

# APPENDIX V

## DSOG Unmanned Vehicle Status

### JASON/Medea

- Addition of Auxiliary Hydraulic System - completed
- Installation of Benthos DSC - underway
- Documentation/Training - underway
- Revision of Manipulator Gripper - underway
- Revise design of lower payload Skid/Basket - complete
- Test HiDef Video - underway
- Install Zoom Color Video Camera - underway

### ARGO II

- Improved Obstacle Avoidance Forward Looking Sonar complete, not tested
- Thrusters for Heading Control - complete
- Resolve Noise on LBL Transducer - complete
- Install Benthos DSC - complete
- Test HiDef Video - underway
- Documentation/Training - underway

### DSL 120

- Replace Depressor - complete
- Refine Low Speed Tow Dynamics - underway
- Addition of Auxiliary Data Channels - complete
- Determine suitable Upgrade Path for Surface Processing proposal pending
- Documentation Training - underway
- Addition of audio uplink for LBL Nav. - complete

## JASON Manipulator Test Program

### Objectives/Status

- Improve reliability
  - conducted approx. 150 hours of operations during pressure tests and dock trials
- Test at maximum rated pressure
  - Tested to 6,800 meters
- Develop techniques for handling and triggering "double major" hydrothermal vent fluid samplers
  - installed auxiliary hydraulic system and associated triggering mechanism
- Design and test new elevator system
  - Mid water design/docking transfer
- Redesign gripper
  - Improve gripping force and address pressure related failure
- Improve spares and documentation
- Demonstrate ability to work with temperature probes and "bio. boxes"
  - Underway

## DSOG Navigation Upgrade Status

- Three copies of Winphrog software and associated hardware purchased

- Initial interface to Benthos 455 ASP completed
- Field trials during ALVIN engineering dives:
  1. Winphrog functioned in parallel to ACNAV
  2. In hull test completed
- Interface to ROV system underway and will be tested during upcoming field programs
- Presently determining suitable upgrade path for ALVIN in hull system
- Preparing phase two proposal to address ALVIN in hull system and advanced capabilities (i.e. doppler/USBL, replacement of portable LBL system for ROVS)