uCSPP1 "redelivered" to OSU/OOI on 4/4/14

uCSPP System Testing

date tester

4/2 PAR ✓ 1. With profiler indoors, attach host serial cable to profiler and start the host program using the appropriate serial port.

4/2 PAR ✓ 2. Power profiler by installing battery loopback connector.

4/2 PAR ✓ 3. Verify serial coms operation (WK message appears and status indicators update).

4/2 PAR ✓ 4. Turn on the winch and verify that it is detected (WC,WK message and status updates).

4/2 PAR ✓ 5. Go to the Winch Control|Misc|Compass taband verify that the compass data is being received

4/2 PAR ✓ 6. Verify that the winch pressure data is present.

4/1 PAR ✓ 7. Release the brake and verify that the drum can be turned by hand and that the rope spool value changes.

4/1 PAR ✓ 8. Run the winch in both directions, first at 10 and and then at 30 cm/s.

4/2 PAR ✓ 9. Load ~~5 to 10~~ 120 m of test rope on the drum for ~~silo~~ ocean testing, leaving approximately 3m of rope out.

4/2 PAR ✓ 10. Start log file 10927042.PPB, etc.

4/2 PAR ✓ 11. Turn on instruments, CTD and winch.

4/2 PAR ✓ 12. Verify that the Triplet and PARs wipers move at power up.

4/2 PAR ✓ 13. Verify that the winch compass is outputting data.

4/2 PAR ✓ 14. Verify that the winch pressure sensor reading is varying

4/2 PAR ✓ 15. Power off winch, instruments and CTD.

4/2 PAR ✓ 16. Issue BFS,1 and BFS,2 commands to check battery statuses.

4/2 PAR ✓ 17. Close log file.

4/2 PAR ✓ 18. Offload and then delete just logged files from profiler.

4/1 PAR ✓ 19. Run file processor program on logged data and verify output data all components (CTD ✓ TRIP ✓ PARS ✓ OCR ✓ OPT ✓ ADCP ✓ ACS ✓ SUNA ✓ BF1 ✓ BF2 ✓) and mvs 1 reported by Triplet ✓ and PARS ✓ and MVS 0 reported by PARS at power down ✓.

4/2 PAR ✓ 20. Enter PSW command and verify surface detection.

4/2 PAR ✓ 21. Depress pressure switch diaphragm and verify PSW reads submerged.

4/2 PAR ✓ 22. Reconnect pump cable, power PMP on, verify operation, and power off.

4/2 PAR ✓ 23. Verify PAR shutter in closed position and triplet wipers between windows

4/2 PAR ✓ 24. Power off profiler and remove serial cable.

4/2 PAR ✓ 25. Move profiler to silo. – silo not available - used ocean test

4/2 PAR ✓ 26. Install coms loopback.

4/20 PAR ✓ 27. Perform a buoyancy test of profiler in silo. Adjust ballast until flotation is between 25 to 30 pounds, and the top of the flotation is within 10 degrees of being level. – testing done @ Neahmann quarry.

4/2 PAR ✓ 28. Setup and verify host computer network connection to OMC server and host.

N/A 29. Remove profiler from silo, attach profiling line to silo attachment point and re-establish power to profiler.

4/20 PAR ✓ 30. Depress the power button on the acoustic modem and listen for its power up chirp sequence.

4/2 PAR ✓ 31. Verify that the profiler establishes a connection to AMPServer and host computer.

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N/A __32. Place profiler back into the silo.

4/2 ✓ __33. Issue the manual IGF command to the profiler to get a new GPS position fix. Coms will drop out once the profiler receives the IGF command. Wait for the profiler coms to re-connect. Verify that it has a new GPS position fix.

3/20 ✓ __34. Via host, turn on winch and spool on rope until the profiler flotation is just below the surface.

__35. Verify that the compass heading changes through a full 360 degrees of rotation. silo unavailable - test skipped.

3/20 ✓ __36. Adjust winch current using the STA command until it slowly starts to submerge, then decrease the STA setting by 0.5A.

3/20 ✓ __37. Record STA value 2.0 – proved to be too high during testing. Spec to be changes.

3/20 ✓ __38. Run profiler down until CTD is just below the surface. Record the CTD depth 0.52

3/20 ✓ __39. Goto the Misc|Depth tab, turn on the CTD, wait 5 seconds and then use the Winch to CTD button to adjust the winch depth offset. Record the Depth Offset value 0.56

3/20 ✓ __40. Turn off winch and CTD.

3/20 ✓ __41. Goto the Advanced|Profile tab and set the Radio depth to the CTD depth recorded above plus 0.2 m

4/2 ✓ __42. Run a profile with a start time of 10 minutes from the current time with a 5 minute interval, and a 10 cm/s ascent rate from a zero spool home position to a stop depth that matches the radio depth. Select the Auto Release checkbox to ensure that the profiler will continue running following the first profile.

skipped due to unavailability of silo surface modem tested at ooc on 4/4/14

__43. While the profiler is parked at the bottom, connect the surface acoustic modem to a computer and power supply. Start a terminal program and turn it on.

__44. Enter +++ to get to the command prompt

__45. Enter ATD2 to connect to the profiler modem

__46. Once connected, enter $PWETC,,,,,DATE*<ret> to test the acoustic connection to the profiler.

__47. After getting a response, enter +++ to return to the surface modem command prompt. Enter ATH<ret> to put the profiler modem back to sleep then power off the surface acoustic modem.

4/2 ✓ __48. Allow the profiler to surface, establish coms and start another profile.

N/A __49. Select the Auto Hold checkbox, enter 0 in the Auto Hold text box and de-select the Auto Release checkbox to halt profiling after the second profile.

N/A __50. Once the profiler surfaces and re-establishes coms, verify that it has ceased profiling. Remove the profiler from the silo, remove the power loopback plug to turn it off, and bring it back indoors.

4/2 ✓ __51. Connect a host serial cable and offload the files from the test profiles.

4/3 ✓ __52. Power on the winch, remove the test rope, turn off the winch and remove power from the profiler.

4/7 ✓ __53. Verify the data within the test profiles.