Dive Plan 4899- May 2, 2017

Port: Jeremy Rich Starboard: Ed Hobart Pilot: Jefferson Grau

On Bottom Target: Teddy Bear

Objectives: Deploy Vent-SID at Crab Spa, take majors, pick up Crab Trap, collect Riftia

Basket List

- 1. Large biobox w/ Crab Trap
- 2. 2 small bioboxes, one with colonizers
- 3. 2 medium bioboxes
- 4. T probe

Locations:	Lat	Long	m	X	У
Pvent	9 50.276	104 17.474	2511	4628	77926
Bio9	9 50.296	104 17.476	2514	4624	77962
Crab Spa MkF	9 50.396	104 17.489	2505	4600	78147
Tica	9 50.406	104 17.490	2505	4598	78165
Teddy Bear	9 50.50	104 17.51	2514		

- 1. On bottom, first proceed to Teddy Bear to release LVP:
 - a. Put wand in holster
 - b. Release LVP
- 2. Transit to Vent-SID landing site
- 3. Pick up Vent-SID and proceed to Crab Spa
- 4. At Crab Spa, position instrument
- 5. Deploy intake nozzle of Vent-SID
 - a. Insert wand into same spot as for LVP wand
 - b. Stabilize wand
 - c. Temperature at intake should read 25°C
 - d. Turn on Vent-SID
- 6. Pick up both colonizers CV at Alvinella mound. When picking up, move extremely slowly to minimize loss of material
- 7. Put in right medium biobox
- 8. Measure T at spot were colonizers were located
- 9. Deploy new colonizers in hotter fluids of around 80°C

- 10. Collect CV colonizer at Crab Spa microbial mat area
- 11. When picking up, move extremely slowly to minimize loss of material
- 12. Put in front left small biobox
- 13. Measure T at spot were colonizer was
- 14. Collect several rocks with microbial mats in the area around CV colonizer
- 15. Put in medium left biobox
- 16. Collect Riftia near Alvinella mound
- 17. Before collecting Riftia, proceed with following:
 - a. Measure T at base of Riftia clump,
 - b. Make a T measurements at plume level
- 18. Proceed with collection and put worms in large biobox. Make sure worms fit into biobox and nothing sticks out. Don't fold them!
- 19. Proceed to Bio9
- 20. Check on colonizer CV
- 21. Collect piece of chimney with Alvinella and put in front right small biobox
- 22. Measure T of fluids

Alvin Dive 4899 – AT37-12 MAY 2, 2017

Pilot: Jefferson Grau

Port Observer: Jeremy Rich Starboard Observer: Ed Hobart Notes are from Jeremy Rich

(NOTE: A copy of framegrabber does not exist for this dive)

GMT	Comments
14:00	Descending
16:00	At sea floor
16:20	At Teddy Bear taking T at location of large volume pump inlet (x4558 y78350 d2516), T 12.7; The pump was released to the surface.
16:41	Collected crab trap at Teddy Bear (x4563 y78350 d2516). The trap was full of about 30 crabs. We proceeded to Vent-SID landing site.
17:03	Found Vent-SID at landing site.
17:29	Transiting to Crab Spa with Vent-SID
18:05	The Vent-SID was in position at Crab Spa. Attempted communication with Vent-SID via ICL. Communications were noisy and failed. We aborted trying to start the Vent-SID.
19:22	We collected two CV colonizers at the Alvinella mound ("Wedding Cake"; x4595 y78140 d2513). T on marker with long string (east side of mound) was 65°C, marker on west side of mound T 28°C.
19:38	Deployed 2 CV colonizers at Wedding Cake. CV7 was placed but then fell down and was repositioned on subsequent dive 4900. CV8 was placed in T60-100°C at top of Wedding Cake mound.
20:00	Proceeded back to the Vent-SID at Crab Spa. ICL communications not working, no way to start Vent-SID. Placing of Vent-SID inlet into Crab Spa vent fluid was never attempted. Vent-SID was sent back to the surface.
20:39	CV3 colonizer was collected at Fury Rock, near Crab Spa (x4612 y78152 d2505). T 10°C
20:57	Collected 7 small rocks with thick microbial filamentous biofilm at Fury Rock. T 2°C where rocks were collected.
21:30	Collected Riftia in mussel field (x4582 y78167 d2516) near Wedding Cake. 15 Riftia and 4 mussels were collected. At base of Riftia tubes T 13-18°C, at plume of Riftia T 4-5°C.
21:45	Went off axis to park and rest batteries, waiting for Vent-SID to be secured on deck of Atlantis.
22:10	Ascending
23:40	Alvin secured on deck of Atlantis.

AT 37-12 Sample Sheet Alvin Dive# 4899 Date 5-2-17 Logged by Ed Hobart Port Obs. Jensey Rich Starboard Obs. ED Hobart Pilot Jefferson Grau Descend: 8, 65 At Seafloor: ______ Ascend: _____ FLUID SAMPLES Major# _____ Time _____ Temp ICL _____ Vent ____ X Y Hdg Depth Alt Marker (type/#) Comments _____ Major# _____ Time ____ Temp ICL _____ Vent ____ X ______ Y ____ Hdg _____ Depth _____ Alt ____ Marker ____ (type/#) Comments Major# _____ Time ____ Temp ICL _____ Vent ____ X ______ Y ____ Hdg _____ Depth _____ Alt ____ Marker ____(type/#) Comments _____ Major# _____ Time ____ Temp ICL _____ Vent ____ X ______ Y ____ Hdg _____ Depth _____ Alt ____ Marker ____ (type/#) Comments _____ Major# _____ Time ____ Temp ICL _____ Vent ____ X _____ Y ___ Hdg ____ Depth ____ Alt ____ Marker ____ (type/#) Comments Major# _____ Time ____ Temp ICL _____ Vent ____ X ______ Y ____ Hdg _____ Depth _____ Alt ____ Marker ____(type/#) Comments **BIOLOGICAL SAMPLES** Take photos before collection, in the claw (if possible), and after collection. If needed, make sketches with scales. Sample # _____ Time ____ Temp ____ Vent ____ X _____ Y ___ Hdg ____ Depth ____ Alt ___ Marker ____(type/#) Sample type ____

Basket location _____

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ADDITIONAL NOTES:

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EXPERIMENT DEPLOYMENTS/RECOVERIES

Take photos before and after deployment or recovery. Make sketches with scales.

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EXPERIMENT DEPLOYMENTS/RECOVERIES

Take photos before and after deployment or recovery. Make sketches with scales.

Expt IDI#pamp Time 1620 Temp 12.7 VentTeddy Bear
X 4558 Y 7835 Hdg 14 Depth 256 Alt Marker (type/#)
Land A Co Description of associated found 8 for type of venting 14 ford in Total
cut off the west side of crack next old weight stack, west
Additional assoc. samples: type/ID of riftia clunp
Additional descriptive comments <u>We released the pump to the surface</u> seawaker Sexpt ID/# <u>Crab collection</u> Time 1641 Temp <u>ambient</u> Vent <u>Teddy Bar</u>
Expt ID/# CVas Time 1641 Temp wistent Vent 18ddy Bar
x <u>4563</u> y <u>7835</u> Hdg <u>290</u> Depth <u>25/6</u> Alt Marker (type/#)
Description of associated fauna &/or type of venting Collected Crab trop. full of CVaSS and put out new are trap.
Additional assoc. samples: type/ID
Additional descriptive comments
2 collectors colonizers CV
Expt ID/# Time 1922 Temp Vent Alvinella Worund
x <u>4595</u> y <u>78,142</u> Hdg <u>46</u> Depth <u>2513</u> Alt Marker(type/#)
Marker with > marker on east side T 65°C Harbaran mount
on aer string
Additional descriptive comments
Expt ID/# Deploying 2 Cottectors at Alvinella mound Time 1938 Temp Vent
x 4595 y 48142 Hdg 46 Depth 2513 Alt Marker (type/#)
Description of associated fauna &/or type of venting
CV7.2017 placed at hot fluid 50-100°C
Additional assoc. samples: type/ID CV8 2017 placed in but fluid at top of mon
Additional descriptive comments
Expt ID/# CV3 Time 2039 Temp 10°C Vent Furly rock
X 46/2 Y 76/52 Hdg 22 Depth 2505 Alt Marker (type/#)
Description of associated fauna &/or type of venting
Additional assoc. samples: type/ID
Additional descriptive comments

MARKERS DEPLOYED

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ADDITIONAL NOTES: