

300070 - DMO Support - Ventana

Week 50

1. Paul McGill
 - a. Helped DJ troubleshoot a fan error message on the Miranda video box

Week 49

1. Kevin Gomes
 - a. Small stuff to bring things back up after power outage on Carson.

Week 44

1. Paul McGill
 - a. Continuing to work with DJ to find suitable thumbsticks for ROV camera control

Week 41

1. Paul McGill
 - a. Researching miniature joystick options for *Ventana* camera

Week 39

1. Paul McGill
 - a. Helped Ethan with setting nulls on repaired joystick
 - b. Worked with DJ on better way to control camera from pilot's joystick
 - c. Working with Duane and DJ to add isolation to new power monitor board

Week 37

1. Paul McGill
 - a. Helping DJ adapt a surplus potentiometer to fix broken joystick

Week 34

1. Paul McGill
 - a. Built circuit to test joystick range scaling
 - b. Attempted to repair potentiometer on old joystick without success. New pots on order.

Week 32

1. Paul McGill

- a. Refining design of joystick range scaling circuit

Week 31

- 1. Paul McGill
 - a. Did more troubleshooting and adjustments on Ventana joystick

Week 30

- 1. Paul McGill
 - a. Helped pilots fix two broken ROV joysticks that would've prevented science dives this week

Week 27

- 1. Thom Maughan
 - a. Discussed 2025 hours with DJ, recommended 40 hrs.

Week 25

- 1. Kevin Gomes
 - a. Picking up DiveLog app again.

Week 24

- 1. Kevin Gomes
 - a. Help troubleshooting CTD issue. Added new logger to log raw CSP messages to see what is being sent during the 'outages'.

Week 23

- 1. Thom Maughan
 - a. Sampling delay problem solved - mechanical fix. Wahoo. 300078 - DMO Support - AUV
- 2. Paul McGill
 - a. Reviewed final version of power monitor board so Duane T. can send to fabrication

Week 21

- 1. Paul McGill
 - a. Reviewed final design for current/voltage monitor board

Week 20

- 1. Paul McGill
 - a. Tested new Hall sensor for prop RPM on vehicle

- b. Continuing to help DJ with load cell for tether management system

Week 19

1. Kevin Gomes
 - a. Working on web application replacement for DiveLog app
2. Paul McGill
 - a. Helping DJ with a load-cell problem on the ROV winch

Week 18

1. Kevin Gomes
 - a. Dive log web application development

Week 17

1. Kevin Gomes
 - a. Picking up DiveLog web app work again.
2. Mike Risi
 - a. Applied updates for navproc machines during maintenance period
 - b. Worked with Kevin G. to cutover to 4D Nav, Wifrog is officially retired on the Rachel Carson

Week 16

1. Kevin Gomes
 - a. Mike R and I worked to add the camera temperature from the 4K camera through navproc and into dataprobe/logging. Andy had to make some changes in the firmware to send the temperature out of the lapbox, but it's working now.
2. Thom Maughan
 - a. Worked with DJ to root cause the ~1sec actuation delay. Kent had figured out building and programming a spare valve pack controller designed in 2016 and with that spare and the modbus and electrical analysis tools ready for measurement, we had the privilege of working with the pilots who figured out the root cause is due to the internals of the valve - a great mbari moment. Ceremonial electrical measurements were made just to verify all was indeed well.

Week 14

1. Mike Risi
 - a. Working with Kevin G. to incorporate 4K camera temperature into Dataprobe

Week 11

1. Thom Maughan

- a. Electrical testing of valvepack controller to investigate lag problem. Kent has the valve pack controller up and running, DJ has it setup with a valve on his bench and gave an overview of operations. There is a lag noticed between modbus tester app and wago stack, but this is likely not the problem as there is GreenSeas software controlling the valvepack on the vehicle.
- 2. Mike Risi
 - a. Worked with Andy to update lapbox firmware and get camera data reporting on Dataprobe

Week 10

- 1. Paul McGill
 - a. Continuing to help DJ sort out power issues on ROV.
 - b. Helping DJ figure out why hydraulic valves are slow. Looking at valve drivers and made some measurements on the valves.

Week 9

- 1. Paul McGill
 - a. Helped DJ with ROV power problem

Week 8

- 1. Thom Maughan
 - a. Valve pack controller boards are in assembly. Source code has not been located however the hex file exists. Need to find a PIC programmer and utility.
- 2. Paul McGill
 - a. Working with DJ and Duane T. on a power monitoring system for Ventana. They are having brownouts during dives and need to see where the power is going.

Week 7

- 1. Kevin Gomes
 - a. Working on web application to replace MiniROV DiveLog (shore based) which will be the first step in building a web application to replace DiveLog on Carson and eventually Packard
- 2. Thom Maughan
 - a. Valve pack controller board is being stuffed. A hex file has been located, however the source has not been found.
- 3. Paul McGill
 - a. Working on a couple of Ventana problems with DJ. We'll tackle them next week during the maintenance period.

Week 6

- 1. Thom Maughan

- a. Ventana has an issue with valve pack delay. It was found there are no spares of French's valve pack controller. DJ has a couple more being built and assembled and is requesting PIC programming when those come in.

Week 5

- 1. Kevin Gomes
 - a. Restarting my efforts on upgrading the DiveLog application. There are serious problems with ODBC on Mac and thinking we should migrate this to an API to get rid of the ODBC dependency.

Week 3

- 1. Kevin Gomes
 - a. Checked in on data paths during first cruise post 4D Nav install configuration

Week 2

- 1. Kevin Gomes
 - a. Working with 4D nav rep to help with 4D Nav demo setup on Carson and trying to figure out how to integrate with existing systems.
 - b. Working with Risi, we have a navproc process running that reads in the 4D nav feed and have logger set up to log the raw strings for testing.
 - c. Working with 4D Nav to see if they can put our WMS layers from ERDDAP into 4D nav. Not working yet, will continue to work with them.
 - d. Changed ODSS script running on board Carson to not only feed the asset locations to Winfrog, but to now send them to 4D Nav.
- 2. Paul McGill
 - a. Helped DJ with time synchronization issues with WinFrog upgrade, and refinement of ground-fault system on Ventana.
- 3. Mike Risi
 - a. Support work for 4D Nav integration