


Figure A - Kaktovik and Nuiqsut Subsistence Use Areas for Bowhead

 Kaktovik Bowhead Use Area

 Nuiqsut Bowhead Use Area

 Shoreline Buffer (3 mile increments)

 Well

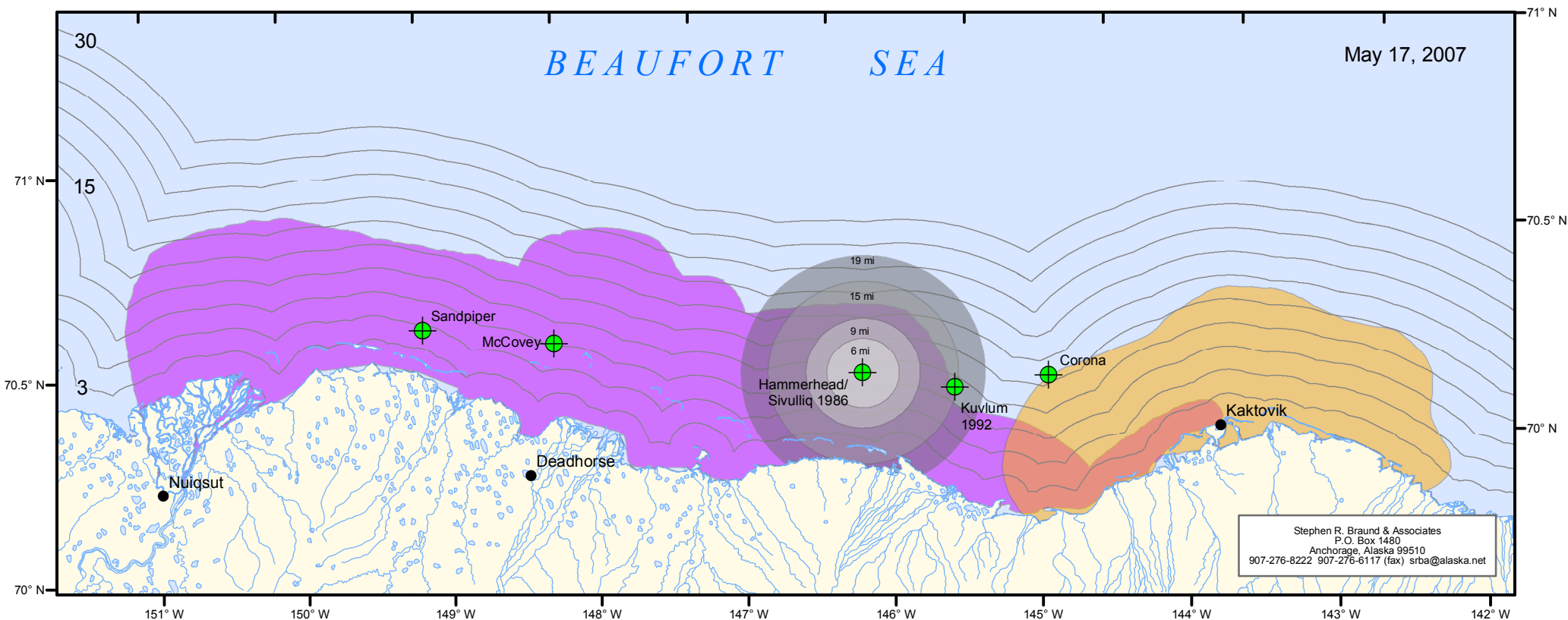
 Whale Deflection Distances - 6,9,15,19 mi

0 25 50 Miles

0 25 50 Kilometers



Sources: National Research Council 2003. Cumulative Environmental Effects of Oil and Gas Activities on Alaska's North Slope. Committee on Cumulative Environmental Effects of Oil and Gas Activities on Alaska's North Slope, Board of Environmental Studies and Toxicology, Polar Research Board, Division of Earth and Life Studies. The National Academies Press. Washington, D.C.; Pedersen, S. 1979. 1979 Regional Subsistence Land Use: North Slope Borough, Alaska. Occasional Paper No. 21. Conservation and Environmental Protection, North Slope Borough and Anthropology and Historic Preservation, Cooperative Park Studies Unit, University of Alaska. Barrow and Fairbanks, Alaska; U.S. Department of the Interior, Minerals Management Service 2006. Beaufort Sea Exploration Wells. Minerals Management Service, Alaska OCS Region. U.S. Department of the Interior. http://www.mms.gov/alaska/fo/wellhistory/BS_WELLS.HTM. Accessed 10 March 2007.



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Migrating Bowhead Reactions (NRC 2003)

Hammerhead 1986, no ice management

Kuvlum 1992, with ice management

Seismic Vessels

6 miles - whale exclusion
 9 miles - few whales
 15 miles - whale "swam in arc" around drillship

19 miles - "whales began to deflect to the north,"
 calling rates peaked

12 miles - whale exclusion
 21 miles - whale deflection