DIVE PLAN – Leg 1 Dive 10 Pod 1 Deployment

ROV Dive Number: OE 0113
Location: ***Barkley Canyon*** *Date: May 9, 2014 PDT*
Constraints: Weather, Sufficient deck space

Objectives

- Visual inspection of Pod 1
- Deploy Nortek Profiler (DeviceID: 11302)
- Raise Kongsberg sonar (DeviceID:11301)
- Deploy Dragonfish camera system (DeviceID: 23152, 23074)
- Deploy INDEEP
- Visual transect
- Recover bait trap
- Deploy CTD (DeviceID: 11105)
- Niskin O2 sample

Dive Dependents
1. Line laser and ROV porch grating orientation with respect to ROV heading

Ship Procedure
1. Transit to site, assess weather and sea state. Proceed only when it is safe to do so
2. Deploy ROV USBL pole

ACTION	LATITUDE	LONGITUDE	DEPTH (m)
Descend at Pod 1	48° 18.9910’	-126° 03.0130’	985
Ascend at Pod 1	48° 18.9910’	-126° 03.0130’	985

Shore Procedure
1. Monitor Twitter feed

Communications With Shore
1. On-board team will tweet using @oceanetworksops twitter account at the beginning of the dive
2. Post the dive plan on the cruise website
3. On-board team connect via intercom with shore operations as required

Navigation
1. Record positions of the deployed platforms and satellite instruments
2. Guide visual transect
3. Record interesting positions

Dive Chief
1. Record deviations from dive plan

Site/Equipment IDs

ACTION	SITEID	SITENAME	DEVICE ID	DEVICENAME	LATITUDE	LONGITUDE	DEPTH	PORT	EXT CABLE
Deploy/ Connect	1000257	CanyonAxis_IP_Pod1_2014-05	10011	BC Pod #1 Axis JB-02	48°18.9910'	-126°03.0130'	985	J10 on JB-07	3/ 101.EX.0003
Deploy/ Connect	1000258	CanyonAxis_ADCP_2014-05	11302	Nortek Aquadopp HR-Profiler 2965	48°18.9910'	-126°03.0170'	986	J1	282
Deploy/ Connect	1000257	CanyonAxis_IP_Pod1_2014-05	11301	Kongsberg Mesotech Rotary Sonar 1071 sonar head 3	48°18.9910'	-126°03.0130'	985	J4	16/ 101.EX.0021
Deploy/ Connect	1000257	CanyonAxis_ADCP_2014-05	23065	RDI Workhorse Long Ranger ADCP 75 kHz	48°18.9910'	-126°03.0130'	985	J5	352
Deploy/ Connect	1000259	CanyonAxis_Camera_2014-05	23152	Barkley Colour Axis-Video [Axis P1347]	48°18.9910'	-126°03.0130'	986	J3	287
Deploy/ Connect	1000259	CanyonAxis_Camera_2014-05	23074	ROS Pan/Tilt with Lights	48°18.9910'	-126°03.0130'	986	J2	286
Deploy/ Connect	1000296	CanyonAxis_CTD_2014-05	11105	SBE 16 Plus CTD				J6	365, 275, 205
Deploy/ Connect	1000296	CanyonAxis_CTD_2014-05	23283	SBE 63 Oxygen Sensor				J6	365, 275, 205
Deploy/ Connect	1000296	CanyonAxis_CTD_2014-05	23301	Remote Serial Server 2				J6	365, 275, 205

ROV/Equipment Requirements

1. Line laser
2. Milk Crate
3. Bio box
4. Niskin Bottle

ROV Procedure

Descent

1. Start recording, start streaming video to UVic, start dive log, confirm both are being received
2. Start ROV-mounted CTD
3. Descend ROV

Visual Inspection of Pod 1

1. Visual inspection for any issues with deployment
2. Obtain and record IP position: Latitude, longitude, Depth, Tilt, Heading

Connect Pod 1 (DeviceID: 10011)

1. Transit to record parking position coordinates for cable (3/101.EX.0003) connector
2. Pick up parking position and termination can
3. Return to Pod 1 connector panel
4. Place termination can on seafloor
5. Remove dust cap on J13, and place on front porch
6. Connect cable (3/101.EX.0003) connector to J13
7. Systems confirm power and functionality to Pod 1

Deploy CTD (DeviceID: 11105)

1. Release bungee securing CTD tripod.
2. Transit to CTD Monument position.
3. Place CTD tripod.
4. Return to Pod 1.
5. Release bungee securing CTD.
6. Lift CTD off frame using handle.
7. Transit back to CTD tripod.
8. Hang CTD on tripod.
9. Record CTD latitude, longitude, depth.
10. Systems power on J6 Pod 1 JB-02 (DeviceID: 10011) and confirm instrument functioning

Deploy Nortek Profiler (DeviceID: 11302)

1. Break ty-wrap securing Nortek cable
2. Remove bungee securing the Nortek
3. Lift Nortek T-stand off the platform using the handle
4. Pay attention not to hit the instrument's head when maneuvering
5. Transit backwards to near extent of the cable and place stand on seabed
6. Record Nortek latitude, longitude, depth, and heading
7. Systems power on J1 Pod 1 JB02 (DeviceID: 10011) and confirm instrument (DeviceID: 11302) functioning

Raise Kongsberg Sonar (DeviceID: 11301)

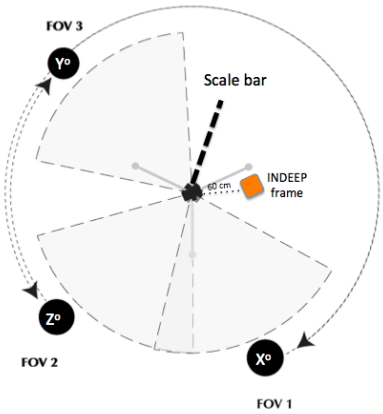
11. Release bungee securing sonar
12. Lift sonar up using the rope loops
13. Secure sonar using bungee to bolt on end of platform
14. Systems power on J4 Pod 1 JB-02 (DeviceID: 10011) and confirm instrument functioning

Deploy Camera Tripod (DeviceID: 23152, 23074)

1. Remove bungees securing camera to frame
2. Free the cable
3. Lift the camera off the platform
4. Place the camera at a distance away from the IP. Ensure it is being placed on an undisturbed seafloor (e.g., away from where float ballast left last time or where instruments were deployed previously)
5. Record latitude, longitude, depth, and camera heading
6. Retrieve horizontal ruler from position on seafloor
7. Reposition horizontal ruler; running out from directly beneath camera to side opposite camera, perpendicular to long axis of Pod
8. Systems power on J2 and J3 Pod 1 JB-02 (DeviceID: 10011) and confirm camera system (DeviceID: 23152, 23074) functioning

Deploy INDEEP Frame

1. Return to IP and pick up INDEEP frame tie-wrapped to center platform
2. Place INDEEP frame in field of view of camera per figure below. Disturb sediment as little as possible
3. Video INDEEP position from three different angles
4. Record tripod latitude, longitude, depth and camera heading
5. Retrieve horizontal ruler from position on seafloor
6. Reposition horizontal ruler; running out from directly beneath camera to side opposite camera, perpendicular to long axis of Pod
7. Shore to confirm if the INDEEP is visible. If not, reposition accordingly



Float release
1. Confirm with bridge permission to release float.
2. Release float on Camera and then on CTD stand

Visual transect survey
3. Survey at POD 2 camera location
4. Perform visual survey with laser on, 1m above seafloor at 0.5 knots: 8 X 50m branches oriented North, North-East, East….

Bait Trap Recovery
1. Move to bait trap location
2. Recover bait trap

Take O2 sample
1. Grab Niskin bottle in manipulator
2. Place bottle near to and at approximately the same height as the CTD
3. Trigger bottle
4. Stow bottle

Ascend
1. Retrieve beacon and float
2. Request permission for recovery from Bridge
3. Recover ROV