

2015 Bureau of Ocean Energy Management Arctic Nearshore Impact Monitoring in Development Area (ANIMIDA) III Cruise

Daily Update for:

7/31/2015

This form provides daily updates for the Bureau of Ocean Energy Management (BOEM) Arctic Nearshore Impact Monitoring in Development Area (ANIMIDA) III research survey in the Beaufort Sea in early August 2015. The team is comprised of scientists from Olgoonik Fairweather LLC (OF, management, logistics, offshore vessel, safety), Florida Institute of Technology (FIT, metals chemistry and geochemistry), University of Texas Austin (UT-A, benthic and data management), University of Alaska Fairbanks (UAF, epibenthic and physical oceanography), and Battelle Memorial Institute (Battelle, hydrocarbon chemistry). The offshore (~12-60 m depth) survey will be performed on the *R/V Norseman II*. The attached map shows the planned sampling locations and stations completed to date. The vessels can be tracked real-time on the website at :

<http://share.findmespot.com/shared/faces/viewspots.jsp?glId=08qnDNqIKQsOotXfd1ogoL3CreMqmpizz>

The survey schedule for the vessels is:

Fisheries Trawling and Oceanographic Sampling (*R/V Norseman II*):

July 31	Depart for Prudhoe Bay/Crew Change
August 1-Aug 8	Surveys and Sampling
August 9	Prudhoe Bay Crew Change

Notes from the field:

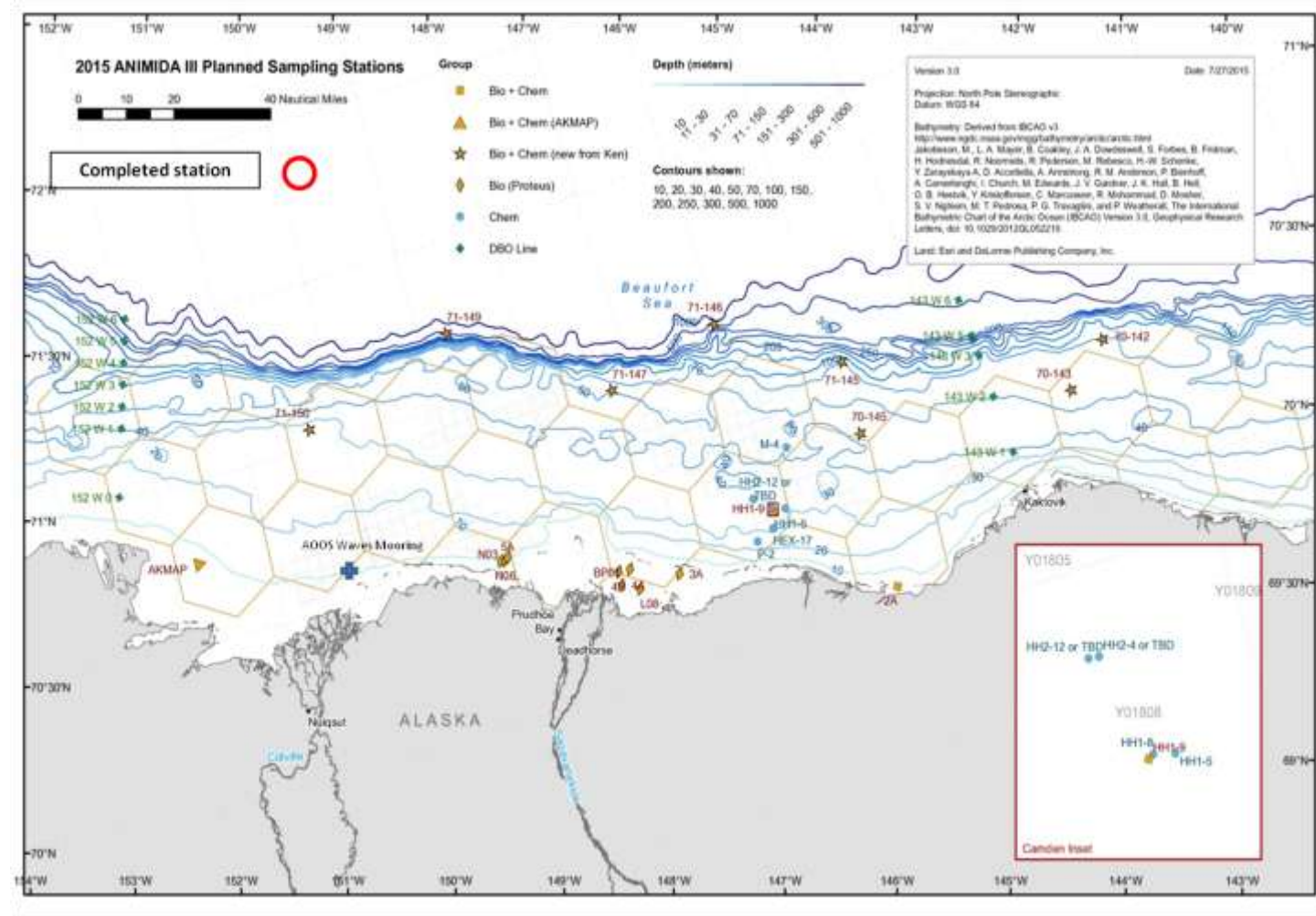
ANIMIDA Cruise Updates: Science team disembarked from Prudhoe Bay beginning at approximately 1 PM this afternoon. Attended vessel orientation, safety briefing and safety drill. Unpacking and setup began shortly thereafter. Headed west to attempt recovery of the AOOS waves mooring. Vessel was on site by approximately 19:30. The release command was sent to the mooring. The acoustic release responded that it was vertical and the release was engaged. The float never surfaced. Multiple attempts to drag for the mooring failed. Acoustic release was re-engaged and the vessel departed the site at approximately 22:00 to head west to the first DBO station at 152W. Heavy ice was encountered until the western edge of Harrison Bay early on 8/1/2015.

Completed Stations: Attempted mooring recovery.

Stations Planned for the Following Day: Western DBO line at 152 W (stations 152W 0 - 152W 6).

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2015 Bureau of Ocean Energy Management Arctic Nearshore Impact Monitoring in Development Area (ANIMIDA) III Cruise

Daily Update for:

8/1/2015

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July 29	Depart for Prudhoe Bay/Crew Change
July 30-Aug 6	Surveys and Sampling
August 7	Prudhoe Bay Crew Change

Notes from the field:

Norseman II Notes:

Inshore, optional DBO station 152W0 in 15 m of water was occupied on 8/1/2015. Then pushed farther north to attempt other stations on the 152 W DBO line. Encountered heavy ice until ~1 NM south of 152W1 station at which point it was decided to conduct a full (bio+chem station) in water that still allowed for trawling. The station was occupied and then we pushed north until after ~1.5 hours of navigating the ice we diverted from the DBO line to seek open water. Vessel headed south and east in order to sample at station 71-150. After pushing through heavy ice a full bio+chem station was occupied as close to the planned station location as possible.

Completed Stations: 152W1 (ACWPVTBA), 152W1 (ACWPVTBA), 71-150 (CWPVT)

Measurement Key: A=Amphipod, C = CTD, W = Niskin water samples, P = plankton net tow, V = Van Veen Grab, T = Trawl, B=Bivalve Rake,

Stations Planned for the Following Day:

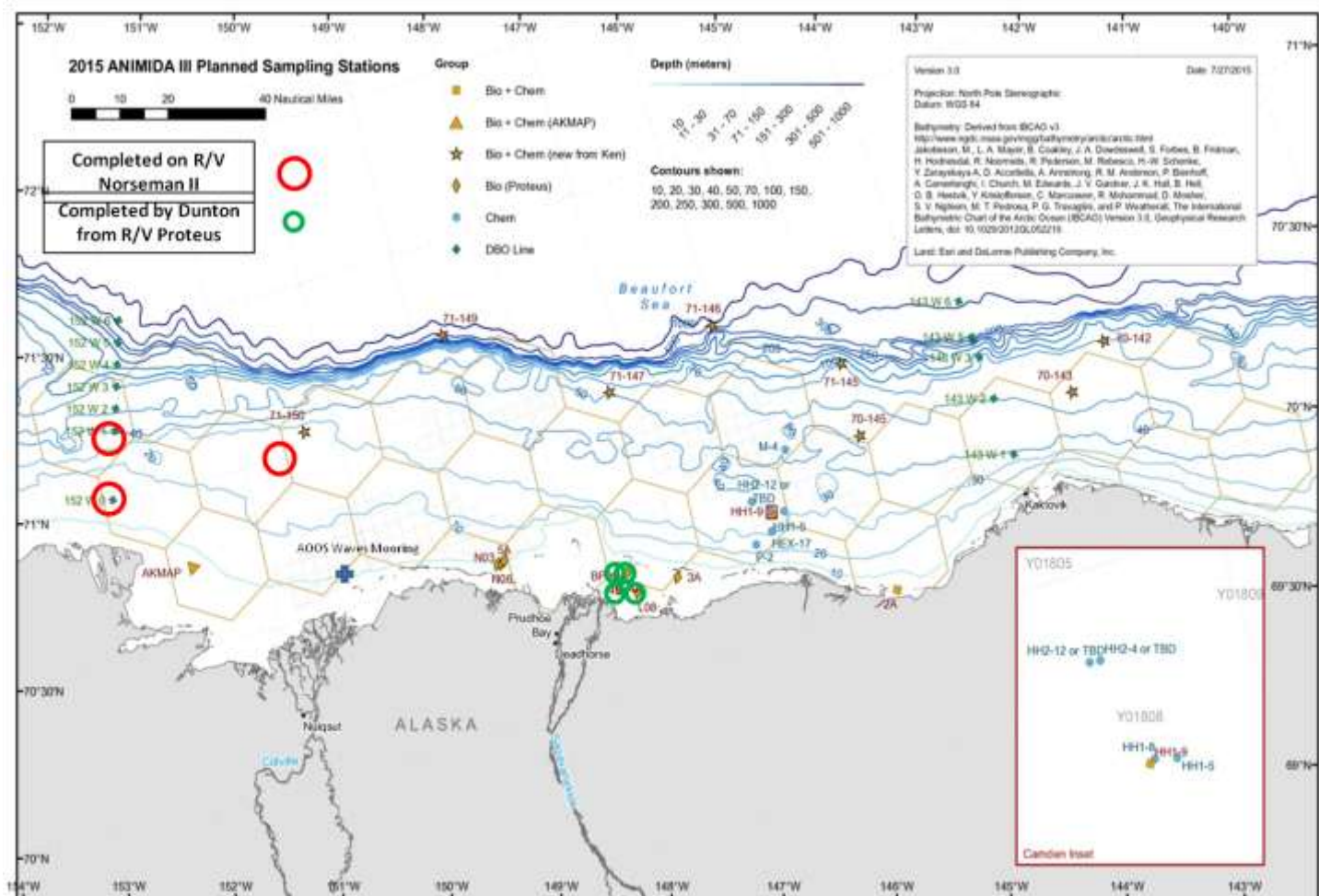
5A, N03, N06, 3A, P-2, HH1-5, HH2-12, HEX-1, HEX-12, HEX-17, HH1-9, HH1-8, M-4, HH2-4

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2015 Bureau of Ocean Energy Management Arctic Nearshore Impact Monitoring in Development Area (ANIMIDA) III Cruise

Daily Update for:

8/2/2015

This form provides daily updates for the Bureau of Ocean Energy Management (BOEM) Arctic Nearshore Impact Monitoring in Development Area (ANIMIDA) III research survey in the Beaufort Sea in early August 2015. The team is comprised of scientists from Olgoonik Fairweather LLC (OF, management, logistics, offshore vessel, safety), Florida Institute of Technology (FIT, metals chemistry and geochemistry), University of Texas Austin (UT-A, benthic and data management), University of Alaska Fairbanks (UAF, epibenthic and physical oceanography), and Battelle Memorial Institute (Battelle, hydrocarbon chemistry). The offshore (~12-60 m depth) survey will be performed on the *R/V Norseman II*. The attached map shows the planned sampling locations and stations completed to date. The vessels can be tracked real-time on the website at :

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Notes from the field:

ANIMIDA Cruise Updates:

The presence of ice has continued to impede offshore operations. Despite this, science and crew morale remains high because the cruise participants have extensive experience working in the area and are familiar with operations in ice infested waters. A number of key nearshore stations were occupied today near Northstar Island. The history of these stations date back to the Beaufort Sea Monitoring Project and thus maintaining a continuous record at these sites is high on the priority list for the ANIMIDA project. Ice maps appear to show areas of open water to the east near the eastern DBO line that may allow for the DBO line to be occupied.

Completed Stations:

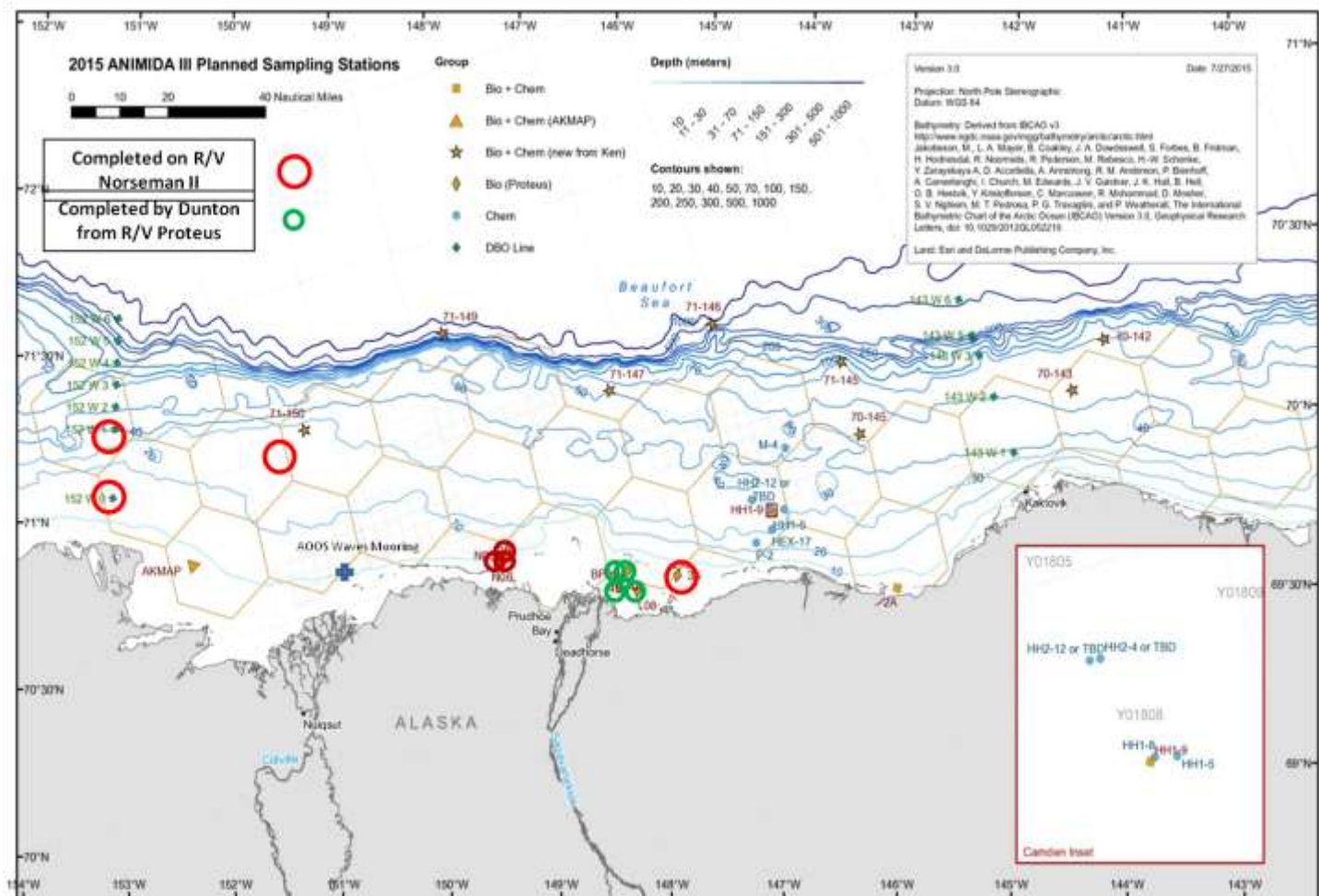
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B=Bivalve Rake,

AOOS Mooring	C
5A	ACWPVTBA
N06	CV
N03	CV
3A	ACWPVTBA

On the way between stations, the AOOS mooring site was revisited in order to drag for the mooring. We arrived on site at approximately 12:30 AM on 8/2/2015. A CTD cast was taken and the mooring location was triangulated using acoustic ranging between an acoustic modem on deck and the acoustic release on the mooring. The acoustic release continues to indicate that the release is vertical which based on the mooring configuration we infer to mean that the mooring is still intact. Based on the acoustic ranging, the ship's GPS waypoint appeared to be accurate to within several meters. A trawl beam fitted with 3 drag lines and grapple hooks was run over the area where the bottom mounted mooring was located. On the last trawl, the line went slack and the beam appeared to have contacted the mooring but nothing came up. In the interest of expediency the acoustic release was placed into the locked position and disabled. The mooring instruments and release have adequate batteries for at least 6 months of continued sampling so options for retrieval of the mooring will be reassessed as the cruise unfolds. We departed the mooring site at approximately 4 AM and headed east following open water to a cluster of nearshore stations near Northstar Island. The Northstar stations were occupied and then we proceeded further east again following the open water along the coast. Station 3A was occupied late in the afternoon. We then proceeded east towards the Camden Bay stations. Again ice prevented us working our way offshore to reach the cluster of stations near the Sivulliq prospect. The decision was made to proceed further east to the 143 W DBO line as the BOEM COR indicated that the DBO line was the highest priority and the ice maps appear to show open water, for now, near the 143W DBO line (the most southerly station on the 143W DBO line is just west of Kaktovik)

Stations Planned for the Following Day:

DBO stations 143W-1, 143W-2, 143W-3, 143W-4, 143W-5, 143W-6.



2015 Bureau of Ocean Energy Management Arctic Nearshore Impact Monitoring in Development Area (ANIMIDA) III Cruise

Daily Update for:

8/3/2015

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July 31	Depart for Prudhoe Bay/Crew Change
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Notes from the field:

ANIMIDA Cruise Updates:

We started sampling the newest DBO line at 143W today including collecting a gravity core at 500 m depth at the deepest/furthest offshore of the DBO stations. We appear to be in the one area of the Beaufort Sea that is not covered by ice this week. We will continue with the DBO stations until the line is complete and then assess which of the remaining stations can be occupied based on ice, weather and transit time. We discovered area charts were slightly off such that the latitude and longitude for station 143W-3 appeared to be in 100m of water (the target depth). A CTD cast was taken at the planned lat/lon (in 200 m of water) and then we proceeded to the end of the line and will work our way inshore and reoccupy 143W-3 in 100 m of water.

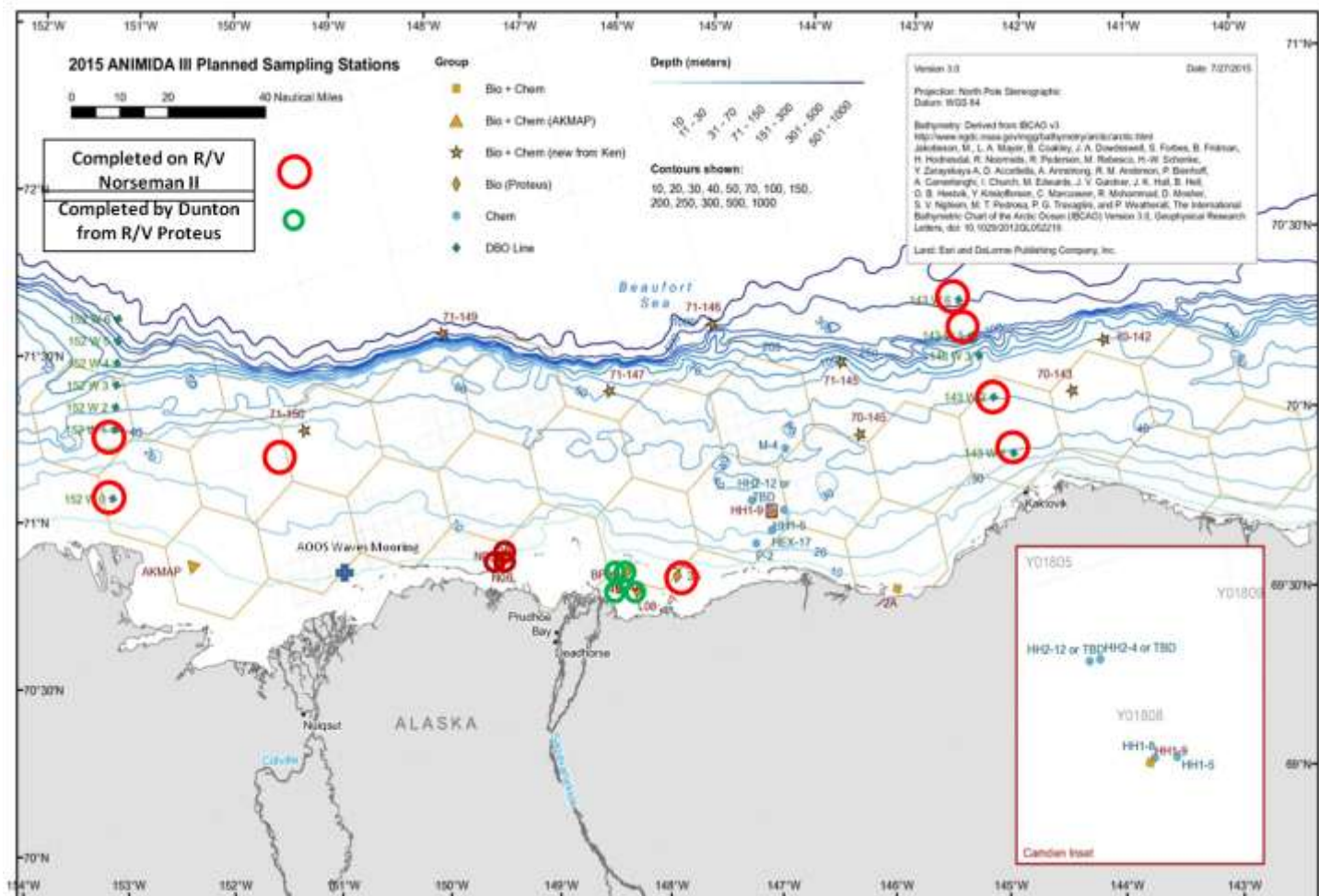
Completed Stations:

Measurement Key: A=Amphipod, C = CTD, W = Niskin water samples, P = plankton net tow, V = Van Veen Grab, T = Trawl, B=Bivalve Rake,

143W-1	ACWPVTBA
143W-2	ACWPVTBA
143W-3	CTD only
143W-6	CWPGT
143W-5	CWPVGT

Stations Planned for the Following Day:

143W-4, 143W-3, 70-142, 70-143



2015 Bureau of Ocean Energy Management Arctic Nearshore Impact Monitoring in Development Area (ANIMIDA) III Cruise

Daily Update for:

8/4/2015

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Notes from the field:

ANIMIDA Cruise Updates:

After encountering rough seas in the AM, sampling on the 143W DBO line was completed today. After the DBO line, we headed east and into icy waters again where the seas were calmer. Our two farthest east stations were sampled and then we began to transit westward again working our way along the outer shelf and west.

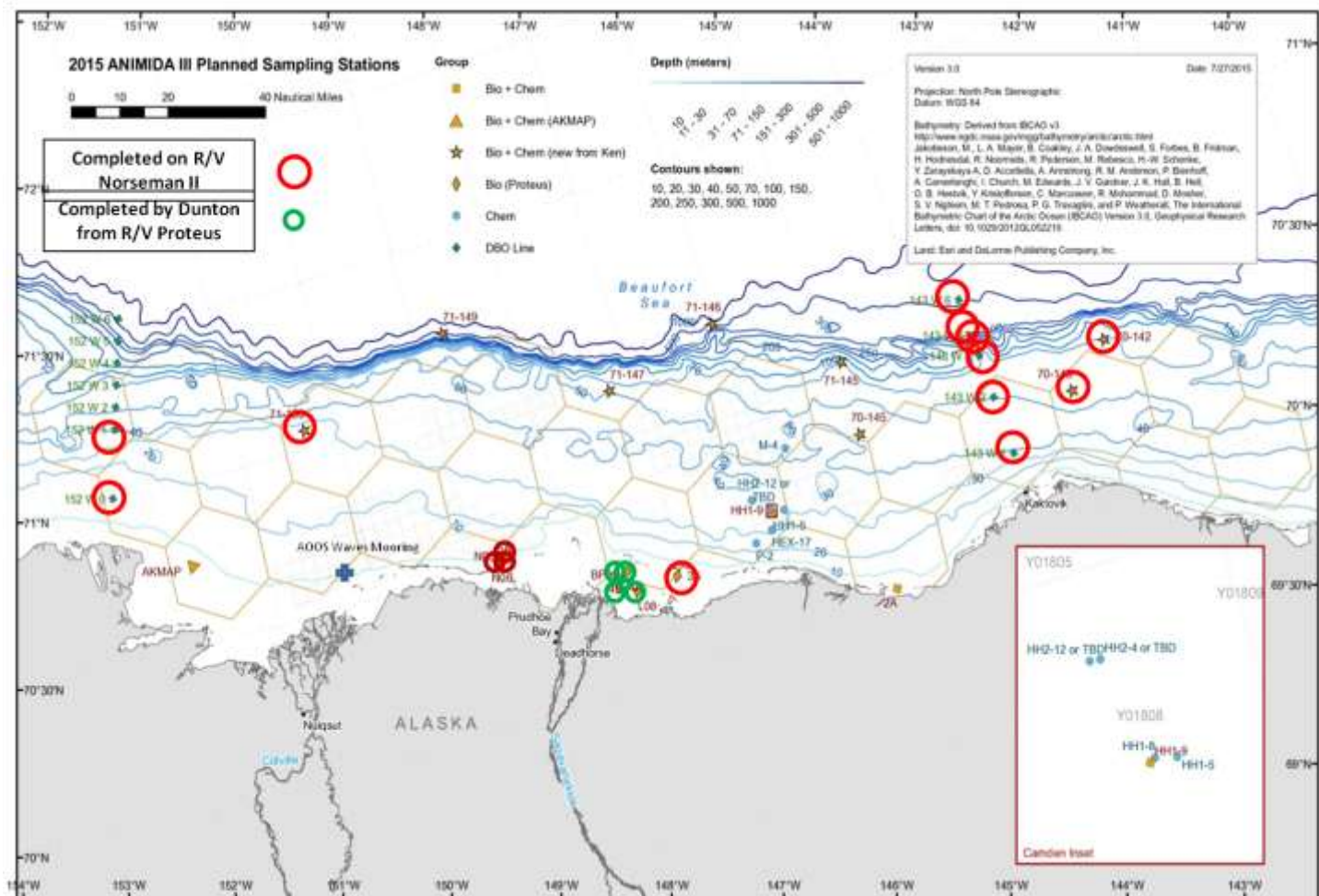
Completed Stations:

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143W-4	CWPVT
143W-3	CWPVT
70-142	ACWPVTBA
70-143	ACWPVTBA

Stations Planned for the Following Day:

70-145, 71-145, 71-146, 71-147, 71-149



2015 Bureau of Ocean Energy Management Arctic Nearshore Impact Monitoring in Development Area (ANIMIDA) III Cruise

Daily Update for:

8/5/2015

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Notes from the field:

ANIMIDA Cruise Updates:

While calm seas today made working easier, ice continued to cause delays while transiting between stations. Despite this, 3 full bio+chem stations and 1 deep gravity core (900 m) stations were completed.

Completed Stations:

Measurement Key: A=Amphipod, C = CTD, W = Niskin water samples, P = plankton net tow, V = Van Veen Grab, T = Trawl, B=Bivalve Rake,

70-145 ACWPVTBA

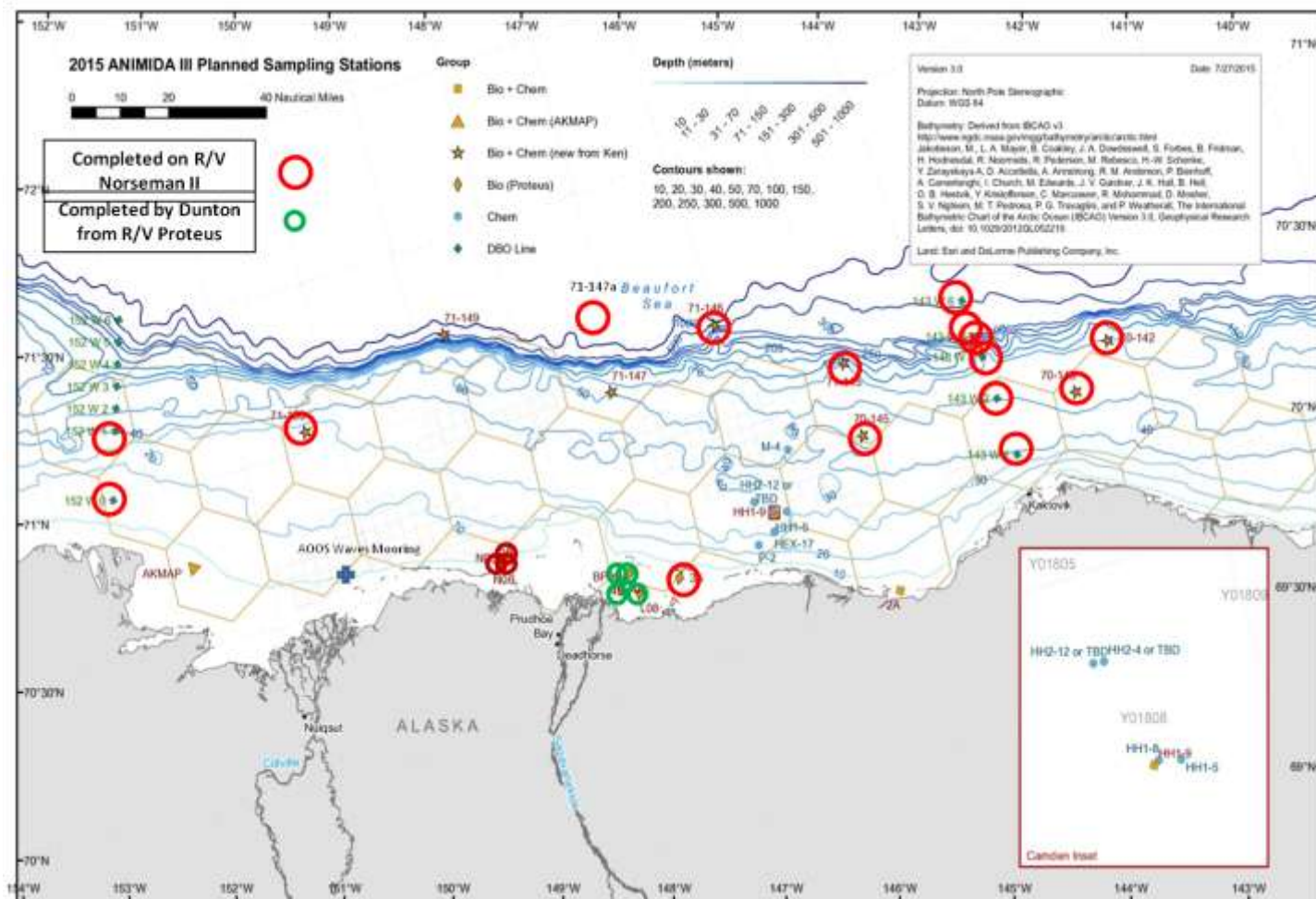
71-145 ACWPVTBA

71-146 CWPVGT

71-147a G

Stations Planned for the Following Day:

71-147, 71-149, 149-350, 149-250



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2015 Bureau of Ocean Energy Management Arctic Nearshore Impact Monitoring in Development Area (ANIMIDA) III Cruise

Daily Update for:

8/6/2015

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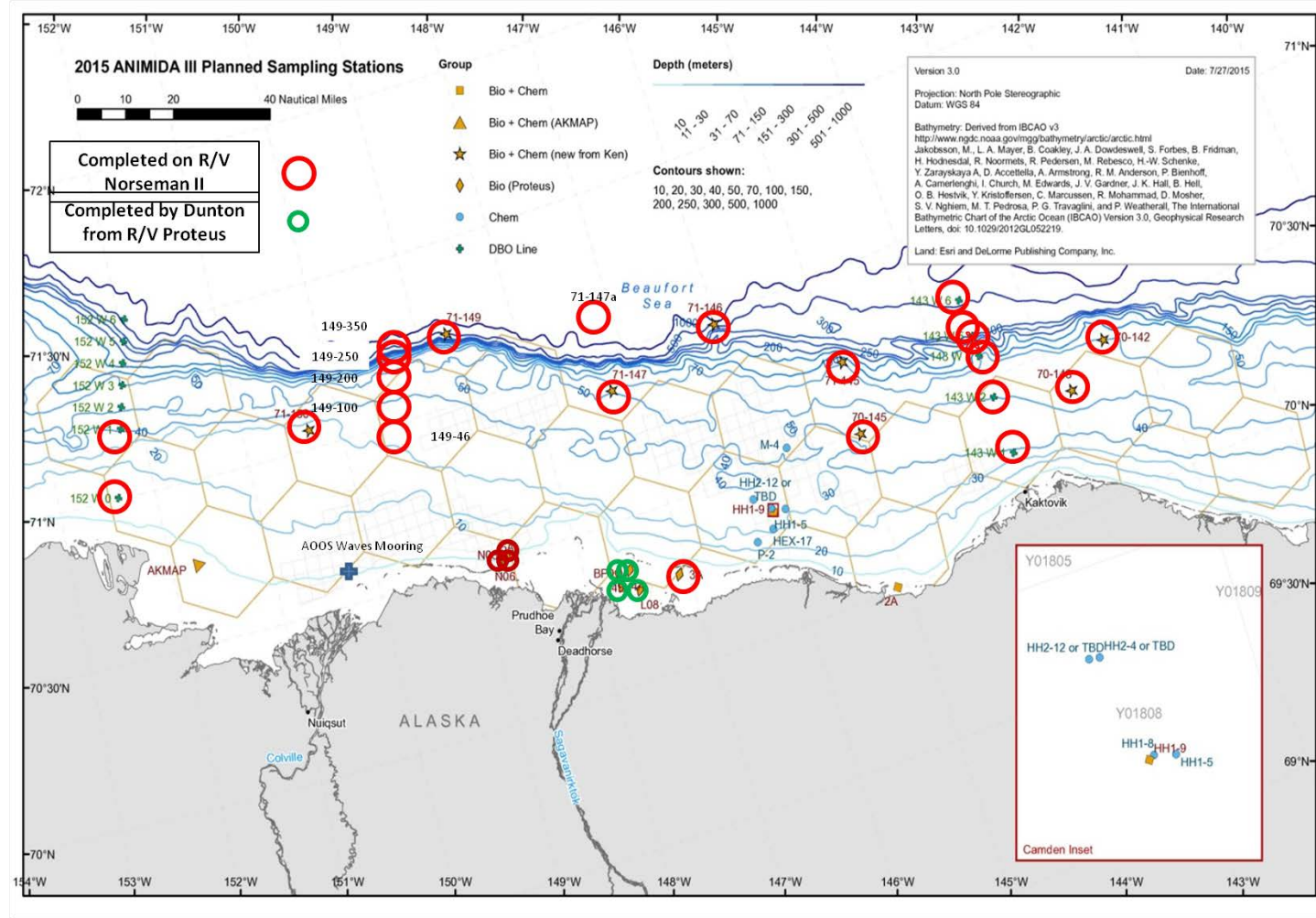
ANIMIDA Cruise Updates:

After working our way southwards from the shelfbreak near 149W, we were forced to divert north again as it became clear reaching the coast on this trajectory was impossible due to persistently thick ice cover. We backtracked north to open water and made our way south and east following a line of ice that appears to hug the coast. Tomorrow we will continue looking for a path shoreward for our Saturday AM rendezvous in Prudhoe Bay. At this point, our goal is to reach Prudhoe Bay on schedule. In the event that we arrive in Prudhoe Bay early, we will continue CTD sampling.

Completed Stations:

Measurement Key: A=Amphipod, C = CTD, W = Niskin water samples, P = plankton net tow, V = Van Veen Grab, T = Trawl, B=Bivalve Rake,

71-147	CWPVTB
71-149	ACWPVTBA
149-350	CVG
149-250	C
149-200	CWPVT
149-100	CW
149-46	CW



ANIMIDA Daily Report Distribution List

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