

R/V *Marcus G. Langseth*



MSROC AGU Meeting — December 8, 2019
L-DEO Office of Marine Operations

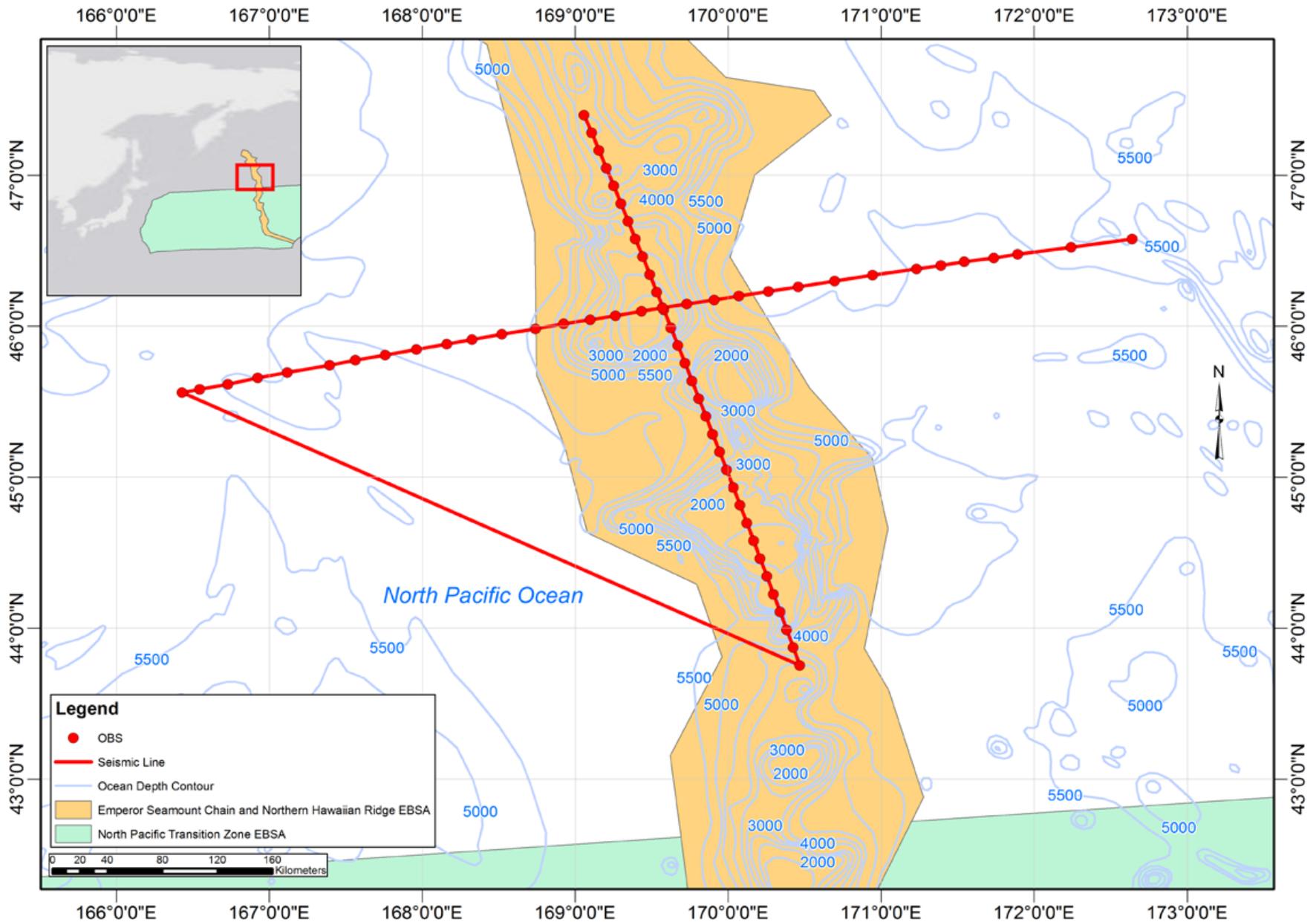
Lamont-Doherty Earth Observatory
COLUMBIA UNIVERSITY | EARTH INSTITUTE

Langseth 2019 Schedule 144

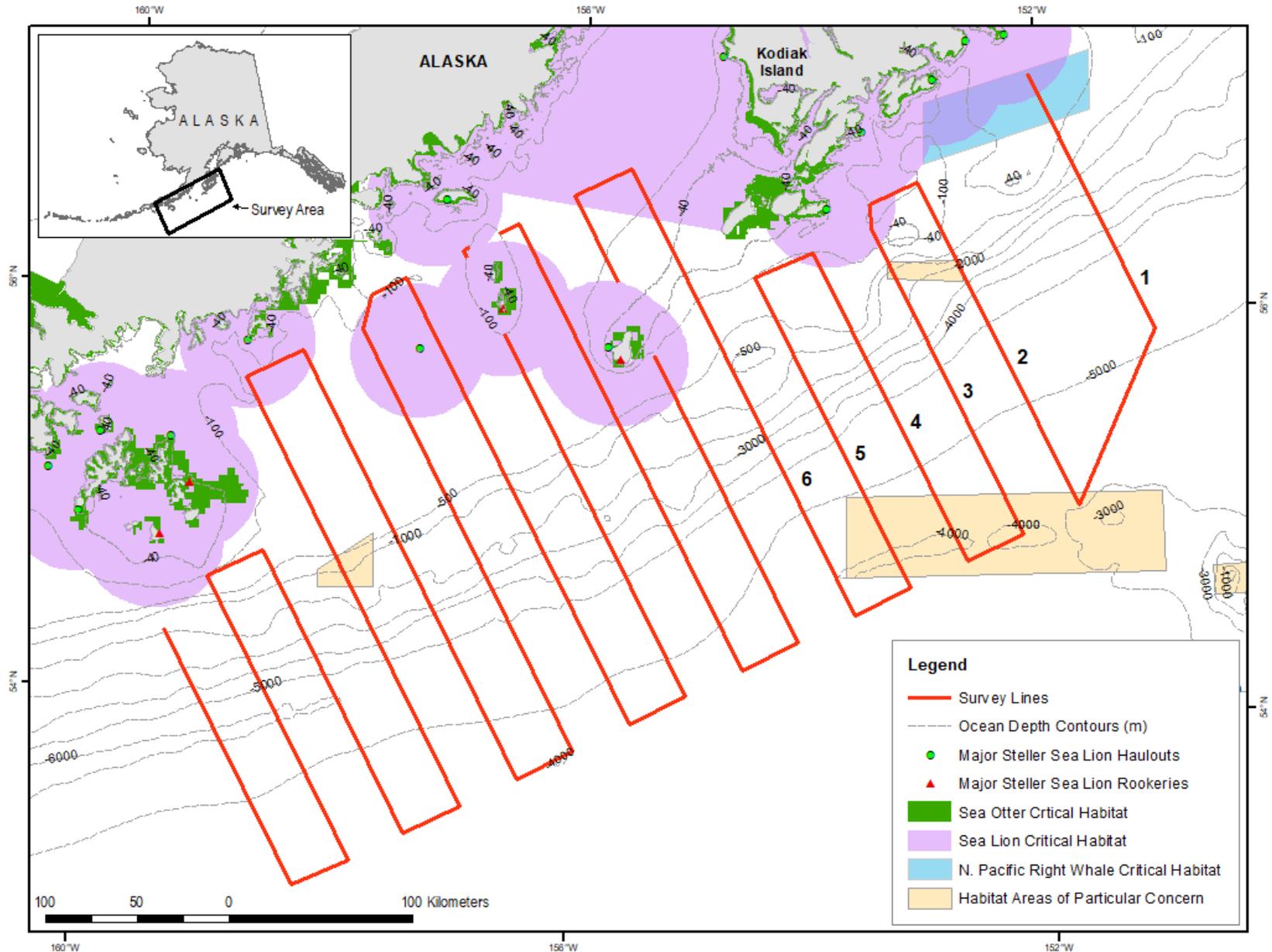
Days

- NSF – Shillington, Watts, Dunn –April-May - Leg II N. Emperor Seamounts- N.W. Pacific
- NSF- Abers/Becel– Amphibious Array – Project – June
- NSF – Arnault et al. Axial 2D/3D Abers July -August
- NSF - Abers- Amphibious Array pickup and MB- August-Sept.
- Shipyard- Sept- Nov. -
- Lay up at OSU – Late –Nov-Dec.

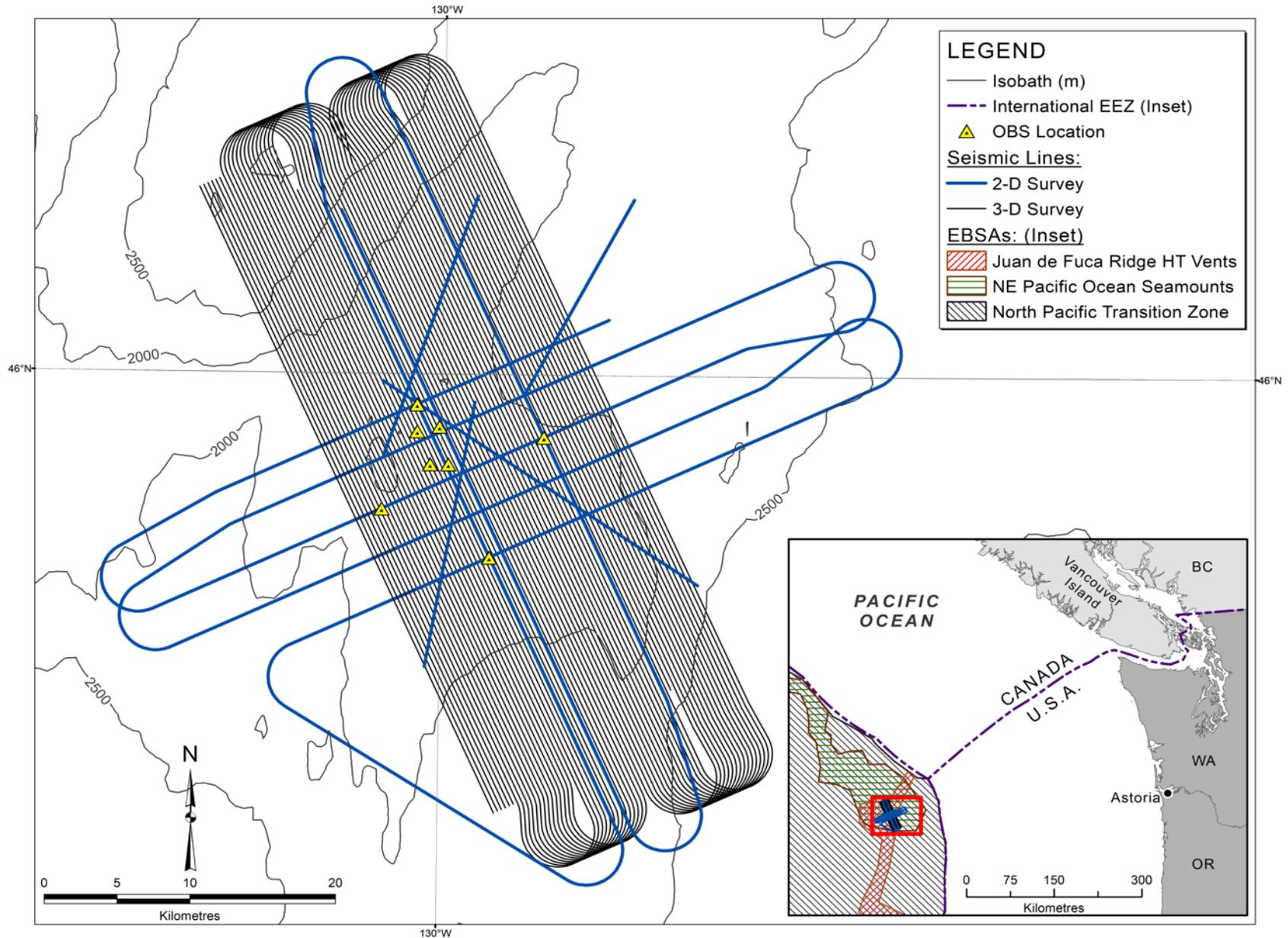
. Shillington, Watts, Dunn, et al --Northern Emperor Seamounts 2019



Becel, Sheehan, Abers et al. N. Gulf of Alaska- 2019



Arnaulf, et al.--- Axial Seamount 3D/2D - 2019



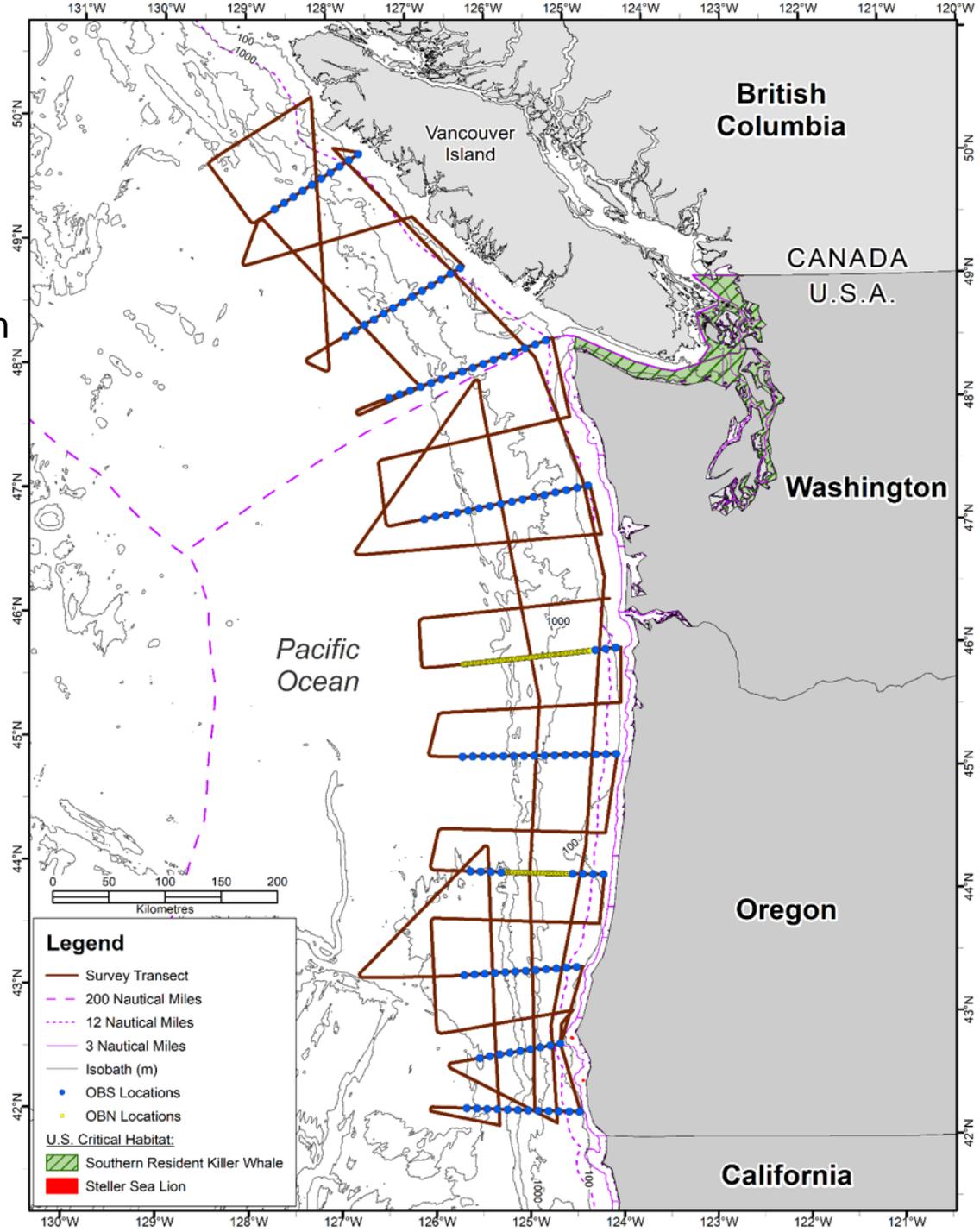
Langseth 2020 Proposed Schedule

255 Days

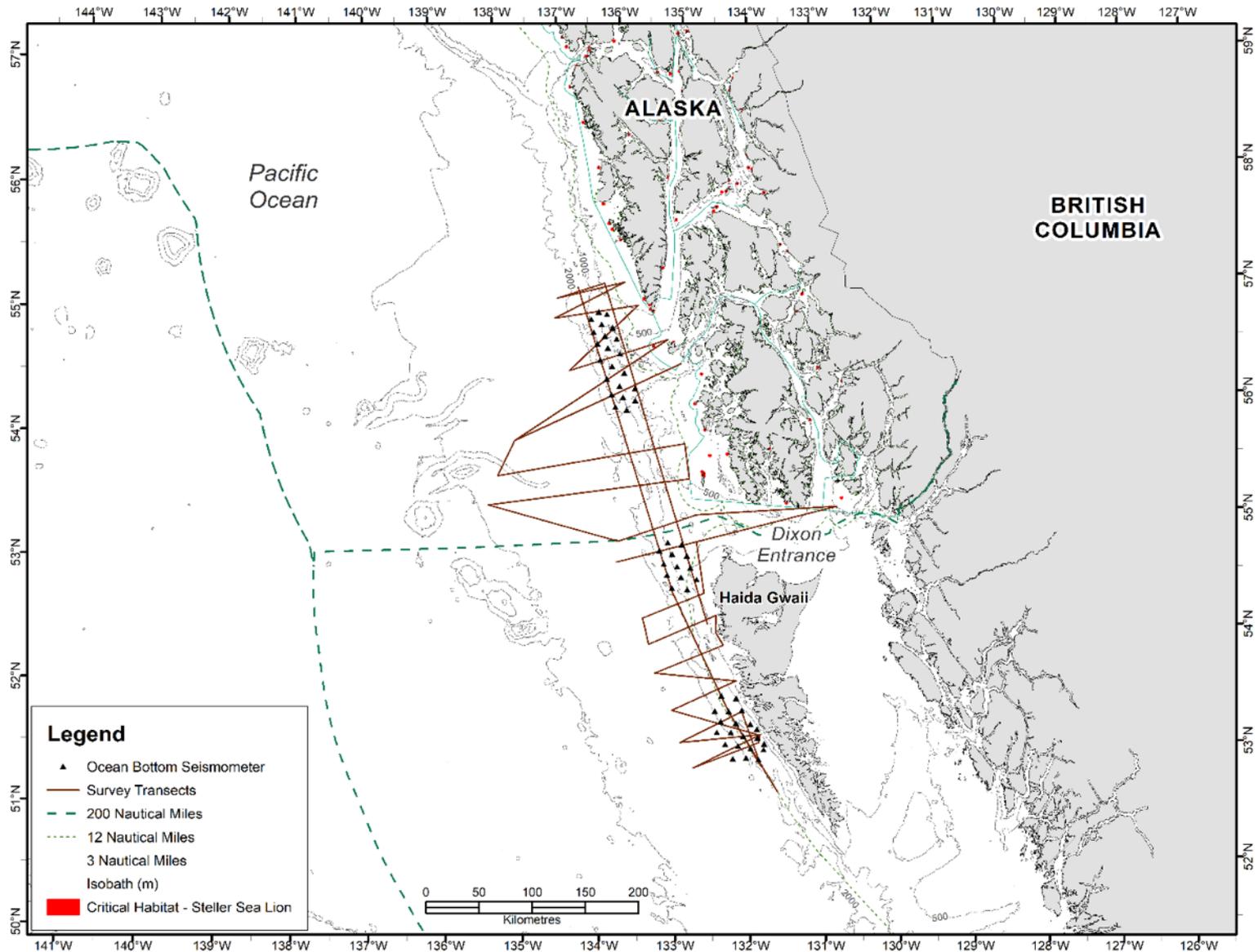
- Oceaneering- MB Mapping – Jan- April
- NSF- Ship inspections May 16-20
- NSF- Proposed Carbotte/Canales- Cascadia 2D/OBS/Node Project – June-Mid July
- NSF- Proposed Worthington 2D/OBS- Queen Charlotte Project Canadian Margin- Mid-July –August
- NSF – Proposed Lizarralde- 2D/OBS – Aleutians – Sept- Oct.

Proposed Cascadia Margin Project

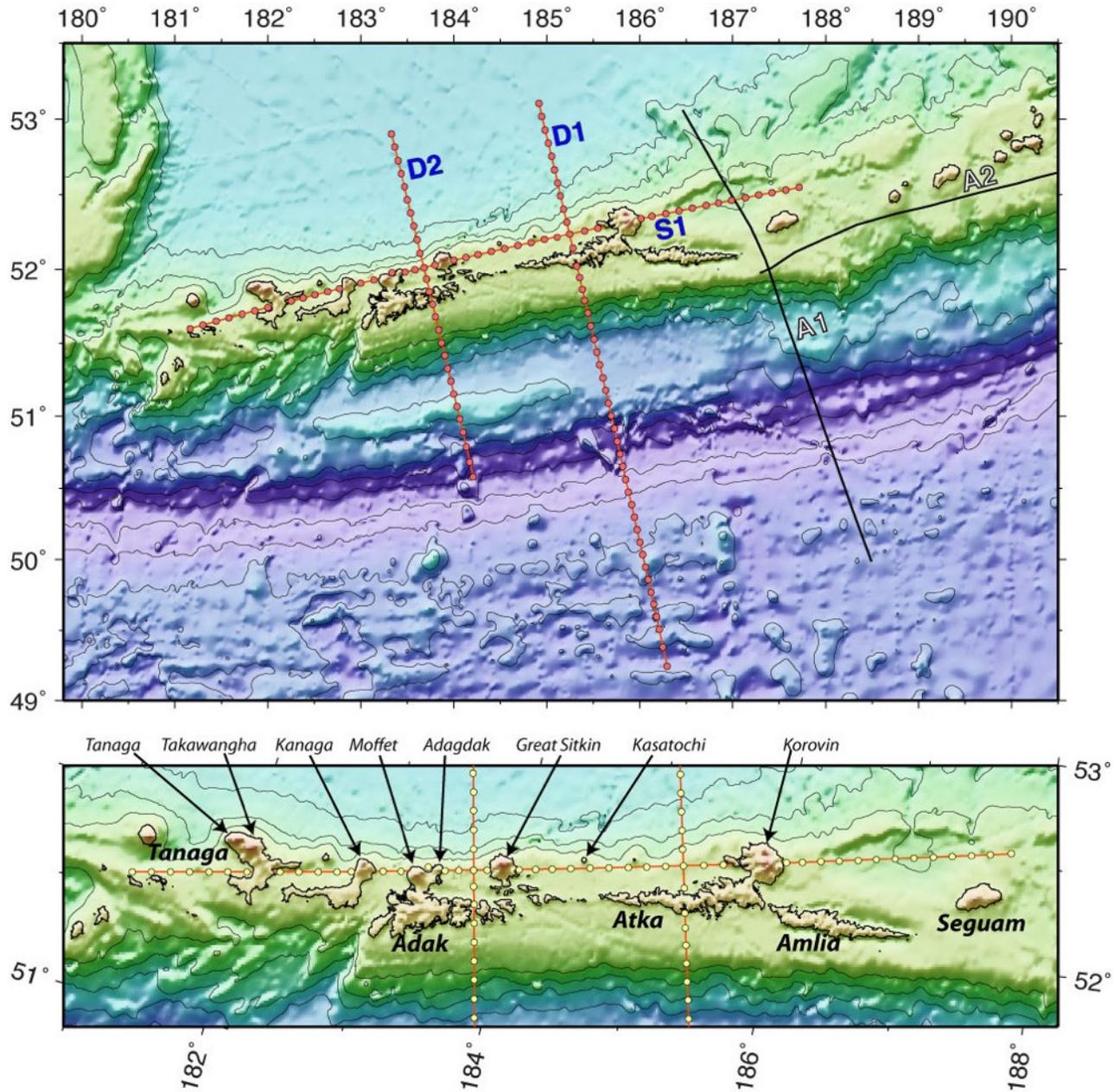
Carbotte/Canales



Proposed Queen Charlotte Fault Project – Worthington et al.



Proposed Western Aleutians Project – Lizarralde et al.

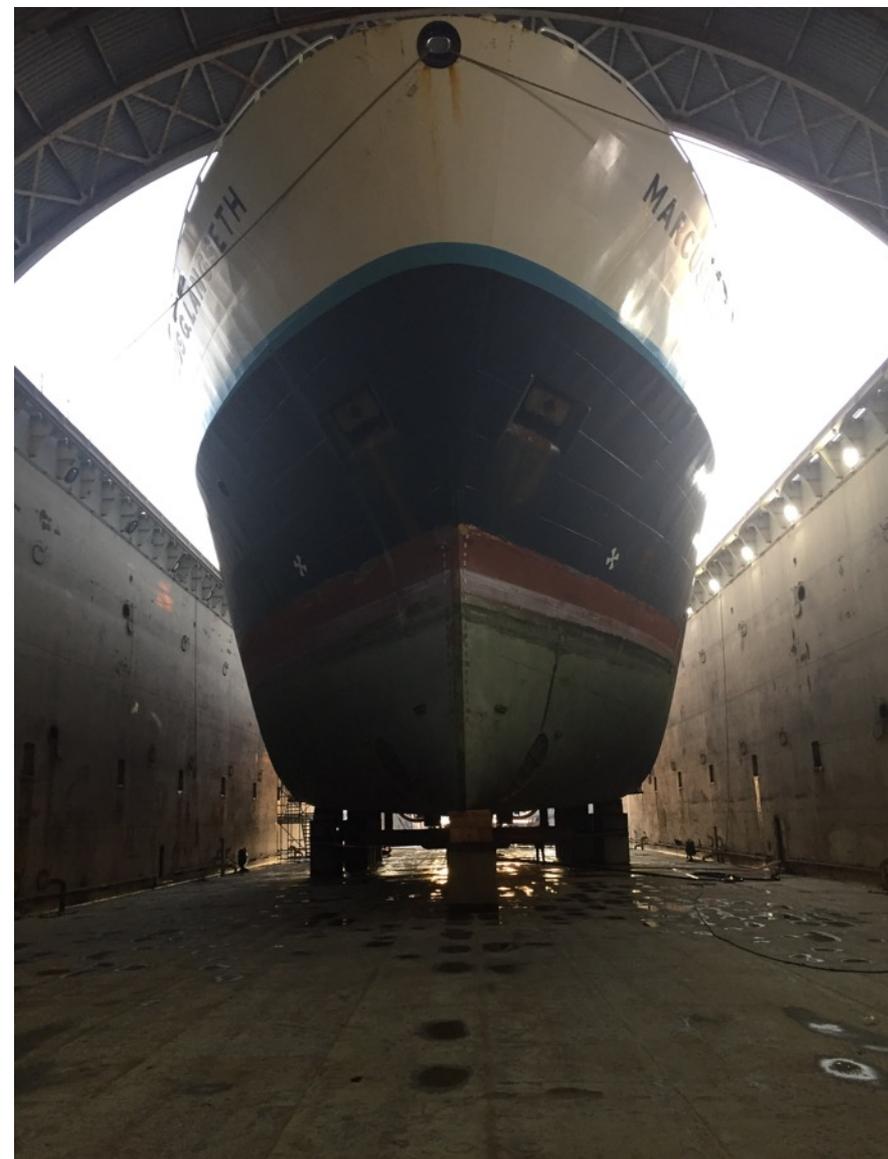


Langseth -Drydock– Sept-Nov. 2019

Shipyard at Bay Ship and Yacht, Alameda, CA

- Painting hull, freeboard, mammal tower, and anchor chain
- Rudders and Steering System repairs
- Replaced Bow Thruster- EAL's
- Steel Work in Port Aft Ballast tank and #2 fuel tanks.
- Engines and auxiliary systems
- Piping repairs in several locations
- Sewage Tank
- Propellers
- Port clutch Overhaul
- Stbd ME Turbo Overhaul
- Capstans Overhaul
- Stern Tube head tanks

- INTENSE ABS and USCG Inspections





Schnitzker's Steel Recycling



Environmental Permitting and Compliance

Incidental Harassment Authorization (MMPA) and Biological Opinion(ESA) are key documents that define project and compliance requirements.

State Dept. Clearances for foreign EEZ's are required and can have additional environmental and reporting requirements.

Other requirements:

National Marine Sanctuaries, US Fish & Wildlife, and more

OMO Announcements and Plans

1) CGG Gift of 20 Streamer

Original no-cost lease allowed NZ and Axial
3D to be done with 4x6km array.

2) Oceanographic Instrumentation Proposal

New Source Controller/ Umbilicals for Acoustic Source

3) People Update at OMO

It's Freakin' Awesome !!

A Deep-Sea Magma Monster Gets a Body Scan
Scientists set sail on a perilous expedition to create the first internal 3D images of Axial Seamount, an underwater volcano deep in the Pacific Ocean.

The caldera and rift zones of the Axial Seamount off the coast of Oregon, depicted as a computer generated 3D oblique view using seafloor bathymetry. The red zone is the shallowest area, and the blues and purples are as much as 2 miles deep. Credit...Susan Merle, Oregon State University, CIMRS

