

Ryan Chouset daily data transmission and report

Period covered: 1709 07/25/2010 - 1030 07/26/2010

112.441 - Nautical miles covered

Cruise notes:

The first leg of this cruise has returned the Ryan Chouset to the 5NM circular route shown in Figure 1a. The remainder of Cruise 10 will focus on surface detection of hydrocarbons with the Hydrocarbon Sensor Array (HSA) and bottom and water column acoustical profiling for natural methane seeps (Figure 1b). Two new sensors were added to the HSA and include a Contros HydroC methane sensor and a dissolved volatile organic compounds sensor.

Science results and preliminary interpretation:

Fluorometry results

Fluorometry measurements are low to lower-medium for the Chelsea, Trios, and Contros sensors (Figures 2-3). Baseline levels were measured by the Chelsea and Trios fluorometers for the majority of the route traveled. The Trios sensor detected slightly higher than baseline levels in Mobile Bay. The Contros fluorometry data show lower-medium level values throughout the route surveyed.

Contros HydroC Methane Sensor

No detectable levels of methane were recorded over the route traveled.

Surface Observations

Convergence lines and seaweed are the only surface features observed over the route shown in Figure 1a.

Science Operations:

Fluorometer measurements were logged and observations of sea-surface conditions were made throughout the period. Two new sensors were added to the HSA and include a Contros HydroC methane sensor and a dissolved volatile organic compounds sensor. The volatile organic compounds sensor is in use but may require additional calibration. We continue to perform liquid-liquid extractions on seawater samples and analyze the extracted material by GCMS. The EK-60 echosounder is continuously collecting data to evaluate the seabed and water column for methane seeps.

Planned versus actual route taken cruise 10:

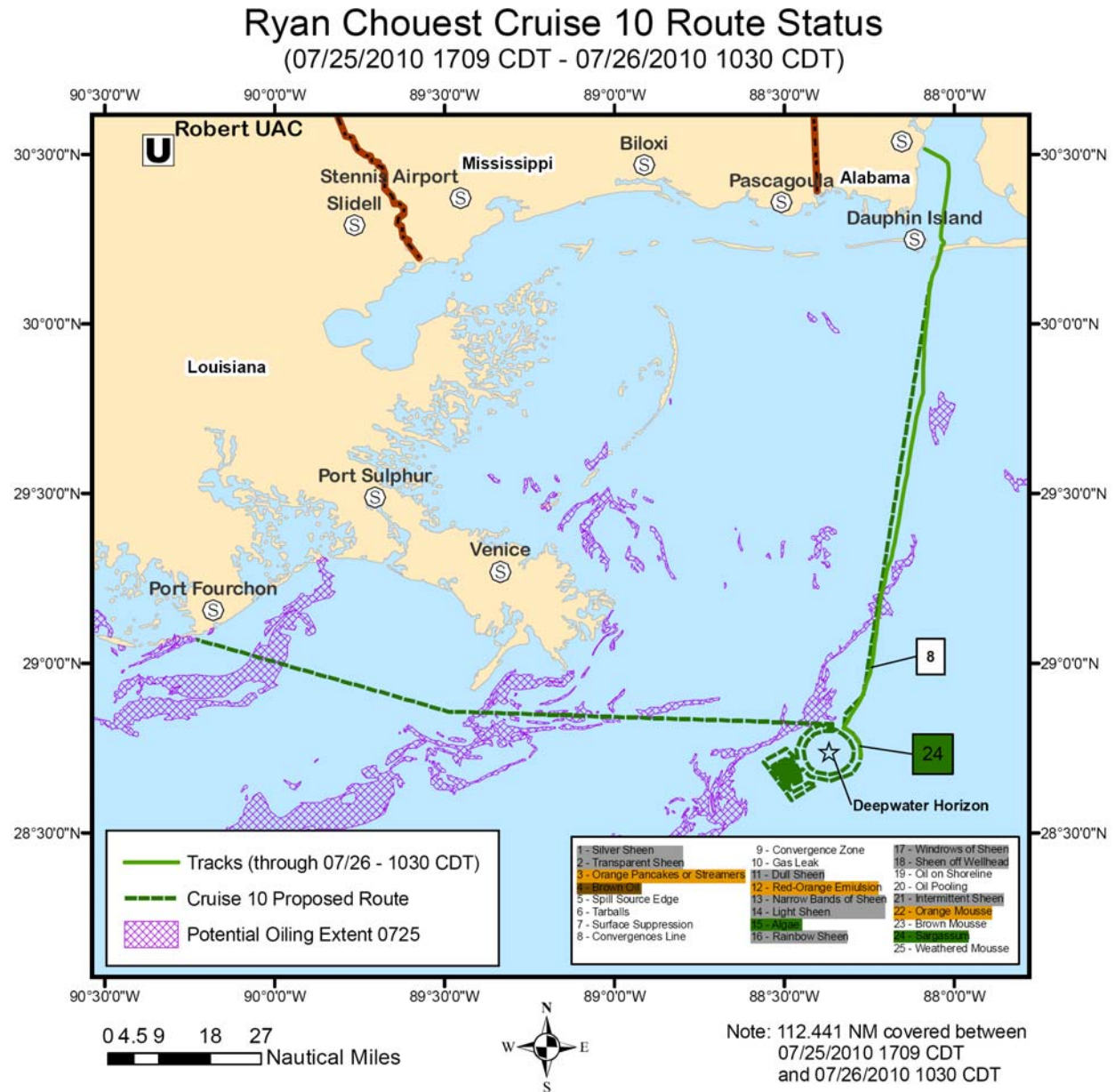


Figure 1a: Planned versus actual route course plotted between 07/25 – 07/26. Purple shaded area represents outline extent of the slick from 07/25 ERMA composite.

Ryan Chouset Cruise 10 Detailed Grid Route (07/25/2010 1709 CDT - 07/26/2010 1030 CDT)

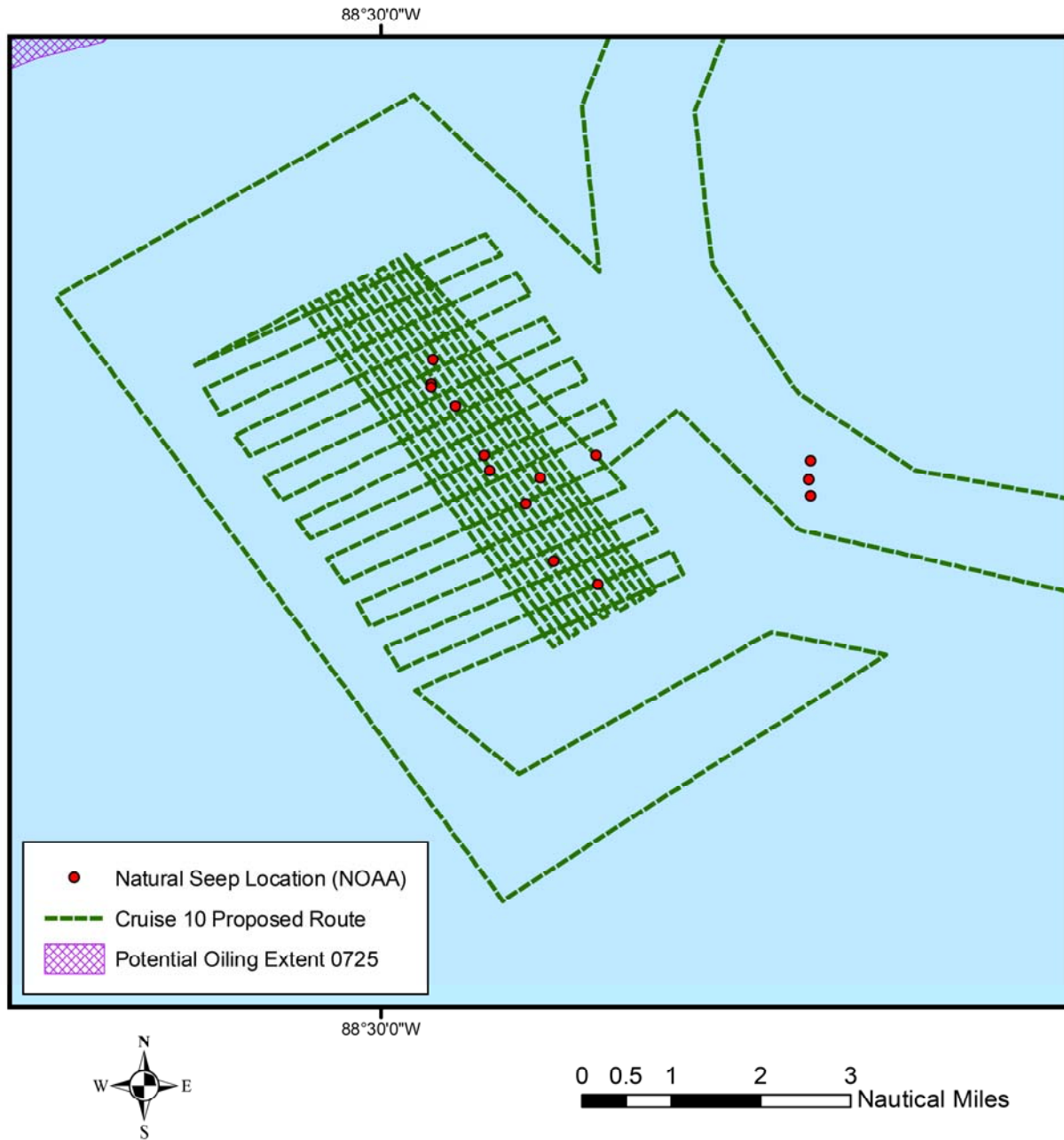


Figure 1b. Detailed grid route for the cruise 10 acoustical survey over natural methane seeps previously reported by NOAA.

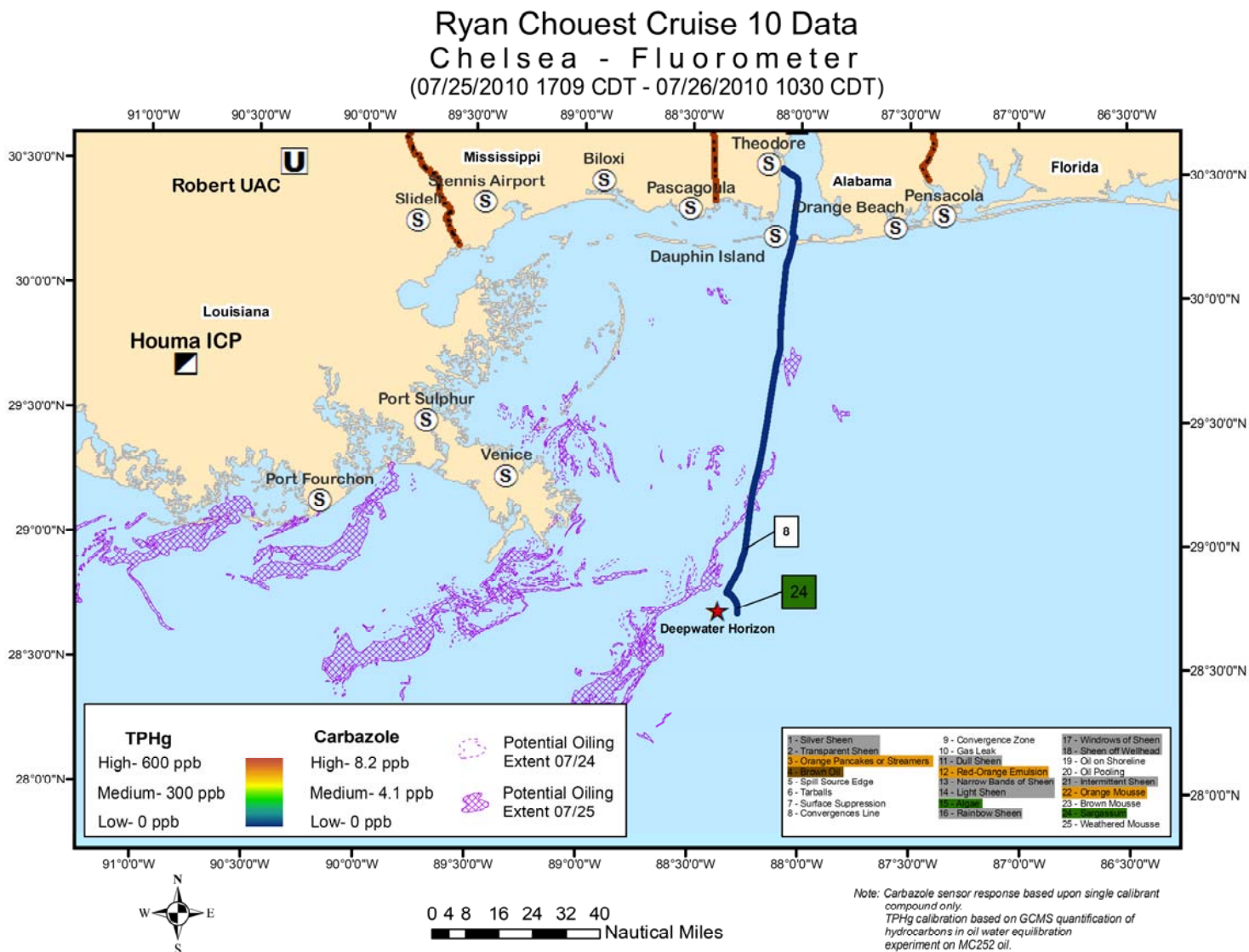


Figure 2. Chelsea fluorometer results plotted with location on cruise track 10. Breaks in data occur when either data quality is poor or the systems were turned off due to pump problems.

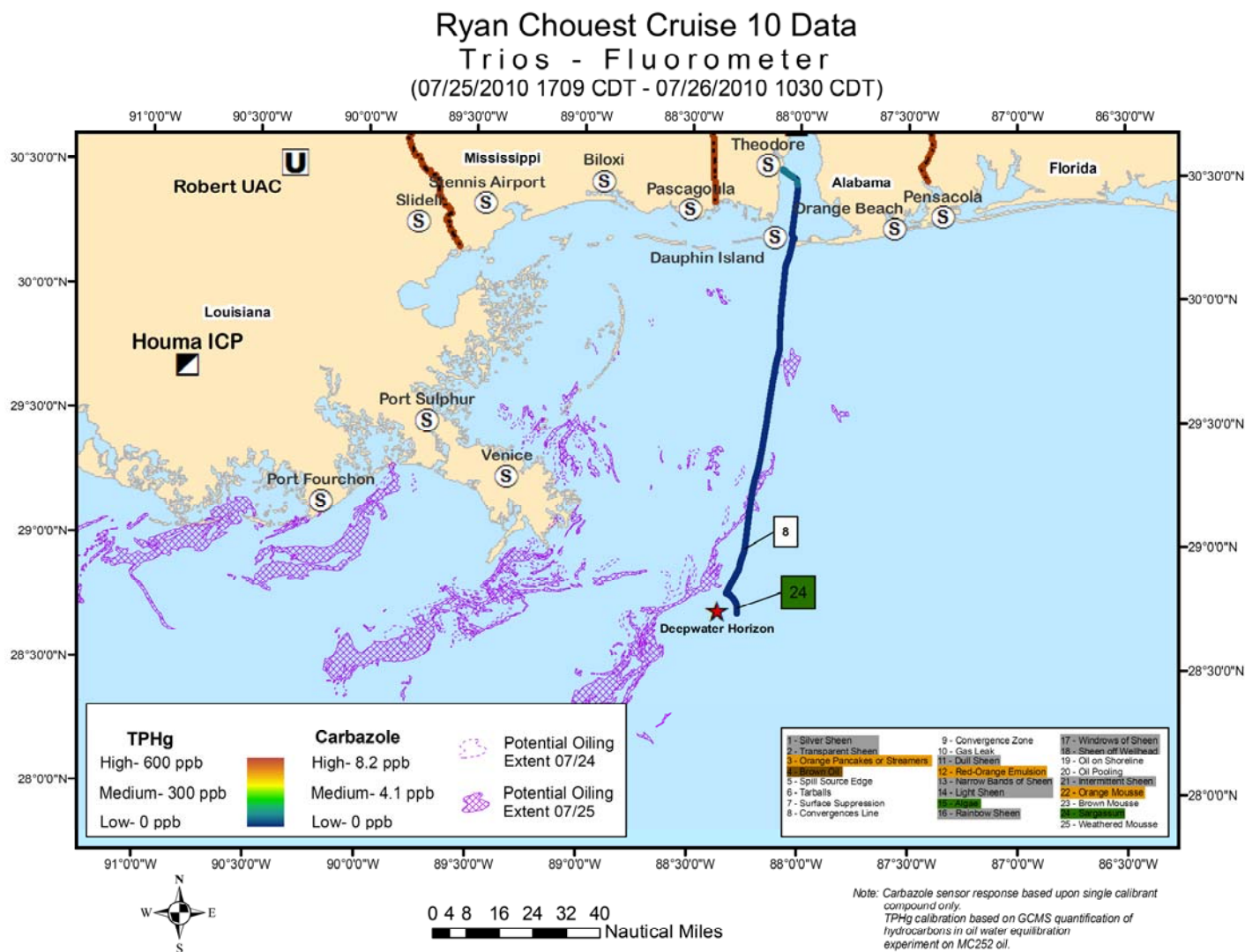


Figure 3. Trios fluorometer results plotted with location on cruise track 10. Breaks in data occur when either data quality is poor or the systems were turned off due to pump problems.

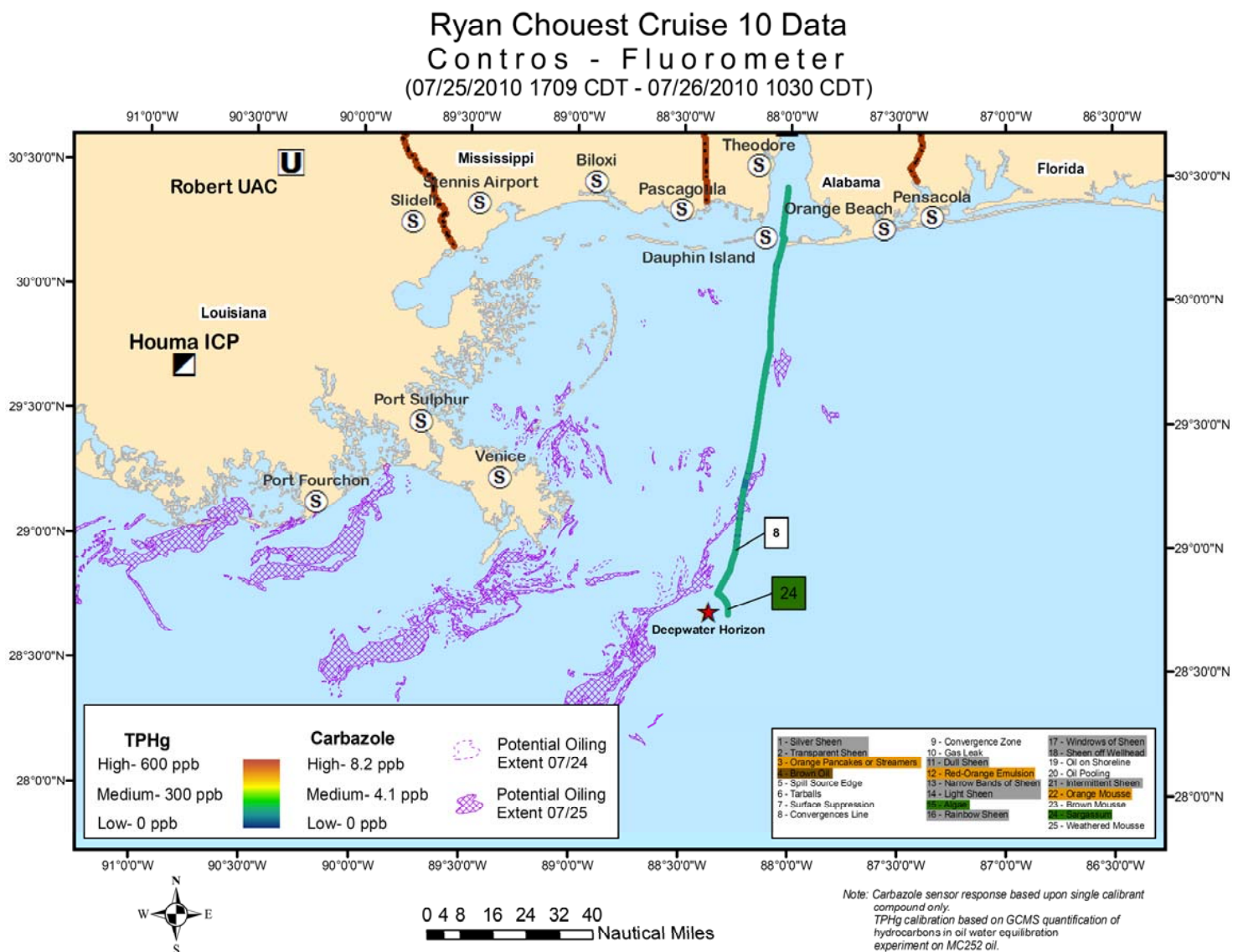


Figure 4. Contros fluorometer results plotted with location on cruise track 10. Breaks in data occur when either data quality is poor or the systems were turned off due to pump problems.

Problems/operational issues:

(Includes items up to report submission time)

There are no problems or operational issues at this time.

Planned activities for next 24 hours:

The Ryan Chouset will complete the acoustical and underway HSA survey over natural methane seeps shown in Figure 1b.

Selected Photos:

No photographs were taken over the cruise period.