Ryan Chouest daily data transmission and report

Period covered: 13.30 06/14/2010-1300 06/15/2010

158.3 - 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 13.00 hrs 06/14/2010 we have continued our parallel route along the Alabama-Florida coastline gradually moving our survey area to the east in order to investigate possible hydrocarbon fingerprints along the Florida coastline and also re-establish base line results (figure 1). The route continued to be characterized by light sheens and occasional discrete concentrated accumulations of brown mousses until approximately 50 miles to the east of Pensacola. At 30° 15.510N 86° 55.610 W a dark spot appeared on the surface rapidly forming a silver sheen. In addition at 30° 16.33 N 86° 54.910 W a silver sheen surrounding a rainbow sheen which then surrounded a heavy very discrete patch of orange/brown mousse was observed. This area correlated well with an enhanced sensor response.

Science results and preliminary interpretation:

Generally the flourometer results recorded over the period show low to medium values of inferred concentration of hydrocarbons in the water column. The Chelsea values reach their peak in areas where there are visual observations of sheens or mousses on the sea surface (figure 2). Further east of these visual observations the sensor values reach baseline. Where the Chelsea values are increased in areas of sheens or mousses the recorded values are however not as high as those encountered over the last few days to the west in the Orange Beach and Pensacola region, and it could be inferred that the oiling in this area is not as pronounced as that to the west. The Trios and Contros devices also show a similar relationship to the Chelsea flourometer with the devices recording their highest inferred concentration of hydrocarbons for the day within the areas of observed sheens or mousses to the west (figures 3 and 4), however the sensor responses only reach baseline values in the area close to 30° N 86° 30’ W. It is unknown if the slightly elevated Trios and Contros flourometer sensor values encountered on the eastern end of the cruise track towards Panama City are within those expected for the region. There was only one visual occurrence of possible light sheen, which has to be treated with caution as the observation was made at night in very calm seas. When compared to today’s (06/15) ERMA oiling extent map (not shown on the maps as it is not a full composite) the visual observations and sensor outputs

recorded at the western end of the track are confirmed. However there is no apparent possible oiling detected to the east of 86° 15’ W, which leads us to the conclusion that the slightly elevated sensor values obtained in this area may reflect normal concentrations of hydrocarbons or other interferands in the water column.

Planned versus actual route taken cruise 2:

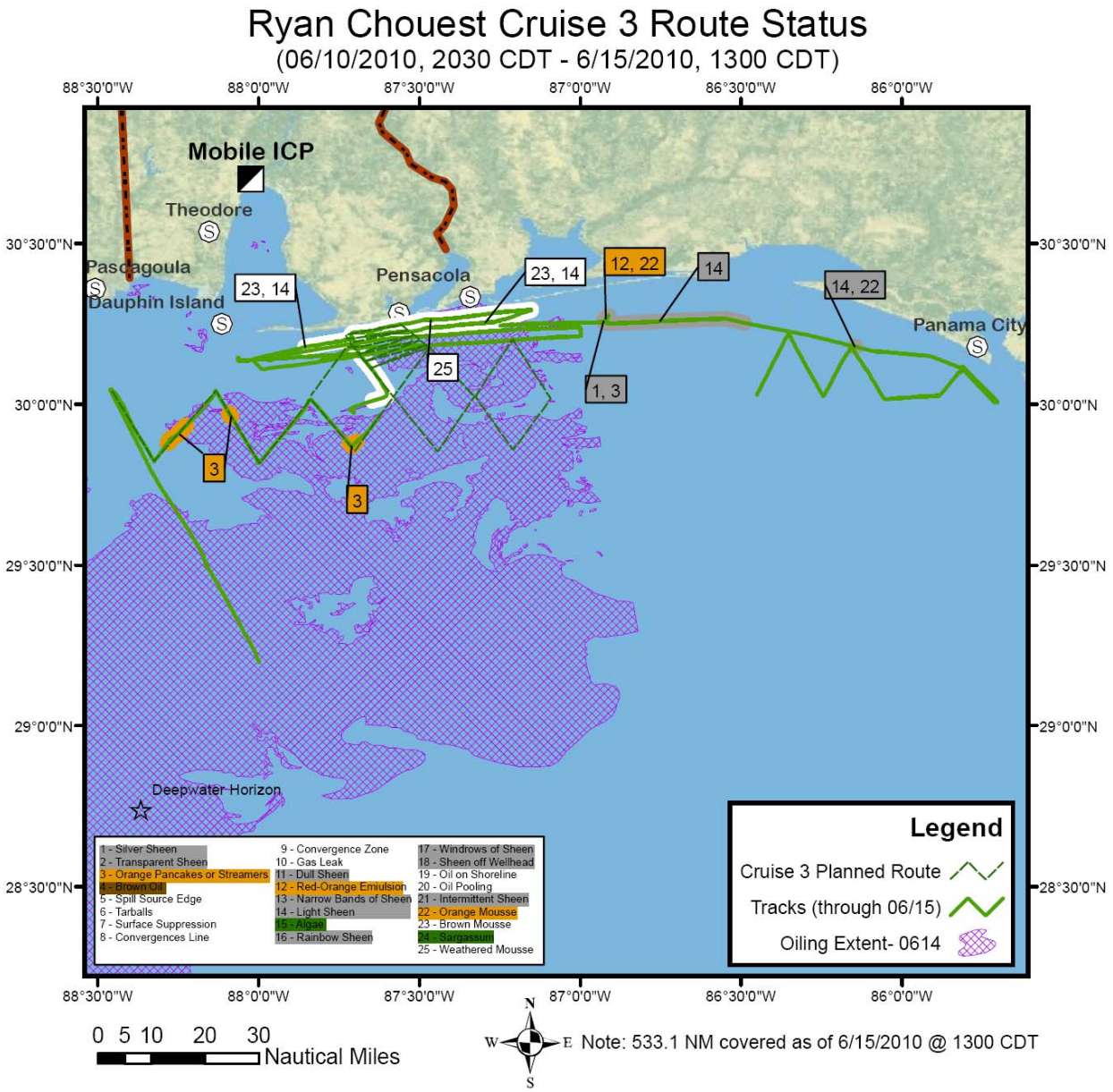

Figure 1: Planned versus actual route course plotted between 2000 06/10 – 1300 06/15. Purple shaded area represents outline extent of the slick from 06/14 ERMA composite.

Vessel science operations:

Underway sensor system deployment and testing of water samples using the SPE and liquid-liquid extraction. Operations documentation and templates being refined in anticipation of team change over.

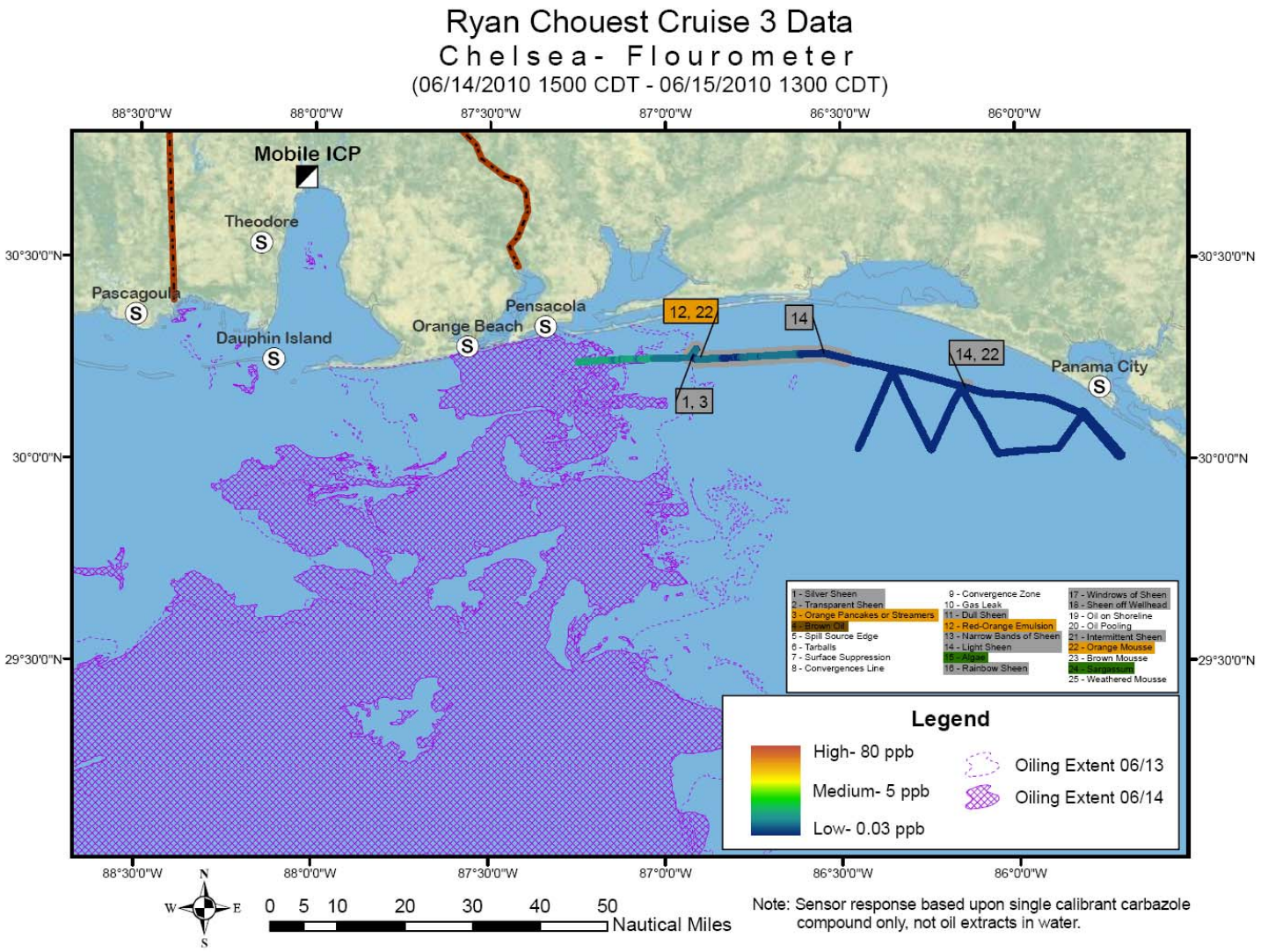

Figure 2. Chelsea fluorometer results plotted with location on cruise 3 track. Breaks in data occur when either data quality is poor or the systems were turned off due to pump problems.

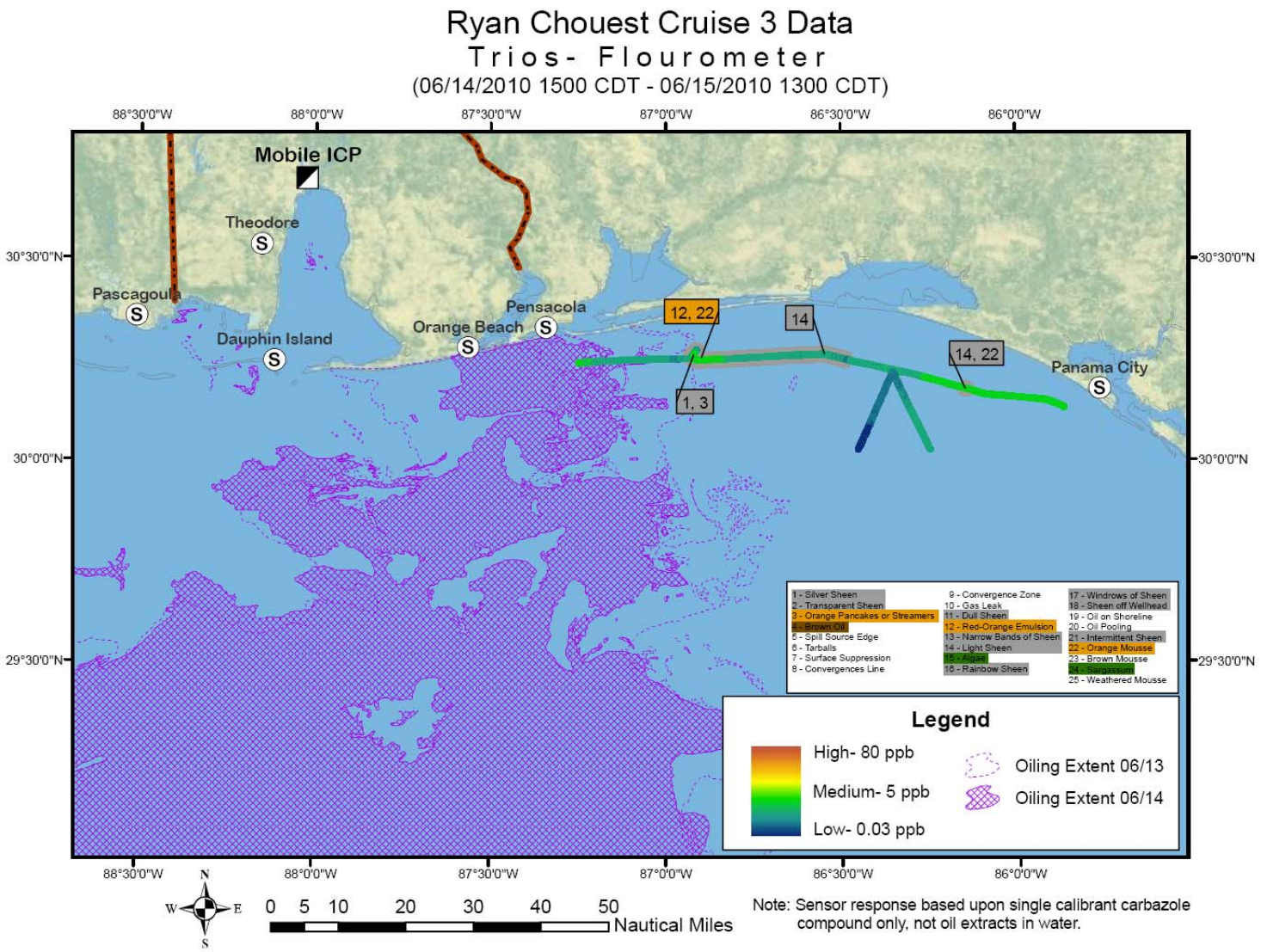

Figure 3. Trios fluorometer results plotted with location on cruise 3 track. Breaks in data occur when either data quality is poor or the systems were turned off due to pump problems.

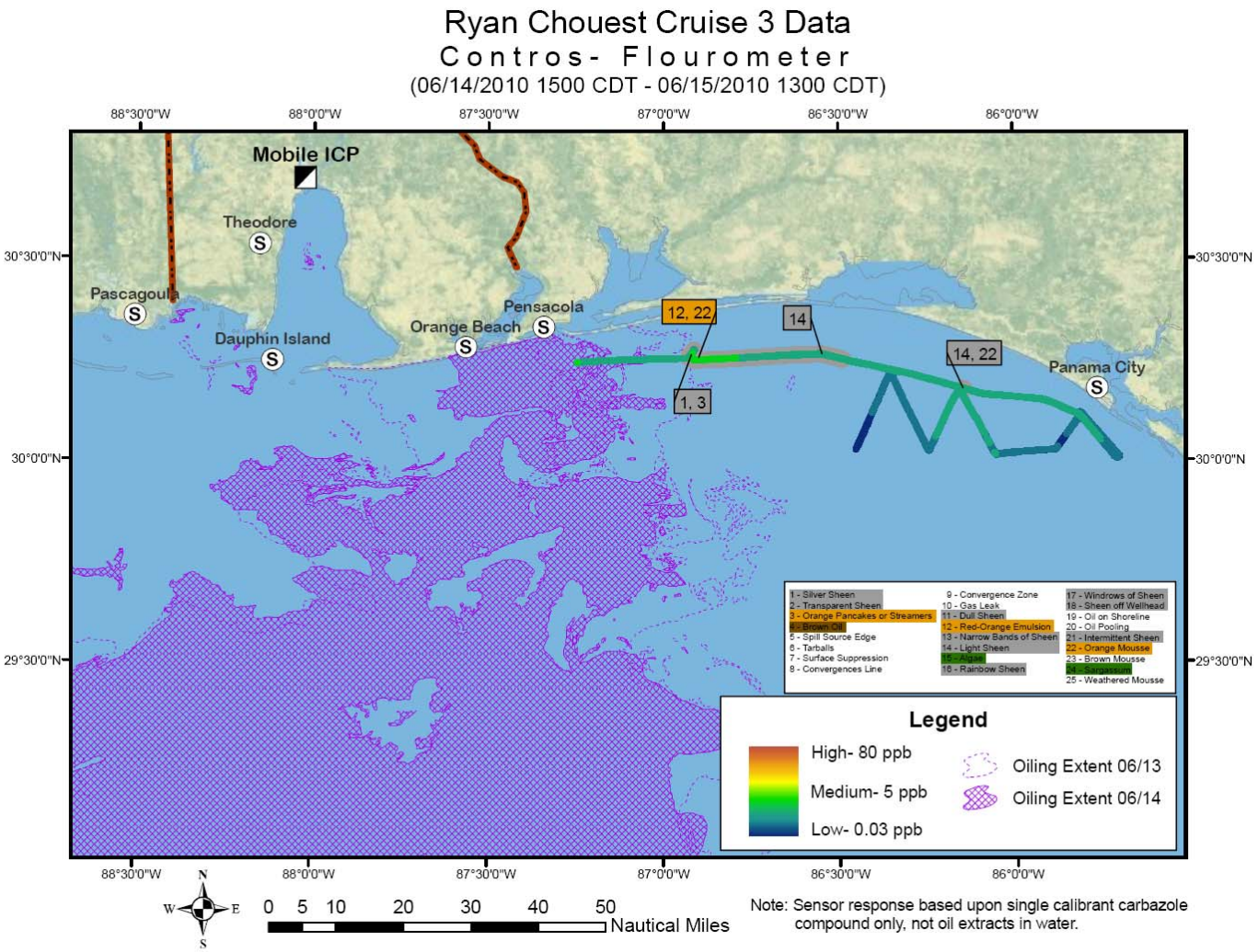

Figure 4. Contros fluorometer results plotted with location on cruise 3 track. Breaks in data occur when either data quality is poor or the systems were turned off due to pump problems.

Problems/operational issues:

No operation issues encountered

Planned activities for next 24 hours:

Return to Theadore at 09.00 hrs for a crew change, re-provisioning and resupply of equipment and consumables. We will operate the underway sensor system until we reach port. It is envisaged that we will be in port for 24 hour hours.