

### Information for Mariners – July 2018 NEPTUNE Observatory: Endeavour

**Project:** The North-East Pacific Undersea Networked Experiments (NEPTUNE) is an oceanographic project managed by Ocean Networks Canada (ONC), an initiative of the University of Victoria. It consists of a cabled observatory off the west coast of Vancouver Island, beginning in Port Alberni and extending 300 km offshore along an 813 km loop. From a shore landing, an armoured marine cable extends along the ocean bottom to large observatory “Nodes”, into which oceanographic instrument systems connect. High voltage power is supplied down the cable, and Ethernet communications along fibre optics bring data and images back to the University in real time. Project status, system information, and data are available from the Ocean Networks Canada web site: [www.oceannetworks.ca](http://www.oceannetworks.ca)

**What:** High voltage marine fibre-optic cables and observatory systems (see web site for system details).

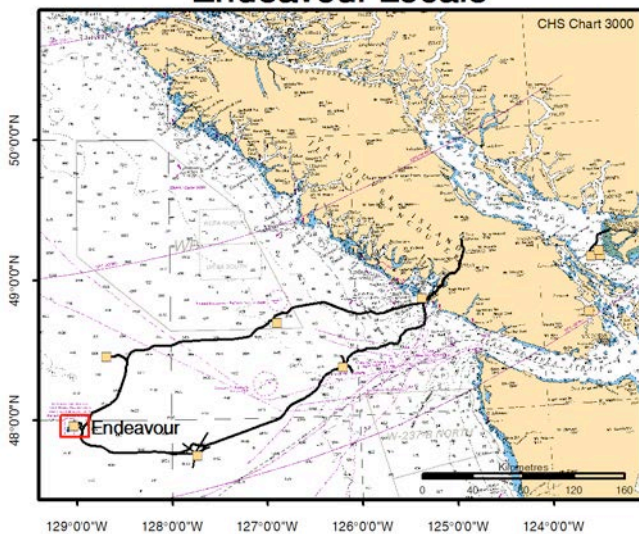
**When:** Latest system and instrument deployments at the Endeavour site: **29 July 2018**

**Where:** Endeavour, Juan de Fuca Ridge, West Coast Vancouver Island. See **chart # 3000**.

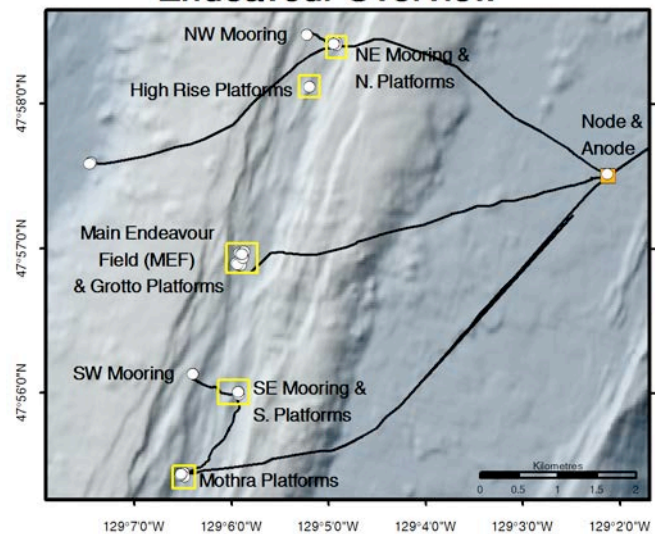
The infrastructure at Endeavour is located within the Canadian Department of Fisheries and Oceans’ Marine Protected Area.

**Remotely Operated Vehicle Operators** should be made aware that there are **4 moorings** at this site that extend 250 m into the water column. Please contact us for more information (contact information provided below).

**Endeavour Locale**



**Endeavour Overview**



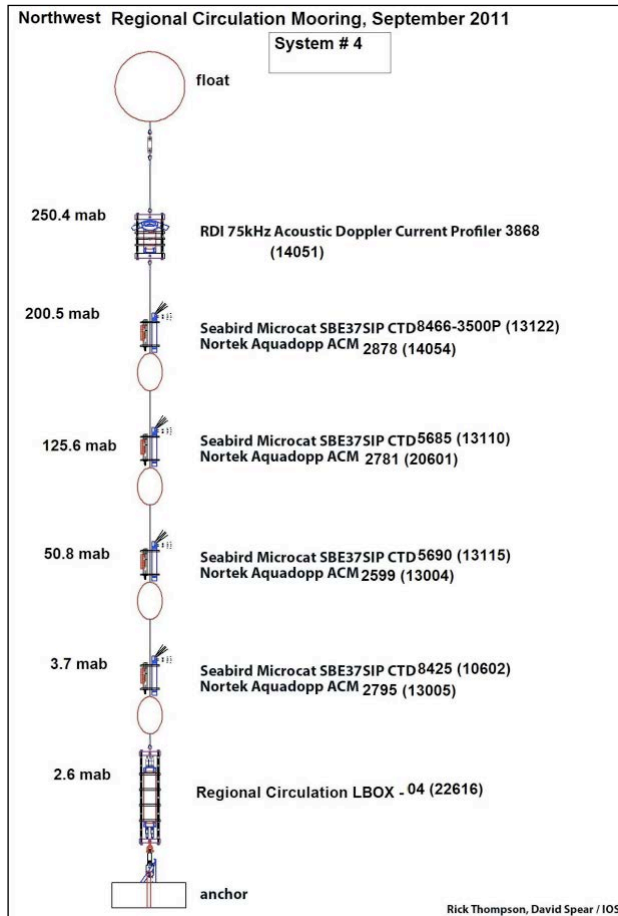
*These figures have been produced by the University of Victoria based on Canadian Hydrographic Service (CHS) charts, pursuant to CHS Direct User License No. 2016-1003-1260-V. The incorporation of data sourced from CHS in these products shall not be construed as constituting an endorsement by CHS of these products. These products do not meet the requirements of the Charts and Nautical Publications Regulations, 1995 under the Canada Shipping Act, 2001. Official charts and publications; corrected and up-to-date, must be used to meet the requirements of those regulations.*

Name	Latitude	Longitude	Depth (m)	Notes	Description
Node	47° 57.5021' N	129° 2.1263' W	2323		Large 7 m yellow trawl resistant frame
Anode	47° 57.5087' N	129° 2.1165' W	2335		1 m cylindrical steel can
Branching Unit	47° 55.9568' N	128° 56.9040' W	2505		3 m cylindrical steel can
Node Seismometer	47° 57.5181' N	129° 2.1291' W	2325		1 m steel triangular frame
Node-end Mudmat 1	47° 57.4958' N	129° 2.1493' W	2321		1.5 m yellow rectangular platform
Node-End	47° 57.4921' N	129° 2.1456' W	2323		1.5 m yellow rectangular platform

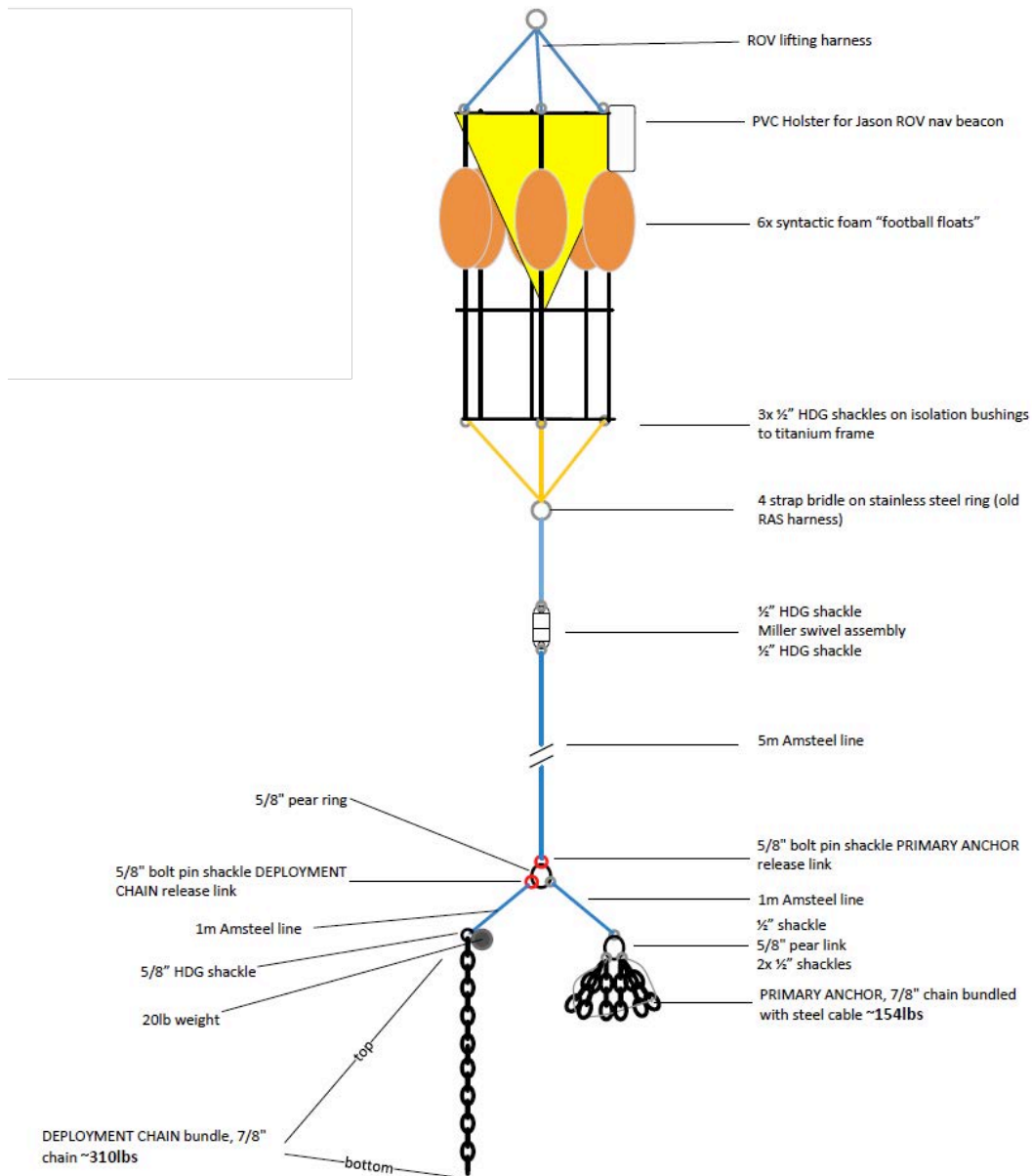
Mudmat 2					
NE Mooring	47° 58.4170' N	129° 4.9524' W	1906 to 2159	See diagram below	Fixed position mooring extending 270 m into the water column and topped with an orange buoy
NW Mooring	47° 58.4788' N	129° 5.2290' W	1898 to 2146	See diagram below	Fixed position mooring extending 270 m into the water column and topped with an orange buoy
RC North Instrument Platform	47° 58.4066' N	129° 4.9292' W	2154		Large (3 m) grey steel frame
RC North IP Mudmat 1	47° 58.3986' N	129° 4.9405' W	2151		1.5 m yellow rectangular platform
RC North IP Mudmat 2	47° 58.3872' N	129° 4.9424' W	2159		1.5 m yellow rectangular platform
RC North NCHR Seismometer	47° 58.4251' N	129° 4.9254' W	2152		1 m steel triangular frame
High Rise Seismometer	47° 58.1194' N	129° 5.2043' W	2162		1.5 m white truncated pyramidal frame with titanium cylinder
Ridge Flank Auxiliary Platform	47° 57.5918' N	129° 7.4570' W	2360		1.5 m grey steel frame
Ridge Flank ENWF Seismometer	47° 57.5860' N	129° 7.4687' W	2361		1 m spherical grey titanium platform
Ridge Flank Mudmat	47° 57.5936' N	129° 7.4318' W	2362		1.5 m yellow rectangular platform
Grotto BARS	47° 56.9601' N	129° 5.9072' W	2188		1 m cylindrical can with 4 legs
Main Endeavour Field ADCP	47° 56.9454' N	129° 5.8936' W	2195		1 m cubic aluminum
Main Endeavour Field Autonomous Sediment Trap	47° 56.8995' N	129° 5.9562' W	2190	See diagram below	Yellow mooring extending 8m above bottom
Main Endeavour Field Autonomous Temperature Array	47° 56.9552' N	129° 5.9016' W	2187		2 triangles and 1 rectangle each with 3 loggers
Main Endeavour Field Bottom Pressure Recorder	47° 56.9150' N	129° 5.9207' W	2195		1 m steel triangular frame
Main Endeavour Field Hydrophone	47° 56.9580' N	129° 5.9011' W	2189		1.5 m steel tripod
Main Endeavour Field Instrument Platform	47° 56.9301' N	129° 5.9100' W	2190		Large (3 m) grey steel frame
Main Endeavour Field KEMF Seismometer	47° 56.9143' N	129° 5.9197' W	2195		0.5 m titanium canister
Main Endeavour Field Seismometer Chain 1	47° 56.9709' N	129° 5.9206' W	2185		1 m green and white square frame with 1 m cylinder
Main Endeavour Field Seismometer Chain 2	47° 56.9781' N	129° 5.8740' W	2193		1 m white cylinder
Main Endeavour Field Seismometer Chain 3	47° 56.9347' N	129° 5.8870' W	2192		1 m white cylinder
Main Endeavour Field South BARS	47° 56.8857' N	129° 5.9181' W	2193		1 m cylindrical can with 4 legs
Main Endeavour Field South BBES	47° 56.8835' N	129° 5.9163' W	2189		1.5 m yellow and white rectangular platform
Main Endeavour Field South	47° 56.8832' N	129° 5.9354' W	2186		Large (3 m) grey steel frame

Instrument Platform					
Main Endeavour Field South UURS	47° 56.8837' N	129° 5.9123' W	2189		1 m yellow and green rectangular platform
Main Endeavour Field South UVA UCRDS	47° 56.8877' N	129° 5.9420' W	2190		Large (3 m) grey steel frame
Main Endeavour Field Tempo Mini	47° 56.9580' N	129° 5.8994' W	2196		1.5 m white Delran platform with suspended cable
RC South Bottom Pressure Recorder	47° 55.9861' N	129° 5.9309' W	2228		1 m steel triangular frame
RC South Instrument Platform	47° 55.9937' N	129° 5.9318' W	2230		Large (3 m) grey steel frame
SE Mooring	47° 56.0037' N	129° 5.9336' W	1977 to 2223	See diagram below	Fixed position mooring extending 250 m into the water column and topped with an orange buoy
SW Mooring	47° 56.1307' N	129° 6.4034' W	1974 to 2173	See diagram below	Fixed position mooring extending 250 m into the water column and topped with an orange buoy
Mothra BARS	47° 55.4286' N	129° 6.5295' W	2274		1 m cylindrical can with 4 legs
Mothra Bottom Pressure Recorder	47° 55.4453' N	129° 6.4920' W	2275		1 m steel triangular frame
Mothra Camera	47° 55.4358' N	129° 6.5189' W	2276		2 m titanium tripod
Mothra Instrument Platform	47° 55.4184' N	129° 6.4914' W	2276		Large (3 m) grey steel frame
Mothra KEMO Seismometer	47° 55.4461' N	129° 6.4920' W	2270		0.5 m titanium canister
Mothra Mudmat	47° 55.4397' N	129° 6.4831' W	2280		1.5 m yellow rectangular platform

**Figure 1: Regional Circulation Mooring Diagram**



**Figure 2: Sediment Trap Diagram**



**Contacts:** If you have any concerns, or would like further information, please contact either: Adrian Round, Ocean Networks Canada's Director of Observatory Operations at [around@uvic.ca](mailto:around@uvic.ca) or 250-472-5364 or Karen Douglas, GIS Specialist at [kdouglas@uvic.ca](mailto:kdouglas@uvic.ca) or 250-472-5359.