Taking you Further.

Winner of the IBJ awards for Bulk Ship Operator of the Year and Bulk Ship of the Year for Umiak I
Year Round Arctic Operations
Bulk Shipments of Base Metals

- **Existing, recent past**
  - Red Dog
  - Bent Horn
  - High Lake/Izok
  - Mary River

- **Future development**
  - Polaris
  - Nanisivik
  - Voiseys Bay
  - Raglan

Red Dog
Lead/Zinc

Bent Horn
Crude Oil

Polaris
Lead/Zinc

Nanisivik
Lead/Zinc

Mary River
Iron Ore

High Lake/Izok
Lead/Zinc

Voiseys Bay
Nickel Copper

Raglan
Nickel
Radarsat Image of Deception Bay After Winter Transit

MV ARCTIC

Heavily Rridged
Shear Zone

Track of MV Arctic in Fast Ice
of Deception Bay

Location of MV Arctic
Besetmen on Outbound
January 27, 2001

Copyright Canadian Space Agency
Current Regime
### Table of Ice Multipliers for the Arctic Ice Regime Shipping System (AIRSS)

<table>
<thead>
<tr>
<th>AES / WMO Ice Codes</th>
<th>Ice Types</th>
<th>Thickness</th>
<th>Type E</th>
<th>Type D</th>
<th>Type C</th>
<th>Type B</th>
<th>Type A</th>
<th>CAC 4</th>
<th>CAC 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>7 or 9*</td>
<td>Old / Multi-Year Ice</td>
<td></td>
<td>-4</td>
<td>-4</td>
<td>-4</td>
<td>-4</td>
<td>-4</td>
<td>-3</td>
<td>-1</td>
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<tr>
<td>8*</td>
<td>Second-Year Ice</td>
<td></td>
<td>-4</td>
<td>-4</td>
<td>-4</td>
<td>-4</td>
<td>-3</td>
<td>-2</td>
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<tr>
<td>6 or 4*</td>
<td>Thick First-Year Ice</td>
<td>&gt; 120 cm</td>
<td>-3</td>
<td>-3</td>
<td>-3</td>
<td>-2</td>
<td>-1</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>1*</td>
<td>Medium First-Year Ice</td>
<td>70-120 cm</td>
<td>-2</td>
<td>-2</td>
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<td>-1</td>
<td>1</td>
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<td>2</td>
</tr>
<tr>
<td>7</td>
<td>Thin First-Year Ice</td>
<td>30-70 cm</td>
<td>-1</td>
<td>-1</td>
<td>-1</td>
<td>1</td>
<td>2</td>
<td>2</td>
<td>2</td>
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<tr>
<td>9</td>
<td>Thin First-Year Ice - 2nd Stage</td>
<td>50-70 cm</td>
<td>-1</td>
<td>-1</td>
<td>1</td>
<td>1</td>
<td>2</td>
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<td>2</td>
</tr>
<tr>
<td>8</td>
<td>Thin First-Year Ice - 1st Stage</td>
<td>30-50 cm</td>
<td>-1</td>
<td>-1</td>
<td>1</td>
<td>1</td>
<td>2</td>
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</tr>
<tr>
<td>3 or 5</td>
<td>Grey-White Ice</td>
<td>15-30 cm</td>
<td>-1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>2</td>
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<tr>
<td>4</td>
<td>Grey Ice</td>
<td>10-15 cm</td>
<td>1</td>
<td>2</td>
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<td>2</td>
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<tr>
<td>2</td>
<td>Nilas, Ice Rind</td>
<td>&lt; 10 cm</td>
<td>2</td>
<td>2</td>
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<td>2</td>
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<td>2</td>
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<tr>
<td>1</td>
<td>New Ice</td>
<td>&lt; 10 cm</td>
<td>&quot;</td>
<td>&quot;</td>
<td>&quot;</td>
<td>&quot;</td>
<td>&quot;</td>
<td>&quot;</td>
<td>&quot;</td>
</tr>
<tr>
<td>~Δ</td>
<td>Brash (ice fragments &lt; 2 m across)</td>
<td></td>
<td>&quot;</td>
<td>&quot;</td>
<td>&quot;</td>
<td>&quot;</td>
<td>&quot;</td>
<td>&quot;</td>
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<tr>
<td></td>
<td>Bergy Water</td>
<td></td>
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<td>&quot;</td>
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<td></td>
<td>Open Water</td>
<td></td>
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<td>&quot;</td>
<td>&quot;</td>
<td>&quot;</td>
<td>&quot;</td>
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</tr>
</tbody>
</table>

*Decayed Ice: For the following ice types: MY, SY, TFY, and MFY that are 'Decayed', add +1 to the Ice Multiplier.

*Ridged Ice: For ice floes that are over 3/10ths 'Ridged' and in an overall ice concentration that is greater than 6/10ths, subtract 1 from the Ice Multiplier.

*Another version of this table can be found in TP 12209.
Community Consultation and Cooperation

Arctic Bay HTA
Taking you Further.
Draft Check
Safety Culture, celebrating 1000 accident free days