

August 7th | 2010

Ryan Chouest daily data transmission and report

Period covered: 0918hrs 08/06/2010 - 0906hrs 08/07/2010

161.645 - Nautical miles covered

Vessel science party:

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Cruise notes:

The *Ryan Chouest* science party attempted to continue the planned cruise along the coastal transect with planned vertical cast deployment every 20 Nautical miles (Figure 1). We achieved the first two shallow vertical casts before another electrical fault, this time with the power lead occurred. At this point the additional planned vertical casts for cruise 11 were abandoned. We continued on the planned route along the 30m contour along the coast with the echo sounder and underway hydrocarbon sensor system.

Science results and preliminary interpretation:

Fluorometry results

The Chelsea sensor detected minimal levels of inferred hydrocarbons for the track covered during the reporting period (Figure 2). The Trios sensor results show mostly low levels with minimal levels present in segments of the SW and NE of the track away from the Mississippi passes (Figure 3). Mid-high levels of inferred hydrocarbons are deduced by the Contros sensor. Segments, similar to the Trios, show mid levels (Figure 4). This sensor is beginning to show low signal to noise which suggests that xenon flash lamp is nearing the time that it needs replacement. The vertical casts performed (Figures 5 & 6) show increased concentrations of inferred hydrocarbons towards the sea surface relative to the bottom waters.

Surface Observations

Surface observations made over the reporting period included sargassum, dolphins and what appeared to be transparent sheen. Locations are shown in Figure 1.

EK-60 Echosounder results

No echo sounder contacts were made during the reporting period.

Planned route for cruise 11:

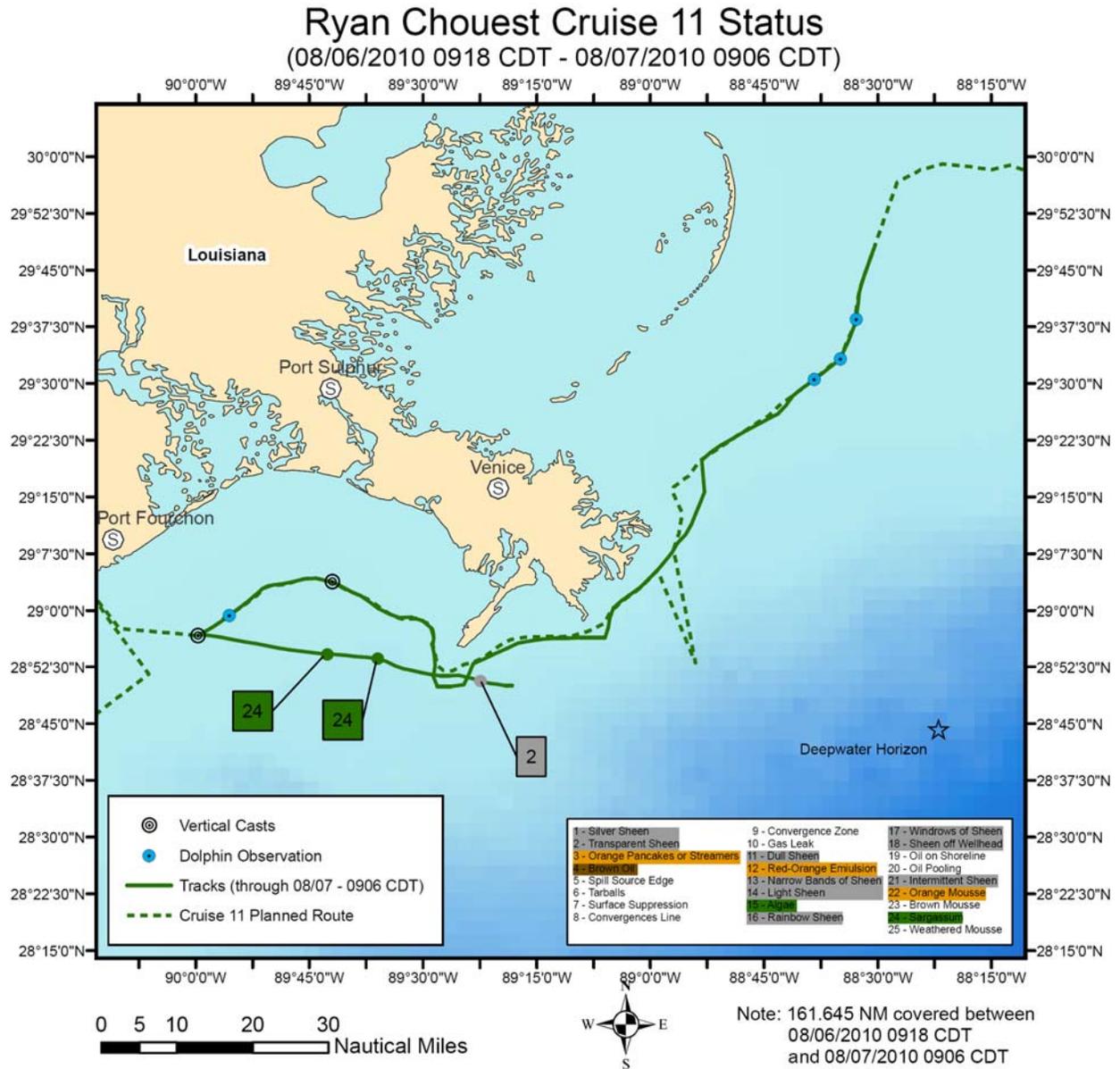


Figure 1: Planned route for cruise 11 versus the actual route plotted between 08/06/2010 – 08/07/2010.

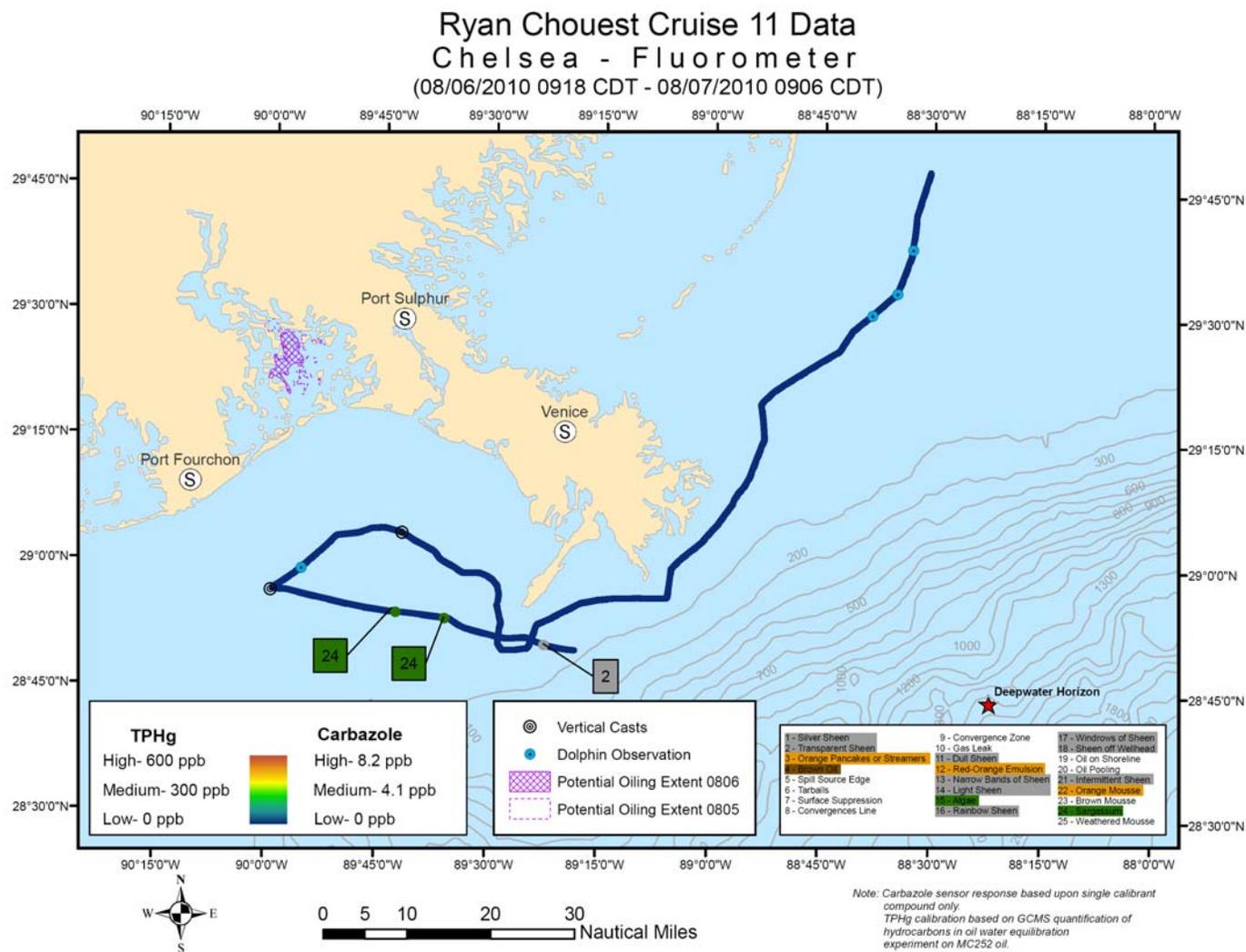


Figure 2. Chelsea fluorometer results plotted with location on cruise track 11. Breaks in data occur when either data quality is poor or the systems were turned off due to pump problems. Purple lines represent depth contours of 100 m intervals.

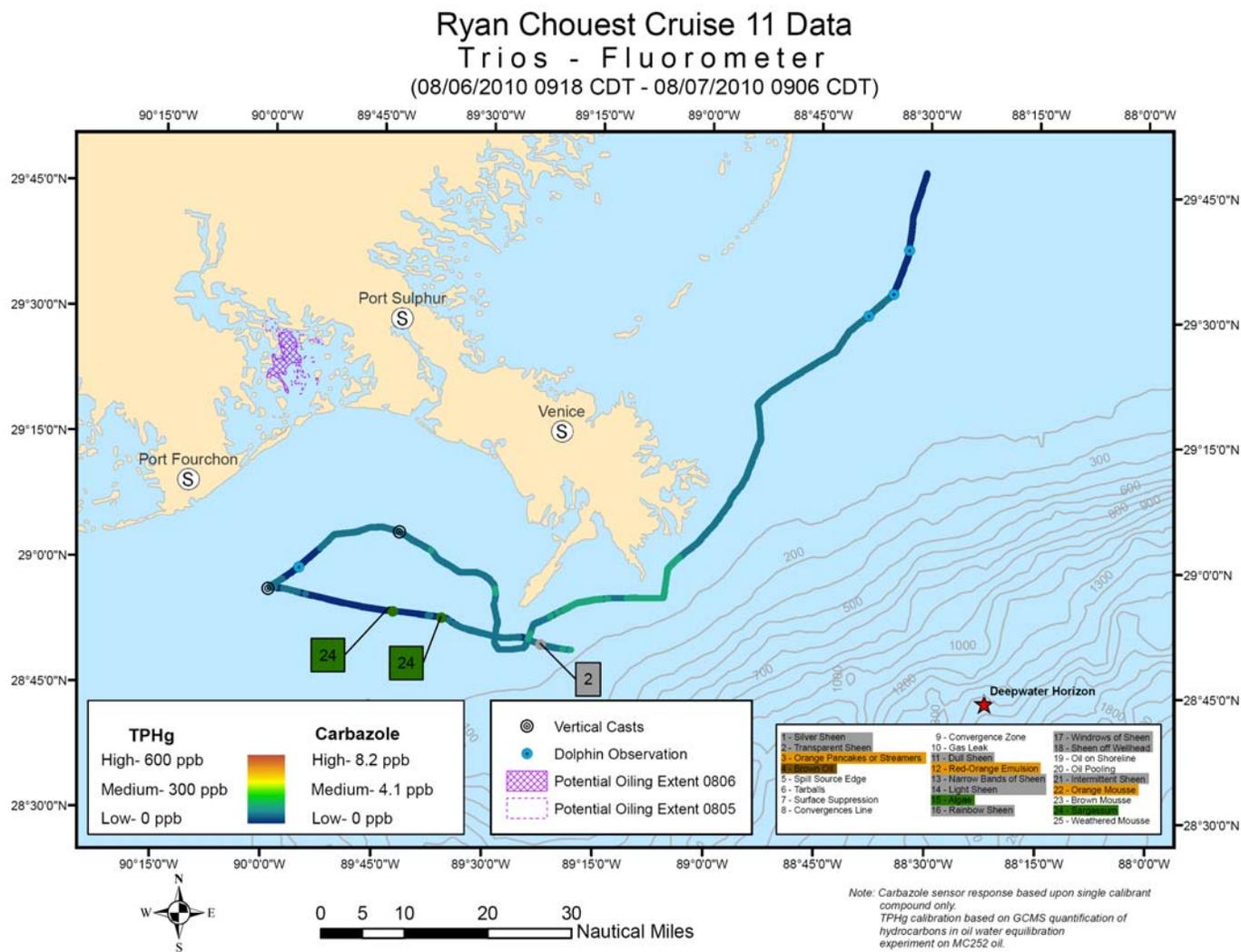


Figure 3. Trios fluorometer results plotted with location on cruise track 11. Breaks in data occur when either data quality is poor or the systems were turned off due to pump problems. Purple lines represent depth contours of 100 m intervals.

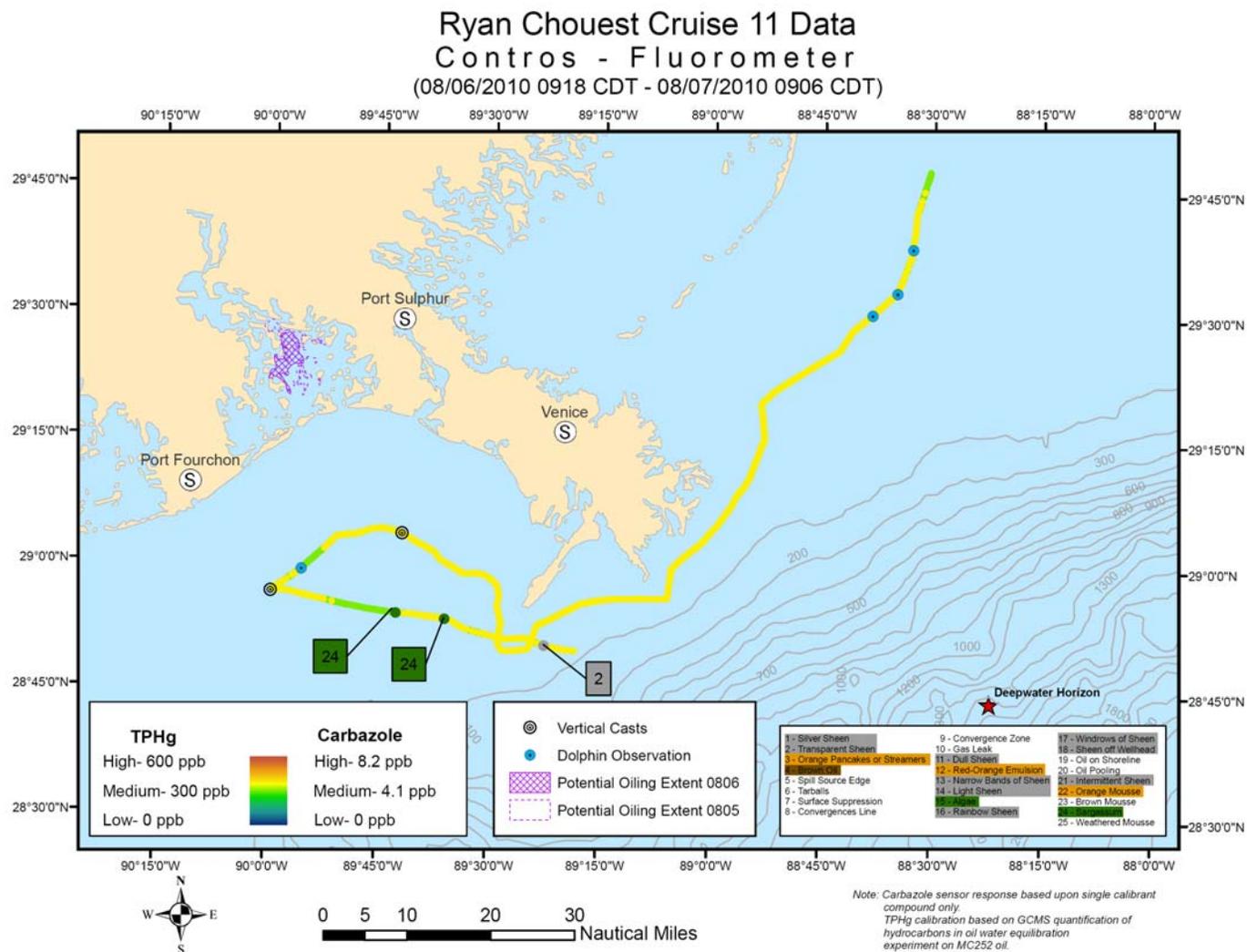


Figure 4. Contros fluorometer results plotted with location on cruise track 11. Breaks in data occur when either data quality is poor or the systems were turned off due to pump problems. Purple lines represent depth contours of 100 m intervals.

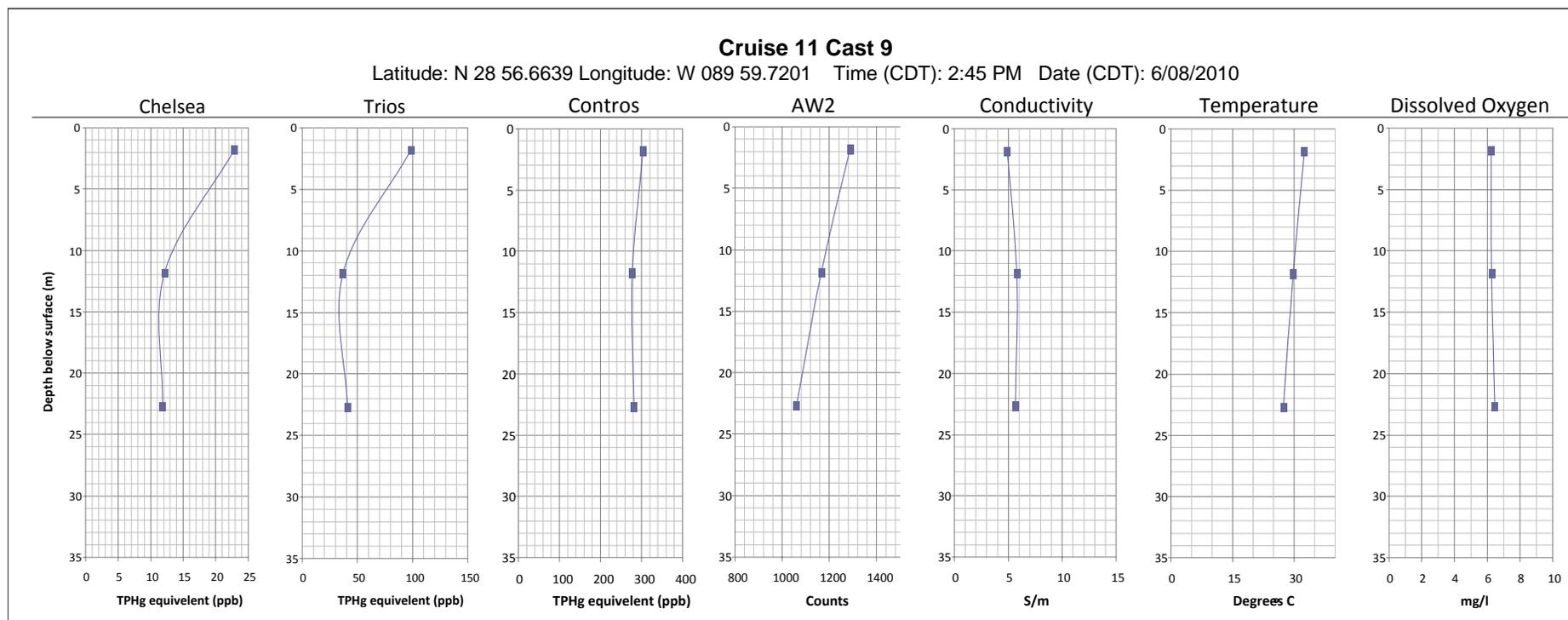


Figure 5. The results obtained for Cruise 11 vertical cast 9 down to 27 m. The sensor fluorometry results for the Chelsea, Trios and Contros sensors were obtained from waters pumped to the surface. Conductivity, temperature, depth and dissolved oxygen measurements were obtained from a SBE 19+ system and oxygen sensor attached to the submersible pump used to draw the water into the sensor tank on the surface.

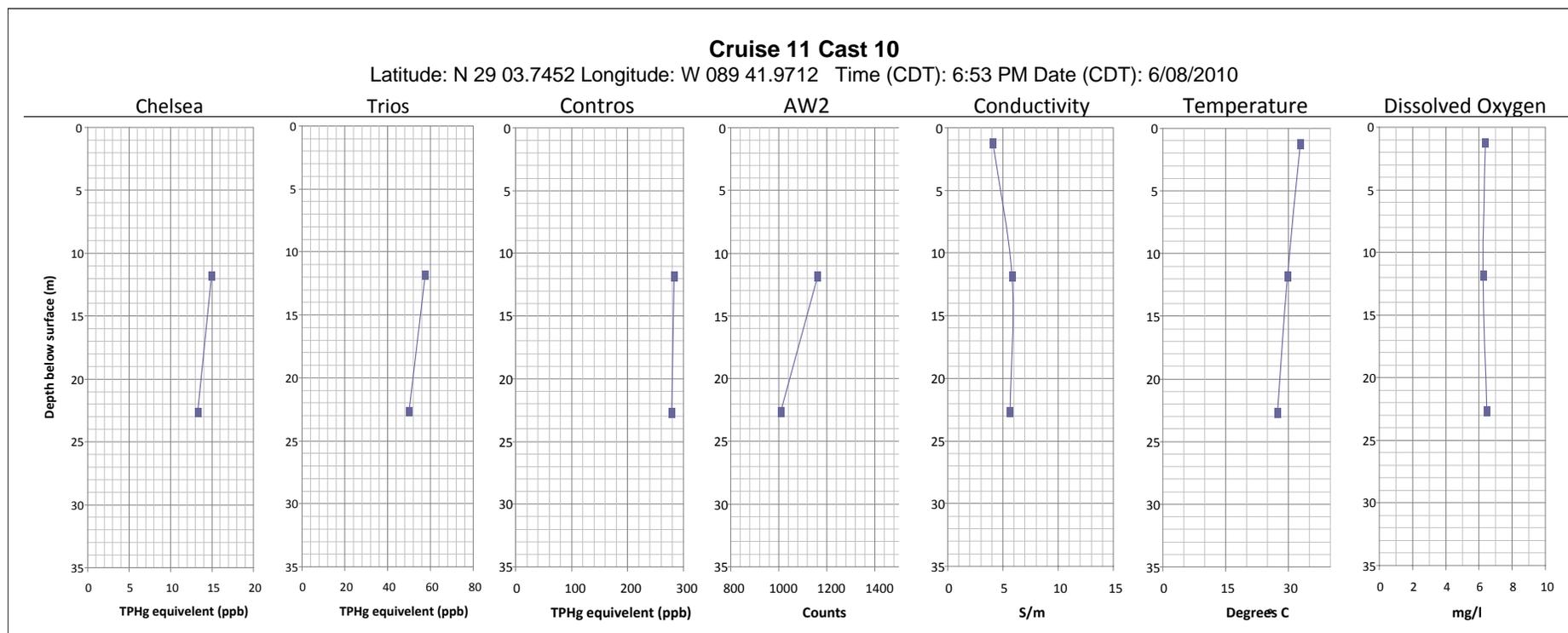


Figure 6. The results obtained for Cruise 11 vertical cast 8 down to 112 m. The sensor fluorometry results for the Chelsea, Trios and Contros sensors were obtained from waters pumped to the surface. Conductivity, temperature, depth and dissolved oxygen measurements were obtained from a SBE 19+ system and oxygen sensor attached to the submersible pump used to draw the water into the sensor tank on the surface. The submersible pump failed at the surface sampling station.

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:

Electrical fault in the wiring attached to the vertical pump hose was uncovered, rendering the planned vertical cast drops impractical.

Selected Photographs:

No photographs were taken over the cruise period.

Planned activities for next 24 hours:

As a result of problems experienced with the electrical wiring, the planned vertical casts will not occur. Instead, the *Ryan Chouest* will continue the costal transect running the underway pump, revisiting the Cruise 2 track along the gulf coastlines of Louisiana, Mississippi, Alabama and west Florida. Planned arrival in Theodore for a crew change and resupply are planned on Wednesday.

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	Patrick 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