

Arctic Shipping and Vessel Activity



STEVE SCALZO

Outline of Presentation



- 1. Background of MRG and Foss**
- 2. MRG/Foss experience in the Arctic and Alaska**
- 3. Challenges in a changing Arctic**
- 4. Red Dog video**
- 5. Questions and Answers**



Marine Resources Group



- Begun in 2004 to develop Saltchuk's Green Water Assets
- 1675 Employees worldwide
- 94 Tugs
- 74 Barges
- MRG Mission
 - Brand Integrity
 - Safe Operation
 - Profitability and Return on Investment
 - Growth Initiatives

MRG Global Operations



global operations

Areas of operation of MRG's operating companies



BLUE WATER



GREEN WATER



REGIONAL PETROLEUM PRODUCTS



NORTHWEST REAL ESTATE & MARINAS



AIR CARGO



Foss Maritime Company



- Founded in 1889
- Foss Maritime Company offers a complete range of maritime transportation and logistics services to customers on the U.S. West and East coasts, Alaska, across the Pacific Rim, Europe, South America and around the globe.



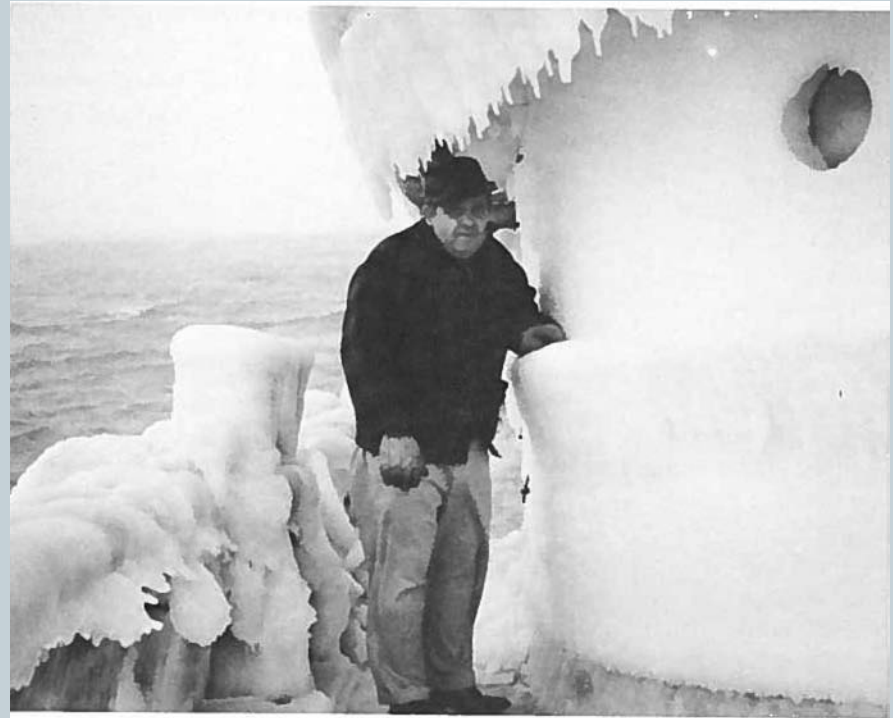
The first Foss office in the late 1890's



MRG/Foss in Northern Alaska and the Arctic



- **1941- ~1990**
 - Standard Oil Contract
- **1957-1964:**
 - Dew Line Assist Contract
- **1967-1971**
 - Amchitka Island, Holmes and Narver Contract
- **1975-1978**
 - Prudhoe Bay Sealift
- **1978-1983**
 - Military Sealift Contract
- **1988-present**
 - Teck Cominco Contract
- **2004, 2006-2007**
 - Sakhalin Islands
- **2010-present**
 - Cook Inlet Tug & Barge



Captain Jug Nolze, weather bound on a mid-winter voyage to S.W. Alaska, 1974

Standard Oil, 1941-1985



- **Primary Foss Vessels**
 - Edith Foss, Christine Foss, Wendy Foss, Alaska Husky
- **Areas of Operation**
 - Dutch Harbor
 - Bristol Bay
 - Bering Sea (various ports and villages, from Kotzebue to Nome)
- **Objectives**
 - Barge petroleum products between Dutch Harbor distribution base to various ports in Bristol Bay and the Bering Sea
 - Supply petroleum products to remote villages in the Aleutian Islands and Western Alaska
 - Alaska Husky: Assist and supply the oil drilling platforms in Cook Inlet

Alaska Husky in Sea Ice



ALASKA HUSKY Shown operating in the icy waters of Cook Inlet, servicing offshore drilling platforms. (Courtesy of Foss Tug Co)

Alaska Husky in an icy Cook Inlet assisting an oil platform



DEW Line Support, 1957-1964



- **Primary Foss Vessel**
 - Agnes Foss
- **Areas of Operation**
 - Bering Sea
 - Arctic Ocean
 - Airforce Base at Shemya Island
- **Objectives:**
 - DEW Line construction support and yearly resupply
 - Complete job in stormy and unpredictable weather
 - Complete 5,800 mile round trip

Barrow DEW Station



Amchitka Island, 1967-1971



- **Primary Foss Vessel**
 - Adeline Foss
- **Areas of Operation**
 - Amchitka Island, part of the Aleutian Chain
- **Objectives**
 - Sealift of supplies and equipment for Holmes & Narver, the prime contractor for the Atomic Energy Commission's underground explosion project
 - 73 separate tows at an average of 40 days each

Remote: Amchitka Island



Prudhoe Bay Sealift, 1975-1978



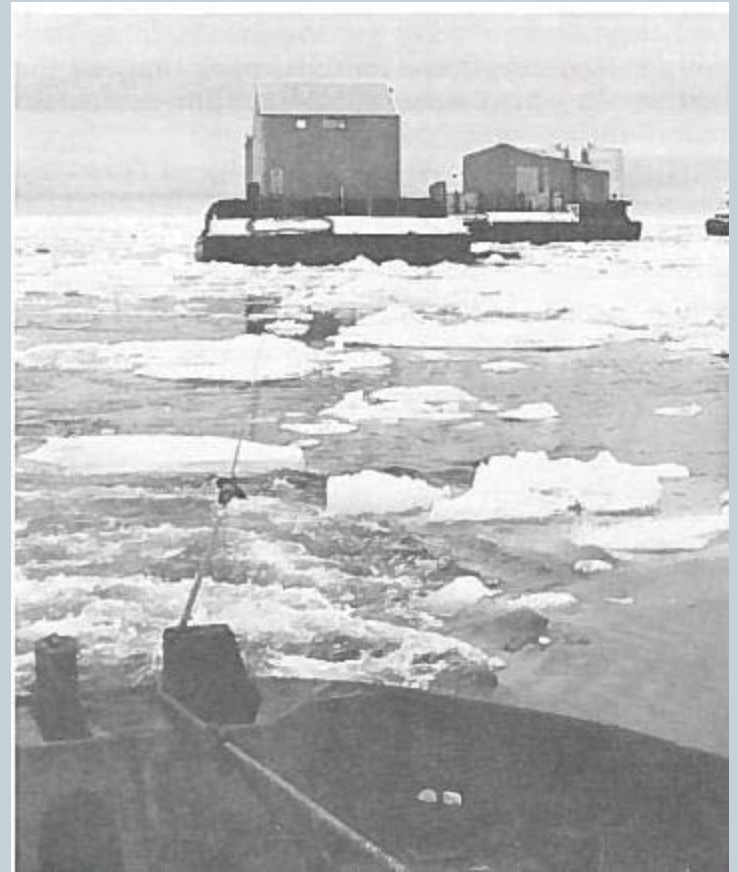
- **Primary Foss Vessels**
 - Jeffrey Foss, Arthur Foss, Henry Foss & others
- **Areas of Operation**
 - Prudhoe Bay, Alaska
- **Objectives , Challenges, & Results**
 - Deliver 47 barges to oil industry customer in Prudhoe Bay
 - Record levels of polar ice led to extremely challenging conditions
 - All 47 barges were delivered safely to Prudhoe Bay
 - The Foss tugs were able to make it out of Prudhoe before the ice thickened
 - 25 barges had to be left in the Bay until the ice thawed

Prudhoe Bay Sealift, 1975-1978



Icy waters made it challenging to tow 47 barges to Prudhoe Bay, but Foss tugs were able to complete the job.

Right: The barges being towed to Prudhoe Bay



Military Sealift Command, 1978-1983



- **Primary Foss Vessel**
 - Justine Foss
- **Areas of Operation**
 - Adak, Aleutian Islands
- **Objectives**
 - Deliver one barge-load to Adak once every 3 weeks
 - To maintain the schedule, the regular Foss Alaska Line tug transported the Military Sealift Command cargo on a barge and dropped it off at Sitka, where it would sit in a marshalling area to await the Justine.

Towing Barges



LESLIE FOSS underway with two barges of construction equipment for Adak and Attu Islands in the Aleutians, April 1983
(courtesy Camera Craft Inc., Seattle)

Teck Cominco, 1988-present



- **Primary Foss Vessels**

- Barbara Foss, Justine Foss, Drew Foss, Jeffrey Foss, Stacey Foss

- **Areas of Operation**

- Red Dog Mine, NW Alaska

- **Objectives**

- Use Foss self-loading barges to pick up the ore and lighter it to the ships anchored offshore
- Complete objectives in a 90-100 day season due to weather and ice



The Stacey Foss towing the specially designed lighter barge

Teck Cominco says Red Dog Mine does everything it can to lessen its environmental footprint – following strict regulations and setting its own environmental and safety standards.



Aerial View of the Mine in the summer



Sakhalin Islands, 2005-2006



- **Areas of Operation**

- Sakhalin Islands, North East Russia

- **Objectives and Results**

- Transport 36 prefabricated modules to support the construction of an LNG production facility on the NE tip of Sakhalin Island
- Each module was 280' long x 45' wide x 85' tall and weight 1,800 tons
- Manage challenging ice, typhoons and dangerous seas
- Project completed ahead of schedule and safely

Foss tugs towing a barge with one of 34 modules for the Sakhalin Island LNG facility



Chayvo Beach, Sakhalin Island



Foss personnel at Sakhalin Island



Cook Inlet Tug & Barge



- **MRG Subsidiary Company**
 - Acquired in 2010
 - Two ASD tractor tugs, one conventional tug, one flat deck barge
- **Services**
 - Harbor Services
 - Construction Support
 - LNG Support
 - Oil rig assist and resupply
- **Areas of Operation**
 - Port of Anchorage – RoRo, Container, Barge, Construction
 - Nikishi-Kenai – Fuel, LNG, Offshore Rig support
 - Homer
 - Port MacKenzie

Stellar Wind breaking ice



Glacier Wind in the ice



Challenges in a Changing Arctic

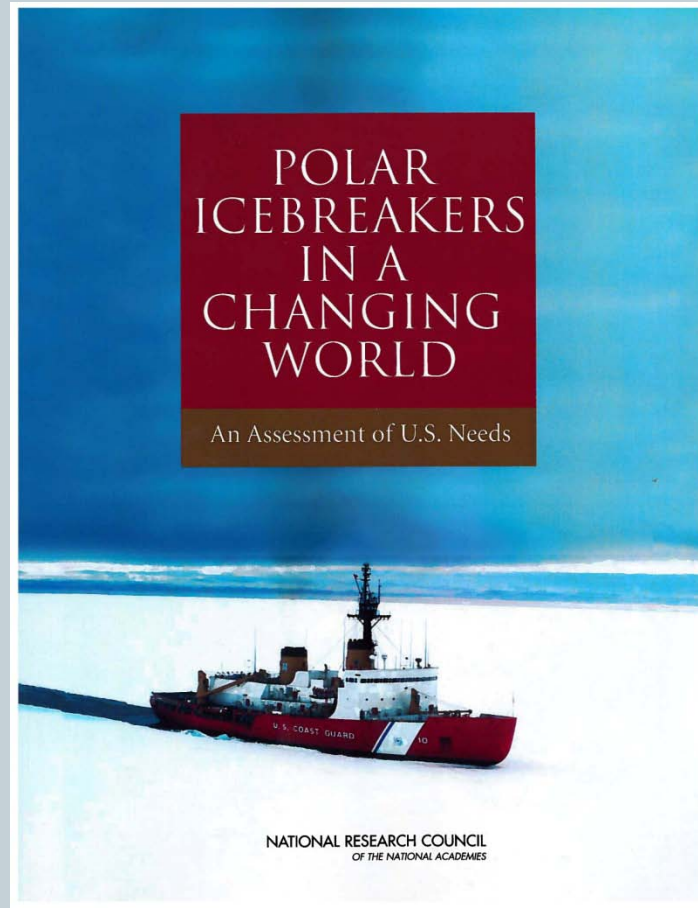


- **Commitment to Environmental Stewardship**
 - Increased human presence in the Arctic calls for *balancing economic opportunity with environmental regulations*
- **Commitment to Safety and Regulations**
 - Many bodies of water usually covered by sea ice are uncharted
 - Strict safety regulations and programs for companies that operate in the Arctic
- **MRG/Foss Leading the Way in Environmental Stewardship and Safety Programs**

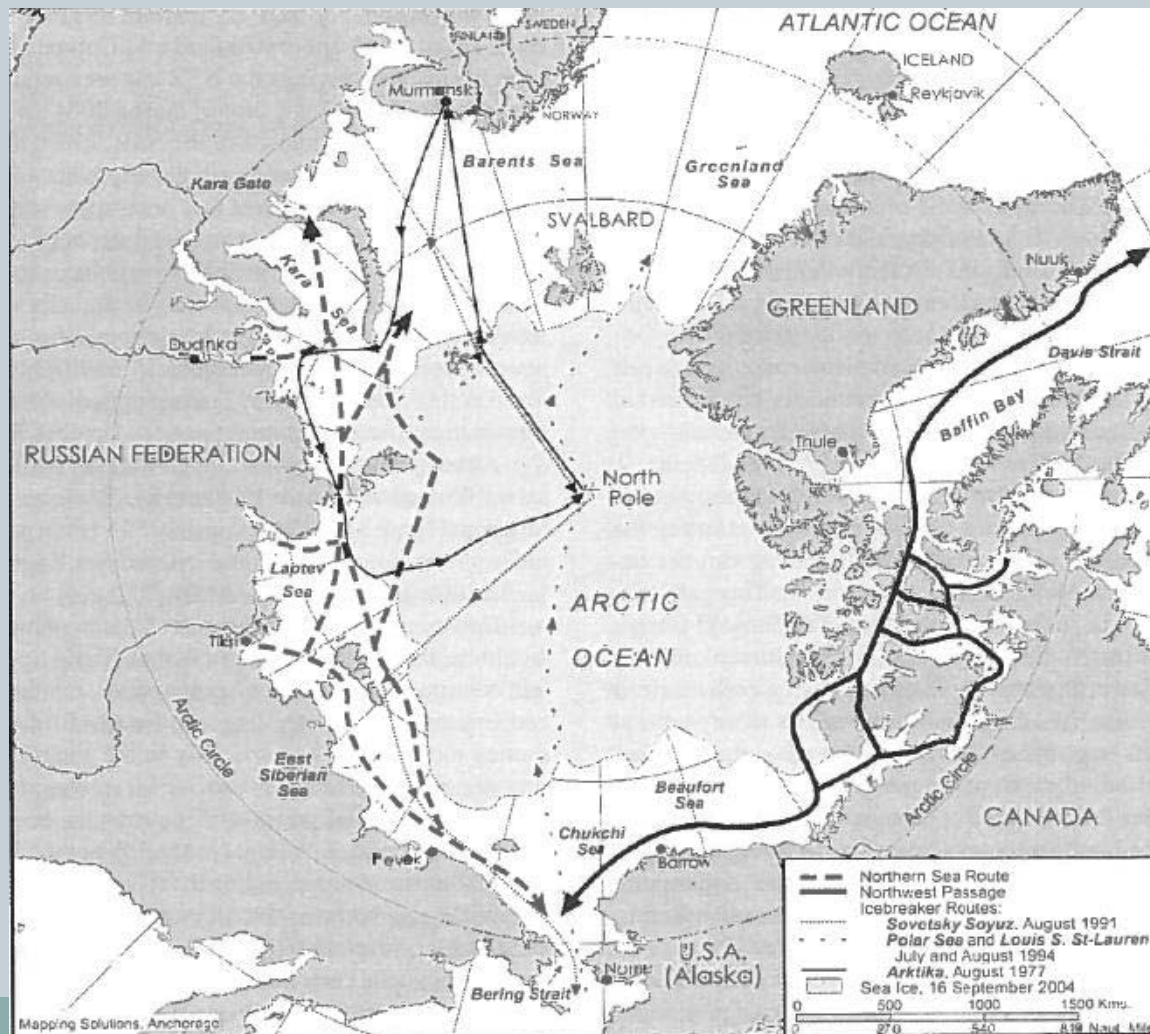


ISM
International Safety
Management

Polar Icebreakers in a Changing World, 2007



Polar Icebreakers in a Changing World



Operational Considerations



- **Environmental Conditions for Operation**
 - Poor Weather/difficult ice
 - Reliable Charts/Navigational aid
 - Underdeveloped communications
 - Remote location logistics

- **Northern Bering and Chukchi Seas**
 - Earlier Spring and later Fall transitions (ice covered to ice free)
 - Improving access to the Arctic

- **Increased Vessel traffic**
 - Ice capable vessel transits
 - Northern sea route – Russia
 - Northwest Passage – Canada

Operational Considerations



- **Potential conflicts among competing users**
 - *Domestic and Foreign*
 - ✦ Natural Resource exploration, development and production
 - ✦ Fishing
 - ✦ Commercial vessel transits
 - ✦ Scientific polar research (national leadership role)
 - ✦ Tourism
 - ✦ Indigenous Peoples
 - Sealing, Whale hunting, wildlife subsistence
 - Cultural implications
 - ✦ *US Government*
 1. Protect territorial interests
 2. Controlled access and oversight
 3. Maritime safety and security law enforcement
 4. Boundary protection
 5. Natural protection
 6. Environmental response
 7. U.N. Convention in the Law of the Seas (extensive mapping)
 8. Assured access and sovereign presence
 - U.S. national policy
 - Presidential decision directive

Red Dog Video



Questions and Answers

