

Information for Mariners – August 2018

NEPTUNE Observatory: Barkley Canyon

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 website: www.oceannetworks.ca

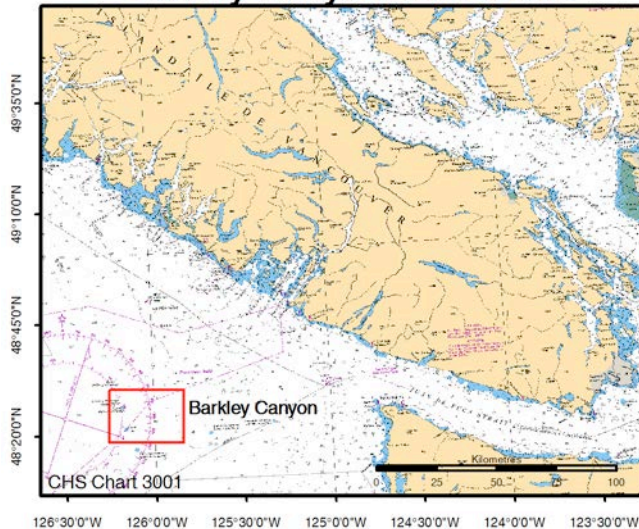
What: High voltage marine fibre optic cables and observatory systems (see web site for system details).

When: Latest system and instrument deployments in Barkley Canyon: **2 August 2018**

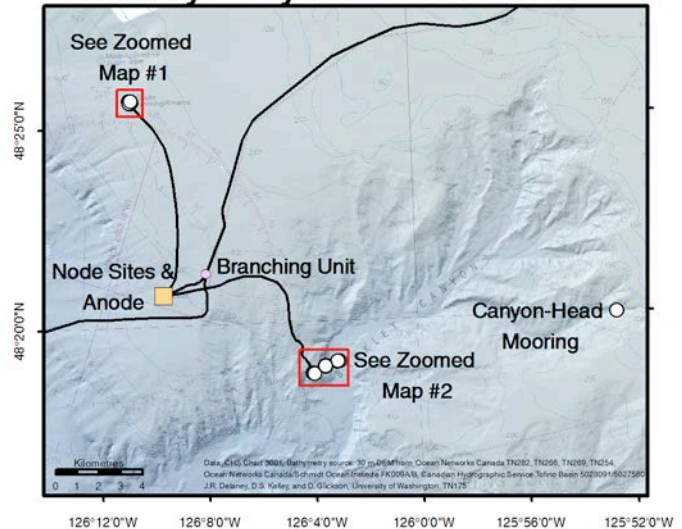
Where: **Barkley Canyon and Upper Slope, West Coast Vancouver Island.** See [chart # 3001](#) (ENC CA270389) for cable route and obstructions. The Vertical Profiling System (a winched profiling buoy extending from the seafloor to the sea surface) is listed on the Automatic Identification System (AIS) as [MMSI 993166003](#).

Note: **Cables are exposed at the surface. Please use caution when operating in this area. Cable position files are available at the link below. Other formats are available upon request.**

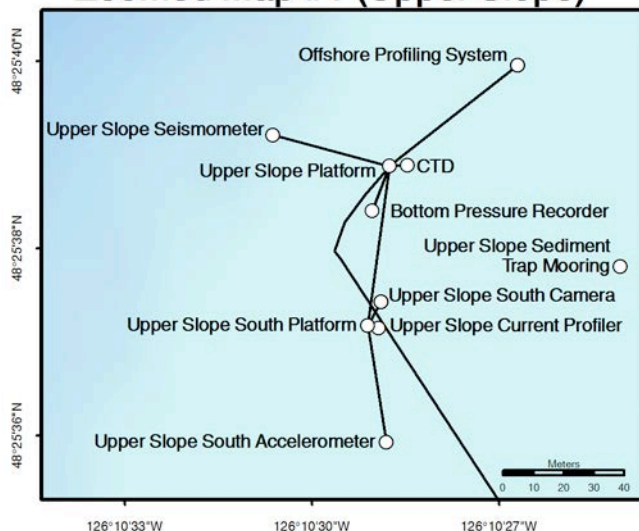
Barkley Canyon Site Locale



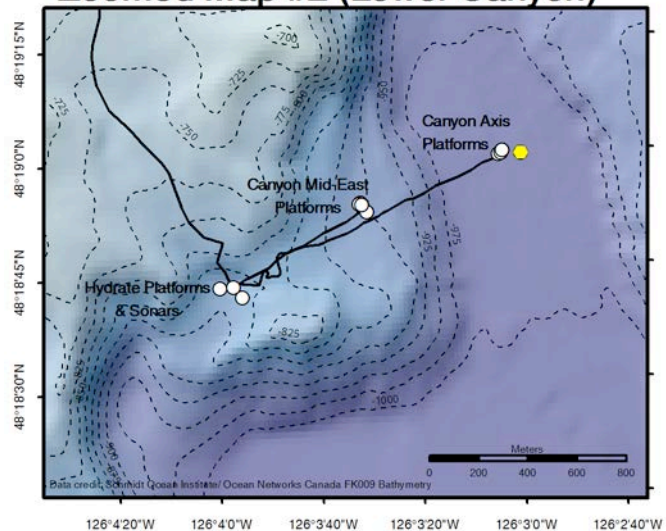
Barkley Canyon Site Overview



Zoomed Map #1 (Upper Slope)



Zoomed Map #2 (Lower Canyon)



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| Name | Latitude | Longitude | Depth (m) | Notes | Description |
|---------------------------------------|----------------|-----------------|-----------|-----------------------|--|
| Node | 48° 20.7626' N | 126° 9.4647' W | 639 | | Large 7 m yellow trawl resistant frame; 13 tons |
| Anode | 48° 20.7592' N | 126° 9.4691' W | 640 | | 1 m Cylindrical steel can |
| Branching Unit | 48° 21.2852' N | 126° 7.8613' W | 460 | | 3 m cylindrical steel can |
| Node Site CTD | 48° 20.7548' N | 126° 9.4706' W | 643 | | 3m white tripod |
| Node Site Hydrophone | 48° 20.7540' N | 126° 9.4763' W | 647 | | 1.5 m steel tripod |
| Node Site Instrument Platform | 48° 20.7584' N | 126° 9.4699' W | 644 | | Large (3 m) grey steel frame |
| Node site Tiltmeter | 48° 20.7564' N | 126° 9.4812' W | 643 | | 1 m cylindrical titanium can with grey cap |
| Canyon Axis Current Profiler | 48° 19.0028' N | 126° 3.0398' W | 985 | | 1 m green rectangular fiberglass platform |
| Canyon Axis Camera | 48° 19.0033' N | 126° 3.0387' W | 980 | | 3 m red and white tripod with yellow float |
| Canyon Axis CTD | 48° 18.9984' N | 126° 3.0443' W | 983 | | 3 m white tripod |
| Canyon Axis Instrument Platform | 48° 18.9984' N | 126° 3.0431' W | 981 | | Large (3 m) grey steel frame |
| Canyon Axis Sediment Trap Mooring | 48° 18.9968' N | 126° 2.9783' W | 981 | | Yellow mooring extending 13.5 m above bottom |
| Canyon Axis Sonar | 48° 18.9946' N | 126° 3.0529' W | 985 | | 3 m white tripod |
| Canyon Head Sediment Trap Mooring | 48° 19.9930' N | 125° 52.5340' W | 402 | NOTSHIP P-1416 (2018) | Fixed position mooring extending 33 m into the water column and topped with an orange buoy |
| Canyon Mid-East Accelerometer | 48° 18.8792' N | 126° 3.4920' W | 897 | | Buried 1 m circular green caisson with cable at surface |
| Canyon Mid-East Current Profiler | 48° 18.8964' N | 126° 3.5152' W | 893 | | 1 m green rectangular fiberglass platform |
| Canyon Mid-East Camera | 48° 18.8993' N | 126° 3.5103' W | 890 | | 3 m grey steel tripod |
| Canyon Mid-East CTD | 48° 18.8939' N | 126° 3.5080' W | 895 | | 3 m white tripod |
| Canyon Mid-East Instrument Platform | 48° 18.8941' N | 126° 3.5120' W | 895 | | Large (3 m) grey steel frame. |
| Hydrate Instrument Platform | 48° 18.7245' N | 126° 3.9381' W | 871 | | Large (3 m) grey steel frame |
| Hydrate East Sonar | 48° 18.7005' N | 126° 3.9109' W | 871 | | 3 m grey steel tripod |
| Hydrate West Sonar | 48° 18.7231' N | 126° 3.9836' W | 869 | | 3 m grey steel tripod |
| Upper Slope Current Profiler | 48° 25.6169' N | 126° 10.4845' W | 394 | | 1 m green rectangular fiberglass platform |
| Upper Slope Auxiliary Platform | 48° 25.6520' N | 126° 10.5109' W | 396 | | 1 m spherical grey titanium platform. |
| Upper Slope Bottom Pressure Recorder | 48° 25.6379' N | 126° 10.4851' W | 392 | | 1 m triangular steel platform. |
| Upper Slope CTD | 48° 25.6457' N | 126° 10.4752' W | 395 | | 3 m white tripod |
| Upper Slope Instrument Platform | 48° 25.6457' N | 126° 10.4799' W | 395 | | Large (3 m) grey steel frame. |
| Upper Slope South Instrument Platform | 48° 25.6175' N | 126° 10.4873' W | 393 | | Large (3 m) grey steel frame. |
| Upper Slope South Camera | 48° 25.6216' N | 126° 10.4834' W | 389 | | 2 m grey steel tripod |
| Upper Slope Sediment Trap Mooring | 48° 25.6263' N | 126° 10.4192' W | 390 | | Yellow mooring extending 13.5 m above bottom |
| Upper Slope South Accelerometer | 48° 25.5966' N | 126° 10.4836' W | 395 | | 0.5 m Cylindrical frame with glass sphere |
| Upper Slope Offshore Profiling System | 48° 25.6628' N | 126° 10.4446' W | 394 | MMSI 993166003 | Winched profiling buoy extending from the seafloor to the sea surface. |

Full cable routes and waypoints are available for use with Electronic Navigation Systems from the ONC website:

<http://www.oceannetworks.ca/installations/notice-mariners>

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 or 250-472-5364 or Karen Douglas, GIS Specialist at kdouglas@uvic.ca or 250-472-5359.