

OER Data Management Team Mission Report EX1701 (Jan 18 – Feb 10, 2017)

The EX1701 [Project Instructions](#) described the following objectives:

- *Conduct preliminary seafloor mapping operations in preparation for remotely operated vehicle dives to occur during EX-17-03 and EX-17-05;*
- *Conduct preliminary seafloor mapping operations to contribute to geological understanding of remote areas of the Pacific Ocean;*
- *Acquire data to support priority Monument and Sanctuaries science and management needs, including habitat surveys in recently expanded boundary areas;*
- *Identify and characterize vulnerable marine habitats - particularly potential locations for high density deep sea coral and sponge communities;*
- *Characterize seamounts within the Prime Crust Zone (PCZ). The PCZ is the area of the Pacific with the highest expected concentration of deep sea minerals, including rare metals and rare earth elements;*
- *Collect information on the geologic history of Central Pacific Seamounts, including those that are or may be relevant to our understanding of plate tectonics and subduction zone biology and geology; and*
- *Provide a foundation of publicly accessible data and information products to spur further exploration, research, and management activities.*

The mapping data collected on EX1701 will help support priority Monument and Sanctuaries science, contribute to geological understanding of remote areas of the Pacific Ocean, characterize seamounts within the Prime Crust Zone and will provide preliminary ROV dive site targets for EX1703 and EX1705.

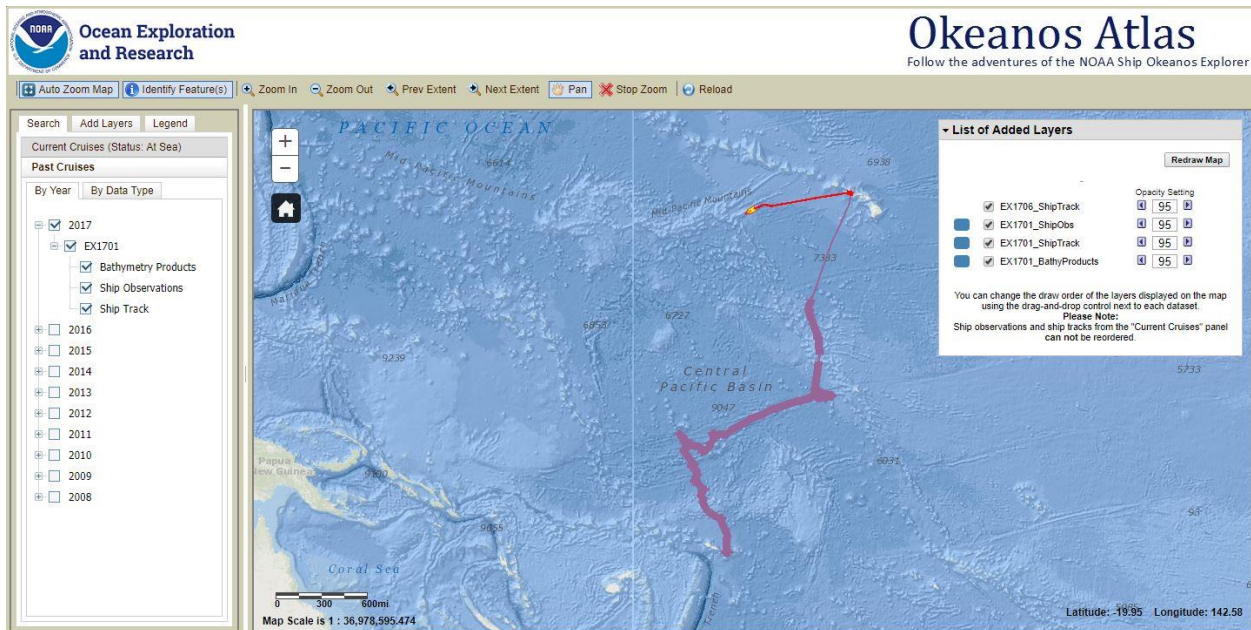
During EX1701 the mission team collected and processed 148 gigabytes of raw multibeam data and 3.25 gigabytes of raw multibeam water column data. The team also collected 8.65 gigabytes of sub-bottom data and 36 gigabytes of single beam data. 59 expendable bathymetric thermograph casts were performed and processed.

Over the course of EX1701, the team mapped over 43,400 km² of seafloor in area that were either poorly mapped or had no modern acoustic data. Summary coverage numbers include: over 14,600 km² in the U.S. Exclusive Economic Zone (EEZ), over 14,800 km² with the Kiribati EEZ, 5,300 km² in the Tokelau EEZ, 5,700 km² with the Jarvis Unit of the Pacific Remote Islands Marine National Monument (PRIMNM), 600 km² in the Kingman/Palmyra unit of

PRIMNM, 12,400 km² in the Phoenix Islands Protected Area (PIPA), and 4,100 km² in the American Samoa EEZ, including within the National Marine Sanctuary of American Samoa (NMSAS).

EX1701 was the first non-shakedown expedition to integrate the Qimera (QPS) hydrographic processing software and workflows were adjusted and changed as necessary. Data acquisition did not experience any major interruptions or unexpected issues other than intermittent poorer data during times of elevated sea state and weather.

The [mission ISO metadata record](#) has been updated to reflect the cruise has taken place.



Data Throughput

Project Instructions Received	Data Management Plan Delivered	ISO Collection Level Metadata Published	Cruise End	Data Received	Final Data Archive Complete	Cruise End to Archive
11/28/2016	1/6/2017	4/6/2017	2/10/2017	4/7/2017	5/11/17	90 days

Data and Information Access

Oceanographic Archive	Geophysical Archive	Library Catalog	Total Archived Volume
4360 files (6.19 GB)	4420 files (215 GB)	3 files (.02031 GB)	221.21 GB