

THE MARIPORT GROUP LTD.

REPRESENTATIVE PROJECTS IN ARCTIC AND SUB ARCTIC REGIONS

Advisory Services – Government of Nunavut

- Prepared a baseline evaluation of cargo moving by marine to Nunavut. Contributed the marine component to a broad ranging, multi-modal transportation strategy for Nunavut in 2000, and an update in 2006. Provided extensive material from Mariport library in support of the marine technical document. Also provided a separate deep water ports strategic document in 2006.
- Advised Nunavut Public Works in 2000 regarding contracts and evaluation of bids following transfer of Sealift responsibility from Canadian Coast Guard. In 2005/6 undertook a major review of re-supply on behalf of Community and Government Services and rewrote the re-supply contracts to bring them up to date and make them more accessible to Nunavummiut. Also drafted a hand book *How to Sealift* and delivered a two-day seminar on re-supply.
- Prepared a financial and economic evaluation of a container stripping and warehouse facility for Iqaluit.

Cost Benefit Analysis of the Polar Code

Utilizing Mariport's database of marine incidents in Arctic waters, reviewed the probable costs and economic impacts of the current draft of the Polar Code. The work included a comprehensive risk analysis for different types of vessels and compared this with risk in the Gulf of St. Lawrence.

Arctic Marine Incident and Shipping Data Base

Based on Transportation Safety Board data, Mariport developed a unique Arctic database covering several years and containing ship movements, cargo carried (where known) and incidents. Mariport prepares an annual, in-house, report of shipping activity in the Canadian Arctic.

Anaconda Aluminium Smelter Transportation Study¹

Undertook total system cost study for a proposed smelter at either Northwest Point (Lake Melville) or York Harbour (Bay of Islands). The study provided a total transportation cost budget for all inbound and outbound cargo movements, with ingot being shipped to Louisville (KY).

Shipment of Asbestos Concentrate from Deception Bay²

Worked with Asbestos Corporation to develop a seasonal shipping service to Nordenhamm, Germany, that minimized the company's exposure to market variations. Study included work to develop systems to permit ice-strengthened handy-max vessels to dock without tug assistance.

Lake Melville Incremental Cost Study^{1,2}

For the Department of Development in Newfoundland and Labrador, worked with NORDCO to develop a commercially-based analysis of a range of shipping options into Lake Melville and Goose Bay (Northwest Point).

Project Logistics Study Urangesselschaft (Canada) Ltd.¹

Analyzed project logistics costs from purchasing centres to delivery at the mine site, NWT. Study included air, marine, and road (ice and permanent) components. Total budget costs were provided for an optimum system that incorporated air and marine.

Coronation Gulf Concentrates Shipping

On behalf of Metall Canada, analyzed opportunities for delivery of concentrates from a proposed new Arctic mine at Izok Lake. Demonstrated the optimum system involved trans-shipment via a large vessel moored in ice-free waters. Provided commercial marine advice relative to shipping companies and tendering process.

¹ Undertaken in conjunction with other consultants.

² Undertaken wholly, or in part, by Mariport principals prior to establishment of the company.

Navarin Basin Trafficability Study¹

Undertook a detailed analysis of crude oil shipment from a remote loading point in the Navarin Basin (Bering Sea). Study looked at Conventional and Ice Classed tankers and tug/barges, including trans-shipment at Dutch Harbour versus direct sailing to US West Coast ports.

Advisory Services – Icebreaking Activity Analysis

Undertook a highly detailed analysis of use of icebreaking services by commercial shipping in Canada during the 1993/94 winter. Other work has involved developing fee concepts for cost recovery for icebreaking services and mitigating factors dependent on ship performance criteria.

Advisory Services – Government of North West Territories

- Undertook detailed analysis of current and possible future costs for moving resupply goods and oil into Arctic communities. Identified several areas for cost savings.
- Mariport managed a desk study into a power transmission corridor across the East Arm of the Great Slave Lake. The study included optional transmission routes and logistics estimates for delivering materials and cable laying.
- Undertook extensive community consultation as well as preliminary marine survey work to relocate the marine re-supply facility at Kugluktuk. Contributed a comprehensive economic analysis to justify the investment, and resolved a number of land use issues in the community.
- Undertook an organization review of NWT Marine Services Division, preparing terms of reference for a technical review of two of the Territories' ferries.
- Undertook a preliminary analysis of a northern delivery route to the Alberta oil sands, liaised with interested oil companies and organized an update workshop for stakeholders.

Shipping Analyses and Oil Supply Advisory Services – Oil Re-supply

Undertook a detailed analysis of oil supply and shipping concepts for oil resupply to the Eastern Arctic. Assisted in putting together a winning bid and implementing the strategy, both with regard to oil supply and tanker chartering.

Voisey's Bay Shipping Study³

Participated in a multi-disciplinary team investigating year-round marine transportation options and costs for Voisey's Bay Nickel. Shipping costs to a proposed Canadian smelter covered a range of options including containers, bulk, and big bags.

Mackenzie River Risk Analysis

On behalf of Transport Canada Ship Safety, undertook a desk analysis of shipping options and risk associated with movement of materials for the gas pipeline. Incorporated assessments of shipping needs for communities and resource projects, as well as opportunities for deep sea shipping.

Canadian Arctic Shipping Assessment¹

Mariport contributed to a scoping study in 2006, then managed a multidisciplinary team in 2007 to deliver a comprehensive overview of Arctic Shipping to Transport Canada. This included an economic assessment of shipping via the North West Passage.

EXPERTISE IN ARCTIC AND NEAR ARCTIC TRANSPORTATION

The Mariport Group, and its principal, has been involved in many studies in Arctic and sub Arctic regions. Some of these have been navigation related in terms of determining the feasibility and cost of moving mined materials to market. Others, such as the delivery of oil to Eastern Arctic communities, looked to the most cost effective and least risk approach to serving Nunavut or GNWT communities with essential oil supplies.

As statistical data on quantities is sparse, Mariport has used "rule of thumb" measures from other regions to develop a forecasting methodology, based on population, for essential dry goods and produce movements. Because of the nature of shipping needs, the actual use of shipping capacity rather than weight is always used. In this respect modal estimates for cargo have been made for air and marine.