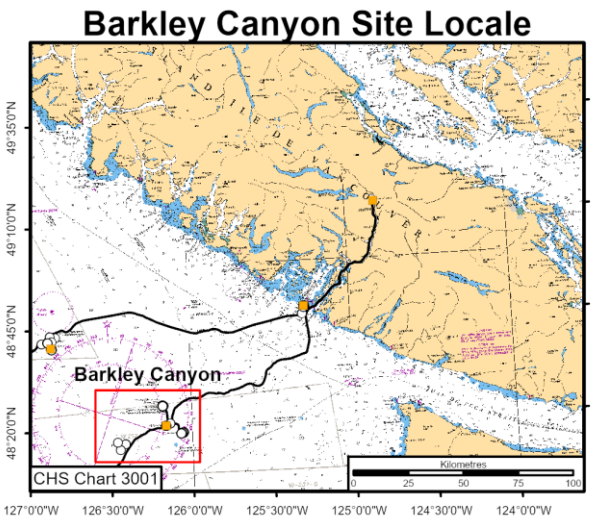
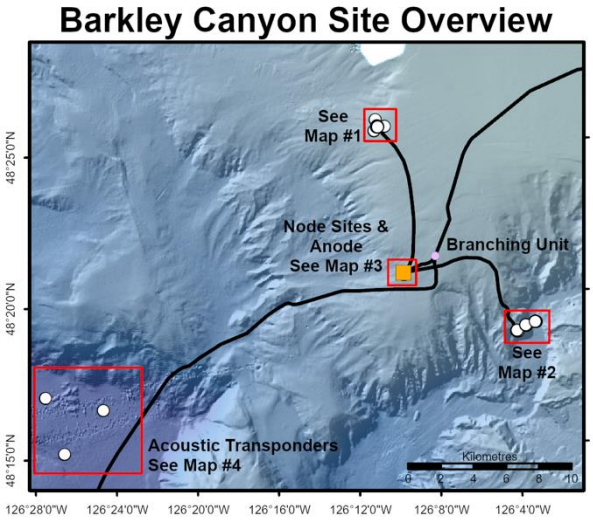
Information for Mariners – June 2025
NEPTUNE Observatory: Barkley Canyon

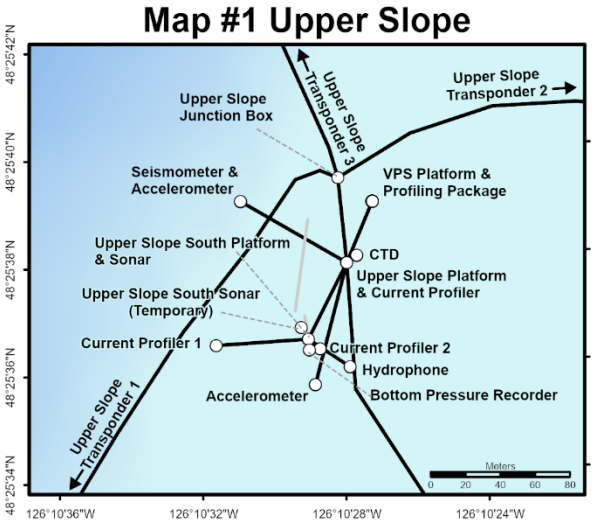
Project: The North-East Pacific Undersea Networked Experiments (NEPTUNE) is an oceanographic project managed by Ocean Networks Canada (ONC), an initiative of the University of Victoria. It consists of a cabled observatory off the west coast of Vancouver Island, beginning in Port Alberni and extending 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**

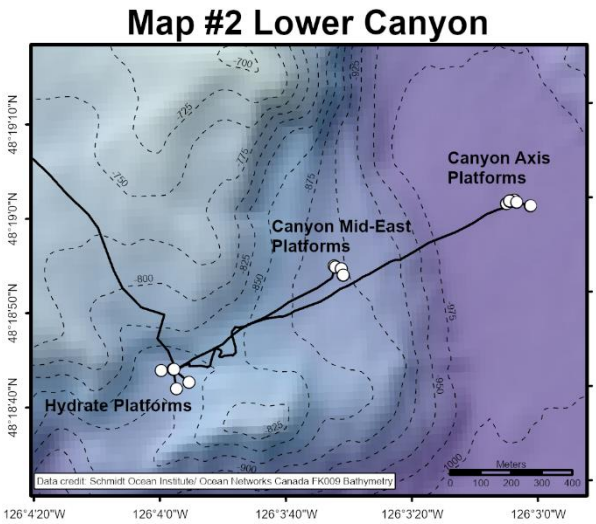
What: High voltage marine fibre optic cables and observatory systems (see web site for system details).
When: Latest system and instrument deployments in Barkley Canyon: **27 May 2025**
Where: Barkley Canyon and Upper Slope, West Coast Vancouver Island. See chart # 3000 (ENC CA271034) for cable route and obstructions.

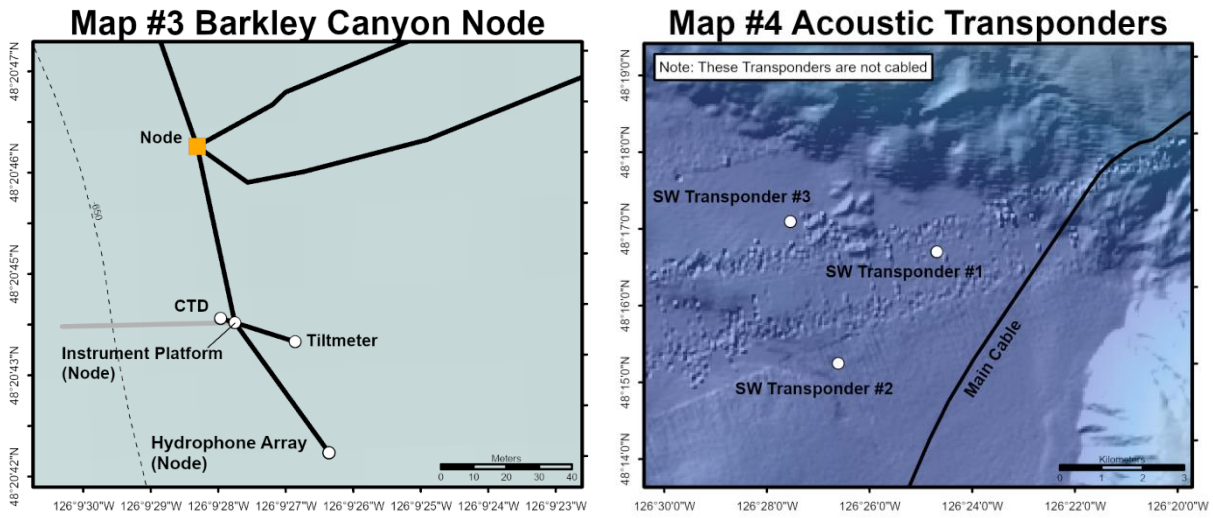
Note: Cables are exposed at the surface. Please use caution when operating in this area. Cable position files are available at the link below. Other formats are available upon request.











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Full cable routes and waypoints are available for use with Electronic Navigation Systems from the ONC website: https://www.oceannetworks.ca/notice-for-mariners

Installations:

Name	Latitude	Longitude	Depth (m)	Description
BarkleyCanyon_SW_Transponder_2	48.25270	-126.44210	2070	An orange GPS Acoustics device extending 2 m off seafloor.
BarkleyCanyon_SW_Transponder_1	48.27619	-126.40889	2070	An orange GPS Acoustics device extending 2 m off seafloor.
BarkleyCanyon_SW_Transponder_3	48.28383	-126.45612	2068	An orange GPS Acoustics device extending 2 m off seafloor.
Hydrates_Multi-beamSonar_2024-06	48.31147	-126.06574	870	1 m metal and plastic tripod
Hydrate_KongsbergSonarEast_2013-09	48.31168	-126.06518	871	3 m grey steel tripod
Hydrate_KongsbergSonarWest_2018-07	48.31205	-126.06639	869	3 m grey steel tripod
Hydrate_CTD_2018-07	48.31207	-126.06583	871	3 m white tripod
Hydrate_IP_2013-05	48.31208	-126.06586	871	Large (3 m) grey steel frame
CanyonMidEast_Accelerometer_BACME_W1_2024-06	48.31463	-126.05811	897	Buried 1 m circular green caisson with cable at surface
CanyonMidEast_CTD_2021-08	48.31484	-126.05828	894	3 m grey steel tripod monument
CanyonMidEast_IP_Pod3_2016-06	48.31490	-126.05853	895	Large (3 m) grey steel frame.
CanyonMidEast_ADCP_2016-06	48.31494	-126.05859	893	1 m green rectangular fiberglass platform

CanyonAxis_ADCP_2023-07	48.31649	-126.04983	986	Acoustic instrument on the seabed
CanyonAxis_Sonar_2024-06	48.31656	-126.05088	987	3 m grey steel tripod
CanyonAxis_IP_2021-03	48.31661	-126.05044	984	Large (3 m) grey steel frame
CanyonAxis_CTD_2024-06	48.31664	-126.05067	983	3 m grey steel tripod
CanyonAxis_Camera_2022-07	48.31665	-126.05074	985	3m grey steel tripod
CanyonAxis_ADCP_2021-03	48.31667	-126.05053	983	1 m green rectangular fiberglass platform
BC-Node_HydrophoneArray_2021-02	48.34517	-126.15732	641	Yellow metal pole rising 3 m from seafloor
BC-Node_TiltMeter_2021-02	48.34548	-126.15744	644	1 m cylindrical titanium can, with white cap
BC-Node_IP_2023-09	48.34554	-126.15768	644	Large (3 m) grey steel frame
BC-Node_CTD_Monument_2023-09	48.34555	-126.15774	646	3 m white tripod
BC-Node_Node_2021-02	48.34603	-126.15781	644	Large 7 m yellow trawl resistant frame, 13 tons
BarkleyCanyon_BranchingUnit_2007-08	48.35475	-126.13102	460	3 m cylindrical steel can
UpperSlope_AZA_Fetch_2021-08	48.42478	-126.17767	407	An orange GPS Acoustics device extending 2 m off seafloor
UpperSlope_South_Accelerometer_2022-07	48.42657	-126.17465	394	0.5 m Cylindrical frame with glass sphere
UpperSlope_IP_South_Hydrophone_2024-06	48.42666	-126.17438	393	1.5m steel tripod
UpperSlope_South_BPR_2023-07	48.42675	-126.17469	393	1 m triangular steel platform
UpperSlope_South_AQD_2019-09	48.42676	-126.17461	392	1 m yellow frame with green caisson
UpperSlope_South_ADCP_2023-07	48.42679	-126.17541	397	Acoustic instrument on the seabed
UpperSlope_IP_South_2019-08	48.42681	-126.17469	394	Large (3 m) grey steel frame
UpperSlope_DQFetch_East_2021-08	48.42714	-126.16895	397	An orange GPS Acoustics device extending 2 m off seafloor
UpperSlope_IP_2019-08	48.42720	-126.17438	395	Large (3 m) grey steel frame
UpperSlope_CTD_2019-09	48.42723	-126.17430	396	3 m white tripod
UpperSlope_BBS-IP_NCBC_2009-09	48.42753	-126.17518	396	1 m spherical grey titanium platform. Notice: P-0748(2012).
UpperSlope_MJB_2021-08	48.42764	-126.17442	397	1.5 x 0.5 m metal frame box on the seafloor

UpperSlope_VPS_base_2025-05	48.42751	-126.17416	394	Steel rectangular (1.5m x 2.5) platform resting on sea floor.
UpperSlope_VPS_instrumentpackage_2025-05	48.42751	-126.17416	394 to 45	Yellow, cylindrical (0.75m diameter; 1.5m height) instrument package profiling depths ranging from the ocean floor to ~45m below sea surface.
UpperSlope_South_Sonar_2025-05_TemporarySite	48.42687	-126.17475	394	3 m grey steel tripod

Contacts: If you have any concerns, or would like further information, please contact Ben Biffard, Ocean Networks Canada's Director of Observatory Digital Operations at bbiffard@uvic.ca, or Ocean Networks Canada's GIS Specialists at GIS@oceannetworks.ca.