

August 4th | 2010

Ryan Chouest daily data transmission and report

**Period covered: 1200hrs 08/03/2010 - 1202hrs 08/04/2010**

**136.452 - Nautical miles covered**

**Vessel science party:**

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**Cruise notes:**

The *Ryan Chouest* continued with the high resolution grid survey over a previously identified possible seep to the north west of the MC252 site (Figure 1). Over the time period covered by this report no echo sounder contacts had been made and the previously identified seep feature had not been re-established. Overnight the CSIRO crew, with the assistance of various representatives aboard, laid out the new vertical cast hose and began coupling the cables to them (Figure 7). At 1130 hrs, a “Man over board” exercise was conducted by Brian Corley (Ship Mate).

**Science results and preliminary interpretation:**

**Fluorometry results**

The Chelsea and Trios sensor results, displayed in figure 2 & 4, indicate minimal levels of inferred hydrocarbons. A relative rescaling of the track travelled (using corresponding highest and lowest sensor voltage values within area surveyed) shows a greater variation within, especially in the NE-SW trending tracks (Figures 3 & 5) possibly due to a shift in currents. The Contros sensor results show mid levels of inferred hydrocarbon concentration along the track (Figure 6), while the relative scaling shows a lesser pattern of elevated levels of inferred hydrocarbon (Figure 7).

**Surface Observations**

No surface observations were logged over the period.

**EK-60 Echosounder results**

No echo sounder contacts were made over the period.

Planned route for cruise 11:

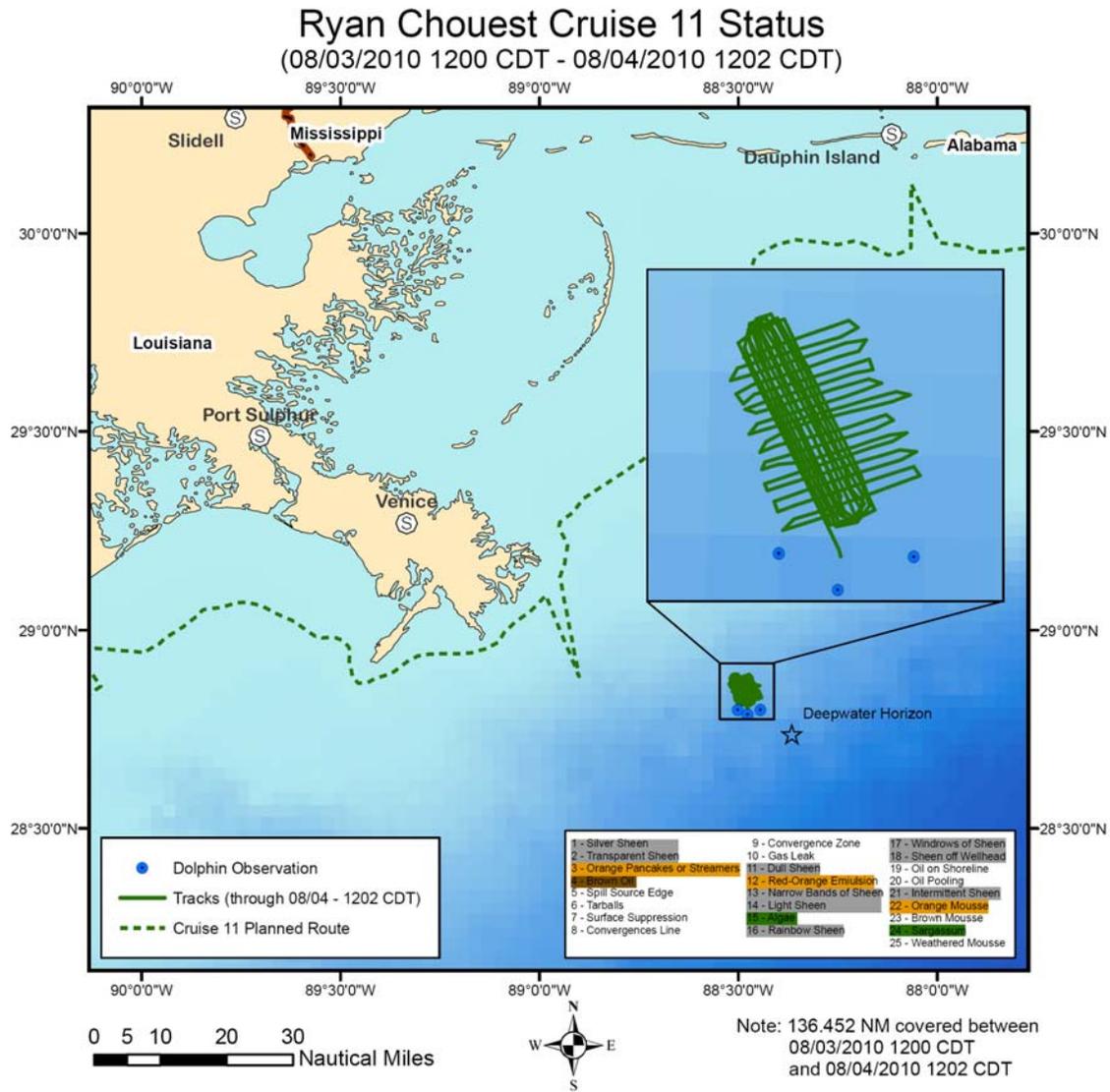
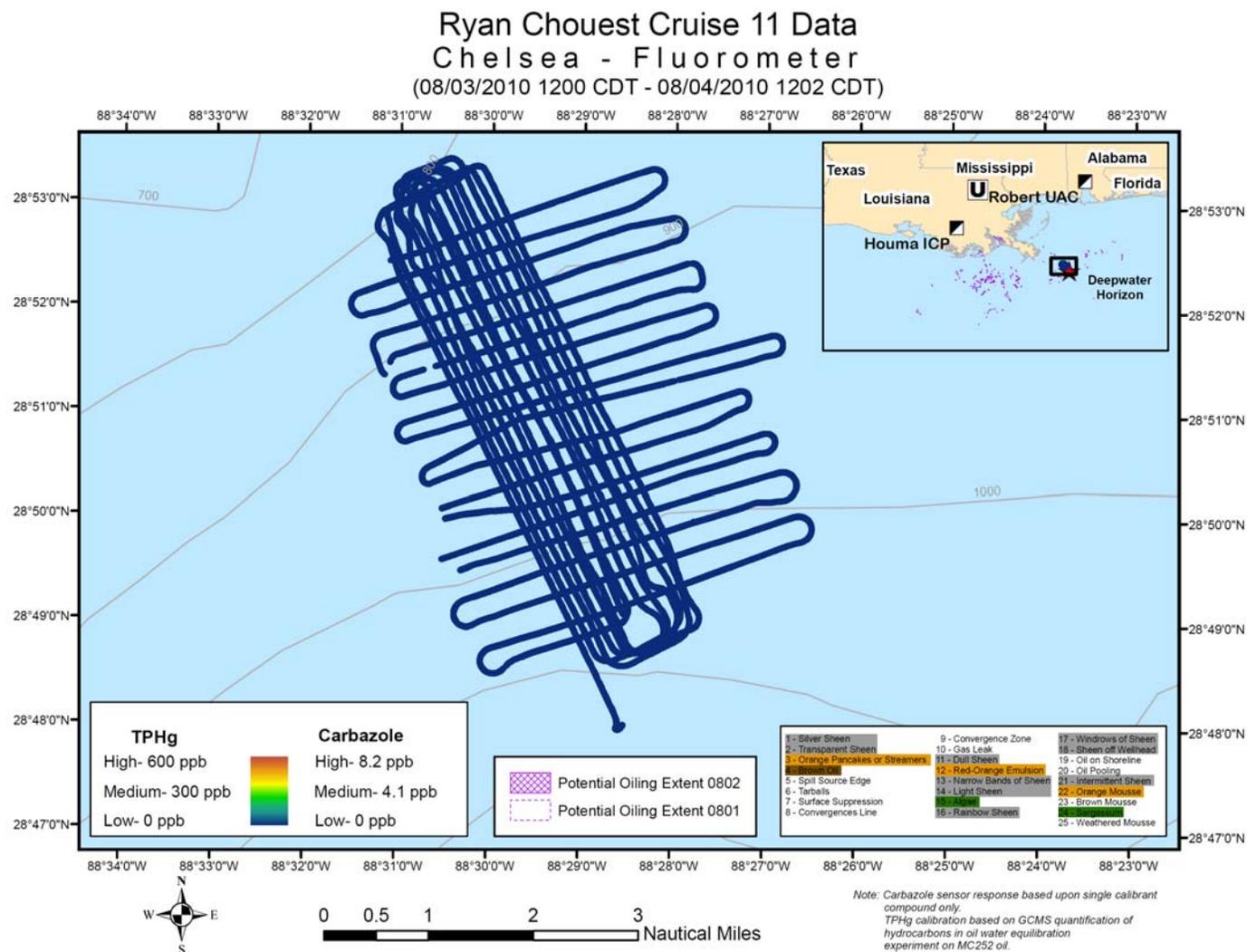
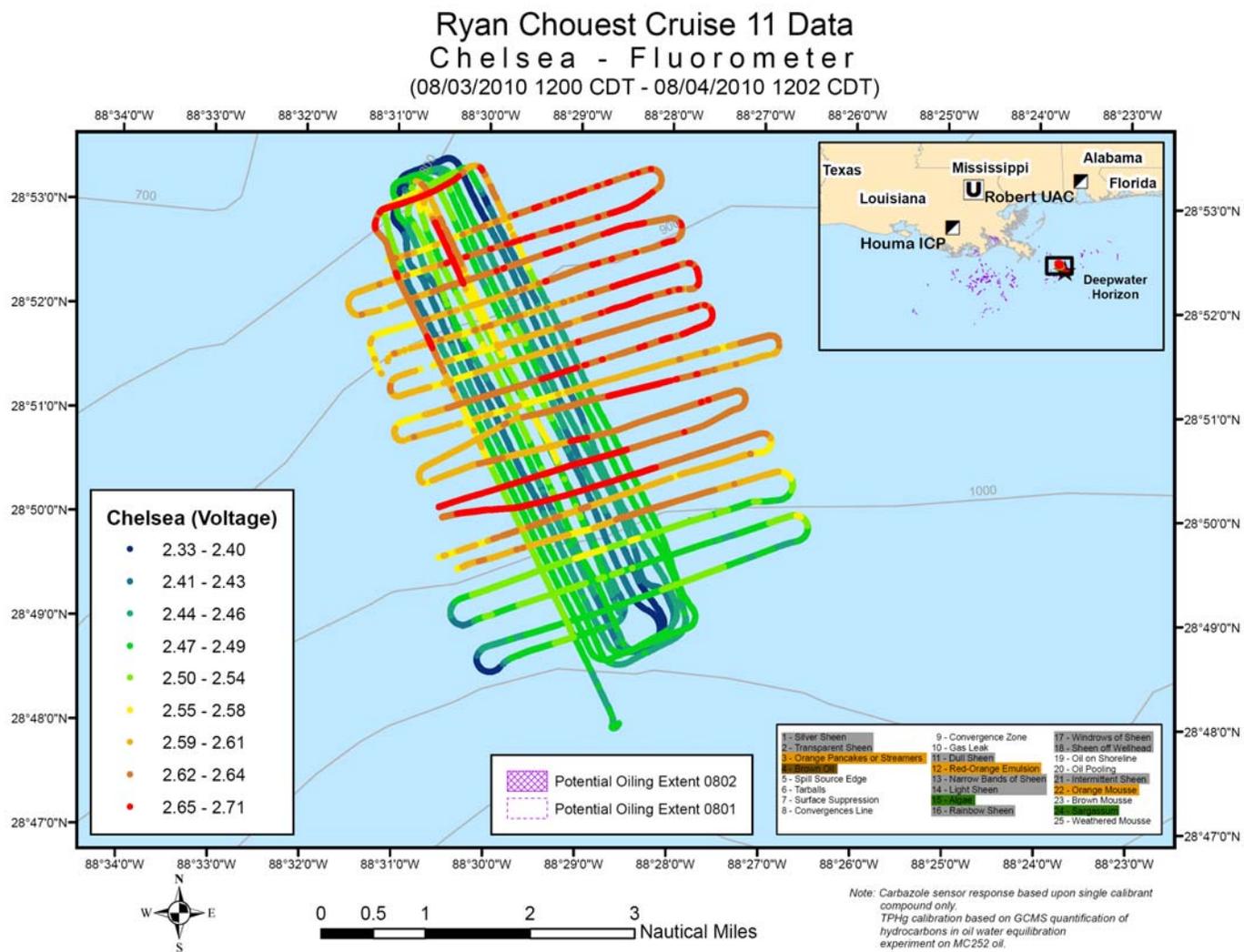


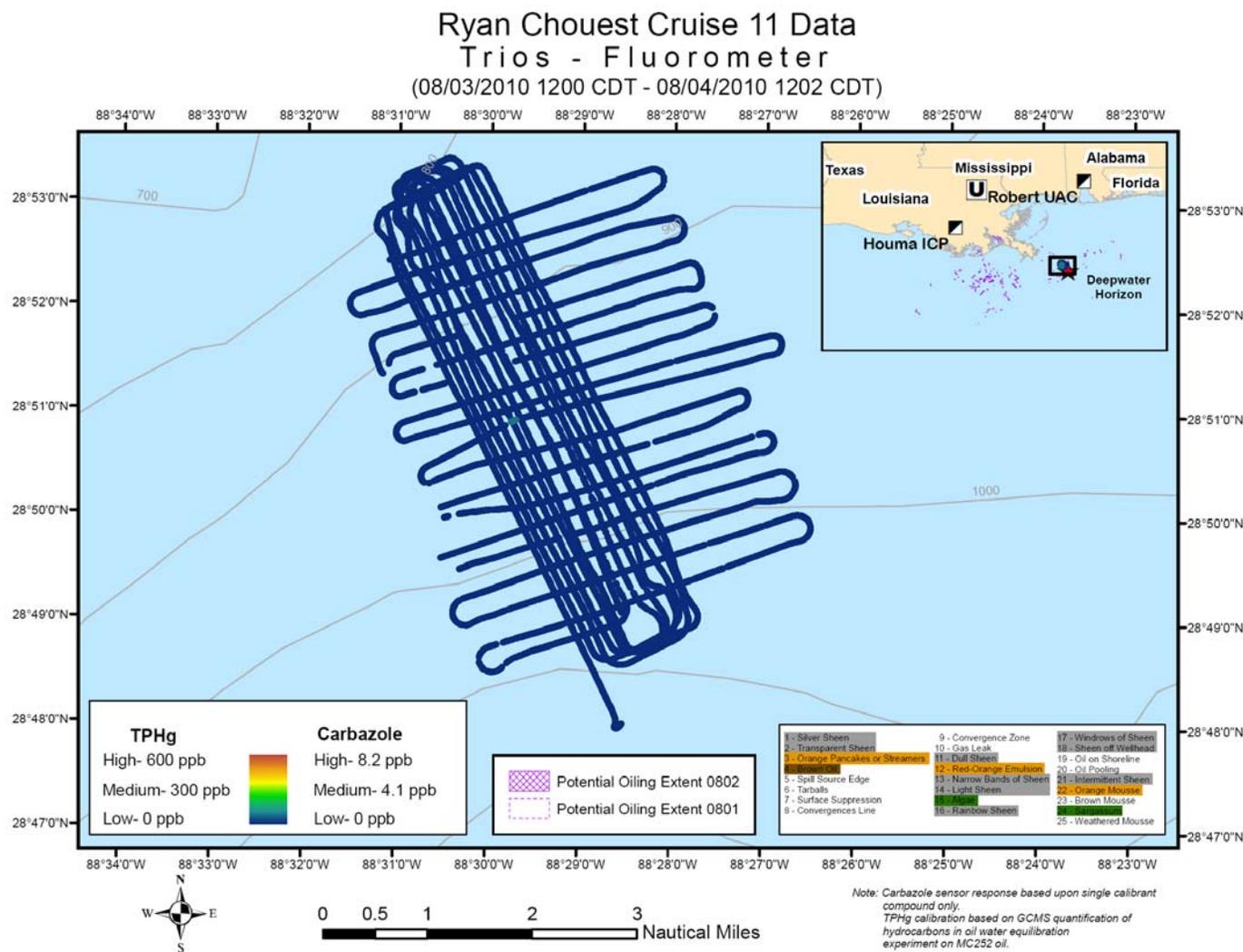
Figure 1: Planned route for cruise 11 versus the actual route plotted between 08/02/2010 – 08/03/2010.



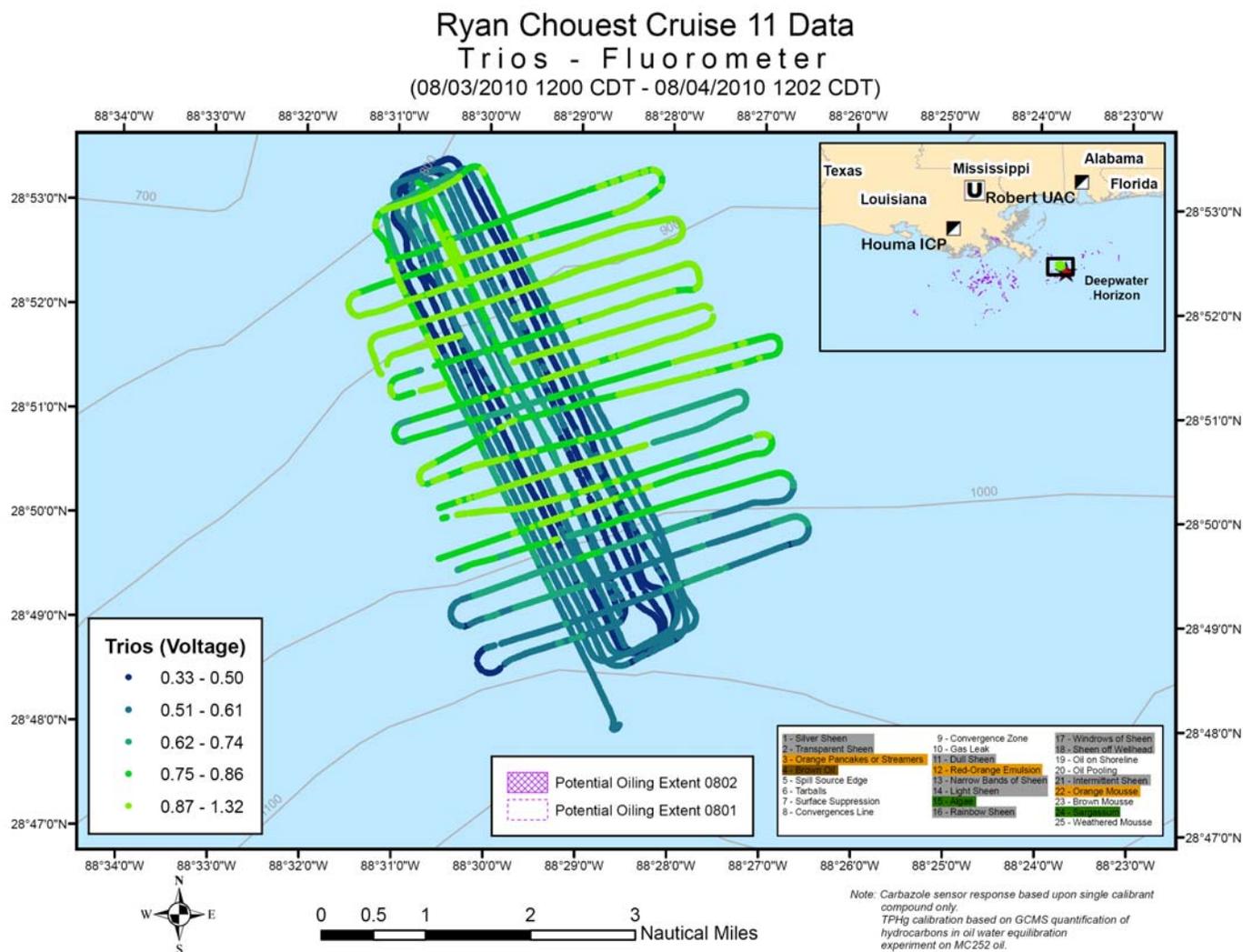
**Figure 2.** Chelsea fluorometer results plotted with location on cruise track 11. Breaks in data occur when either data quality is poor or the systems were turned off due to pump problems. Purple lines represent depth contours of 100 m intervals.



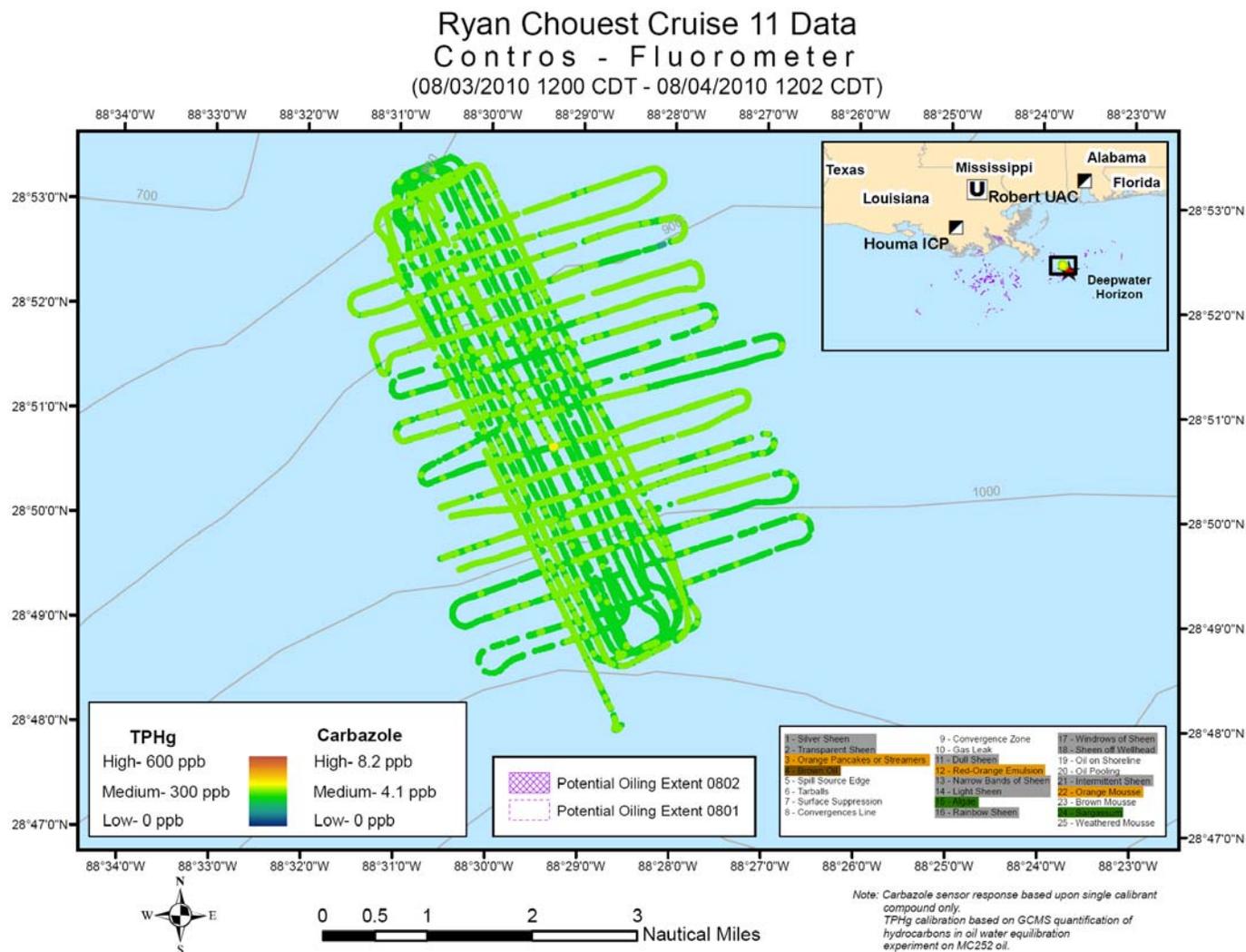
**Figure 3.** Chelsea fluorometer results, within a ~5 x 4 nautical mile grid survey, plotted with location on cruise track 11. The figure scaling is relative based on the highest and lowest fluorometer responses made during the period. Breaks in data occur when either data quality is poor or the systems were turned off due to pump problems. Purple lines represent depth contours of 100 m intervals.



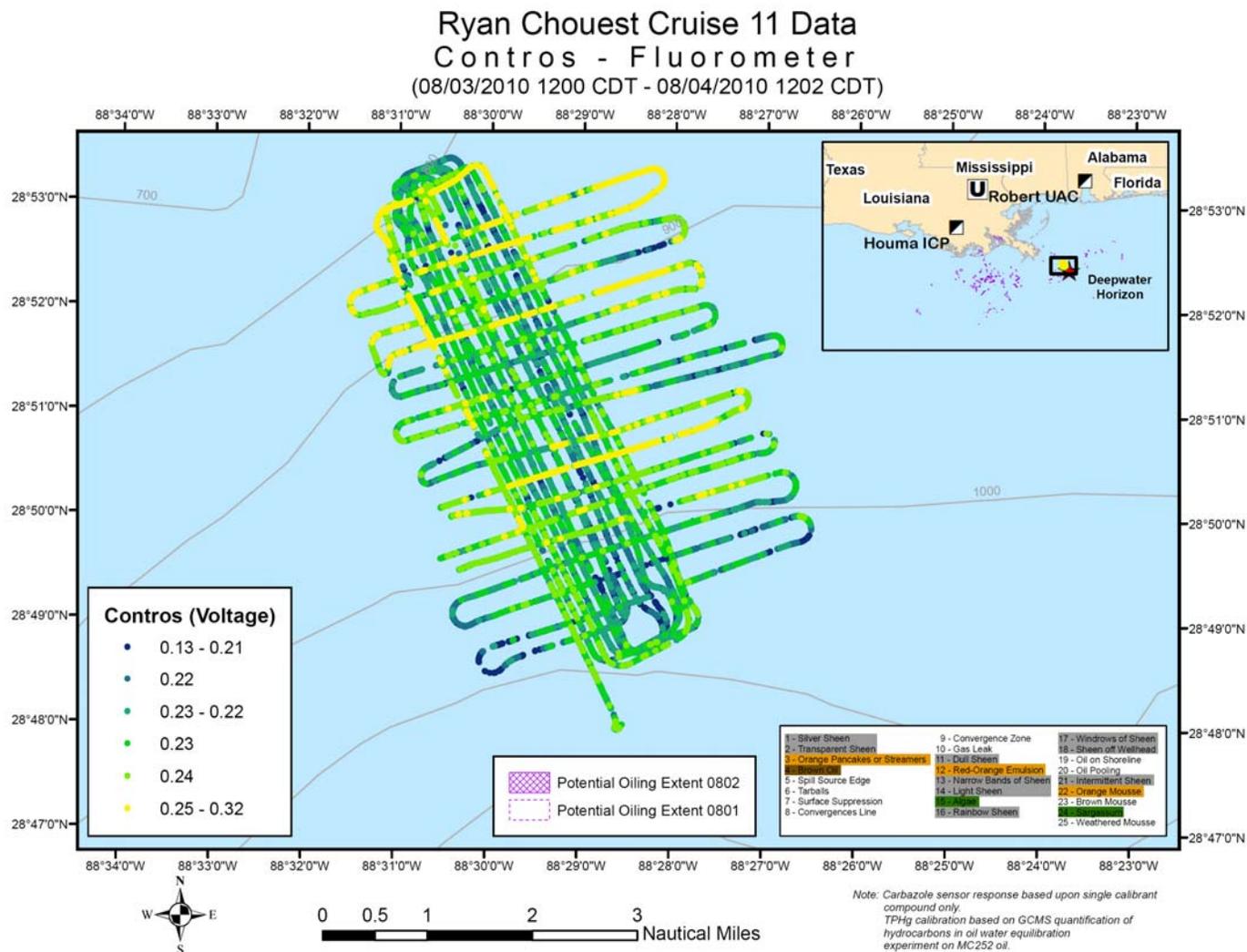
**Figure 4.** Trios fluorometer results plotted with location on cruise track 11. Breaks in data occur when either data quality is poor or the systems were turned off due to pump problems. Purple lines represent depth contours of 100 m intervals.



**Figure 5.** Trios fluorometer results, within a ~5 x 4 nautical mile grid survey, plotted with location on cruise track 11. The figure scaling is relative based on the highest and lowest fluorometer responses made during the period. Breaks in data occur when either data quality is poor or the systems were turned off due to pump problems. Purple lines represent depth contours of 100 m intervals.



**Figure 6.** Contros fluorometer results plotted with location on cruise track 11. Breaks in data occur when either data quality is poor or the systems were turned off due to pump problems. Purple lines represent depth contours of 100 m intervals.



**Figure 7.** Contros fluorometer results, within a ~5 x 4 nautical mile grid survey, plotted with location on cruise track 11. The figure scaling is relative based on the highest and lowest fluorometer responses made during the period. Breaks in data occur when either data quality is poor or the systems were turned off due to pump problems. Purple lines represent depth contours of 100 m intervals.



**Figure 8.** New vertical cast hose assembly.

**Science Operations:**

Fluorometer measurements were logged for the majority of the period and observations of sea-surface conditions were made throughout. The EK-60 echo sounder is continuously collecting data to evaluate the seabed and water column for possible seeps.

**Problems/operational issues:**

No problems reported for period covered. All previously reported problems have been solved.

**Planned activities for next 24 hours:**

The *Ryan Chouest* will perform another high resolution survey over another potential seep area previously identified after which the costal transect along the 30m bathymetric contour, along the gulf coastlines of Louisiana, Mississippi, Alabama and west Florida will continue as originally planned.

**Selected Photos:**

No photographs were taken over the cruise period.

**Full Crew List:**

William A. Smith	MASTER	Brian Corley	Mate
Craig Lyons	ENG	Patrick Cousin	A/B
Mark Harmon	A/B	Arthur Triggs	O/S
Elijah Benjamin	O/S	Patric Anderson	QMED
Kile Blunt	OS/Cook	Roderick Baker	OS/Cook
Tosin Majekodunmi	BP	Curtis Walker	Entrix
Andrew Ross	CSIRO	David Fuentes	CSIRO
Emma Crooke	CSIRO	Asrar Talukder	CSIRO
Quinn Guidrey	C&C	Kelly Bates	C&C
Jen Carlsen	C&C	Mathew Baham	C&C
Joseph Watson	C&C	Jay Ridgeway	C&C
Josh Chauffe	C-Port	Larry Luke	C-Port