From: Schnoor, Tim T CIV ONR, 321 tim.schnoor@navy.mil 🌉

Subject: FW: Fwd: [Non-DoD Source] Thank you --Science Verification Cruise 2 on R/V Armstrong

Date: May 5, 2016 at 9:54 AM

To: Jon Alberts (jon@unols.org) jon@unols.org, Annette DeSilva - UNOLS Office office@unols.org

Jon/Annette.

Here's a report from USGS from ARMSTRONG's SVC #2. Please forward to FIC as appropriate.

Tim

-----Original Message-----

From: Ruppel, Carolyn [mailto:cruppel@usgs.gov]

Sent: Thursday, April 07, 2016 11:43 AM

To: Schnoor, Tim T CIV ONR, 321

Subject: [Non-DoD Source] Fwd: Thank you --Science Verification Cruise 2 on R/V Armstrong

Tim, Not sure if you were the one responsible for the Armstrong, but surely someone you know was. Wanted to make Navsea aware of this too. Carolyn

----- Forwarded message ------

From: Ruppel, Carolyn <cruppel@usgs.gov>

Date: Thu, Apr 7, 2016 at 11:39 AM

Subject: Thank you -- Science Verification Cruise 2 on R/V Armstrong

To: rmunier@whoi.edu, David Fisichella <dfisichella@whoi.edu>, Chad Smith <csmith@whoi.edu>

Cc: mabbott@whoi.edu, Walter Barnhardt <wbarnhardt@usgs.gov>, "Dufour, Rose" <rdufour@nsf.gov>, Bob Houtman

<bhoutman@nsf.gov>, John Haines <ihaines@usgs.gov>

Dear WHOI colleagues,

I wanted to convey my thanks to WHOI marine operations, marine technical staff, and the crew of the R/V Armstrong for accommodating the scientific program that I had proposed along with Dan Lizarralde (WHOI G&G) for the 2nd Science Verification cruise, which ended about 10 days ago. I was overseas last week and had been unable to personally participate on the cruise just before that overseas trip. Thus, I have only seen the full suite of multibeam seafloor and water column backscatter and EK80 water column imaging data acquired at my sites of interest over the past few days as the USGS technical staff pulled the information together. The quick looks that I received when the ship was at sea were very provocative, and I was in some cases able to change the survey strategy in nearly real-time, changes that the R/V Armstrong handily accommodated. The data my group requested are of outstanding quality, and, even on a science verification cruise, the R/V Armstrong has facilitated the discovery of new upper slope and deepwater methane plumes at previously unknown seep sites and helped us to identify associated seafloor features (multiple generations of slide scars; sedimented authigenic carbonates(?)) as well. These will immediately enhance the large seeps database my group published with other colleagues in August 2014 and will add information to the seep-related results that my group obtained on R/V Sharp and R/V Endeavor cruises in 2015.

From everything our senior USGS technical personnel who sailed on SVC2 on my behalf have conveyed to me, the ship rides beautifully, and the crew and technical staff are top-notch and highly professional in all of their interactions. It was a real treat for such experienced USGS personnel to ride a brand-new vessel. The ship's acoustic systems--both seafloor and water column imaging-are already producing outstanding data to support state-of-the-art physical and geological oceanography studies. I can't speak for the biological side, but the split-beam instrument is performing so well that it likely is also yielding outstanding quantitative information about so-called "biologics." I expect the legacy of the R/V Armstrong, which will be operating long after most of us retire, will eventually be equal to that of the R/V Knorr.

Sincere thanks to WHOI for its collegiality in looping in the USGS Woods Hole Coastal and Marine Science Center on these early cruises and in working so openly with our technical personnel. It has been a great pleasure for everyone on this side of the Quissett Campus parking lot.

Carolyn Ruppel