

Ryan Chouest daily data transmission and report

Period covered: 21.00 06/11/2010 -10.30 06/12/2010

101.7 - Nautical miles covered

Vessel science party:

Andrew Ross (Andrew.Ross@csiro.au)

Emma Crooke (Emma.Crooke@csiro.au)

David Fuentes (David.Fuentes@csiro.au)

William Winner (William.Winner@noaa.gov)

Sara Gersbach (Sara.Gersbach@BP.com)

Contact details:

+ 1 337 761 9830 – Sat phone

+ 1 337-761-9830 – Broadband phone ship office

+ 1 337-761-9826 - Broadband phone ship bridge

Cruise notes:

Since 21:00 hrs 06/11/2010 we have transited from the previous Weatherbird station (29° 2.00 N 088° 0.000 W) to the far westerly of our Zig-Zag transect parallel to the Alabama and Florida coast. At the start point of the track we attempted another shallow cast of the pump and reel system. This was again unsuccessful and resulted in contamination of the sensor surfaces. At this point it was concluded that further testing of the hose would not occur until the underway system showed base line conditions. Over part of the late morning and early afternoon we spent time calibrating the instruments before reestablishing our route on track in the late afternoon.

Science results and preliminary interpretation:

Previous results from the period 21:00 through to 10.30 have shown that both the Trios and Contros fluorometer enhanced response correlates reasonably well edge of the previously reported slick extent from the 06/11 (Figures 3 and 4). Results from these instruments have generally been high when compared with previous results. The Chelsea fluorometer has not shown as pronounced results as those from the other instruments, this is possibly because the UV excitation and emission filters are set differently to the other instruments and therefore the instrument detects slightly different compounds within the water.

Planned versus actual route taken cruise 2:

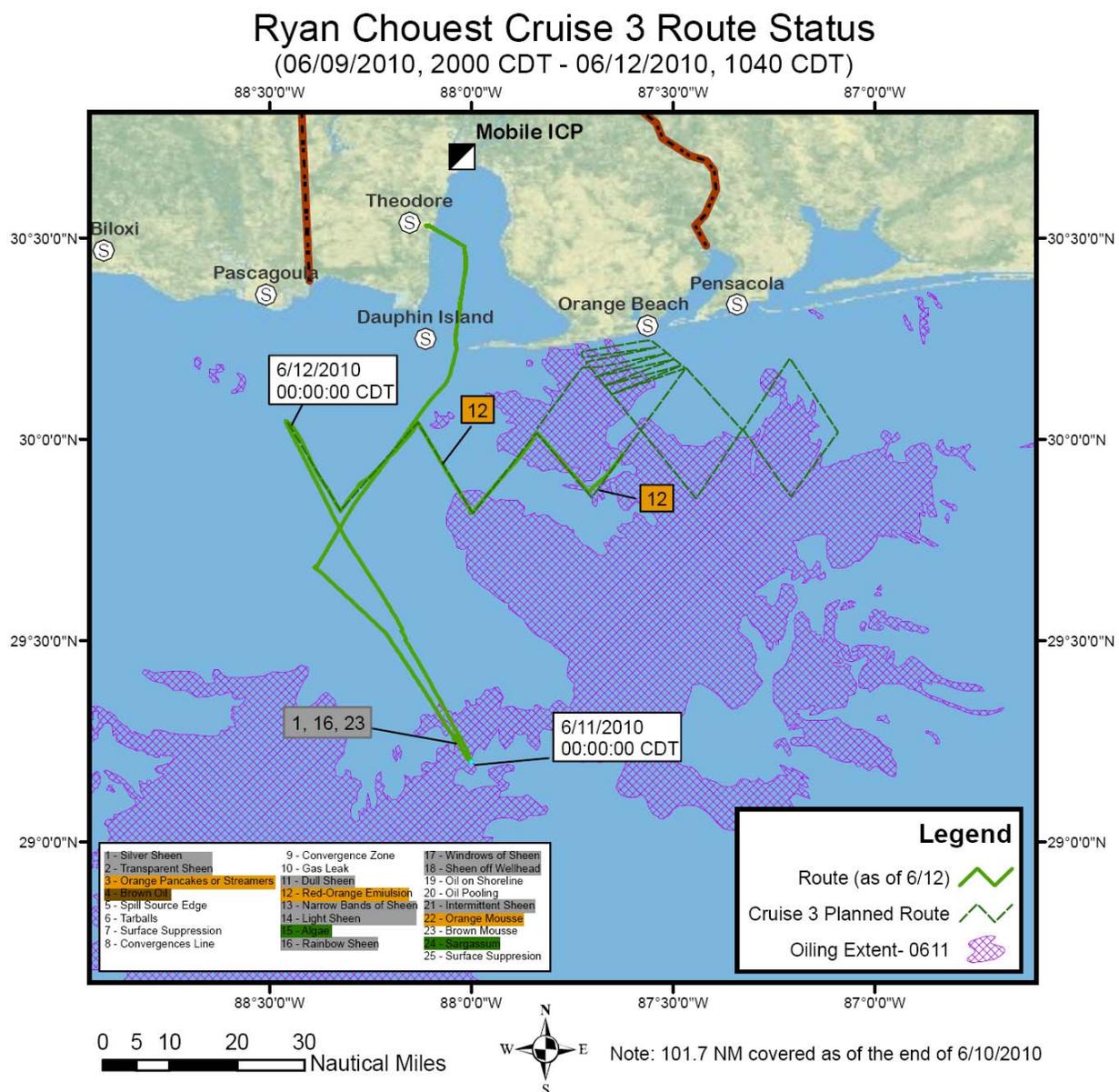


Figure 1: Planned versus actual route course plotted between 05:00 06/010 – 10.30 06/011. Purple shaded area represents outline extent of the slick from 06/11 ERMA composite.

Vessel science operations:

Other operations on the vessel included the calibration of the fluorimeters with dissolved hydrocarbon seawater extracts made using the parent MC252 oil using a slow stirring method adapted from that of Lang et al (2009). Aliquots of the water containing dissolve hydrocarbons were added to milliq water to produce a serial addition calibration curve. Further aliquots of this extract is being assessed by SPE separation followed by GCMS to determine the TPHg fraction concentration in the extracts.

Ryan Chouest Cruise 3 Data
 Chelsea- Fluorometer
 (06/12/2010, 0000 CDT - 06/12/2010 1530 CDT)

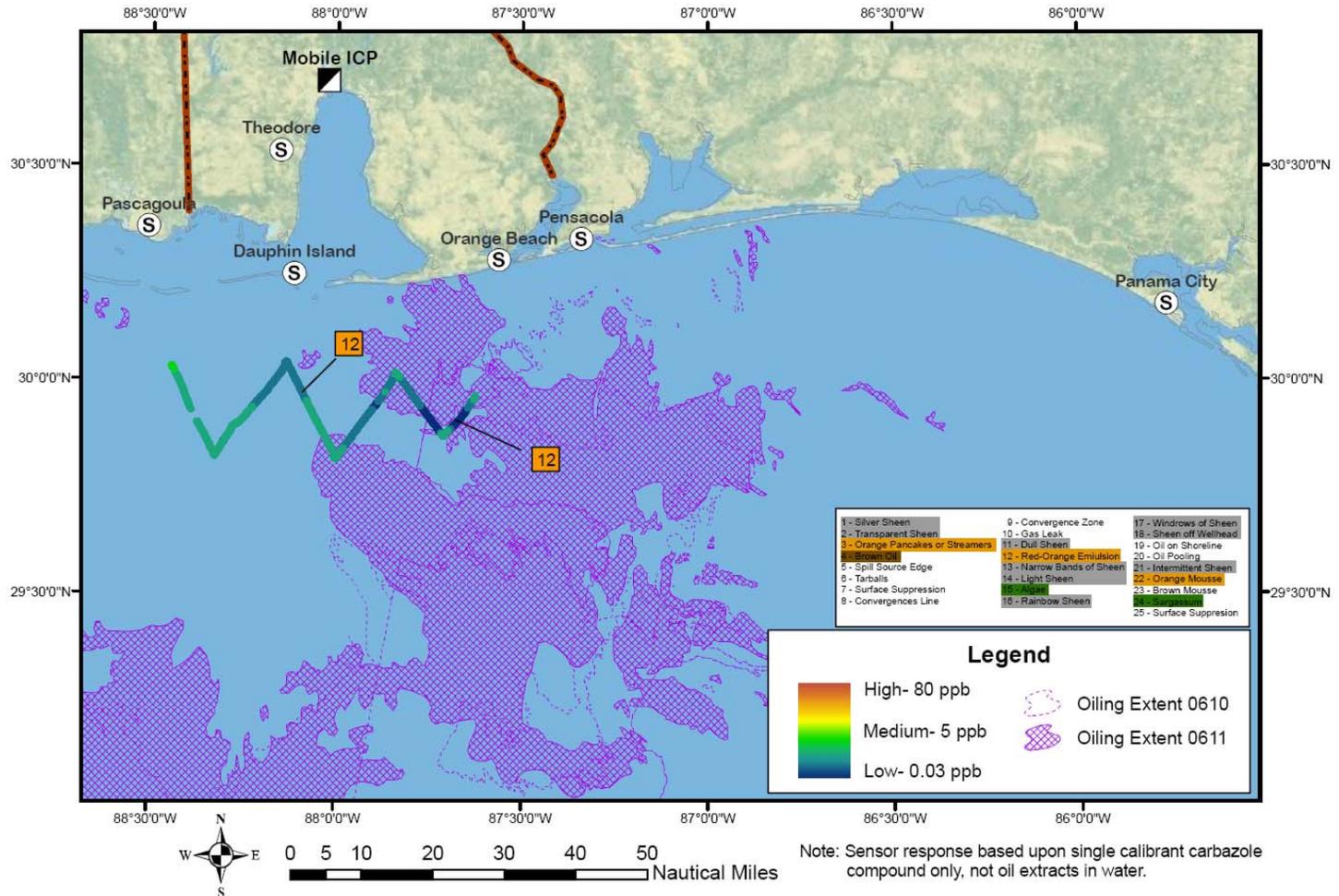


Figure 2. Chelsea fluorometer results plotted with location on cruise 3 track. Breaks in data occur when either data quality is poor or the systems were turned off due to pump problems. The Slick observations and their type are marked by the pointers.

Ryan Chouest Cruise 3 Data
 Trios- Fluorometer
 (06/12/2010, 0000 CDT - 06/12/2010 1530 CDT)

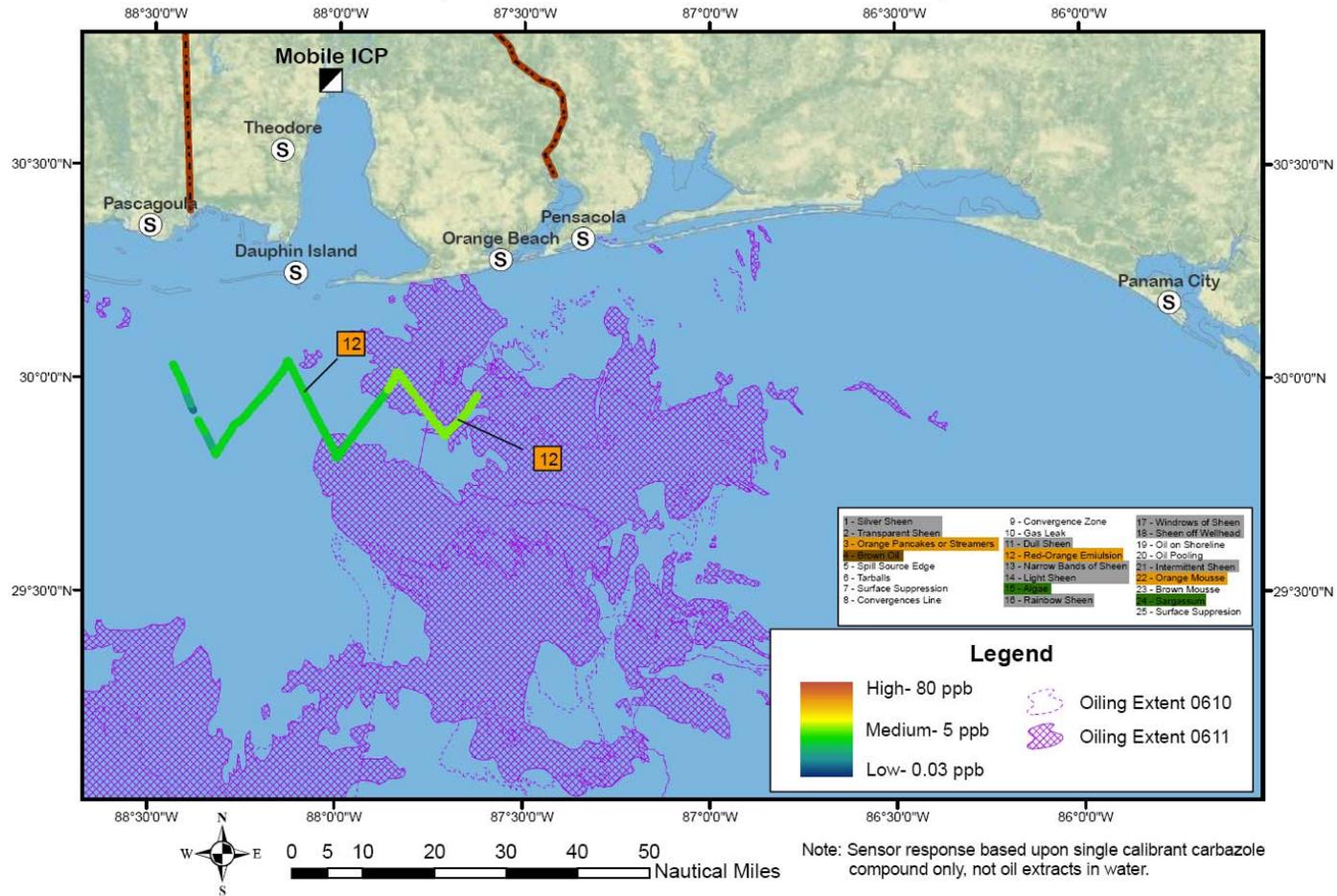


Figure 3. Trios fluorometer results plotted with location on cruise 3 track. Breaks in data occur when either data quality is poor or the systems were turned off due to pump problems. The Slick observations and their type are marked by the pointers.

Ryan Chouet Cruise 3 Data
 Contros- Fluorometer
 (06/12/2010, 0000 CDT - 06/12/2010 1530 CDT)

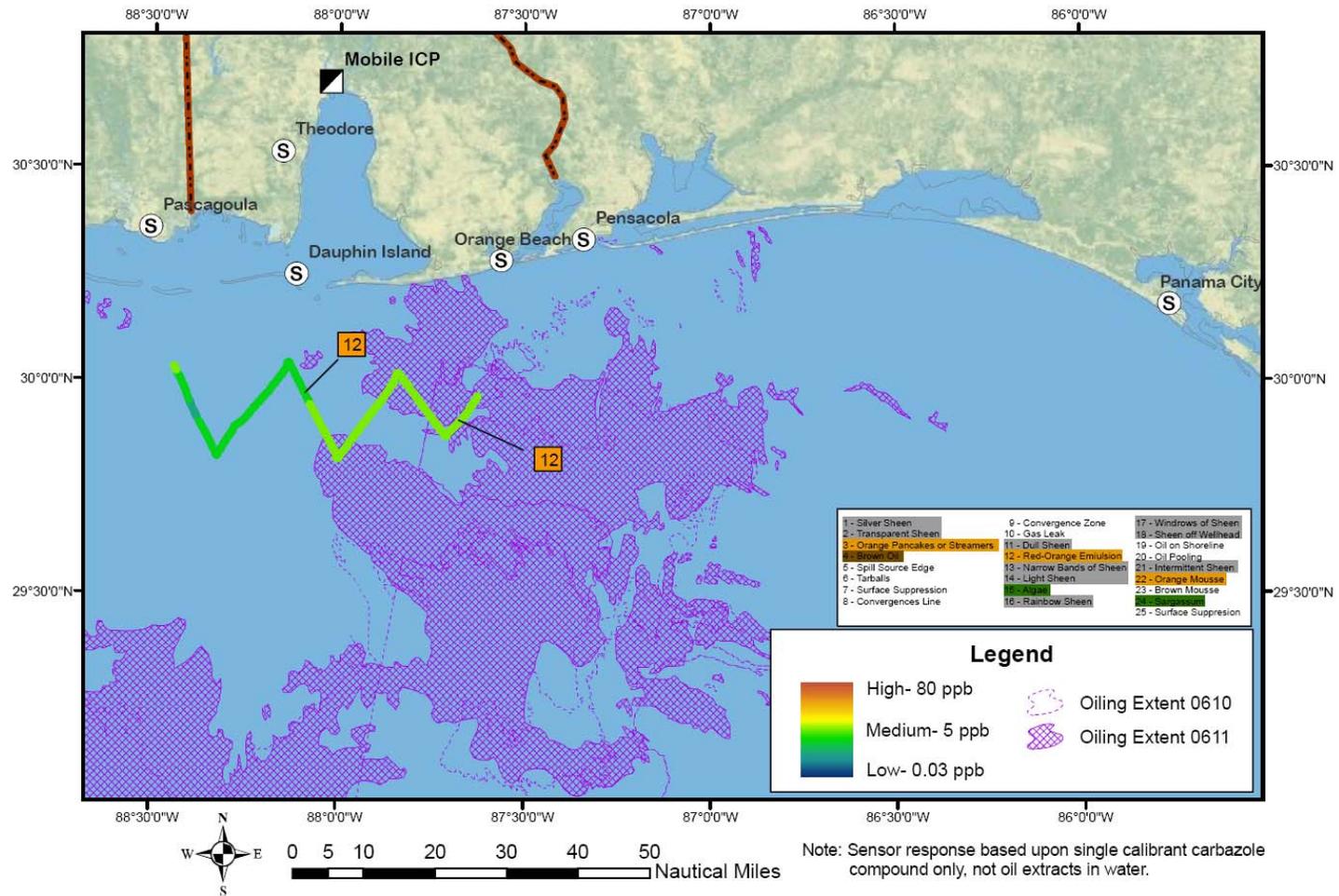


Figure 4. Contros fluorometer results plotted with location on cruise 3 track. Breaks in data occur when either data quality is poor or the systems were turned off due to pump problems. The Slick observations and their type are marked by the pointers.

Problems/operational issues:

No operation issues encountered

Planned activities for next 24 hours:

Continue on our planned route with the underway sensor system deployed parallel to the coast of Florida and Alabama. In the afternoon it is anticipated that additional personnel will join us on the vessel, and the route plan will be changed as the situation in the area develops.

References

Lang, D., Bastow, T., van Aarssen BGK, Warton, B., Davis, G., and Johnston, C. (2009). Polar compounds from the dissolution of weathered diesel. *Ground Water Monitoring and Remediation*, 29 (no. 4): 85-93.

