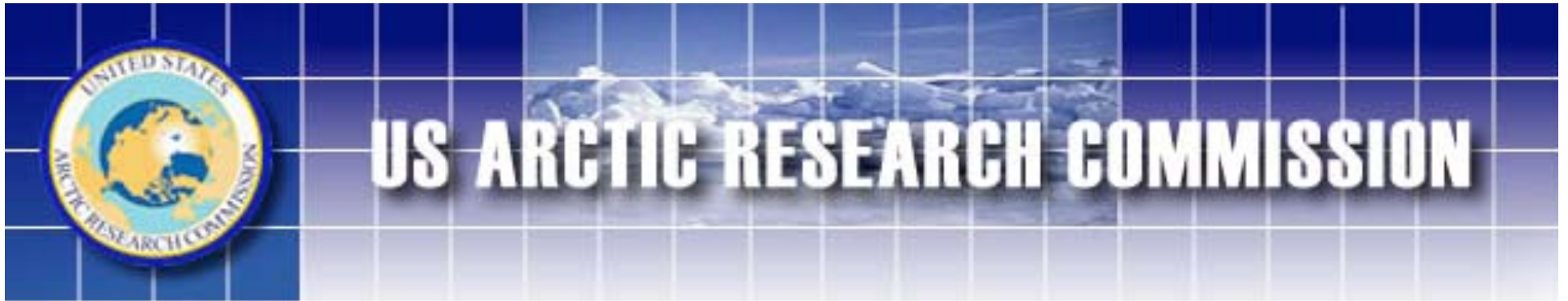


U.S. Arctic Research Commission



John Farrell
UNOLS/AICC
December 3, 2008



Mead Treadwell, Chair



Michele Longo Eder



Helvi Sandvik



Virgil (Buck) Sharpton



Vera Kingeekuk Metcalf



Warren Zapol



Charles Vörösmarty



US Arctic Research

~\$400M/yr across >15 federal agencies

...cooperating with over a dozen nations

...using research infrastructure worth billions



REPORT ON
GOALS AND
OBJECTIVES FOR
ARCTIC RESEARCH
2009



Research Themes

- Ocean Environmental Change
- Arctic Human Health
- Civil Infrastructure
- Natural Resource Assessment & Earth Science
- Indigenous Languages, Identities, Cultures



Ocean Environmental Change

- Grow Arctic Observing Network
- Tie research more closely to CCSP and CCTP
- Tie monitoring to GEOSS
- Agencies we hope will cooperate:
 - NSF, NOAA, NPRB, DOI, NASA, NSSI, Alaska



Recent USARC Icebreaker/USCG Activities

- Treadwell addresses USCG's "Flag Conference" 4/16
- Mead Treadwell's congressional testimony
 - Senate Committee on Commerce, Sci. & Trans. 7/24/08
 - House Coast Guard and Maritime Transportation Comm. on Transportation and Infrastructure 7/16/08 (w/Commandant Allen and Dr. Bement)
- "Inside baseball" with Congress, OSTP, OMB, Executive agencies, etc.
- Govt-wide review and development of new Arctic policy (HSPD/NSPD)
- Arctic Marine Shipping Assessment (thanks USCG...)
- Media outreach (*Parade* Magazine (6/1) *NY Times* (8/17), *Anchorage Daily News*, television/radio (U.S. and Japan))
- USARC intern (Middie) hosted by D17 for C-130 Arctic MDA overflight
- USARC to meet with VADM Pekoske 12/16/08 in Alameda

August 17, 2008

A Push to Increase Icebreakers in the Arctic

By [ANDREW C. REVKIN](#)



*“...experts provided telling snapshots of maritime activity to legislators and other officials from Arctic countries at an international conference last week in Fairbanks, Alaska. For example, **Mead Treadwell**, who attended the conference and is an Alaskan businessman and the chairman of the research commission, said officials were told that more than 200 cruise ships circled Greenland in 2007, up from 27 in 2004.*

***Lawson W. Brigham**, chairman of the three-year Arctic Marine Shipping Assessment that is scheduled to finish work this year, told the gathering that more than 5,400 vessels of 100 tons or larger operated in Arctic waters in the summer of 2004. During that summer there were 102 trips in the Northwest Passage and five complete transits of that legendary route, he said.”*

Icebreakers in stimulus?

S. 3689 (Senator Reid's bill, most legs?) contains funding for icebreakers.

Senate in session next week to consider an automakers' aid plan but unlikely they'll consider legislation beyond an automakers' bill.

Obama, however, has made it a priority to pass an economic stimulus as early as January, and it is expected that Reid will re-introduce S. 3689.

5

COAST GUARD

6

ACQUISITION, CONSTRUCTION, AND IMPROVEMENTS

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For an additional amount for "Acquisition, Construction, and Improvements", \$1,220,000,000, to remain available until expended; of which \$925,000,000 shall be for the acquisition of a new polar icebreaker or for necessary expenses related to the service life extension of existing Coast Guard polar icebreakers; of which \$150,000,000 shall be for the National Security Cutter program; and of which \$145,000,000 shall be for shore facilities and aids to navigation facilities: *Provided*, That no later than 90 days after the date of enactment of this Act, the Secretary of Homeland Security shall provide the Committees on Appropriations of the Senate and the House of Representatives a plan for the expenditure of these funds.

ARCTIC MARINE SHIPPING ASSESSMENT

Scenarios of the Future



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An Assessment Undertaken by the Protection of Arctic Marine Environment Working Group of the Arctic Council

Trillion Dollar Issues

- Arctic ownership, sovereignty
- Arctic resources (fish, O&G, minerals)
- Global Trade: Trans-Arctic Shipping
- Climate Change Mitigation/Adaptation
- Protecting shared values – culture & conservation





Arctic Council, PAME-led Arctic Marine Shipping Assessment

- *Lead Countries:* Canada, Finland, and USA
- *Key Countries & Regions:* Norway & Russia (Norwegian-Barents-Kara seas), Iceland, Denmark-Greenland-Faroe Islands, Sweden
- *Timeline:* 2005 – April 2009
- *Electronic Survey* ~ 2004 Data Collection from the Arctic States
- Arctic Town Hall Meetings ~ Permanent Participants
- Focus ~ Marine Safety & Marine Environmental Protection
- *Inclusive Participation:* Member States, Permanent Participants, Council Working Groups; Council Observers; Shipping Industry; Ship Classification Societies; Research Organizations; Others

Arctic Marine Geography

CHALLENGES & RISKS

Northwest Passage

Draft

Sea Ice

Central Arctic Ocean Route (2100 nm)

Sea Ice

Cold Climate

Ice-Free Ops

Intra-Arctic Route

Arctic Ocean Marine Routes
 Arctic Marine Shipping Assessment of the Arctic Council (2005-2008)

--- Northern Sea Route
 --- Northwest Passage
 --- Key Marine Routes

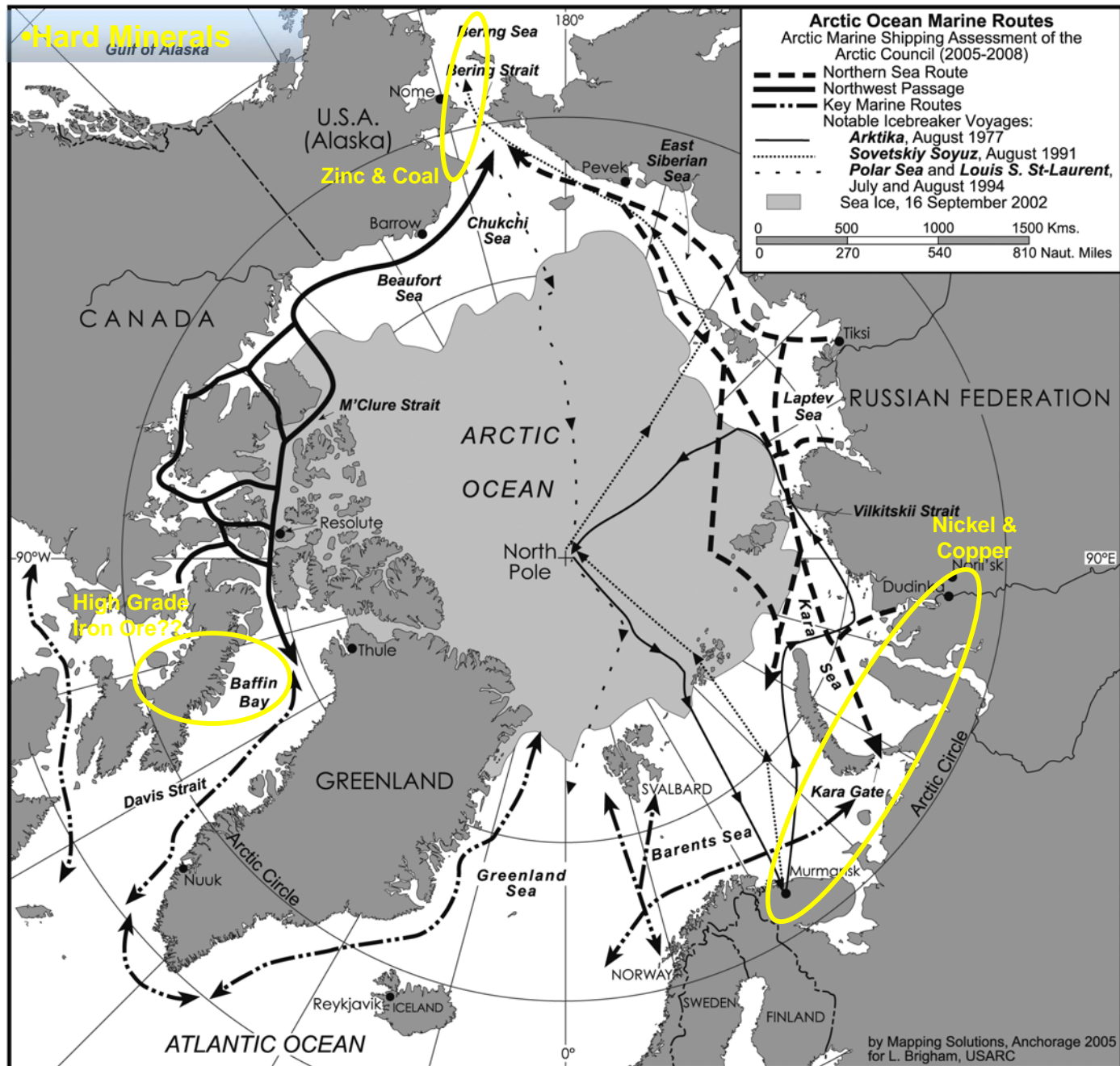
Notable Icebreaker Voyages:
Arktika, August 1977
Sovetskiy Soyuz, August 1991
Polar Sea and *Louis S. St-Laurent*, July and August 1994
Sea Ice, 16 September 2002

0 500 1000 1500 Kms.
 0 270 540 810 Naut. Miles

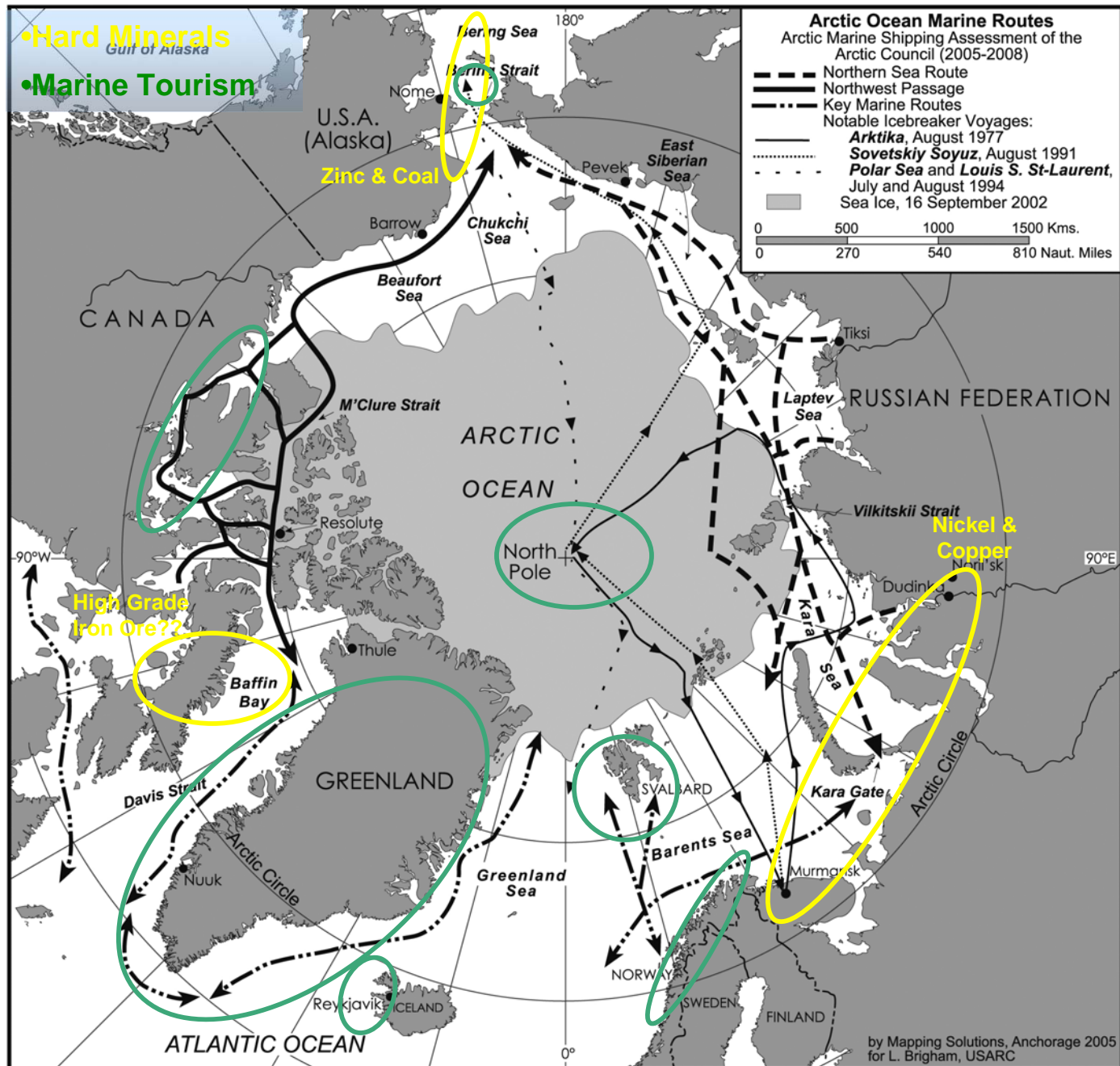
Map labels include: Bering Sea, Bering Strait, Nome, U.S.A. (Alaska), Barrow, Beaufort Sea, Chukchi Sea, East Siberian Sea, Pevek, CANADA, M'Clure Strait, Resolute, Thule, Baffin Bay, Davis Strait, Greenland, Arctic Circle, Nuuk, Reykjavik, ICELAND, ATLANTIC OCEAN, 0°, 90°W, 90°E, RUSSIAN FEDERATION, Laptev Sea, Tiksi, Kara Sea, Dudinka, Noril'sk, Vilkitskii Strait, Northern Sea Route, Murmansk, Barents Sea, NORWAY, SWEDEN, FINLAND, Arctic Circle.

by Mapping Solutions, Anchorage 2005
for L. Brigham, USARC

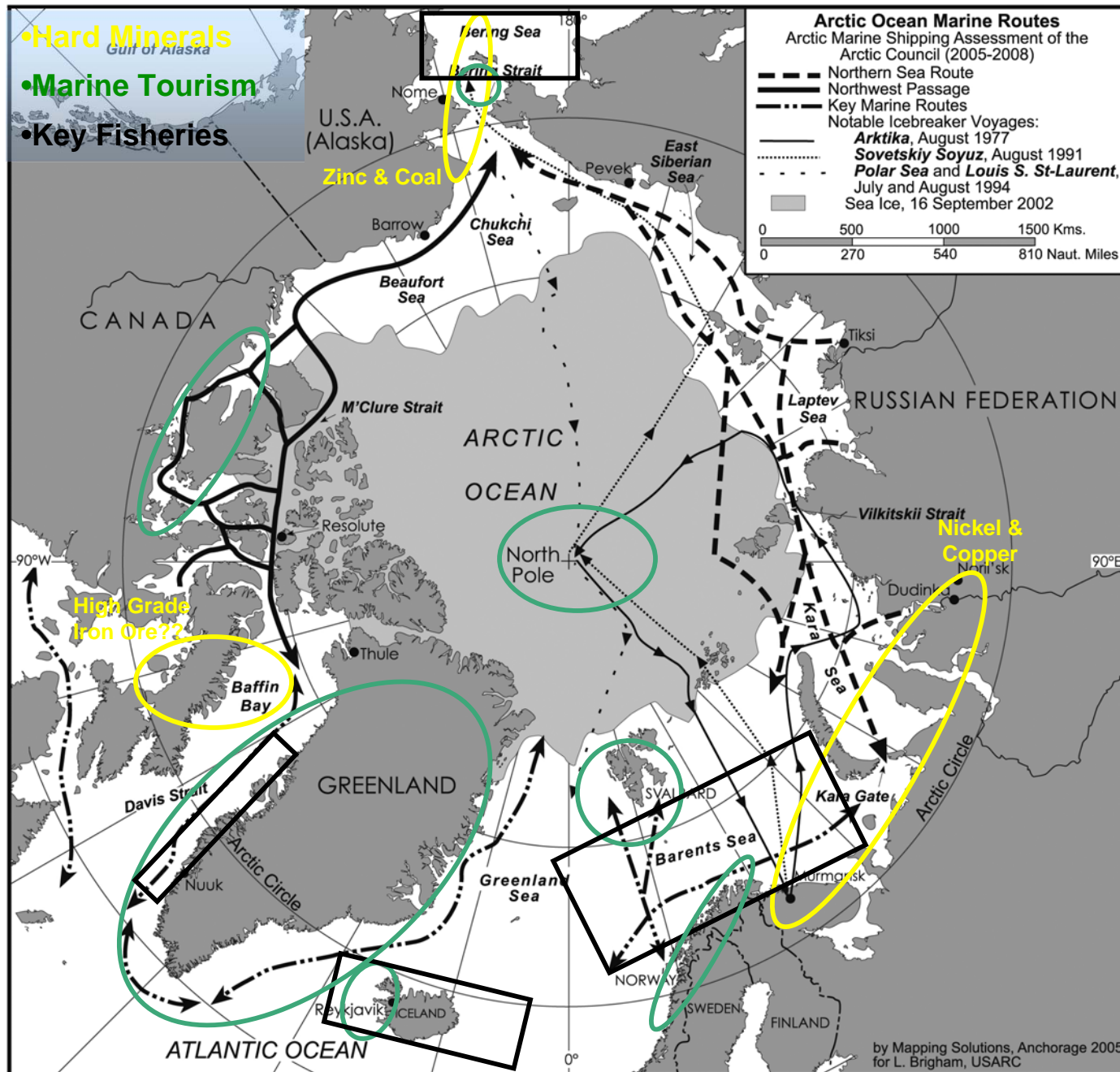
Today's Marine Use



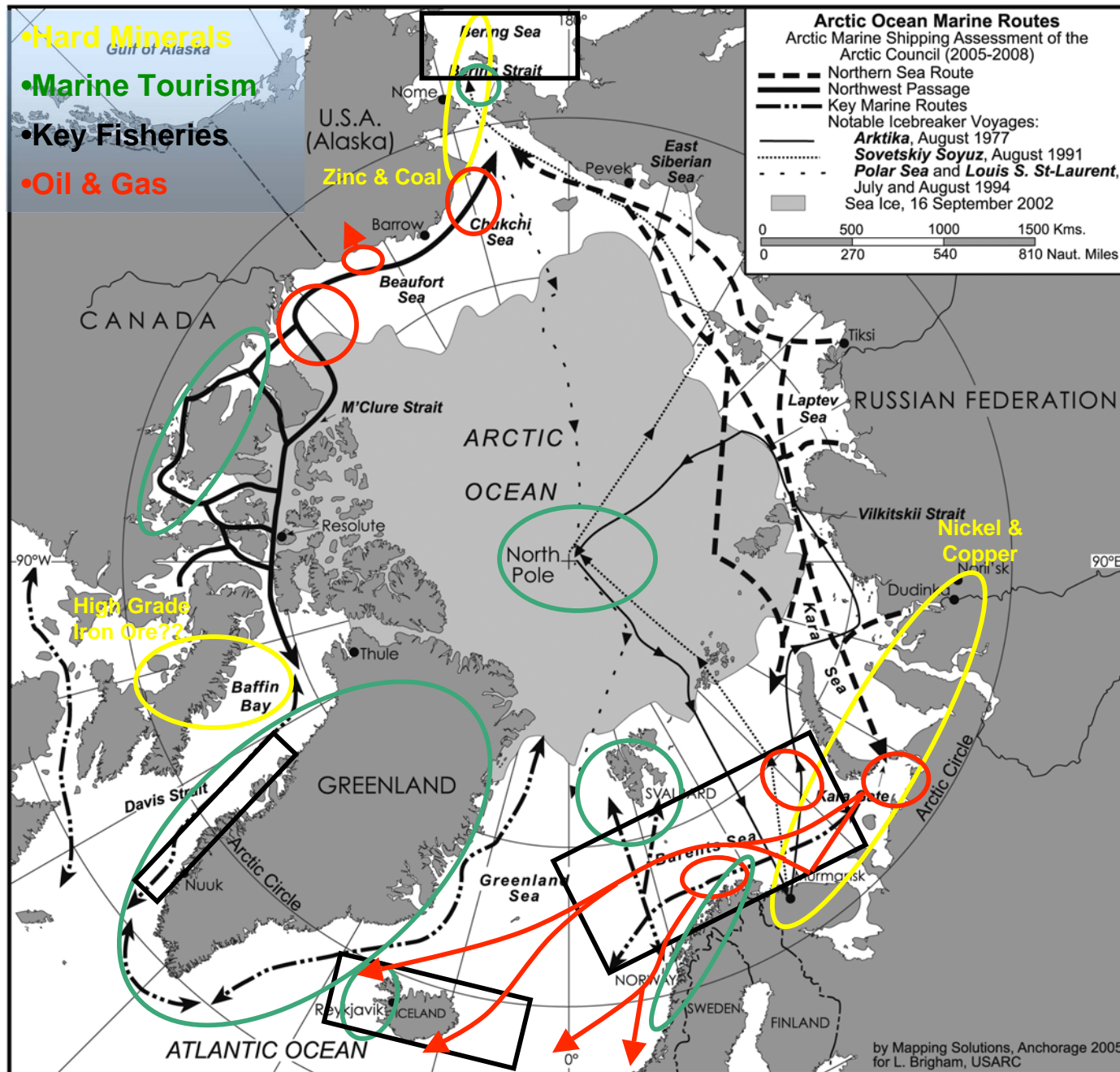
Today's Marine Use



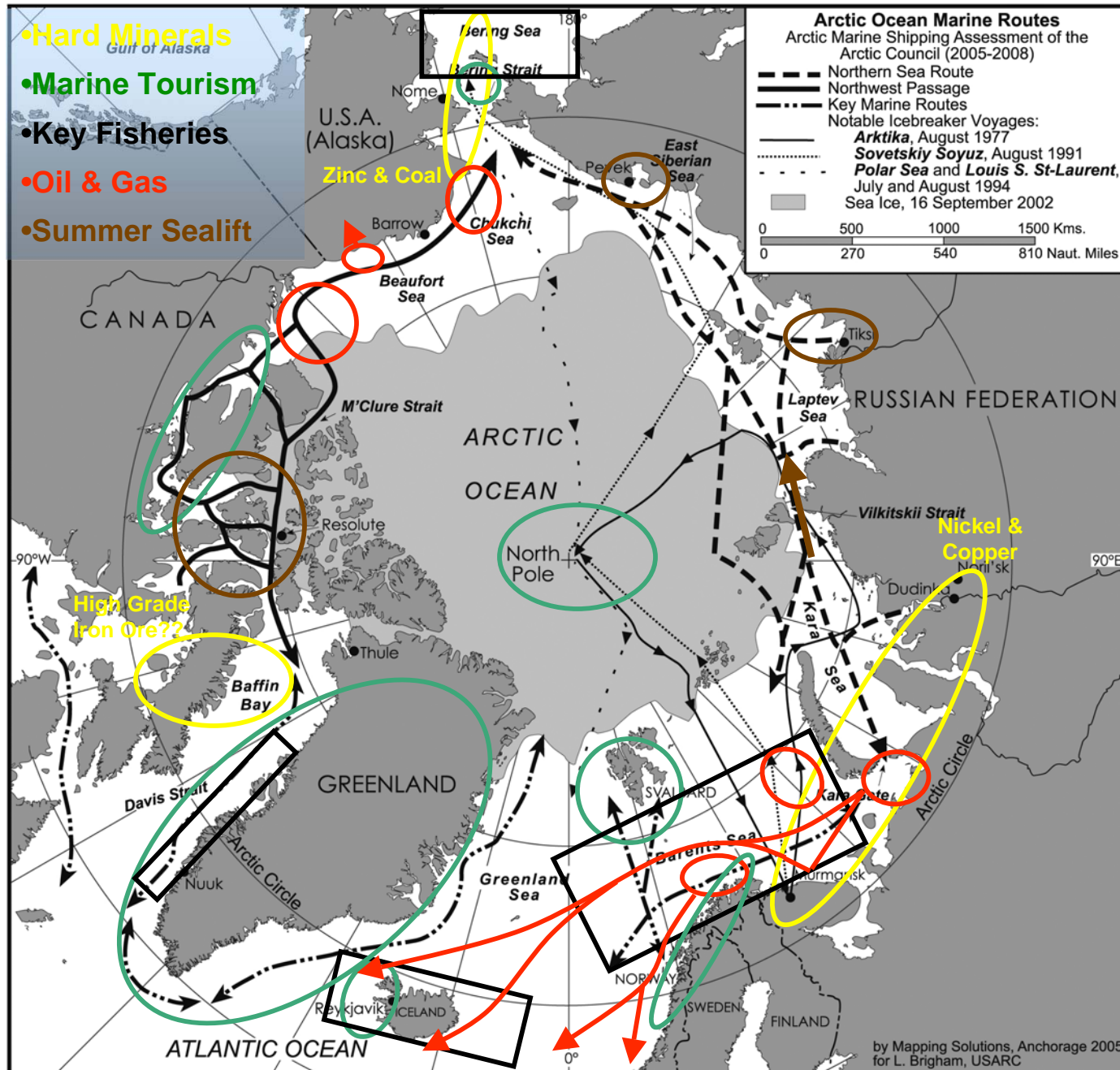
Today's Marine Use



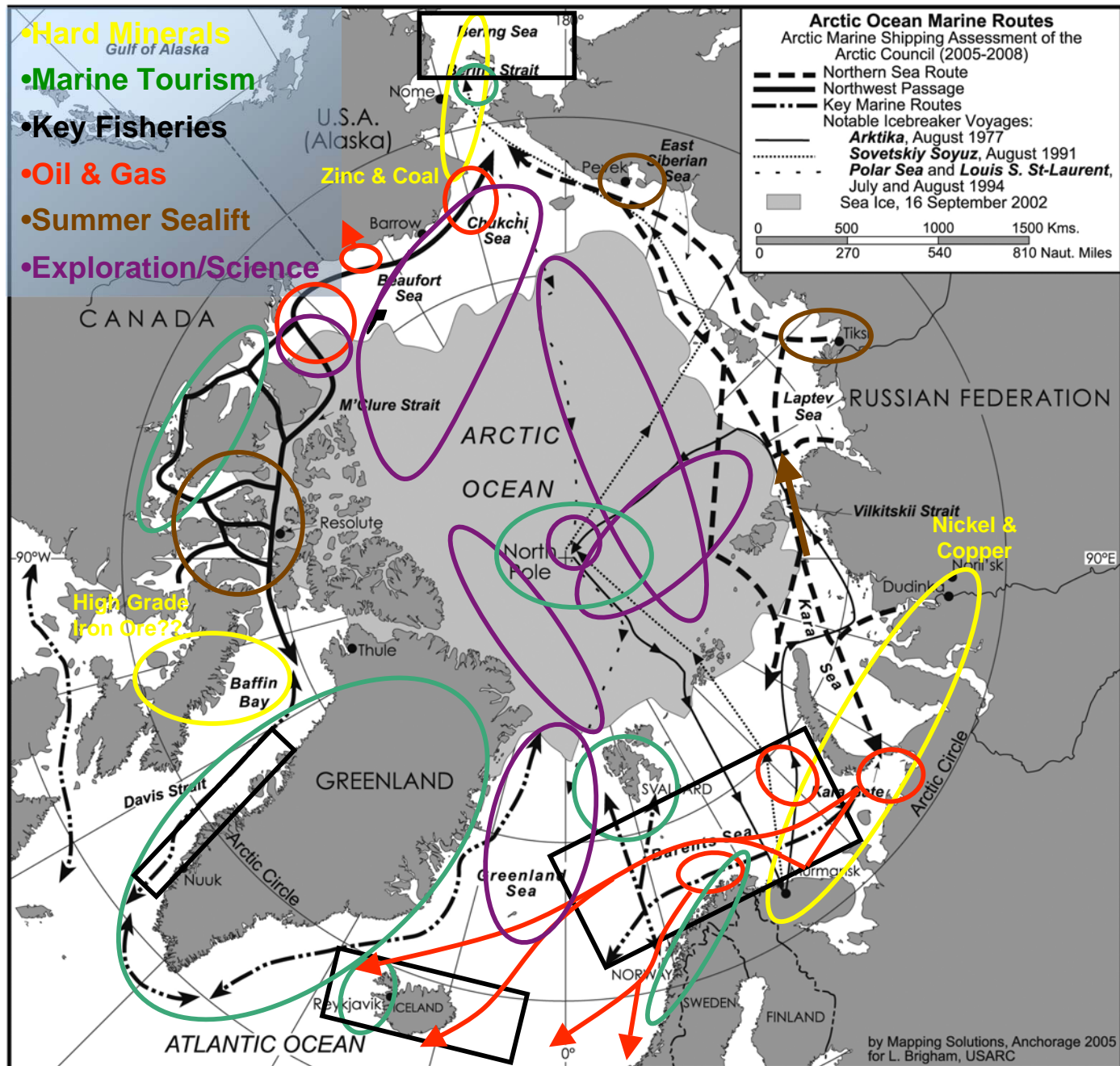
Today's Marine Use



Today's Marine Use



Today's Marine Use

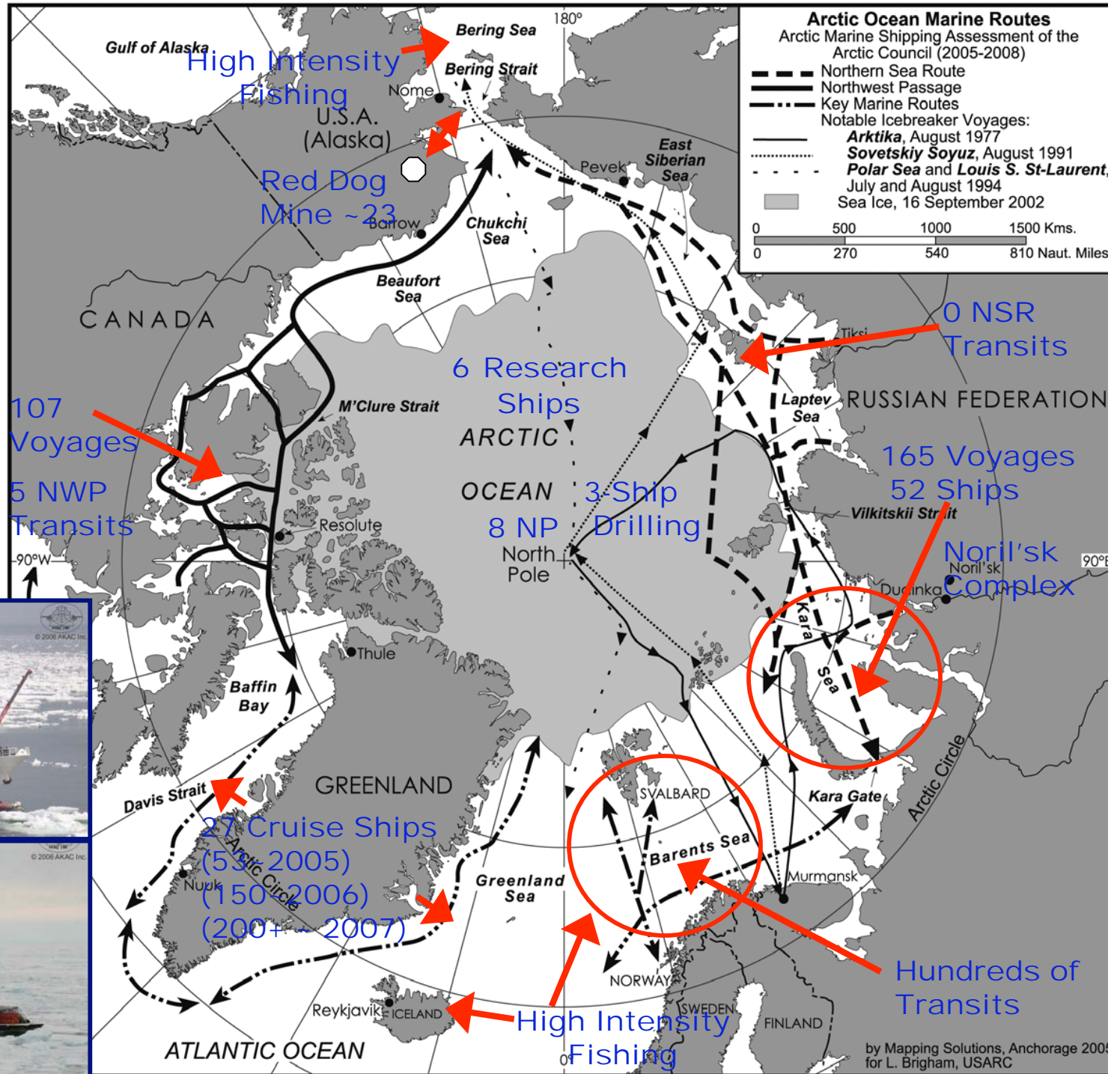


The Maritime Arctic of Today

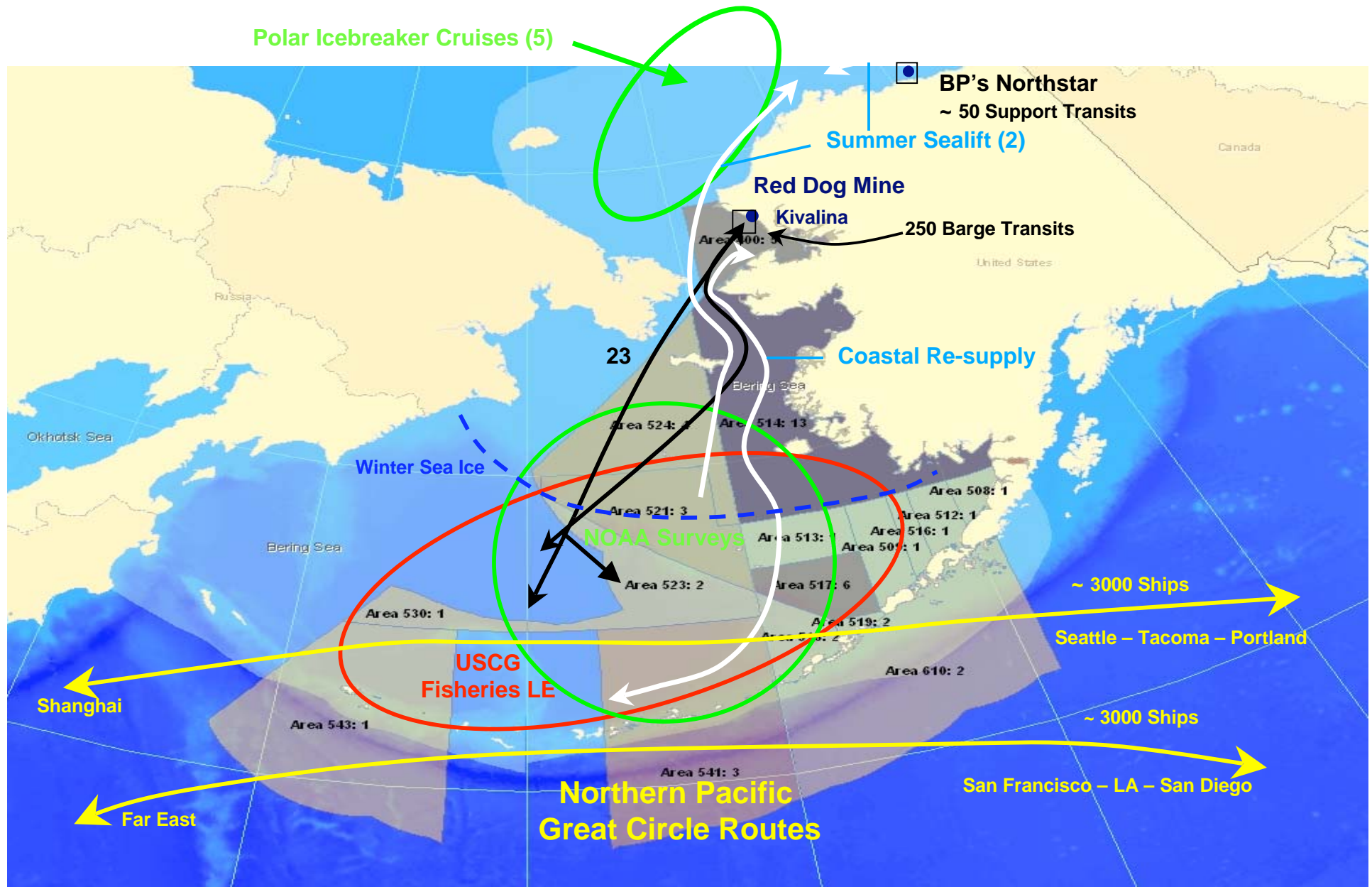
Snapshot of Summer 2004 Traffic:
~ 5475 Ships

Modes of Arctic Marine Transport

- -Destinational & Regional
- -Trans-Arctic
- -Trans-Arctic with Transshipment
- -Intra-Arctic



U.S. AMSA 2004 Data Survey



ARCTIC RESEARCH

GOALS, UPDATES, AND OPPORTUNITIES

Thursday, December 18, 2008 • 6:15 pm to 8:30 pm

Moscone West, Room 2002 • 4th Street • San Francisco, CA

Come hear updates and opportunities on Arctic research from leaders
in the scientific community • Refreshments will be served



Thanks...

jfarrell@arctic.gov