

## Information for Mariners – May 2017

### 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).

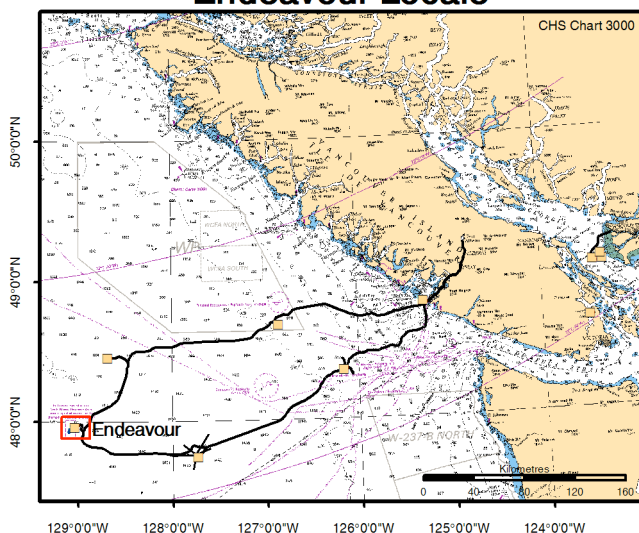
**When:** Latest system and instrument deployments at the Endeavour site: **5 May 2017**

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

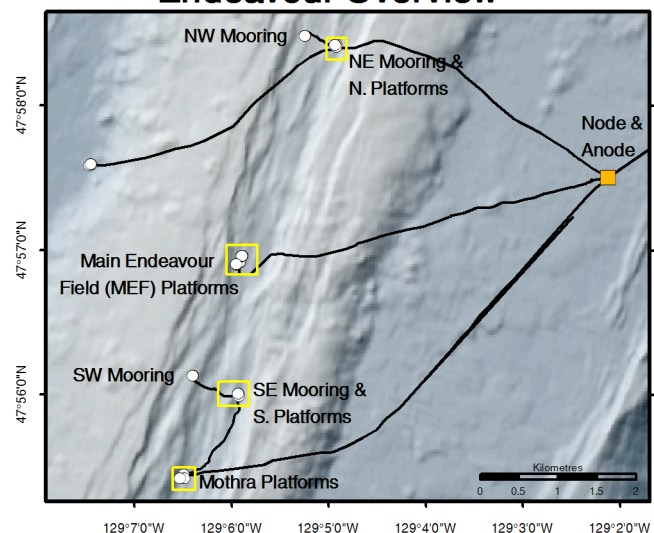
The infrastructure at Endeavour is located within the Canadian Department of Fisheries and Oceans’ Marine Protected Area.

**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



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Name	Latitude	Longitude	Depth	Notes	Description
Node	47° 57.5021' N	129° 2.1263' W	2323 m		Large 7 m yellow trawl resistant frame
Anode	47° 57.5087' N	129° 02.1165' W	2335 m		1 m cylindrical steel can
Branching Unit	47° 55.9568' N	128° 56.9040' W	2505 m		3 m cylindrical steel can

Node-End Mudmat 1	47° 57.4958' N	129° 2.1493' W	2321 m		1.5 m yellow rectangular platform
Node-End Mudmat 2	47° 57.4921' N	129° 2.1456' W	2323 m		1.5 m yellow rectangular platform
Mothra Mudmat	47° 55.4397' N	129° 6.4831' W	2280 m		1.5 m yellow rectangular platform
Mothra Instrument Platform	47° 55.4184' N	129° 6.4914' W	2276 m		Large (3 m) grey steel frame
Mothra Hydrophone	47° 55.4200' N	129° 6.5342' W	2277 m		1 m grey aluminum tripod
Mothra BARS	47° 55.4211' N	129° 6.5317' W	2275 m		1 m cylindrical titanium can with 4 legs
Mothra Bottom Pressure Recorder	47° 55.4453' N	129° 6.4920' W	2275 m		1 m steel triangular frame
Mothra Seismometer	47° 55.4461' N	129° 6.4920' W	2270 m		0.5 m titanium canister
RC South Bottom Pressure Recorder	47° 55.9861' N	129° 5.9309' W	2228 m		1 m steel triangular frame
RC South Instrument Platform	47° 55.9937' N	129° 5.9318' W	2230 m		Large (3 m) grey steel frame
SE Mooring	47° 56.0037' N	129° 5.9336' W	1977 m to 2223 m	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 m to 2173 m	See diagram below	Fixed position mooring extending 250 m into the water column and topped with an orange buoy
Main Endeavour Field Autonomous Sediment Trap	47° 56.8989' N	129° 5.9593' W	2197 m	See diagram below	Yellow mooring extending 8m above bottom
Main Endeavour Field Seismometer	47° 56.9143' N	129° 5.9197' W	2195 m		0.5 m titanium canister
Main Endeavour Field Bottom Pressure Recorder	47° 56.9150' N	129° 5.9207' W	2195 m		1 m steel triangular frame
Main Endeavour Field Instrument Platform	47° 56.9301' N	129° 5.9100' W	2190 m		Large (3 m) grey steel frame
Main Endeavour Field Sonar (COVIS)	-	-	-	Temporarily recovered	6 m tripod with orange cylindrical

					float
Main Endeavour Field Autonomous 3D Temperature Array	47° 56.9562' N	129° 5.9041' W	2186 m		0.4 m x 0.3 m x 0.1 m rectangular 3D frame with yellow cord
Main Endeavour Field Autonomous Temperature Logger Chains	47° 56.9562' N	129° 05.9044' W	2196 m		Small titanium housings spaced along 1 m steel chains
Grotto BARS	47° 56.9528' N	129° 5.9164' W	2184 m		1 m cylindrical titanium can with 4 legs
Main Endeavour Field Tempo Mini	47° 56.9580' N	129° 5.8994' W	2196 m		1.5 m white Delran platform with suspended cable
Main Endeavour Field Camera	47° 56.9580' N	129° 5.8994' W	2185 m		1 m steel triangular frame
Ridge Flank Seismometer	47° 57.5860' N	129° 7.4687' W	2361 m		1 m spherical grey titanium platform
Ridge Flank ADCP	47° 57.5868' N	129° 7.4600' W	2363 m		1 m cubic aluminum
Ridge Flank Auxiliary Platform	47° 57.5918' N	129° 7.4570' W	2360 m		1.5 m grey steel frame
Ridge Flank Mudmat	47° 57.5936' N	129° 7.4318' W	2362 m		1.5 m yellow rectangular platform
RC North IP Mudmat 1	47° 58.3986' N	129° 4.9405' W	2151 m		1.5 m yellow rectangular platform
RC North IP Mudmat 2	47° 58.3872' N	129° 4.9424' W	2159 m		1.5 m yellow rectangular platform
RC North Instrument Platform	47° 58.4066' N	129° 4.9292' W	2154 m		Large (3 m) grey steel frame
RC North Seismometer	47° 58.4251' N	129° 4.9254' W	2152 m		1 m steel triangular frame
NE Mooring	47° 58.4223' N	129° 4.9388' W	1908 m to 2158 m	See diagram Below	Fixed position mooring extending 250 m into the water column and topped with an orange buoy
NW Mooring	47° 58.4849' N	129° 5.2523' W	1893 m to 2141 m	See diagram Below	Fixed position mooring extending 250 m into the water column and topped with an orange buoy

Figure 1: Regional Circulation Mooring Diagram

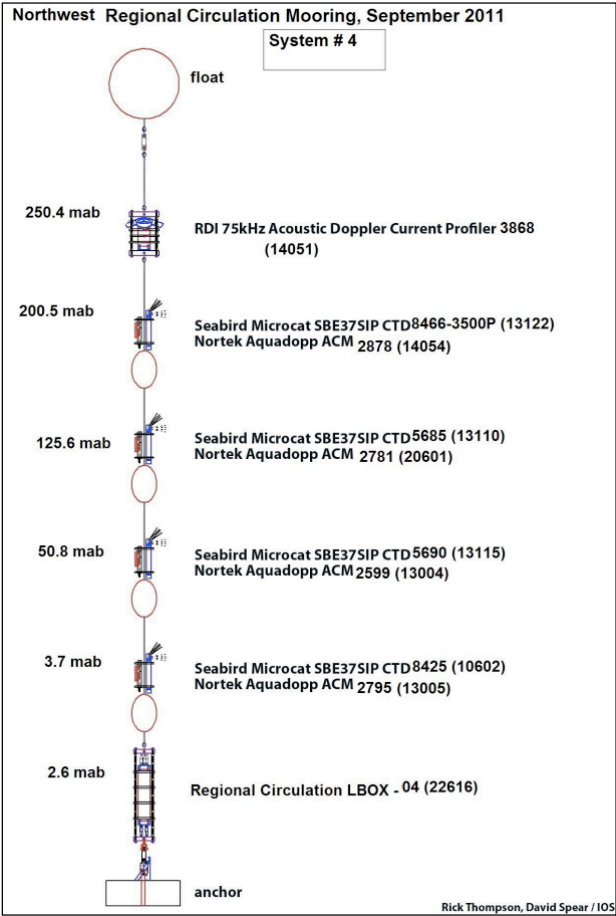
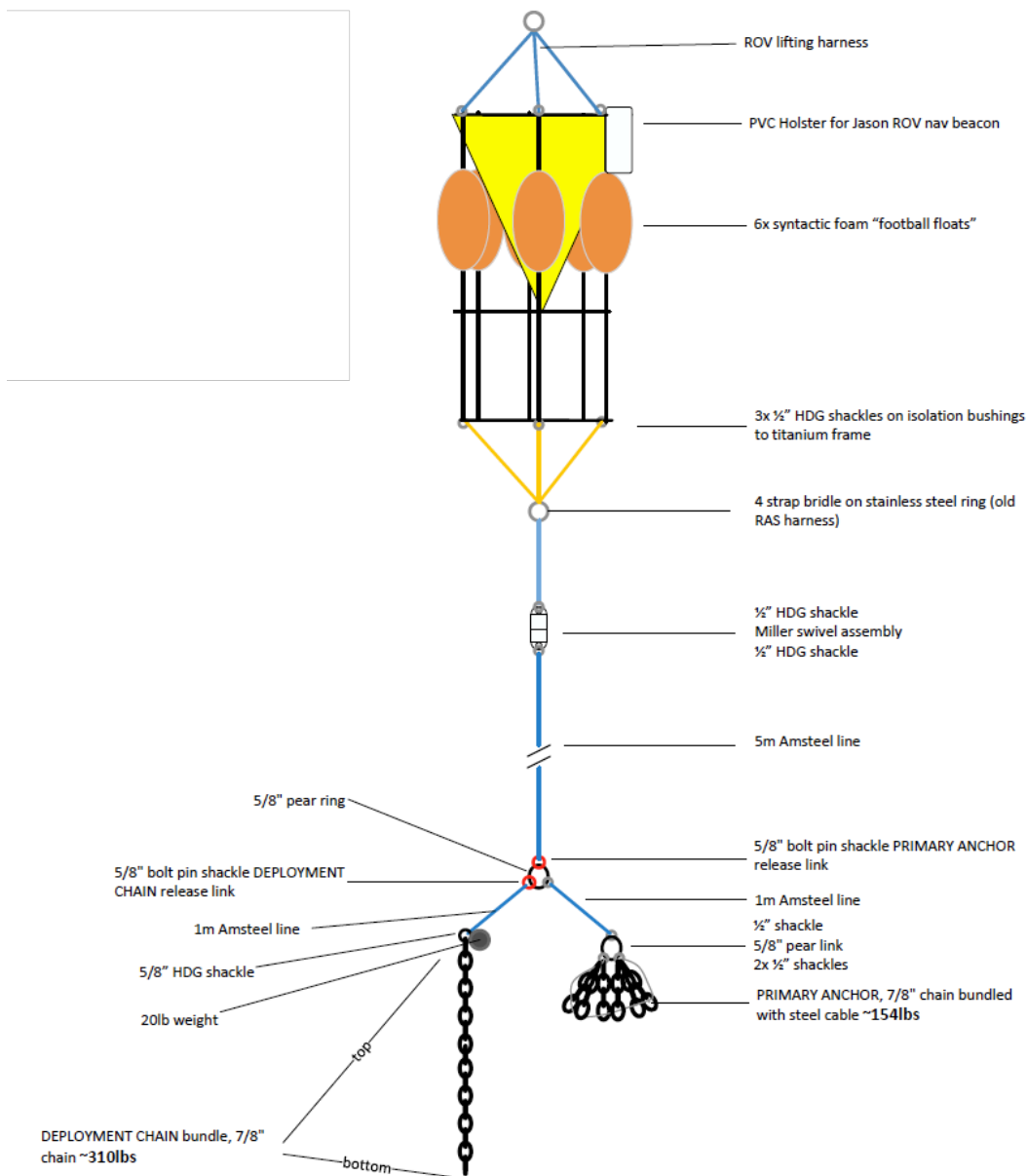


Figure 2: Sediment Trap Diagram



**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.