

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

***Period covered: 19.15 06/06/2010 - 20.0 06/07/2010***

***0 Nautical miles covered***

## **Vessel science party:**

Andrew Ross ([Andrew.Ross@csiro.au](mailto:Andrew.Ross@csiro.au))  
Emma Crooke ([Emma.Crooke@csiro.au](mailto:Emma.Crooke@csiro.au))  
David Fuentes ([David.Fuentes@csiro.au](mailto:David.Fuentes@csiro.au))  
William Winner ([William.Winner@noaa.gov](mailto:William.Winner@noaa.gov))  
Sara Gersbach ([Sara.Gersbach@BP.com](mailto: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:**

In port in Theodore awaiting deliveries of essential equipment and supplies. Whilst in port we have been working on the data produced during the previous cruise to present in this report. In addition the crew have helped us work on re-rigging the pump assembly.

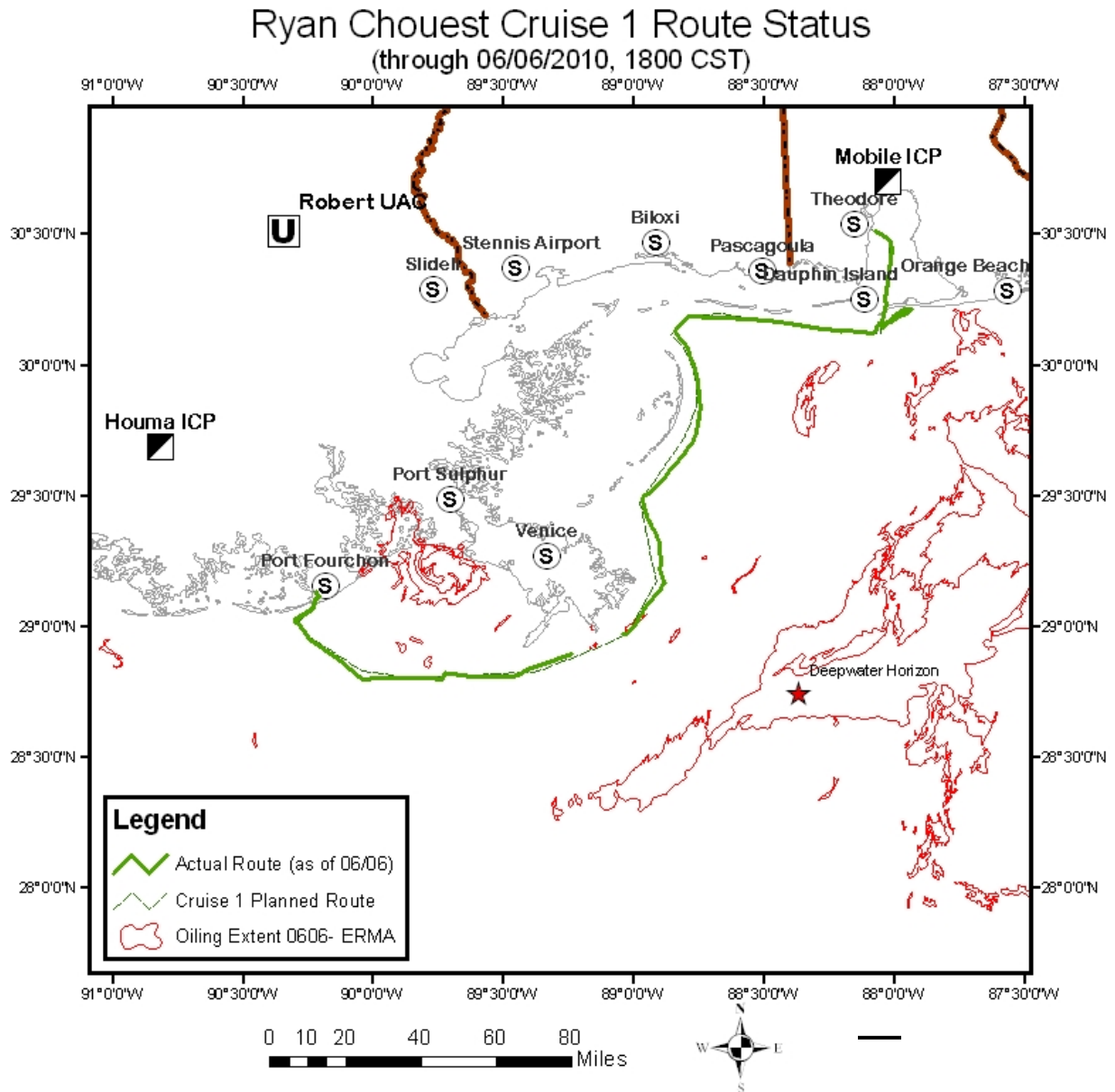
## **Science results and preliminary interpretation:**

The Ryan Chouest cruise 1 transited Pert Fouchon following the track displayed in figure 1. The results obtained by the Hydrocarbon Sensor Array are shown in figures 2 and 3. Generally the sensor responses lie within the range of 0-5 ppm of dissolved hydrocarbons (based on single compound calibrations) and concentrations are highest along the barrier islands on the northern extent of the cruise track. The Chelsea sensor did pick up an anomaly when passing through the only observed slick remnants. Only one low density field of orange/brown pancake field (30 07.4825 N 088 04.7298 W) with pancakes of up to 20 cm wide (Figure 4) was observed during the transit which was between 75m wide and 150-200m long.

## **Vessel science operations:**

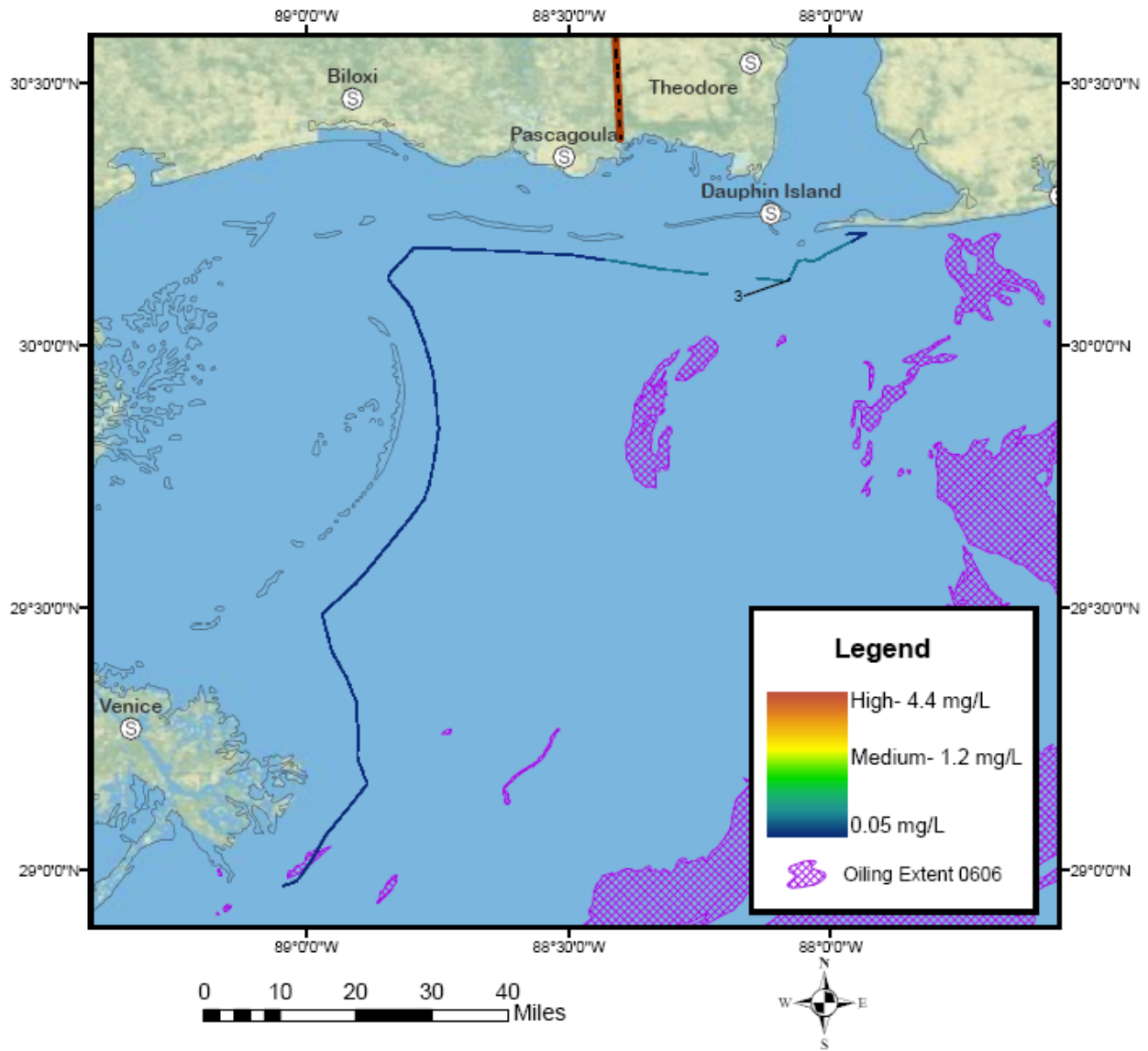
Data interpretation and integration

## Planned versus actual route taken on cruise 1:



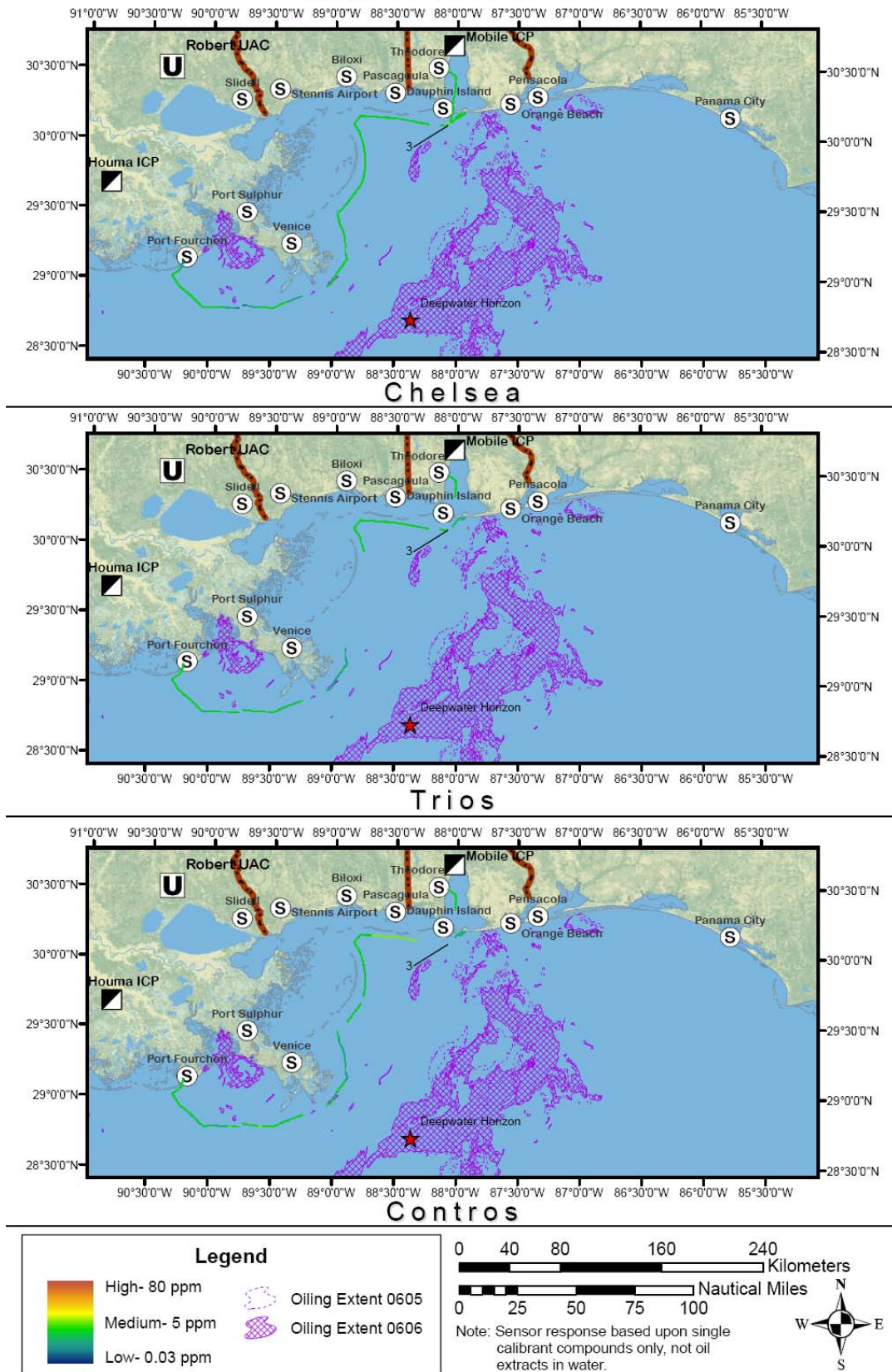
**Figure 1:** Actual route course plotted between 02:10 06/05 – 19:10 06/06. Red line represents outline extent of the slick from 06/06 composite

## Ryan Chouest Cruise 1 AW2 Data



**Figure 2:** AW2 results plotted with location on cruise 1 track. Breaks in data occur when either data quality is poor or the systems were turned off due to pump problems.

# Ryan Chouest Cruise 1 Sensor Results (through 06/06/2010, 1700 CST)



**Figure 3:** Chelsea, Trios, Contros results plotted with location on cruise 1 track. Breaks in data occur when either data quality is poor or the systems were turned off due to pump problems.



**Figure 4:** Example of a typical small oil pancake encountered

**Problems/operational issues:**

Most problems with sensors have been addressed although one sensor is damaged due to saltwater ingress. Further calibration of the GCMS instrument nearly complete and we are awaiting supplies before final method validation is possible with the GCMS instrument. Supplies yesterday delivered at Theodore were not correct and therefore we are still not in a position to perform 150 m vertical profiles.

## Planned activities for next 24 hours:

Depart Theodore at 20:00 hrs 06/07 before starting cruise 2 along the Alabama -Florida coastline at approximately 5 nautical miles towards Panama City along the track shown in figure 5. The idealized ship speed will be 7 knots returning to port 06/09 at 20:00 hours. In cruise 2 we will continue to run our hydrocarbon sensors array and also collect samples of GCMS in areas of high sensor response. No 150 m vertical profiles will be performed.

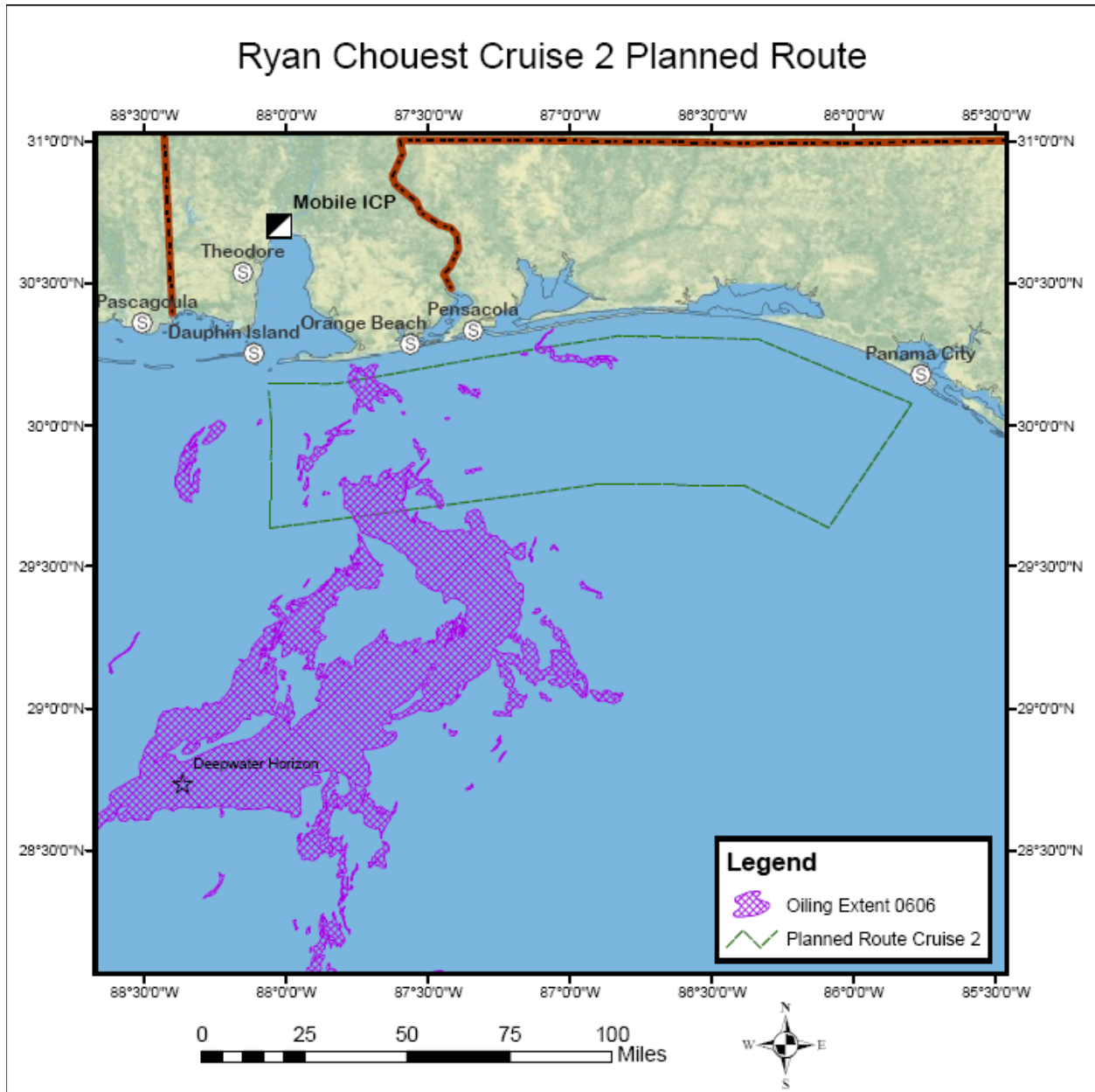


Figure 5: Planned route course for Ryan Chouest cruise 2.