
August 21st | 2010

Ryan Chouest daily data transmission and report

Period covered: 1036 hrs 08/20/2010 – 1117 hrs 08/21/2010

121.204 - Nautical miles covered

Vessel science party:

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Cruise notes:

The *Ryan Chouest* sailed on the planned cruise 12 route and is heading west towards the Louisiana coastline to continue with the vertical casts spaced every 20nm, the echo sounder survey, and the underway fluorometry pump system (Figure 1).

Science results and preliminary interpretation:

Fluorometry results

The Chelsea and Trios sensors generally indicate baseline levels of inferred hydrocarbons concentrations through the reporting period with only minor increase south of the port Theodore, which is probably due to the heavy transportation in that area (Figures 2 and 3). As previously discussed, the Contros data are not shown as the instrument needs servicing as the lamp reached the end of its useful life. We await a spare Contros sensor from the manufacturer.

Surface Observations

There are no new surface observations to report.

EK-60 Echosounder results

No echosounder contacts related to seabed seep activities were observed during this report period.

Vertical Casts

Eight vertical fluorometry/CTD casts were taken during this report period (Figures 4 – 10). Seven of the results are presented and the last one will be presented in the next report. Fluorometers and AW2 showed low level of hydrocarbon concentrations in all casts with the exception of Cast #22, during which the AW2 output higher response signals than the background level. However when the underway pump resumed at the same location as the cast the AW2 returned to background level to the surface water. We tentatively attribute this to the possible temporary pump failure during the cast. No samples were collected in this station so the possible way to confirm the reason is to revisit the site later.

We are in communication with the manufacture on the calibration issue with the methane sensor.

Planned route for cruise 12:

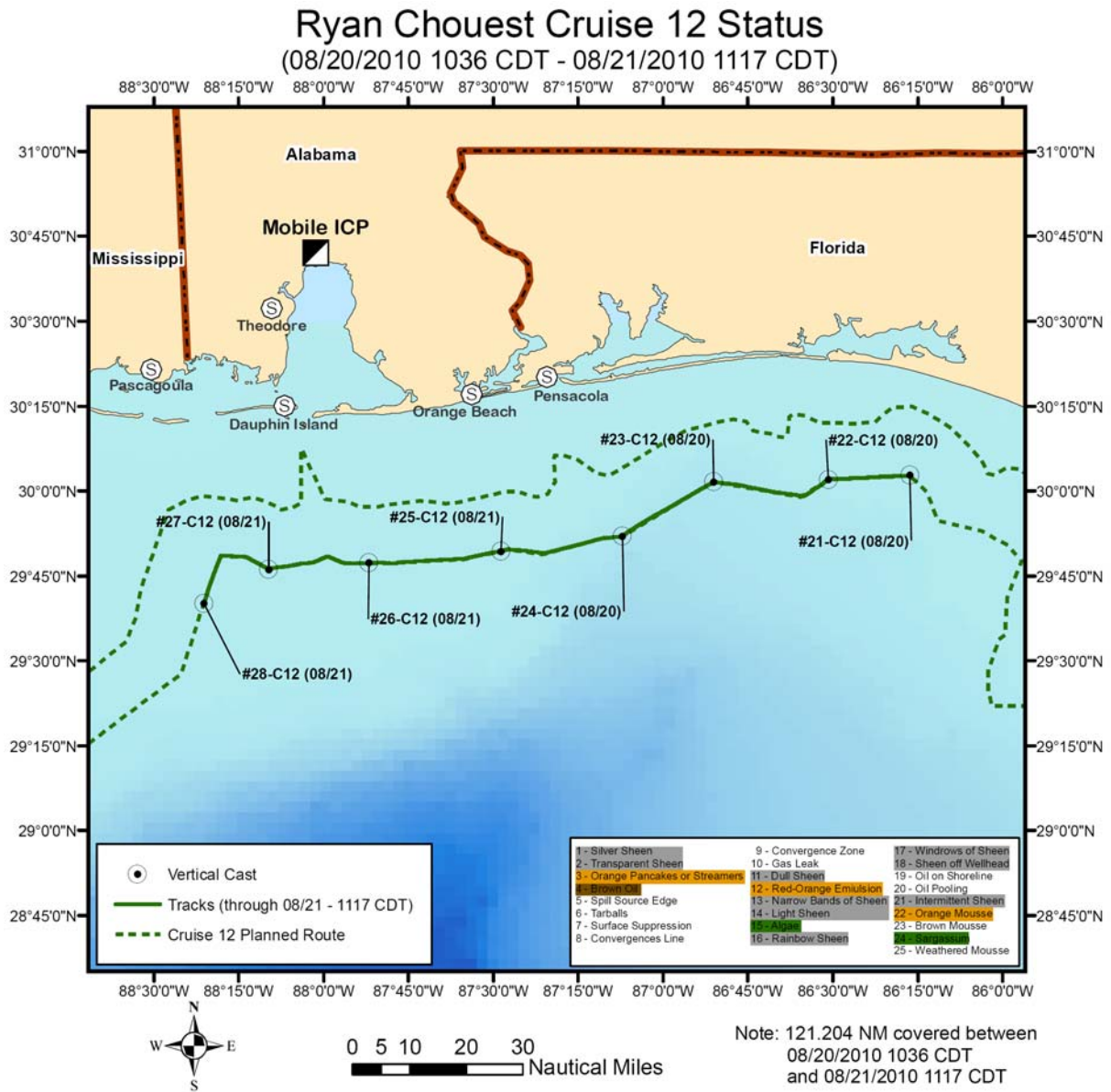


Figure 1: Planned route for cruise 12 versus the actual route plotted between 08/20/2010 – 08/21/2010.

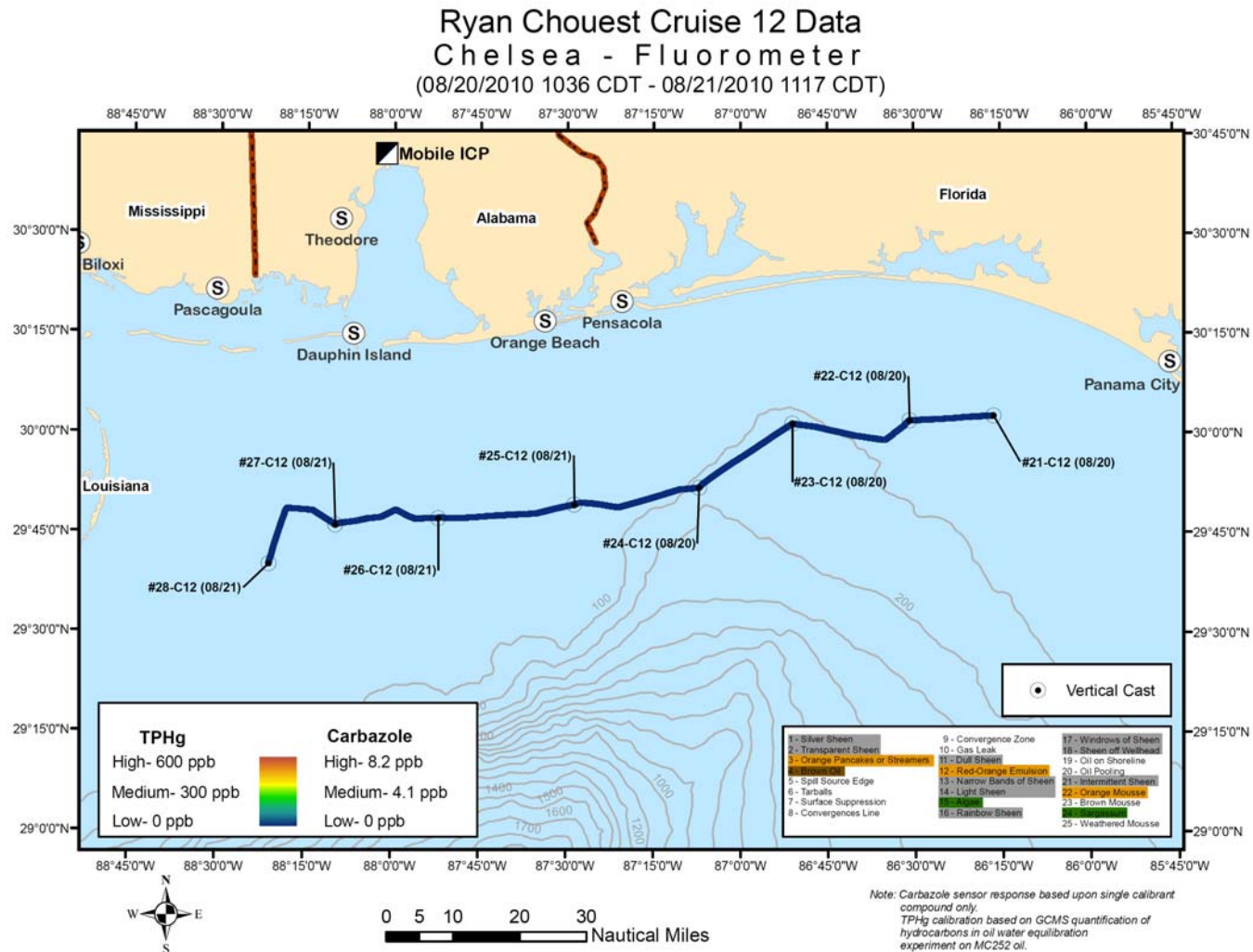


Figure 2. Chelsea fluorometer results plotted with location on cruise track 12. Breaks in data occur when either data quality is poor or the systems were turned off due to pump problems. Purple lines represent depth contours of 100 m intervals.

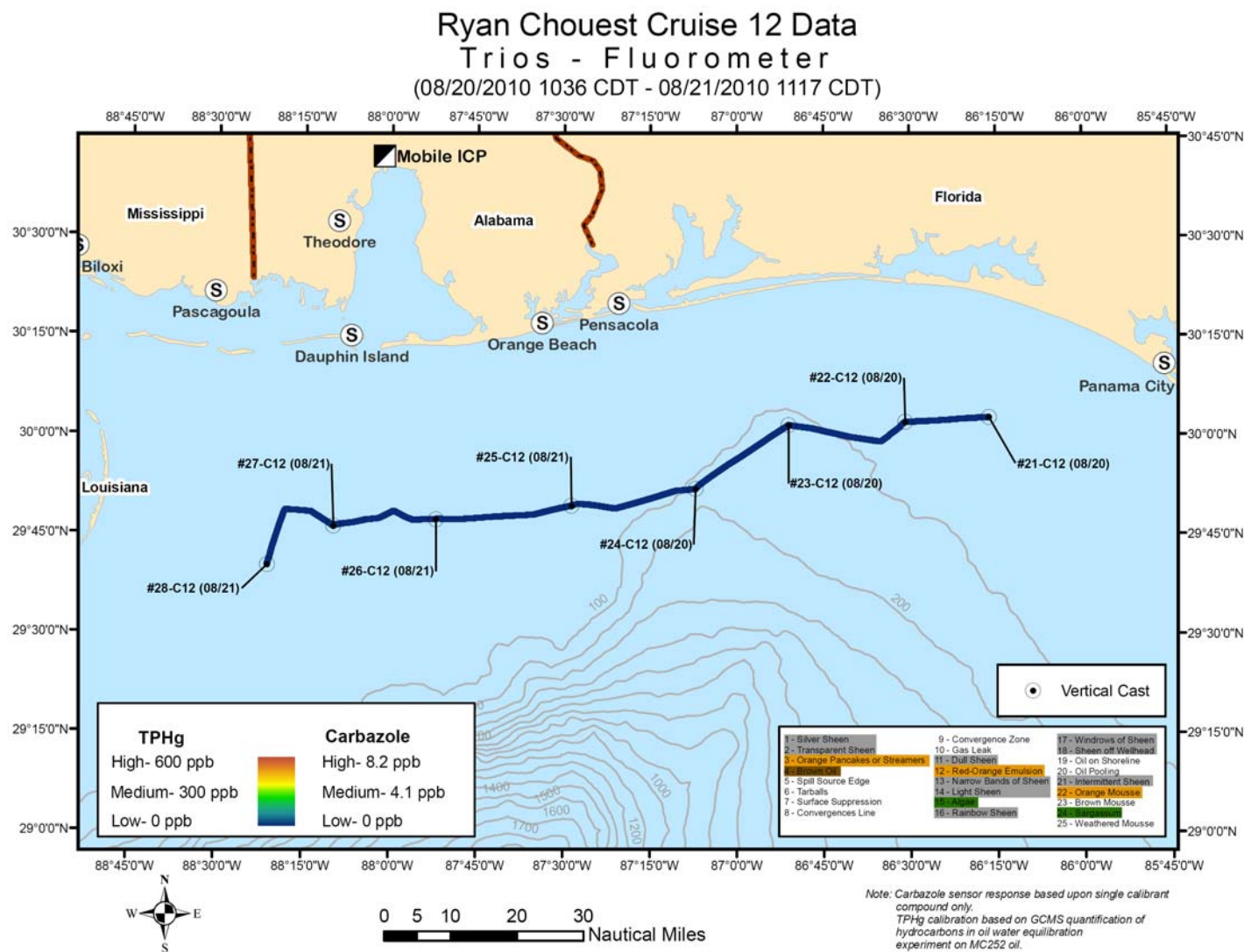


Figure 3. Trios fluorometer results plotted with location on cruise track 12. Breaks in data occur when either data quality is poor or the systems were turned off due to pump problems. Purple lines represent depth contours of 100 m intervals.

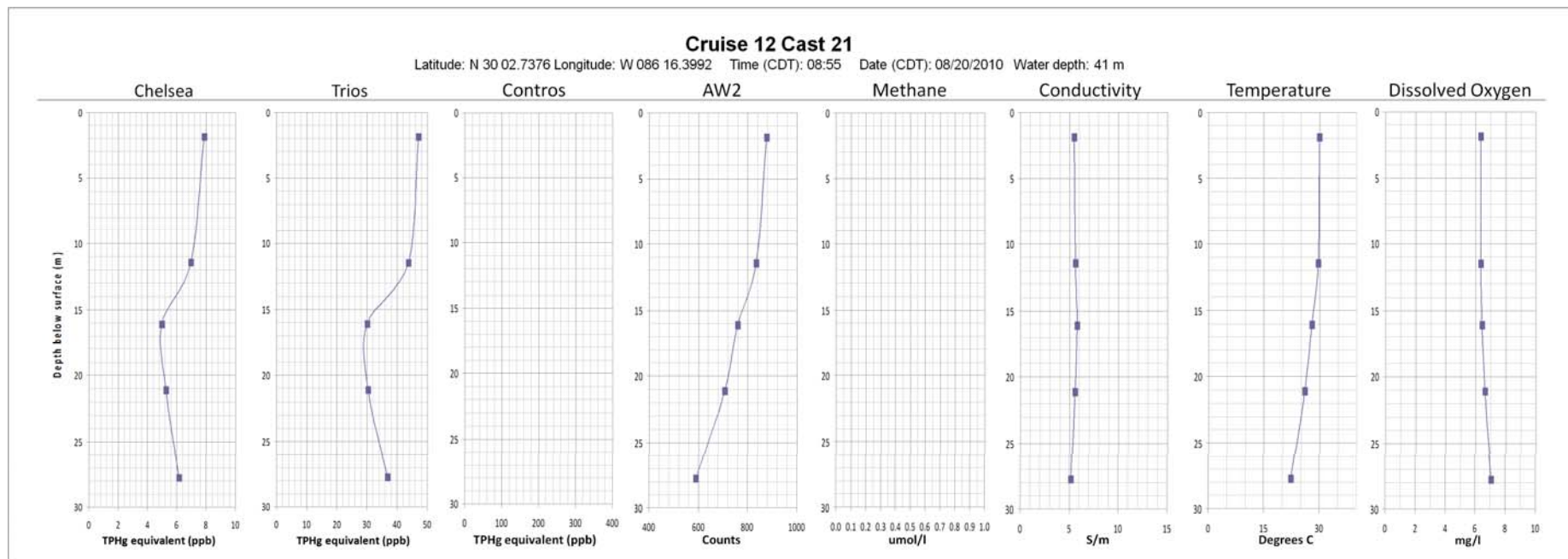


Figure 4. The results obtained for Cruise 12 vertical cast 21 (#21-C12) down to 28 m. The sensor fluorometry results for the Chelsea, Trios and Contros sensors and water samples were obtained from waters pumped to the surface. Conductivity, temperature, depth and dissolved oxygen measurements were obtained 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.

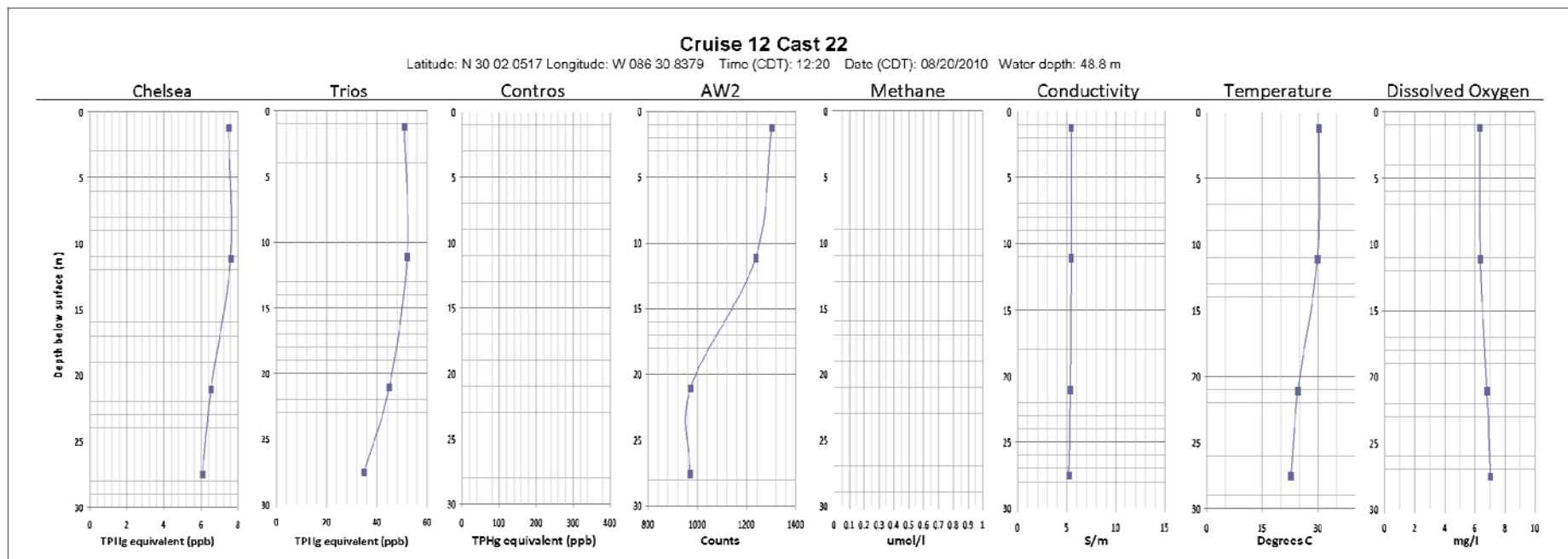


Figure 5. The results obtained for Cruise 12 vertical cast 22 (#22-C12) down to 28 m. The sensor fluorometry results for the Chelsea, Trios and Contros sensors and water samples were obtained from waters pumped to the surface. Conductivity, temperature, depth and dissolved oxygen measurements were obtained 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.

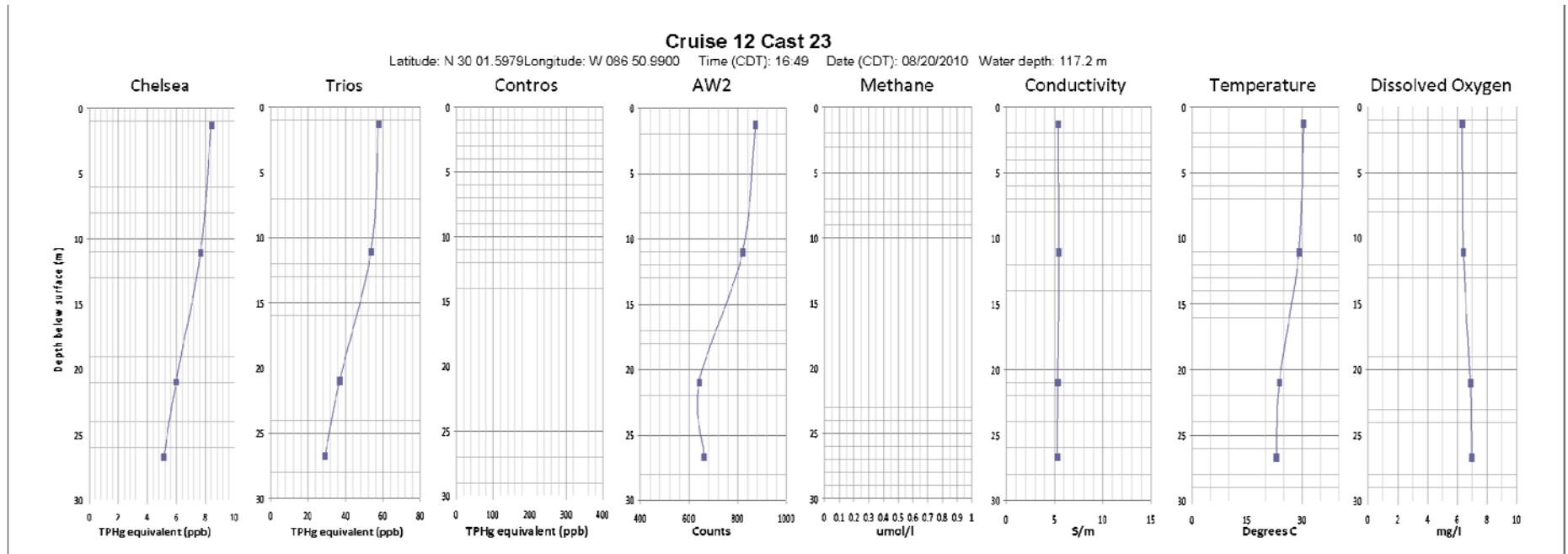


Figure 6. The results obtained for Cruise 12 vertical cast 23 (#23-C12) down to 25 m. The sensor fluorometry results for the Chelsea, Trios and Contros sensors and water samples were obtained from waters pumped to the surface. Conductivity, temperature, depth and dissolved oxygen measurements were obtained 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.

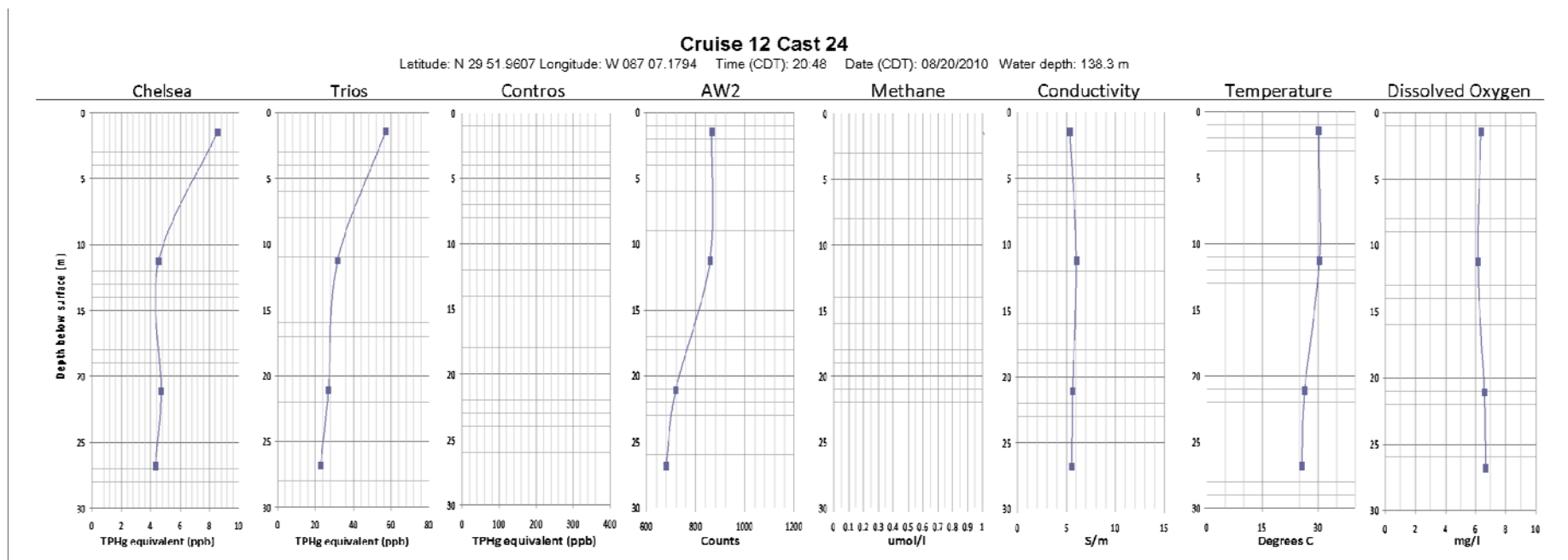


Figure 7. The results obtained for Cruise 12 vertical cast 24(#24-C12) down to 27 m. The sensor fluorometry results for the Chelsea, Trios and Contros sensors and water samples were obtained from waters pumped to the surface. Conductivity, temperature, depth and dissolved oxygen measurements were obtained 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.

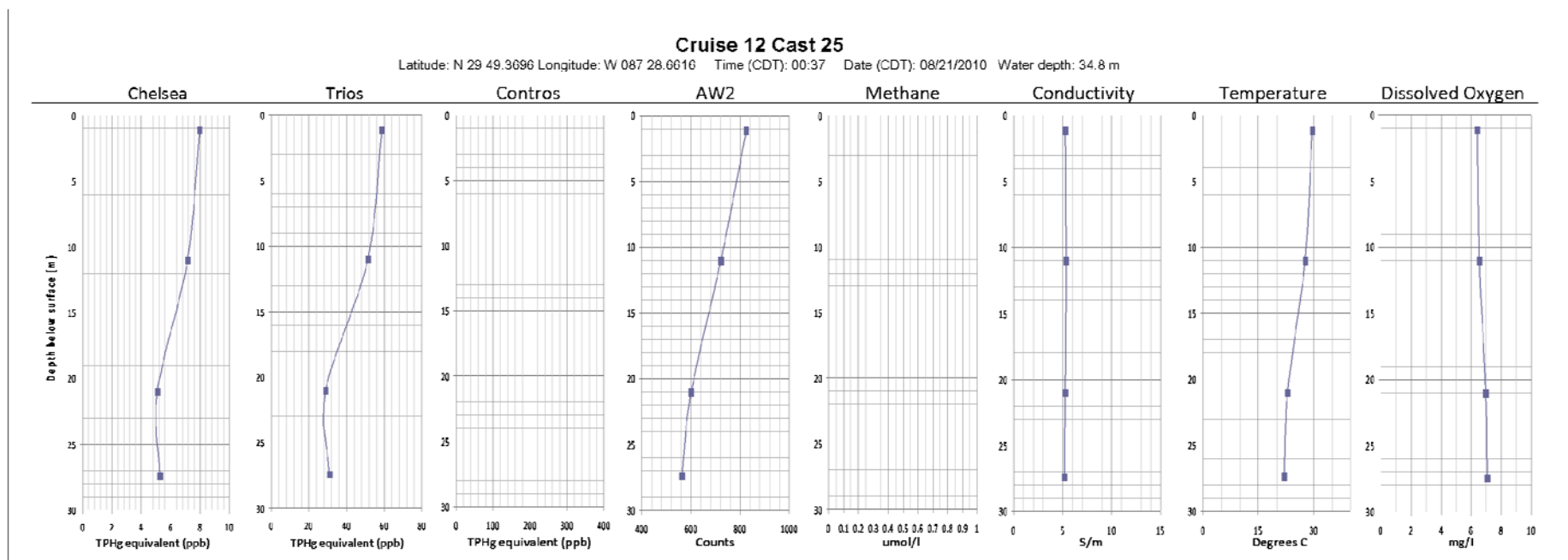


Figure 8. The results obtained for Cruise 12 vertical cast 25 (#25-C12) down to 26 m. The sensor fluorometry results for the Chelsea, Trios and Contros sensors and water samples were obtained from waters pumped to the surface. Conductivity, temperature, depth and dissolved oxygen measurements were obtained 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.

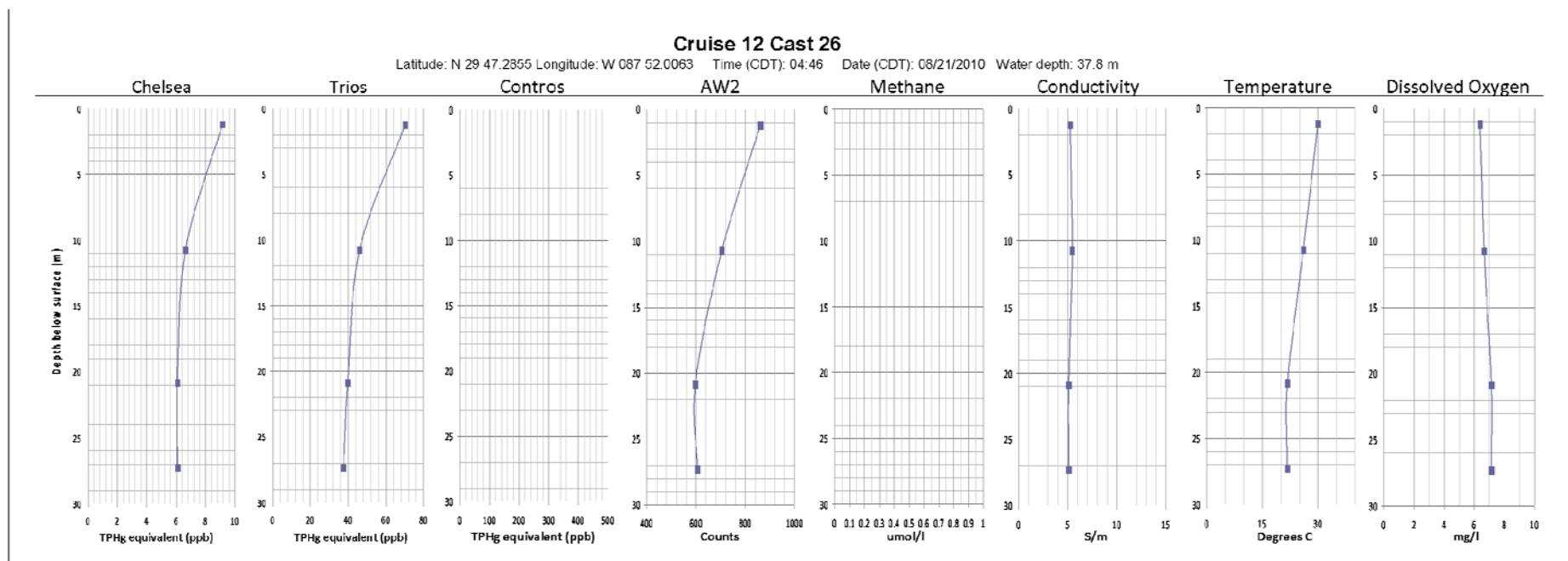


Figure 9. The results obtained for Cruise 12 vertical cast 26 (#26-C12) down to 27 m. The sensor fluorometry results for the Chelsea, Trios and Contros sensors and water samples were obtained from waters pumped to the surface. Conductivity, temperature, depth and dissolved oxygen measurements were obtained 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.

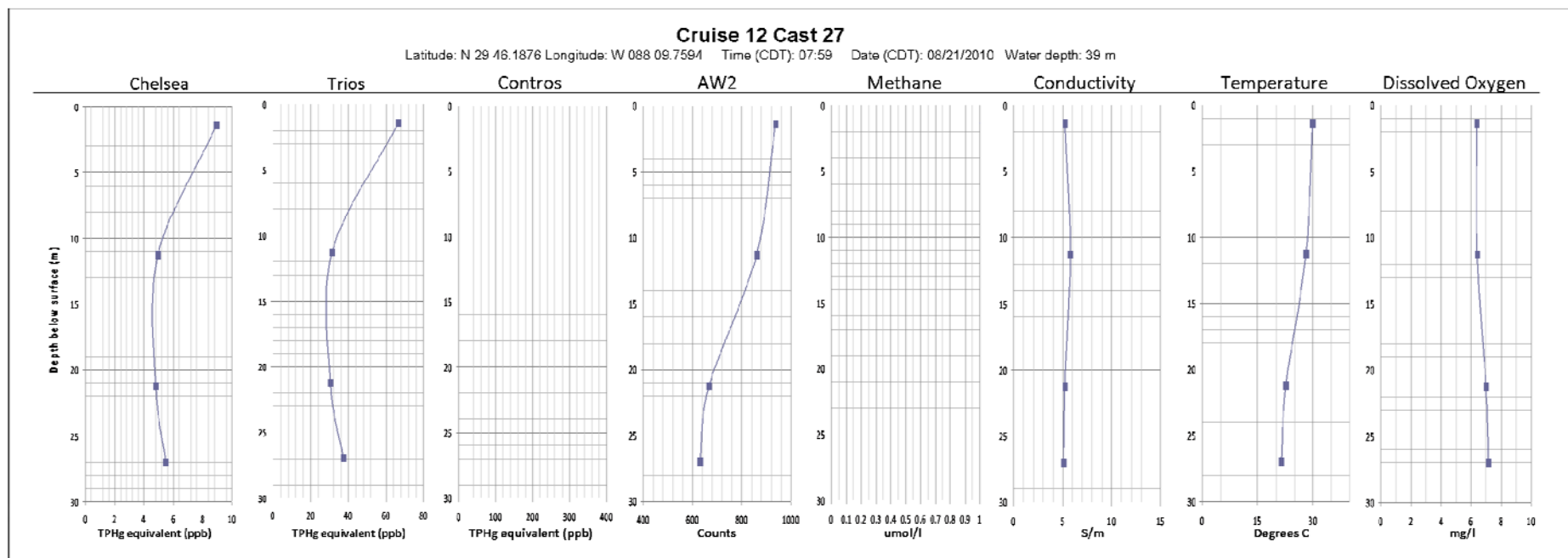


Figure 10. The results obtained for Cruise 12 vertical cast 27 (#27-C12) down to 27 m. The sensor fluorometry results for the Chelsea, Trios and Contros sensors and water samples were obtained from waters pumped to the surface. Conductivity, temperature, depth and dissolved oxygen measurements were obtained 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.

Science Operations:

Fluorometer measurements were logged for the majority of the period and observations of sea-surface conditions were made throughout. Vertical fluorometry and CTD casts were taken approximately every 20 nautical miles and sample the upper 30m. The EK-60 echo sounder is continuously collecting data to evaluate the seabed and water column for possible seeps. We continue to analyse water samples using the GCMS.

Problems/operational issues:

The ship had to accelerate to pass through the shipping lane when entering waters south of port Theodore. We temporarily shut down the underway pump and resumed after passing the area.

Selected Photographs:

No photographs were taken during the reporting period.

Planned activities for next 24 hours:

The *Ryan Chouest* will continue on its cruise 12 track towards Port Fourchon and then head into port to obtain extra paint and engineering supplies. This will be a quick supply stop and afterwards we will complete the cruise 12 track and vertical casts planned.

Full Crew List:

William A. Smith	MASTER	Brian Corley	Mate
Craig Lyons	ENG	Robert Thompson	ENG
Elijah Benjamin	O/S	Arthur Triggs	O/S
Roderick Baker	OS/Cook	Patrick Anderson	A/B
Kile Blunt	A/B/Cook	Guilherme de Almeida	Entrix
Lawrence Febo	BP	Stephane Armand	CSIRO
Xiubin Qi	CSIRO	Charlotte Stalvies	CSIRO
Andy Reville	CSIRO	Bobby Patrick	C&C
Tim MacEwan	C&C	Ben Autin	C-Port
Brett Bundick	C&C	Braden Wilson	C-Port
David Duplechain	C&C		

Important Disclaimer

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