

# **Ryan Chouest daily data transmission and report**

***Period covered: 1000 hrs 07/12/2010-1000 hrs 07/13/2010***

***44.695 - Nautical miles covered***

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## **Cruise notes:**

As of 1000 hrs on 07/12, the *Ryan Chouest* continued west towards the port at Theodore. Vertical casts were taken at additional locations; #12 and 13 (Figure 1) of co-ordinates 30°06.018'N, 87°29.277'W and 30°02.843'N, 88°01.845'W, respectively.

## **Science results and preliminary interpretation:**

### Fluorometry results

The Chelsea and Trios sensors record minimal levels of inferred Poly Aromatic Hydrocarbons (PAH) for the track covered (Figure 2 and 3) while the Contros sensor readings displayed (Figure 4) show low levels of PAH.

### Surface Observations

Other than dolphins spotted at 1320 hrs on (07/11) and 0048 hrs on (07/12), 26°58'N and 84°32'W, the other significant surface observation made was sea weed within convergence at 0012 hrs on (07/12). See figure 1 for locations.

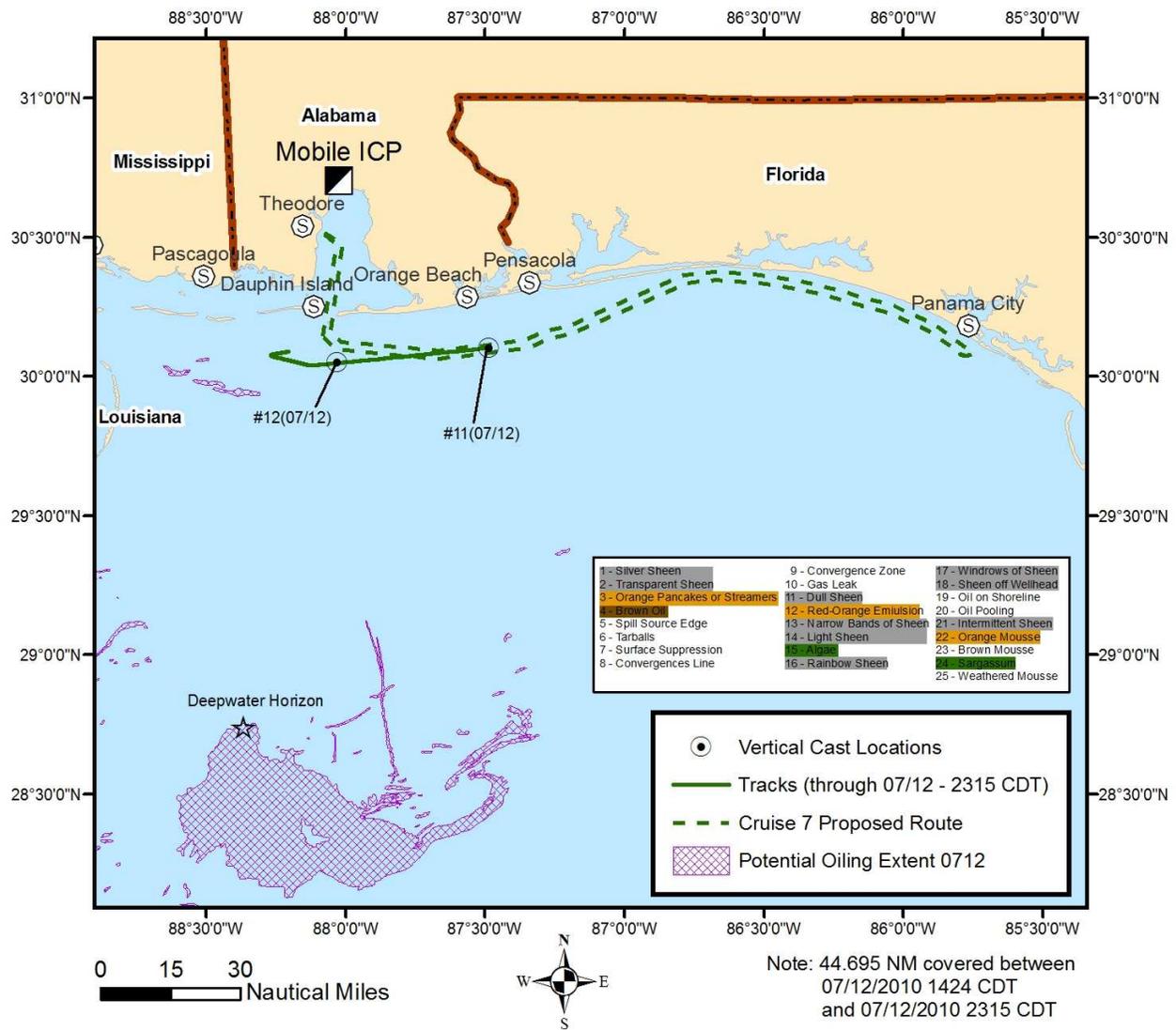
### Vertical casts fluorometry results

During this transect, one vertical cast (Cast # 11 / Cruise 7, 2010/07/12, N 30 06.0188, W 087 29.2770) was conducted in coastal waters south of Orange Beach.

One vertical cast was carried out in the red snapper fishery area, south of Port Theodore (Cast # 12 / Cruise 7, 2010/07/12, N 30 02.8430, W 088 01.8456). Fluorometry results of the casts are shown in

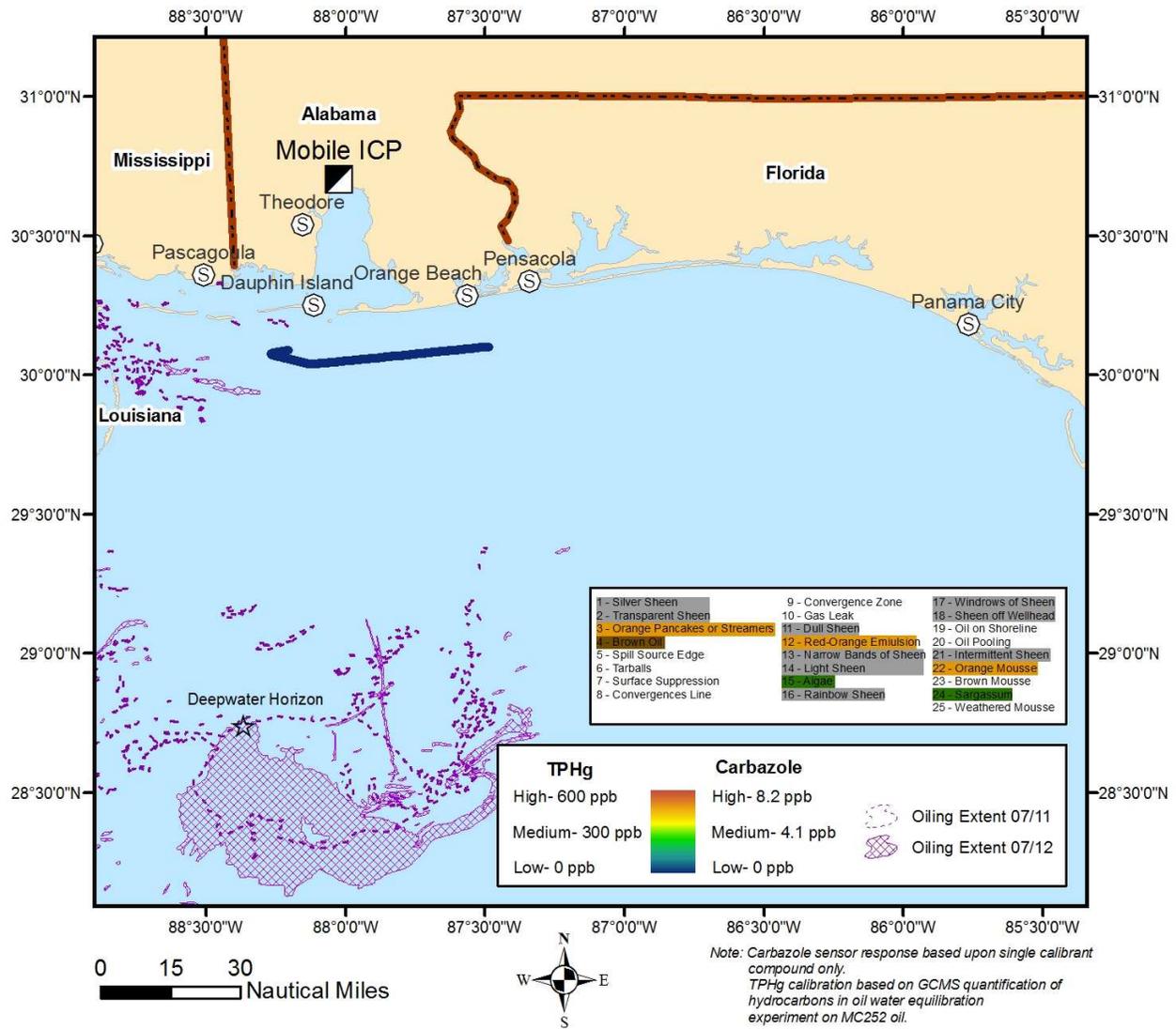
figure 5A and figure 5B. Conductivity and temperature values at each sampling depth, as indicated in the graph, are from the CDT unit attached to the vertical cast pump. The vertical profile in figure 5A shows close to baseline level of sensor response along the water column. Figure 5B shows minor increase in sensor response and reduced conductivity close to sea surface.

## Ryan Chouest Cruise 7 Status (07/12/2010 1424 CDT - 07/12/2010 2315 CDT)



**Figure 1.** Planned course plotted for Cruise 6. Purple shaded area represents outline extent of the slick from 07/12 ERMA composite. The bull's eye symbol represents vertical cast locations labelled by the cumulative number of deployed cast and date of deployment.

# Ryan Chouest Cruise 7 Data Chelsea - Fluorometer (07/12/2010 1424 CDT - 07/12/2010 2315 CDT)

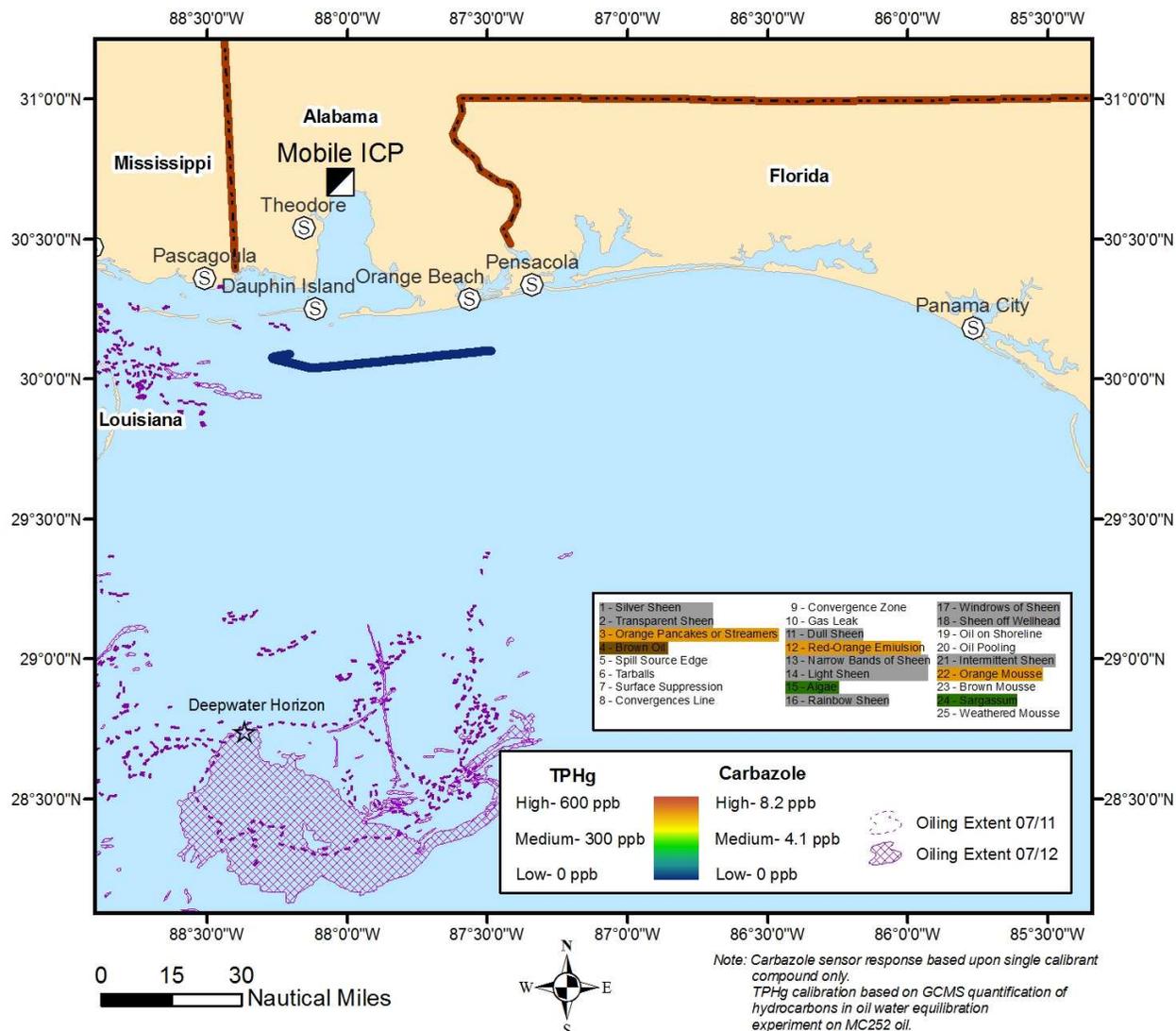


**Figure 2.** Chelsea fluorometer results plotted with location on cruise 7 track. Breaks in data occur when either data quality is poor or the systems were turned off due to pump problems.

# Ryan Chouest Cruise 7 Data

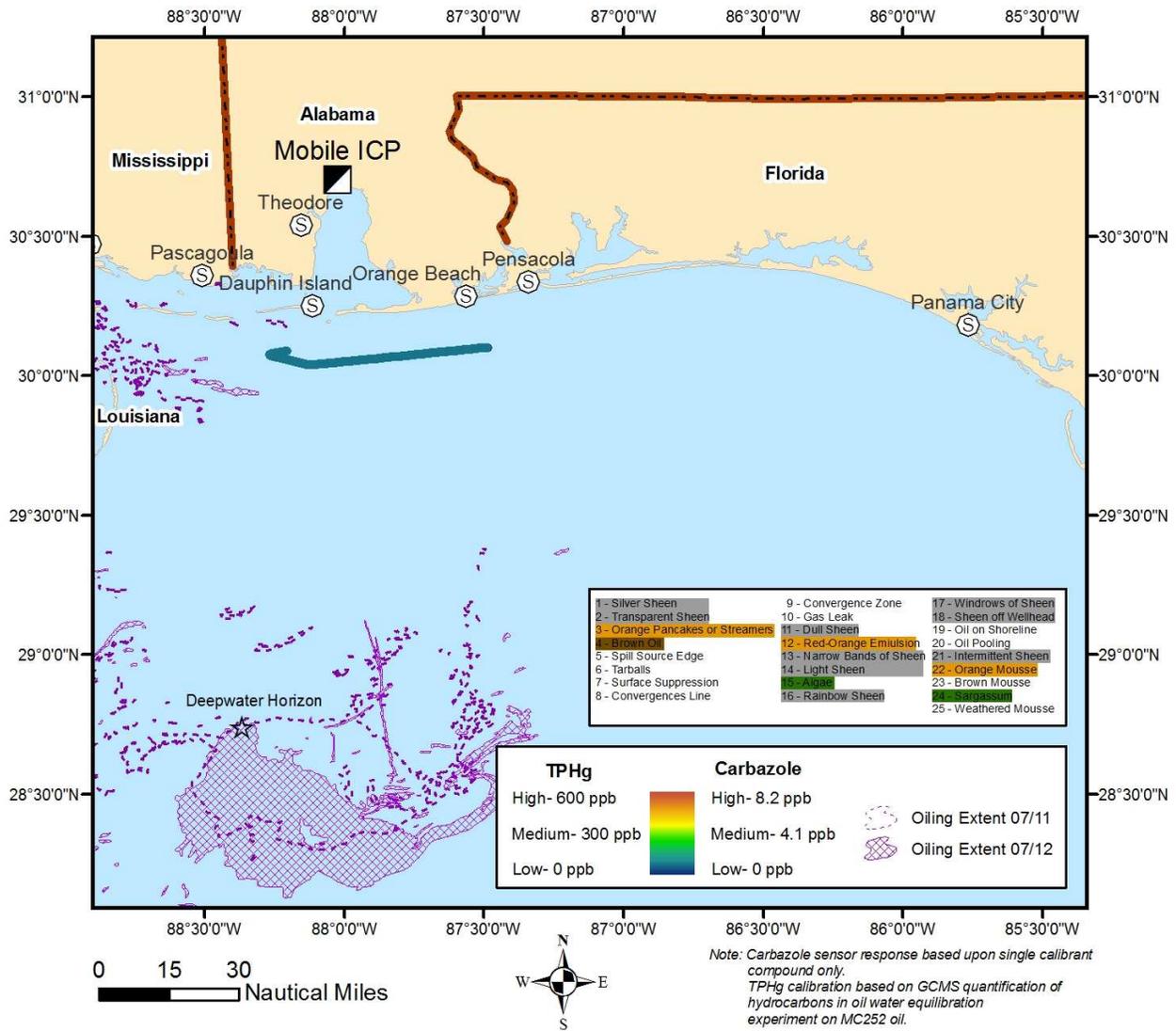
## Trios- Fluorometer

(07/12/2010 1424 CDT - 07/12/2010 2315 CDT)

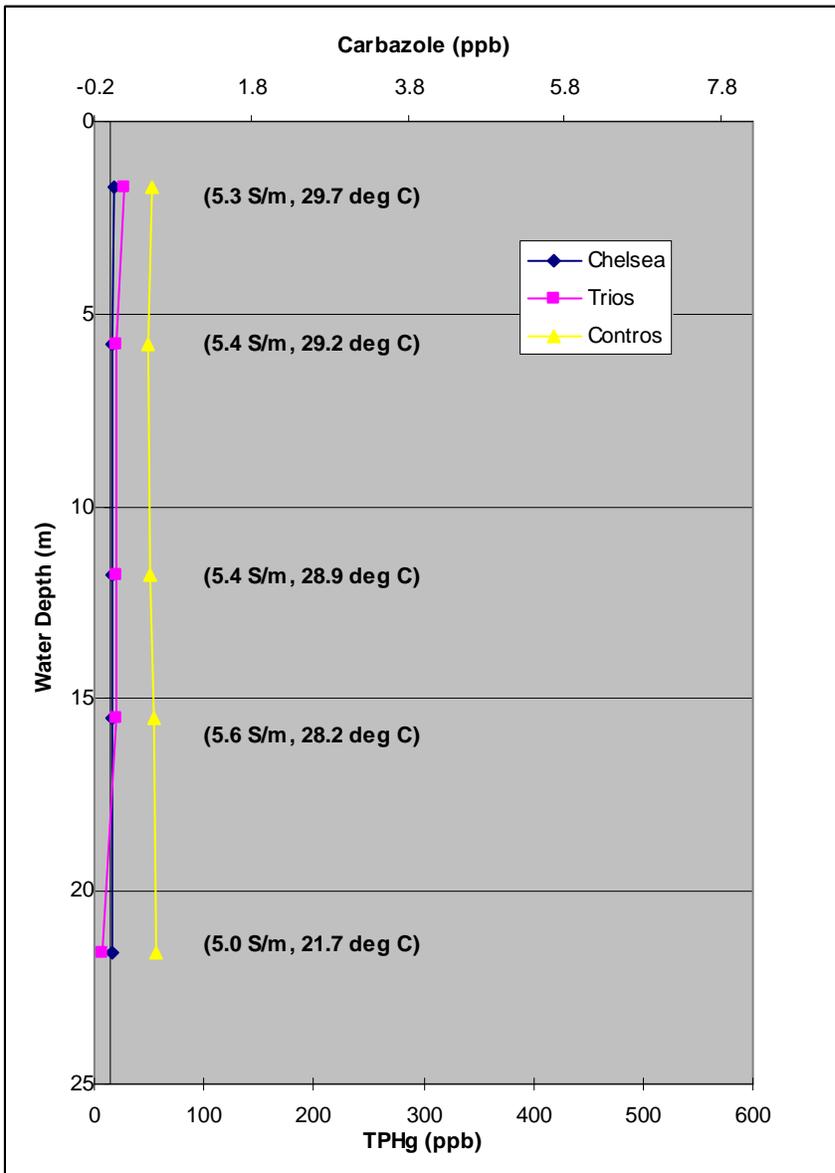


**Figure 3.** Trios fluorometer results plotted with location on cruise 7 track. Breaks in data occur when either data quality is poor or the systems were turned off due to pump problems.

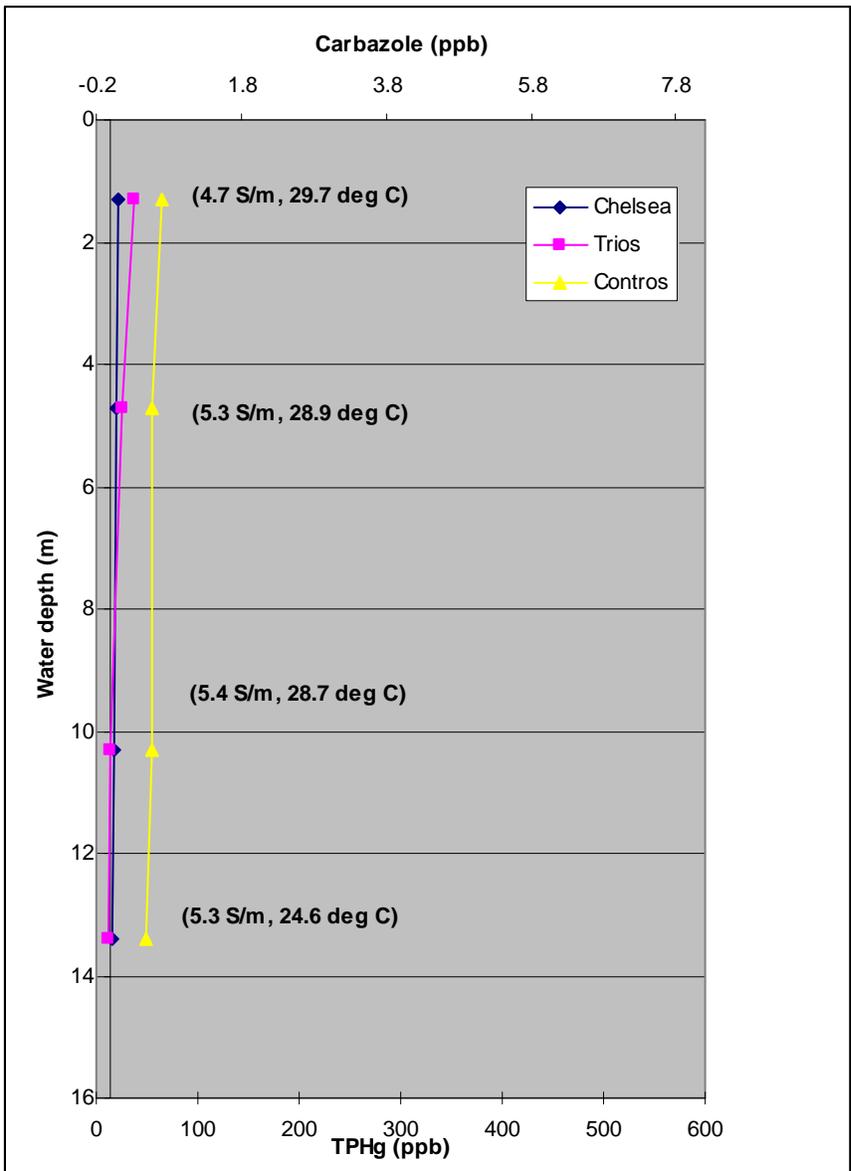
# Ryan Chouest Cruise 7 Data Contros- Fluorometer (07/12/2010 1424 CDT - 07/12/2010 2315 CDT)



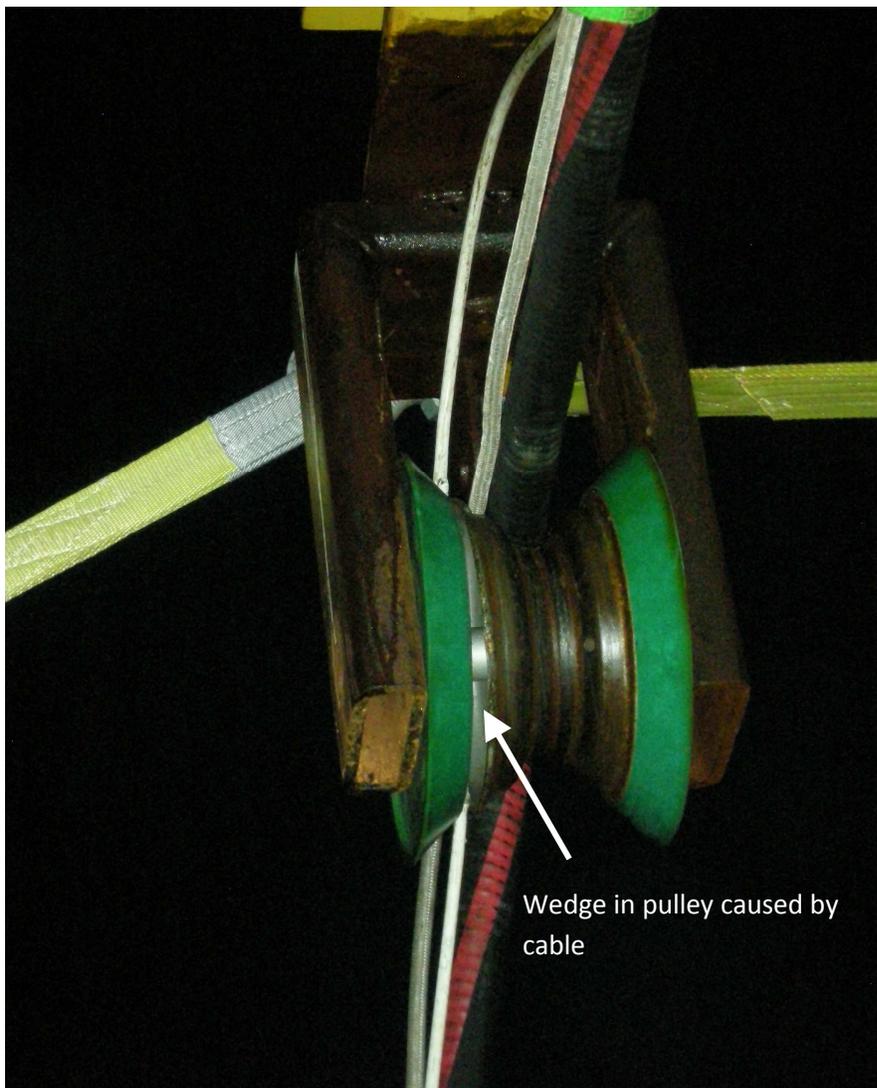
**Figure 4.** Contros fluorometer results plotted with location on cruise 6 track. Breaks in data occur when either data quality is poor or the systems were turned off due to pump problems.



**Figure 5A** Fluorometer response vs. water depth for vertical cast # 11 / Cruise 7 conducted on 2010/07/12 at N 30 06.0188, W 087 29.2770. (Conductivity and temperature values at each sampling depth, as indicated in the graph, are from the CDT unit attached to the vertical cast pump.)



**Figure 5B** Fluorometer response vs. water depth for vertical cast # 12 / Cruise 7 conducted on 2010/07/12 at N 30 02.8430, W 088 01.8456. (Conductivity and temperature values at each sampling depth, as indicated in the graph, are from the CDT unit attached to the vertical cast pump.)



**Photo 1.** Wedge created by cable between outer plastic rim and metal roller in pulley apparatus.

### **Problems/operational issues:**

At 2045, while the CSIRO crew realised the vertical cast from water got entangled with the underway pump as they attempted to retrieve it from the water. Additionally, they had discovered the cable attached to the hose connecting the vertical cast got wedged in between the plastic edge and metal roller of the pulley component attached to the crane (Photo 1).

### **Planned activities for next 24 hours:**

The *Ryan Chouest* will head back to Theodore due to the crane incident. A new pulley completely made out of metal has been recommended by Robert Thompson, the engineer on board.