

## Summary of the Significance of and Threats to Cultural Resources Located at the Historic Settlement Area on Herschel Island Territorial Park of Yukon

The Historic Settlement Area on Herschel Island was designated as a National Historic Event of Canada in 1972 and is part of Yukon's first Territorial Park, established in 1987. The events recognized in its national designation were the whaling industry, the establishment of Canadian sovereignty in the western Canadian Arctic, and the meeting of cultures. It is part of an area called Ivvavik/Vuntut/Herschel Island that is on Canada's tentative list for nomination as a World Heritage site. Ivvavik and Vuntut are each Canadian National Parks located in the very northwest corner of Yukon and Canada.

Sir John Franklin met ancestors of today's Inuvialuit when he visited the island in the summer of 1826 and gave it its English name. There is archaeological evidence here of the Thule culture which would mean at least 1,000 years of human use and occupation. Inuvialuit continue to use the island as a seasonal base for traditional hunting and fishing.

In 1890, American whalers, pursuing diminishing stocks of Pacific Bowhead whales, followed them over the north coast of Alaska into the Beaufort Sea of the Arctic Ocean. The fleet established a "settlement" at the deep and sheltered harbour of Pauline Cove on Herschel Island. At first, ships were simply frozen fast in the ice of the cove to provide shelter over winter in order to get the earliest start possible to the next whaling season. The first structure was built on land in 1892. Today, there are a dozen buildings standing that date back as far as 1893.

There are also archaeological remains of prehistoric, semi-sub-

terranean houses and over 100 grave sites nearby.

As reported in the 2004/5 edition of *Heritage at Risk* (pp 266-7), cultural resources in the historic settlement area are threatened by climate change. The specific effects are rising sea level, coastline erosion, decaying permafrost, and changes to the hydrologic regime. The western Canadian Arctic and Alaska are seeing the greatest increases in yearly average temperature in the world.

Sea level in the Beaufort region has increased by 10 to 20 centimetres in the past century and is conservatively predicted to rise another half a metre in the next century. The Settlement Area is on a low lying spit of land. A rise of this extent will bring water up to the doorsteps of most of the historic buildings and submerge all archaeological sites.

Another effect of warming is the disappearance of sea ice and increasingly violent late summer and fall storms in the Beaufort Sea. These phenomena are directly related to accelerated shoreline erosion due to increased wave action caused by high winds and the fetch provided by the recession of fixed sea ice.

Permafrost and ice lenses are found below ground throughout the island. Solifluction; the downward slumping of the thawed, active layer of soil over the frozen ground beneath has caused coffins to tumble and be pushed out of the ground on the south facing slopes behind the Settlement Area. This deterioration of the permafrost, coupled with a predicted increase in precipitation will inevitably effect the hydrologic regime and surface runoff rates and patterns.



June, 1991 aerial photograph of the Historic Settlement Area with the Northern Whaling and Trading Company (NW&TCO) Store near the shore at centre left and Pauline Cove at right (Credit: Government of Yukon Territory)

Further building relocations have not been required; as of winter 2006/07 however, building foundations that were once dry and frozen are now becoming waterlogged throughout the Historic Settlement Area. This seems to be related to ground thaw and possibly a rise in the water table or land subsidence. Along with shoreline and permafrost monitoring, this introduction of moisture is being monitored for increased freeze/thaw activity and fungal attack that could damage structural integrity.

The development of a Strategic Salvage Plan which will prepare for a worst case scenario for cultural resources on Herschel Island is underway. A team of architectural conservationists, an archaeologist and a palaeontologist from the Government of Yukon will be visiting the island in July, 2007 to study the current situation and collect field measurements to contribute to the plan. The plan will attempt to ensure that as much of the scientific information and cultural values pertaining to the site as possible are retained and at least fully documented for posterity. It will also outline a staged and prioritized reaction as well as cost implications should the predicted progress and extent of climate change, and its effects on the coastal regime be fully realized.

It seems certain that the period of history we are now living in can be added onto the many layers of change over history and onto the exceptional cultural and natural values that Ivvavik/Vuntut/Herschel Island (Qikiqtaruk) embodies and offers the world. The lessons to be learned are many.

Visit [www.yukonheritage.com](http://www.yukonheritage.com) and go to the publications section to see an overview of the heritage of Herschel Island in the two online publications: *Herschel Island - Qikiqtaruk* and *Qikiqtaruk - Inuvialuit Archaeology on Herschel Island*. Further information can be found at <http://www.virtualmuseum.ca/Exhibitions/Herschel/English/menu.html>.

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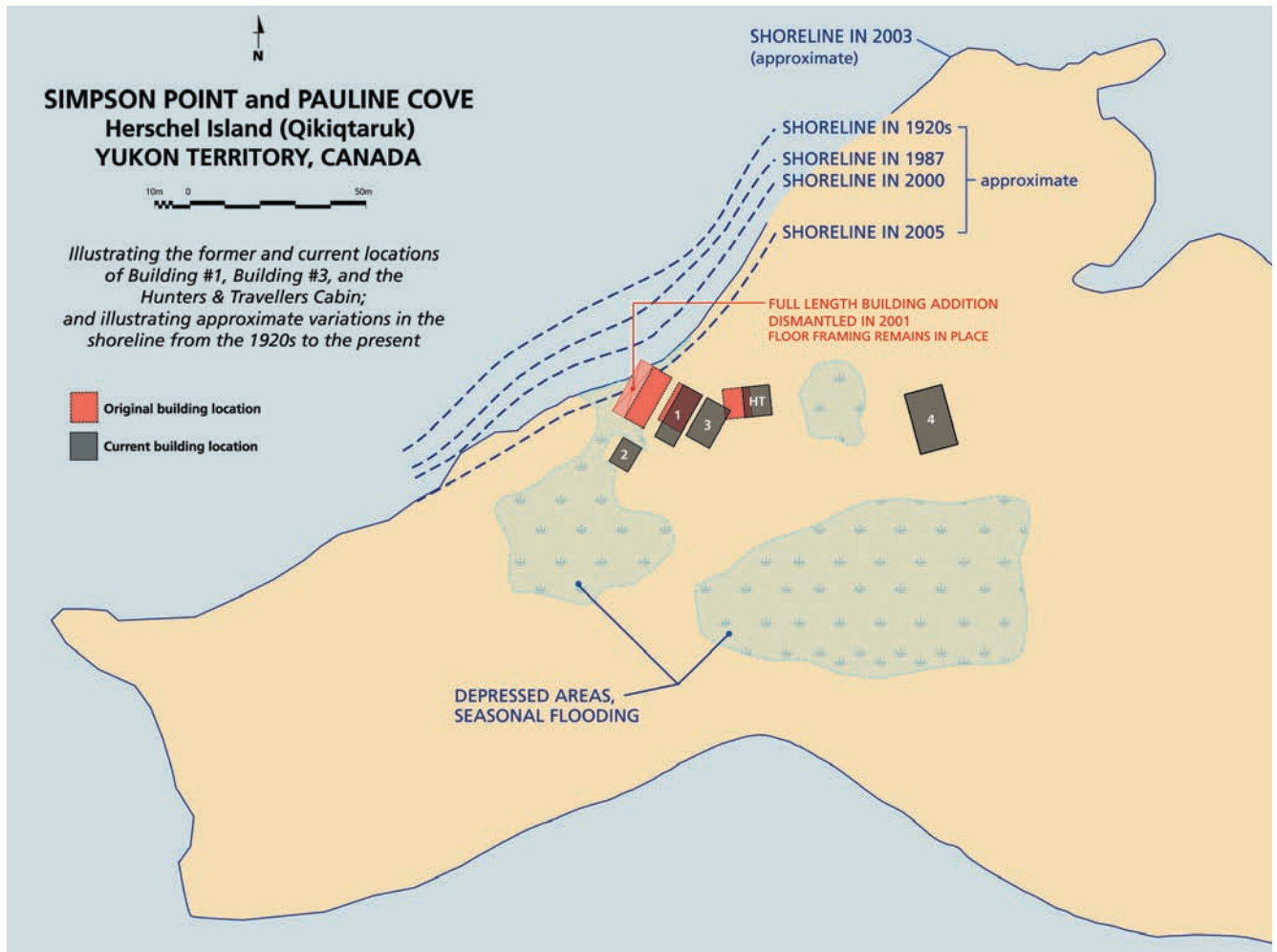
June, 2001 - the NW&TCo Store shed addition after being crushed by sea ice the previous fall (Credit: Government of Yukon Territory)



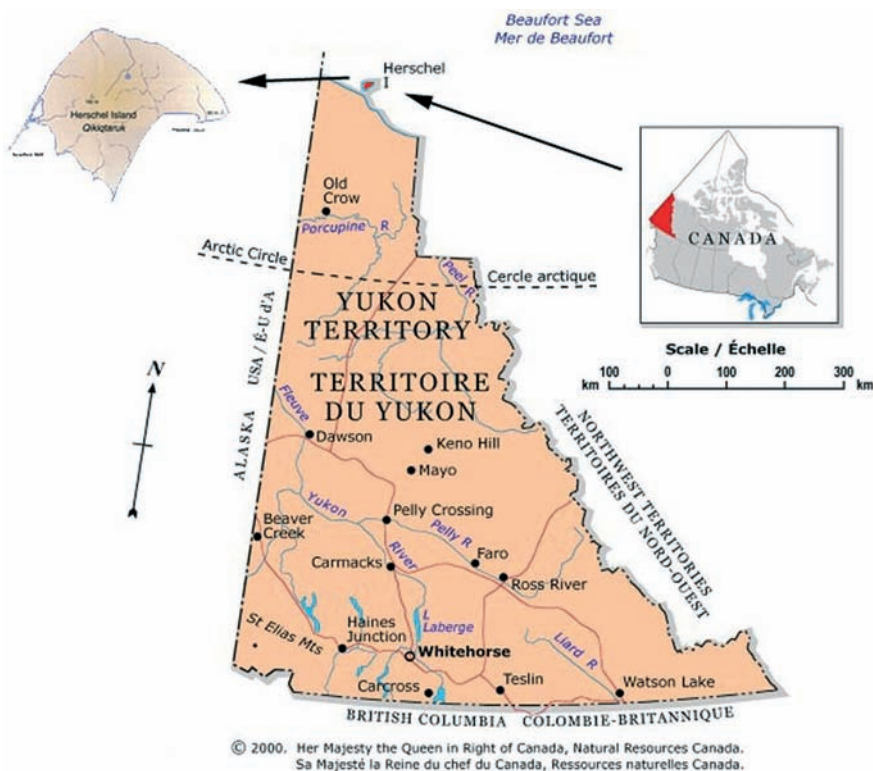
July, 2003 - the NW&TCo Store after the shed addition was removed and the building raised (Credit: Government of Yukon Territory)

August, 2003 - the NW&TCo Store after being moved five metres back from the shore. This building and the Canada Customs Warehouse and Hunters and Travellers Cabin to the left had to be moved an additional five metres in the summer of 2004 (Credit: Government of Yukon Territory)





Plan showing building relocations as of 2006. Building #1 is the NW&TCo Store, Building #2 is the Canada Customs Warehouse (Credit: Government of Yukon Territory)



Yukon Territory showing location of Herschel Island