedition 1921-1924. *As a young girl, Rosie had met the Arctic Explorer. Rosie's, and other elders', stories of the past are being recorded so that future generations may learn of the old ways.*

The Project has been supported financially by the Science Institute of the Northwest Territories, Culture and Communications, Government of the Northwest Territories, the Inuit Cultural Institute, and Indian and Northern Affairs Canada. The Igloolik Research Centre provides all the facilities, equipment and supplies required by the Project. Two members of the Centre's staff, John MacDonald and George Qulaut, are active in coordinating the project and managing its relationship with external funding agencies. Louis Tapardjuk and Leah Otak, both of Igloolik, undertake the difficult task of translation. The project continues.



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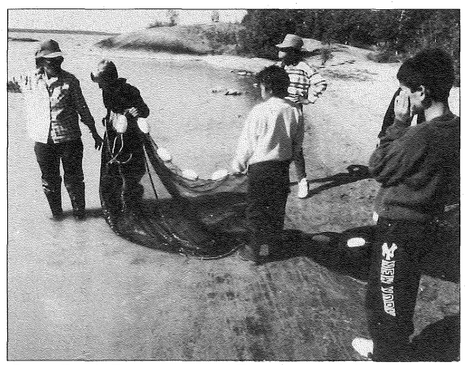
INFORMATION/EDUCATION

Scientists are passionate people. They have an intense desire to learn about the world, sometimes under adverse circumstances and often for long periods of time. Yet they persist knowing that their effort is critical to understanding a problem and revealing a solution. One piece of knowledge may not suffice. Equally important may be the insight provided by a Dene hunter, a summer student doing research in the field or an entrepreneur or engineer mastering the technology of the science. Alone, none may have the solution. Together, a solution may emerge. This tapestry of knowledge may lead to a better understanding of how, for instance, to provide and distribute nutritious foods to a growing Northern population. Underlying this approach is the realization that cooperation and collaboration are of the utmost importance. Whether the knowledge comes from a social scientist who systematically listens to people, a physical scientist who carefully observes and measures natural phenomena or an aboriginal elder whose life experience is a fundamental information base, any knowledge is of little value unless shared.



Carol Read, Department of Fisheries and Oceans, instructs children at the Cross-cultural Science Camp.

The Science Institute of the Northwest Territories, through its Information/Education program, is facilitating information transfer and education of the populace - weaving a fabric of knowledge from many sources. Much has been done with our limited resources; much remains to be done. During this past year, students, educators, government officials, businessmen, members of professional associations and the general public have contacted the Program Coordinator, Mrs. Jane McMullen, and/or been contacted by her. The spirit of cooperation is being nurtured both within the Institute and beyond its doors.

A Public Education Working Group was formed to address the mutual needs of people charged with passing a scientific message to diverse target audiences in the NWT. Within their respective programs, members of the group routinely develop projects for people of all ages who may be fluent in only one of nine official languages in the NWT, or who may live in communities separated by thousands of kilometres. The Group includes front-line information-oriented personnel from GNWT Departments of Education, Safety and Public Services, Health, Public Works, Renewable Resources, Economic Development and Tourism, the Prince of Wales Northern Heritage Centre and Arctic College. Federal departments and non-government agencies are also represented. These are Ecology North, Northwest Territories Association of Professional Engineers, Geologists and Geophysicists, Industry, Science and Technology Canada, Environment Canada and the Canadian Wildlife Service. The door remains open to all those interested in carrying a "scientific" message to the general public. To date,

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the Working Group has produced a calendar of public awareness weeks and shared information about each others' mandates, resources, and projects, whether completed or still in the planning stage. This information exchange has increased the number of joint projects, thereby making the best use of limited human resources and available funds.

Careers, contests and chemicals were discussed at a mall display during National Science and Technology Week, 1990.

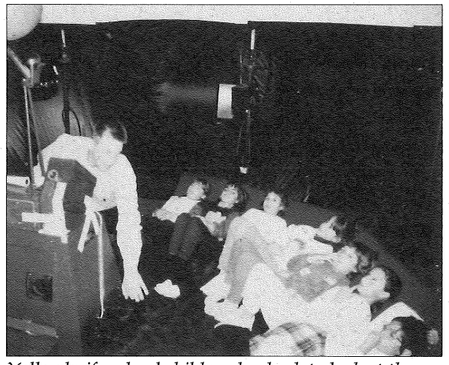
The first National Science and Technology Week, held in October 1990, was one such project. The science and technology awareness week, a concept of the Public Awareness Campaign of Industry, Science and Technology Canada, focused on domestic technology. Activities, which were designed to encourage people to think about the science and technology used in their homes, included an interactive display and tours of facilities including the City of Yellowknife's water and sewage infrastructure. Careers requiring a scientific background were highlighted in displays and talks by professionals. A territorial-wide contest on science in our daily lives was won by Sara Riddell, a Grade 6 student at J.H. Sissons School in Yellowknife.

A second cooperative project was the Institute's Cross-cultural Science Camp which this year received recognition as a significant event of the World Decade for Cultural Development, a proclamation of the United Nations Educational, Scientific and Cultural Organization (UNESCO). Children from the Yellowknife School Districts and the Dogrib Divisional Board of Education attended a week long camp on an island in the Frank Channel near Rae. Dogrib elders, scientists, technicians, educators and students all learned from each other. Rabesca Resources Limited of Rae worked with the Institute to bring the participants together in an atmosphere of respect and understanding which could not be achieved in any classroom. This collaborative effort was made possible through funds and services donated by a number of government departments and private businesses. (Please see page 2.)

The Information/Education program adapts established national and provincial educational projects to suit northern needs. The Shad Valley Program of the Canadian Centre for Creative Technology is a venture in which the Institute has participated for the past two years. Senior high school students, who are top achievers in science and extracurricular leadership, are chosen from across Canada to participate in a one month program at selected Canadian university campuses in July. This is followed by a work term in August. Mr. Giles Pinto, formerly of Sir John Franklin School in Yellowknife, attended the University of Calgary program and then worked as an Information Officer within the Information/Education Program. Giles initiated two databases, one listed the literature submitted to the Institute by researchers and the second listed library titles. Giles also assisted in compiling the Institute's annual summary of research.

The Science Fairs program of the Youth Science Foundation was supported again this year. Information exchanges between six Regional Fair coordinators were facilitated. Prizes for each Regional Fair have been established by the Institute. The Institute funded travel for all Re-

gional winners to the Canada Wide Science Fair in Vancouver. Science Alive, a resource guide for Science Fairs which was produced in 1989, continued to be a popular marketable item, particularly in northern provincial school jurisdictions. Dial-an-Expert, a science hotline, continued to be a well-used service, especially near the time of school science fairs. Through this service, sources of scientific information are given to the caller or potential science project topics are discussed. Journalists and government personnel have joined students in using Dial-an-Expert.



Yellowknife school children lay back to look at the "stars" in the Mobile Planetarium of the Edmonton Space Science Centre during its visit to the N.W.T.

Interesting speakers were hosted throughout the year in Yellowknife. A school and public presentation on Laser Technology was arranged in collaboration with the Industrial Research Assistance Program (IRAP). Mr. George Hobson, longtime Arctic researcher and Member of the Board of the Institute, spoke on pingos while in Yellowknife for a Board meeting. The Mobile Astronomy Program, a travelling planetarium operated by the Edmonton Space Science Centre, delighted school and public audiences. A special feature of this display, developed in cooperation with the Igloolik Research Centre and two Igloolik elders, was an Inuktitut/English storyboard on two Inuit constellations and their associated legends.

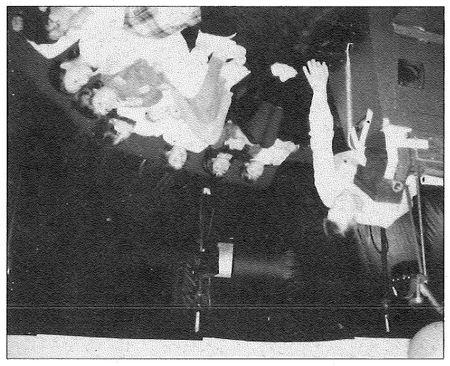
Information items produced in cooperation with other Institute programs, included an education newsletter, a researcher newsletter, a public newsletter on the Science Institute, the 1989 Annual Summary of Research and the 1989-90 Annual Report, Northern Science to Share. A guide to the geology of the Inuvik region, written in non-technical language, was published. This is the first of a series of similar publications.

Efforts were also directed to developing a comprehensive display on the Science Institute and northern science. The display has already been well received by local and international audiences.

Cooperation is definitely second nature to the Information/Education program and collaboration is its key to success.

Information/Education Highlights

- The Public Education Working Group was founded to encourage information and resource sharing among those charged with public science education.
- Groundwork for promoting scientific awareness through all programs of the Institute has been laid. A display of northern science and periodic public, education and researcher newsletters was developed.
- Specific projects included the Cross-cultural Science Camps (which received UNESCO recognition), the Mobile Astronomy Program and National Science and Technology Week.



Technology Development

Science and technology, knowledge and its applications, shape the lifestyles of all people. Old tools and processes for living are maintained or modified depending on usefulness; new tools and processes are developed as needed. The extreme environment of the Northwest Territories often makes technologies, appropriate in more southerly climates, inappropriate in the North. For this reason the Technology Development Program at the Science Institute is a priority, expanding to provide a strong technological resource base to meet the needs of both industry and residents of the Northwest Territories.

Food production technology and the technology of interfacing traditional knowledge and artificial intelligence are two thrusts of the Technology Development Program.

Collaboration between Technology Development personnel and other agencies is cohesive. Federal supporting groups include the National Research Council of Canada, Indian and Northern Affairs Canada, Environment Canada and Energy, Mines and Resources Canada. The Government of the NWT departments working closely with this program are Public Works, NWT Power Corporation, NWT Housing Corporation, Economic Development and Tourism and Energy, Mines and Petroleum Resources. Dr. S.Y. (Joe) Ahmad, Technology Development Program Manager, and Mr. Craig d'Entremont, Industrial Research Advisor, are a strong team, promoting and marketing technology.

Technology Development Program (TDP)

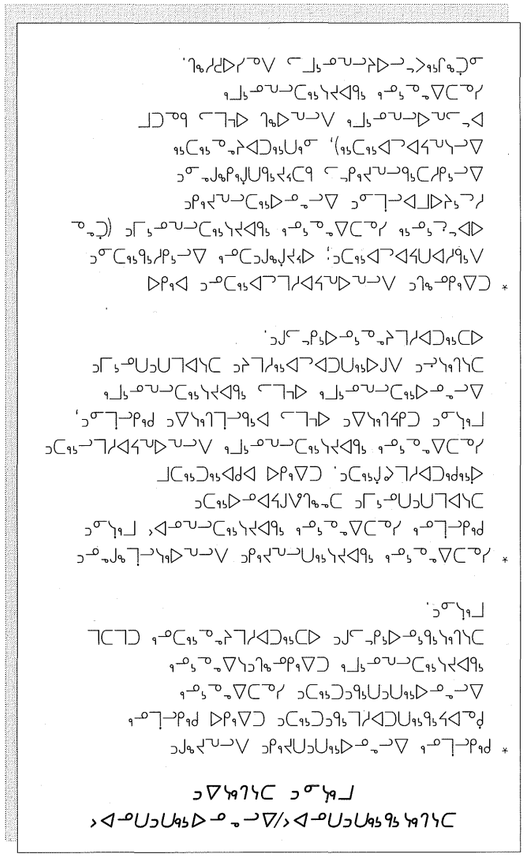
The TDP is a new initiative of the Science Institute which complements the Industrial Research Assistance Program (IRAP). The objective of the TDP is to develop a comprehensive business plan for technology development in the Northwest Territories. In order to achieve this goal, an assessment of available technologies, potentially viable in the North, was undertaken.

Through consultation with NWT industry, five anchor technologies have been identified which form the thrust of the Program:

1) alternative energy
2) environmental management
3) food production
4) engineering technologies, including building science, mechanical and geotechnical, *and*,
5) traditional knowledge/artificial intelligence.

To promote these areas the tasks of the TDP are three-fold: assessment, encouragement and participation.

The initial projects are in alternative energy. The ground work has been laid for installing wind generators in Igloolik and photovoltaic (PV) systems in both residential (Igloolik) and insti-



tutional (Inuvik) settings. The objective of both of the studies is to establish baseline data to develop the appropriate scale of operation for alternative energy applications in northern communities.

Industrial Research Assistance Program (IRAP)

For three decades the National Research Council of Canada (NRC) has been helping industry compete in the marketplace by providing up-to-date tools and know-how. Through IRAP, 220 Industrial Technology Advisors (ITAs) administer a program of assistance to small businesses, typically those with fewer than 200 employees. IRAP is an excellent program for the NWT.

Building technology benefits from Technology Development at the Science Institute.

Since October of 1988, IRAP has been delivered in the NWT through the Science Institute. Short-term financial assistance was given to support project development and science or engineering student salaries. Technical and marketing expertise was also provided.

To date, seventeen projects have been approved for grants which have totalled $225,000. Some examples of projects which have been funded are software development for the Cape Dorset Co-op; research into the application of investment-casting technology for Treeline Trappings, Yellowknife; Canadian Standards Association testing for a mechanical firm in Yellowknife; technical assistance to the agricultural sector; product development assistance with a soil-cement material for the geotechnical sector and a light-weight steel truss for the construction industry.

Ferguson, Simek and Clark, an engineering and architectural consulting firm in Yellowknife, was the first NWT business approved under an IRAP-M for the research and development of a product. IRAP contributed $46,000 of the total cost (in excess of $150,000) to design and manufacture a light-weight steel truss (LWST). With the successful completion of this project, the company sold their first residential 4-plex, designed and built with LWSTs, to the NWT Housing Corporation. This 4-plex will be built in Cambridge Bay. This new technology may save as much as 25% of the total cost of construction in the North because the trusses are lighter, more fire resistant, less costly and allow faster construction of buildings compared to traditional dimensioned lumber.

Other organizations receiving funds were EBA Engineering, Yellowknife; the Science Institute of the NWT, Iqaluit; Tuaro Dairy, Yellowknife; Cascade Publishing, Fort Smith; Thurber Engineering, Yellowknife; Ray Pirker Plumbing, Yellowknife; and Northern Micro On-line Services, Hay River.

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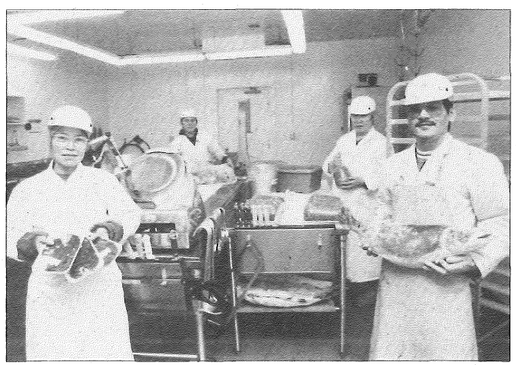
Where Are We Going?

Significant cooperative exploratory work was completed to create a Northern Construction Research Advisor position at the Institute. The advisor will act as a liaison between the private sector, government departments and construction research institutes in Canada and abroad.

Collaborative work will continue to be paramount to the success of Technology Development at the Institute, ensuring that the best technology reaches the people of the Northwest Territories.



Food production technology benefits from Technology Development at the Science Institute.

TECHNOLOGY DEVELOPMENT

- Through NRC's Industrial Research Assistance Program (IRAP), administered in the NWT by the Institute, small businesses were awarded a total of $225,000 dollars for projects involving extensive research and development.
- Technology Development Program (TDP) has identified 5 anchor technologies appropriate for development in the NWT with the current emphasis being alternative energies.
- A Northern Construction Research Advisor, a position created through the cooperative efforts of interested parties, is to be housed at the Institute beginning in 1992.

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Science Institute of the Northwest Territories

Financial Statements

March 31, 1991

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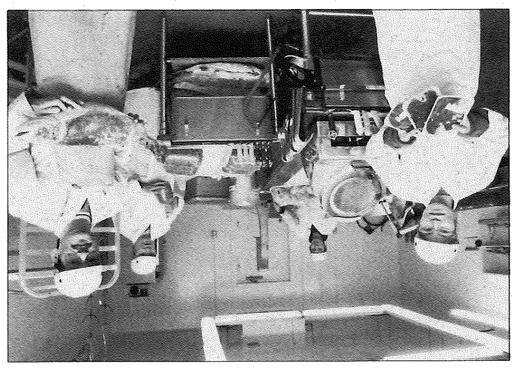

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MacKay & Partners
Chartered Accountants

Auditors' Report

To the Board of Governors
Science Institute of the Northwest Territories

We have audited the balance sheet of the Science Institute of the Northwest Territories as at March 31, 1991 and the statements of revenue, expenditures and unexpended funds for the year then ended. These financial statements are the responsibility of the Institute's management. Our responsibility is to express an opinion on these financial statements based on our audit.

We conducted our audit in accordance with generally accepted auditing standards. Those standards require that we plan and perform an audit to obtain reasonable assurance whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation.

In our opinion, these financial statements present fairly, in all material respects, the financial position of the Institute as at March 31, 1991 and the results of its operations for the year then ended in accordance with generally accepted accounting principles.

MacKay & Partners

Yellowknife, Northwest Territories
May 27, 1991

CHARTERED ACCOUNTANTS

Notes to the Financial Statements

For the year ended March 31, 1991

2. DEFERRED REVENUE

Deferred revenue represents monies committed for programs for which the expenditures have not yet been incurred.

	1991 $	1990 $
Medical Research		
- Minister of Consumer Affairs	132,095	151,312
Slowpoke Reactor Program		
- Energy, Mines and Resources	7,000	7,000
Rayrock Program		
- Indian and Northern Affairs	1,735	1,735
Beluga Research		
- Minister of Fisheries and Oceans	24,521	-0-
	165,351	160,047

3. UNEXPENDED FUNDS

Included in unexpended funds is $402,310 which the Board has identified to be spent on the Technology Development Program in the next two fiscal years and $100,836 which the Board has identified to be spent on medical research.

4. JURISDICTION OF INCORPORATION

The Science Institute of the Northwest Territories was established by an Act of the Government of the Northwest Territories in 1984.

NOTES TO THE FINANCIAL STATEMENTS

FOR THE YEAR ENDED MARCH 31, 1991

1. SIGNIFICANT ACCOUNTING POLICIES

A. Unrecorded Costs Paid by the Government of the Northwest Territories

The Government of the Northwest Territories provides approximately 1,850 square feet of office space, rent free. In addition the Government provides telephone and mail services, printing, translation and library services, as well as other services that are under an Administration Agreement without charge. No provision has been made for these costs.

The G.N.W.T. also provides 3 research centres, 5 scientific reserves and 2 field stations along with all maintenance and utilities related thereto, for the exclusive use of the Institute on a rent free basis. No provision for these costs are included in these financial statements.

B. Fixed Assets

Fixed assets are expensed in the year of acquisition. The accounts "fixed assets" and "investment in fixed assets" reflect the historical cost of all assets owned by the Institute.

Office equipment and furnishings belonging to the Government of the Northwest Territories that were being used by the Institute were transferred to the Institute by the Administration Agreement on February 18, 1987 and recorded at values established by the Government of the Northwest Territories.

Office equipment and furnishings associated with federal research facilities in the Northwest Territories were transferred to the Institute under an agreement dated November 18, 1988 and recorded at values established by the Government of the Northwest Territories.

STATEMENT OF REVENUE, EXPENDITURES AND UNEXPENDED FUNDS

FOR THE YEAR ENDED MARCH 31, 1991

	1991 $		1990 $
	Revised Budget	Actual	Actual
REVENUE			
Government of the Northwest Territories			
Department of the Executive	1,518,050	1,580,359	1,591,524
Department of Renewable Resources	3,000	10,463	12,000
Department of Education	2,000	-0-	6,000
Department of Culture and Communications	3,000	3,000	2,400
Government of Canada			
Employment and Immigration	3,428	3,403	1,247
National Research Council of Canada	94,300	101,310	94,983
Fisheries and Oceans	-0-	35,479	-0-
Industry, Science and Technology	25,000	-0-	23,575
Energy, Mines and Resources	4,800	10,400	2,400
Environment Canada	-0-	-0-	1,800
Cultural and Consumer Affairs	-0-	70,000	-0-
Boards of Education	3,500	3,000	-0-
Interest	90,000	133,525	98,648
Donations	20,000	9,000	-0-
Contributions from:			
Pacific Metals	-0-	-0-	5,000
Northwest Territories Power Corporation	-0-	-0-	1,000
Publications	1,000	1,075	195
Rental and services	3,000	5,658	2,954
Sale of assets	-0-	818	15,535
	1,771,078	1,967,490	1,859,261

SCIENCE INSTITUTE OF THE NORTHWEST TERRITORIES

STATEMENT OF REVENUE, EXPENDITURES AND UNEXPENDED FUNDS

FOR THE YEAR ENDED MARCH 31, 1991

	1991 $		1990 $
	Revised Budget	Actual	Actual
REVENUE (Carried Forward)	1,771,078	1,967,490	1,859,261
EXPENDITURES			
Salaries and benefits	995,810	1,031,474	968,845
Administration	110,000	71,360	100,444
Special projects	-0-	35,479	-0-
Board of Governors	53,000	13,768	14,673
Chairman	10,500	3,448	5,295
Executive Director	18,250	20,331	17,327
Industrial Research Assistance Program	41,690	52,073	36,692
Information/Education	126,500	80,267	95,684
Medical Research	-0-	70,000	-0-
Research Centre operations - Igloolik	74,000	59,796	74,504
Research Centre operations - Iqaluit	61,000	57,036	64,900
Research Centre operations - Inuvik	67,000	64,008	63,466
Research Centre operations - Headquarters	42,600	87,516	38,370
Research Assistance	-0-	-0-	23,650
Science Advisor	10,000	5,041	-0-
Science Administration	33,900	13,654	-0-
Technology Development	110,000	48,844	19,796
	1,754,250	1,714,095	1,523,646
INCREASE IN UNEXPENDED FUNDS FOR THE YEAR	16,828	253,395	335,615
UNEXPENDED FUNDS, OPENING	597,040	597,040	261,425
UNEXPENDED FUNDS, CLOSING	613,868	850,435	597,040

SCIENCE INSTITUTE OF THE NORTHWEST TERRITORIES

BALANCE SHEET

AS AT MARCH 31, 1991

	1991 $	1990 $
ASSETS		
CURRENT		
Cash and term deposits	1,129,588	729,442
Accounts receivable	182,084	163,839
Prepaid expenses	1,732	851
	1,313,404	894,132
FIXED ASSETS	781,063	664,059
	2,094,467	1,558,191
LIABILITIES		
CURRENT		
Accounts payable and accrued liabilities	297,618	137,045
Deferred revenue (Note 2)	165,351	160,047
	462,969	297,092
INSTITUTE'S EQUITY		
INVESTMENT IN FIXED ASSETS	781,063	664,059
UNEXPENDED FUNDS (Note 3)	850,435	597,040
	1,631,498	1,261,099
	2,094,467	1,558,191

APPROVED BY THE BOARD OF GOVERNORS:

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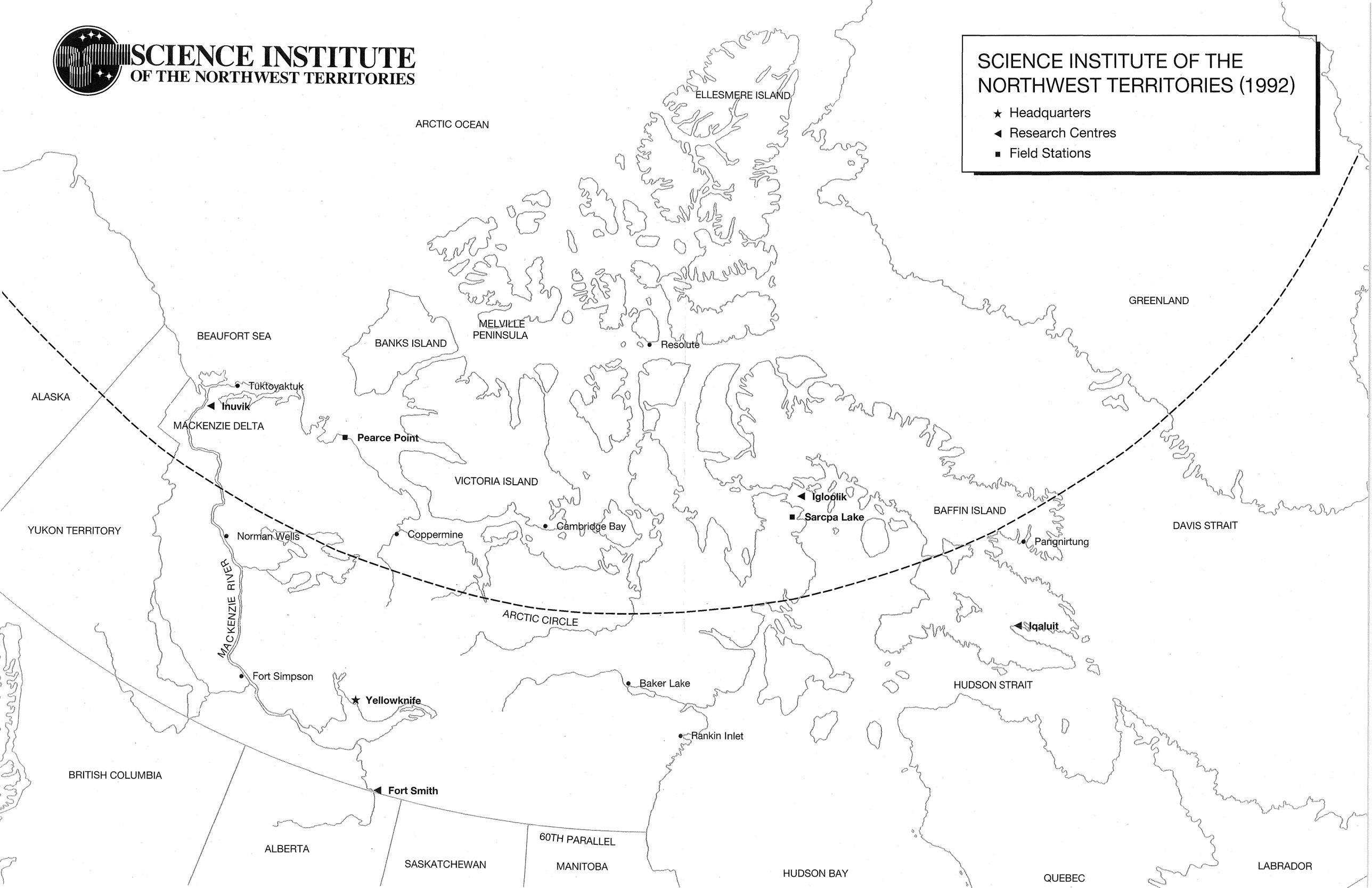
Kaye L MacInnes Governor

SCIENCE INSTITUTE OF THE NORTHWEST TERRITORIES



ᓄᓇᑦᓯᐊᕐᒥᑦ ᓱᓇᑐᐃᓐᓇᕐᓂᒃ ᖃᐅᔨᓴᖅᑎᓕᕆᔨᒃᑯᑦ
ᐃᓐᑯᐳᕋᐃᑕᑦᑕᐅᓚᐅᖅᓯᒪᔪᑦ ᓄᓇᑦᓯᐊᕐᒥᑦ ᓱᓇᑐᐃᓐᓇᕐᓂᒃ
ᖃᐅᔨᓴᖅᑎᓕᕆᔨᒃᑯᑦ ᒪᓕᒐᖕᒐᓂᒃ ᐊᑐᕐᔪᑎᒃ 1984-ᒥ.

ᓱᓇᑐᐃᓐᓇᕐᓂᒃ ᖃᐅᔨᓴᖅᑎᓕᕆᔨᒃᑯᓐᓂᑦ ᖃᐅᔨᓴᖅᑕᐅᓇᓱᐊᖅᑐᑦ
ᖃᓄᐃᑑᒻᒪᖔᑕ ᐱᓕᕆᐊᕆᔭᐅᓯᒪᓕᖅᑐᑦ ᓱᓇᑐᐃᓐᓇᕐᓂᒃ
ᖃᐅᔨᓴᖅᑐᓕᕆᓂᕐᒧᑦ, ᓴᓇᔭᐅᓯᒪᓂᐊᖅᑐᓂᒃ ᐊᖅᑭᒃᓱᐃᓂᕐᒧᑦ ᐊᒻᒪᓗ
ᓄᑖᖕᒍᖅᐸᒡᓕᐊᔪᓕᕆᓂᕐᒧᑦ, ᐊᒻᒪᓗ ᐊᖅᑭᒃᑕᐅᓇᓱᒃᑐᒡᓗ
ᐱᓕᕆᐊᖅᐃᑦ ᐃᑲᔫᑎᒋᔭᐅᓯᒪᓂᐊᖅᑐᑦ ᑕᒪᒃᑯᐊ
ᐱᕙᒡᓕᐊᑎᑕᐅᓯᒪᓂᐊᕐᓂᖕᒋᓐᓄᑦ ᑕᒪᓂᑦ ᓄᓇᑦᓯᐊᕐᒥᑦ ᐃᓄᓯᑦ
ᐊᒻᒪᓗ ᒪᑭᒪᔾᔪᑎᒃᓴᐃᑦ ᐱᔾᔪᑎᒡᓗᒋᑦ ᑐᕐᕋᕐᕕᒋᔭᐅᔪᑦ
ᓄᓇᑦᓯᐊᕐᒥᐅᓄᑦ ᑎᑭᐅᑎᔭᐅᓯᒪᓂᐊᕐᑯᒡᓗᒋᑦ.

ᐊᑐᐊᒐᓇᓂᐊᖅᑕᖕᒋᑦ ᑲᑎᒪᔨᒃᑯᓐᓂ 7-ᓂ 13-ᓄᑦ
ᑎᑭᐅᑎᓯᒪᔪᓐᓇᖅᑐᓂ ᐊᖅᑭᒃᑕᐅᖃᑦᑕᕐᒪᑕ, ᑕᐃᒃᑯᐊ ᑲᑎᒪᔨᖕᒋᑦ
ᐊᑐᐊᒐᕐᓂᒃ ᐊᖅᑭᒃᓯᓲᑦ ᓄᓇᑦᓯᐊᕐᒥᑦ ᓱᓇᑐᐃᓐᓇᕐᓂᒃ
ᖃᐅᔨᓴᖅᑎᓕᕆᔨᒃᑯᑦ ᒥᓂᔅᑕᖕᒐᓄᑦ ᑎᒃᑯᐊᖅᑕᐅᓯᒪᒡᓗᑎᑦ.
ᐊᒥᓲᓂᖅᓴᓂᒃ ᓄᓇᑦᓯᐊᕐᒥᐅᑕᓂᒃ ᐃᓚᖃᓇᐊᖃᕐᓗᑎᒃ ᑲᑎᒪᔨᒃᑯᖕᒋᑦ.

ᑎᓴᒪᐅᓕᖅᑐᑦ ᐱᓕᕆᐊᒃᓴᐃᑦ ᐊᖅᑭᒃᑕᐅᓯᒪᓕᖅᑐᑦ ᑲᑎᒪᔨᒃᑯᑦ
ᐊᑐᐊᒐᖕᒋᑦ ᐊᑐᓕᖅᑎᑕᐅᓯᒪᓂᐊᕐᓂᖕᒋᓐᓄᑦ: ᓱᓇᑐᐃᓐᓇᕐᓂᒃ
ᖃᐅᔨᓴᖅᑐᓕᕆᔨᒃᑯᑦ ᐊᖕᒐᔪᕐᑮᒃᑯᓇᖕᒐᑦ, ᓱᓇᑐᐃᓐᓇᕐᓂᒃ
ᖃᐅᔨᓴᖅᑐᓕᕆᓂᕐᒥᒃ ᐅᖃᐅᔾᔪᐃᔨᑦ, ᑐᓴᒐᒃᓴᐃᑦ/ᐃᓕᓐᓂᐊᕐᓂᖅ,
ᓄᑖᖕᒍᖅᐸᒡᓕᐊᔪᓂᒃ ᐱᔭᒡᓕᐊᑎᑦᑎᓂᖅ.

1988-ᖕᒍᑎᒡᓗᒍᒃ ᓱᓇᑐᐃᓐᓇᕐᓂᒃ ᖃᐅᔨᓴᖅᑎᓕᕆᔨᒃᑯᓐᓂᑦ
ᑲᒪᔨᑖᓚᐅᖅᑐᑦ ᑕᐃᒃᑯᐊ ᐱᖕᒐᓱᑦ ᖃᐅᔨᓴᕐᕕᑦ ᐃᓄᓕᕆᔨᑐᖅᑲᒃᑯᓐᓂᑦ
ᑲᒪᒋᔭᐅᔪᓐᓂᕐᓗᑎᒃ. ᐃᖃᓗᖕᓂᑦ, ᐃᒡᓗᓕᖕᒥᑦ ᐊᒻᒪᓗ ᐃᓅᕕᒃᒥᑦ
ᖃᐅᔨᓴᕐᕕᒃᑕᓕᒃ.

ᓱᓇᑐᐃᓐᓇᕐᓂᒃ ᖃᐅᔨᓴᖅᑎᓕᕆᔨᒃᑯᓐᓂᑦ ᐊᐅᓚᑕᐅᓯᒪᒡᓗᑎᒃ ᑕᐃᒃᑯᐊ
ᑲᓇᑕᒥᑦ ᖃᐅᔨᓴᖅᑐᓕᕆᔨᒃᑯᑦ ᑲᑎᒪᔨᒃᑯᖕᒋᓐᓄᑦ ᐊᖅᑭᒃᑕᐅᓯᒪᔪᑦ
ᓴᓇᔪᓕᕆᓂᕐᒥᒃ ᖃᐅᔨᓴᕐᓂᕐᒧᑦ ᐃᑲᔫᑏᑦ.

ᑕᒪᕐᒥᒃ ᖃᐅᔨᓴᖅᑏᑦ ᐱᔪᓐᓇᐅᑎᖃᓇᐊᖅᑲᕐᒪᑕ ᓱᓇᑐᐃᓐᓇᕐᓂᒃ
ᖃᐅᔨᓴᖅᑎᓕᕆᔨᒃᑯᓐᓂᖕᒑᖅᓯᒪᔪᓂᒃ ᓄᓇᑦᓯᐊᕐᒥᑦ ᓱᓇᑐᐃᓐᓇᕐᓂᒃ
ᖃᐅᔨᓴᖅᑎᒃᑯᑦ ᒪᓕᒐᖕᒐᓂᑦ ᐃᓕᓴᓇᔭᐅᓯᒪᔪᓂᒃ ᑭᓯᐊᓂᓕ ᑕᐃᒃᑯᐊ
ᐃᑦᑕᕐᓂᓴᓂᒃ ᐊᒻᒪᓗ ᓂᕐᔪᑎᓂᒃ ᓄᓇᒥᐅᑕᓂᒃ ᖃᐅᔨᓴᖅᑐᑦ
ᐱᔪᓐᓇᐅᑎᖃᓇᐊᖅᑲᖕᒋᑦᑐᑑᒡᓗᑎᒃ.

ᑐᓴᖅᑎᑕᐅᒃᑲᓐᓂᒋᒪᒍᓯᑦ ᐅᕐᖕᒐᑦ ᑎᑎᕋᓐᓇᖅᐳᓯᑦ:

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