
August 19th | 2010

Ryan Chouest daily data transmission and report

Period covered: 1937 hrs 08/18/2010 – 1104 hrs 08/19/2010

84.487 - Nautical miles covered

Vessel science party:

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Cruise notes:

The *Ryan Chouest* sailed on the planned cruise 12 route. After leaving Theodore, the *Ryan Chouest* sailed back to the point where we left off and resumed the underway sensor data collection. We continue with the echo sounder and underway pump system, along the coastal transect towards and across the western coast of Florida rejoining the previous Cruise 2 track along the gulf coastlines of Alabama and west Florida. (Figure 1).

Science results and preliminary interpretation:

Fluorometry results

The Chelsea and Trios sensors indicate baseline levels of inferred hydrocarbons concentrations through the reporting period (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

No surface observations were reported for the surveyed route.

EK-60 Echosounder results

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

Vertical Casts

Three vertical fluorometry/CTD casts were taken during this report period (Figures 4 – 6). Overall the sensor readings are in the lower range of the average sensor outputs. The Chelsea and the Trios show slightly increased responses to waters close to the sea surface. The AW2 and the temperature probe both show more apparent increases than the fluorometers. The dissolved

oxygen displays an opposite trend of lower reading to the surface water than the bottom water. The conductivities are relatively constant along the water columns. Since the readings' of the AW2, the sensor for the detection of volatile components, are also dependent on temperature, the higher output might be due to the higher water temperature or the combined contribution from dissolved hydrocarbon and temperature. To verify this further quantitative analysis of the water samples collected during the casts is needed.

Planned route for cruise 12:

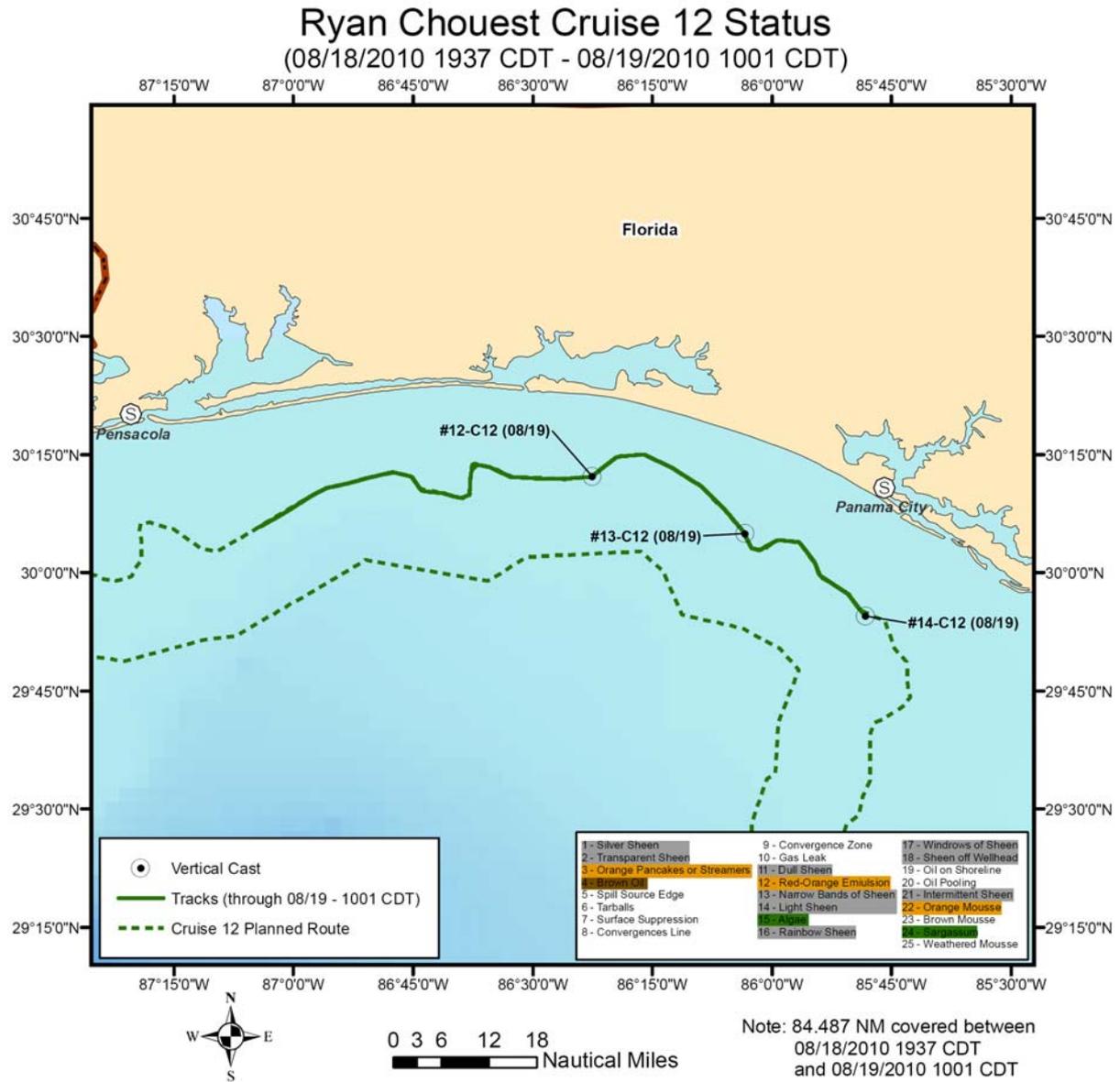


Figure 1: Planned route for cruise 12 versus the actual route plotted between 08/18/2010 – 08/19/2010.

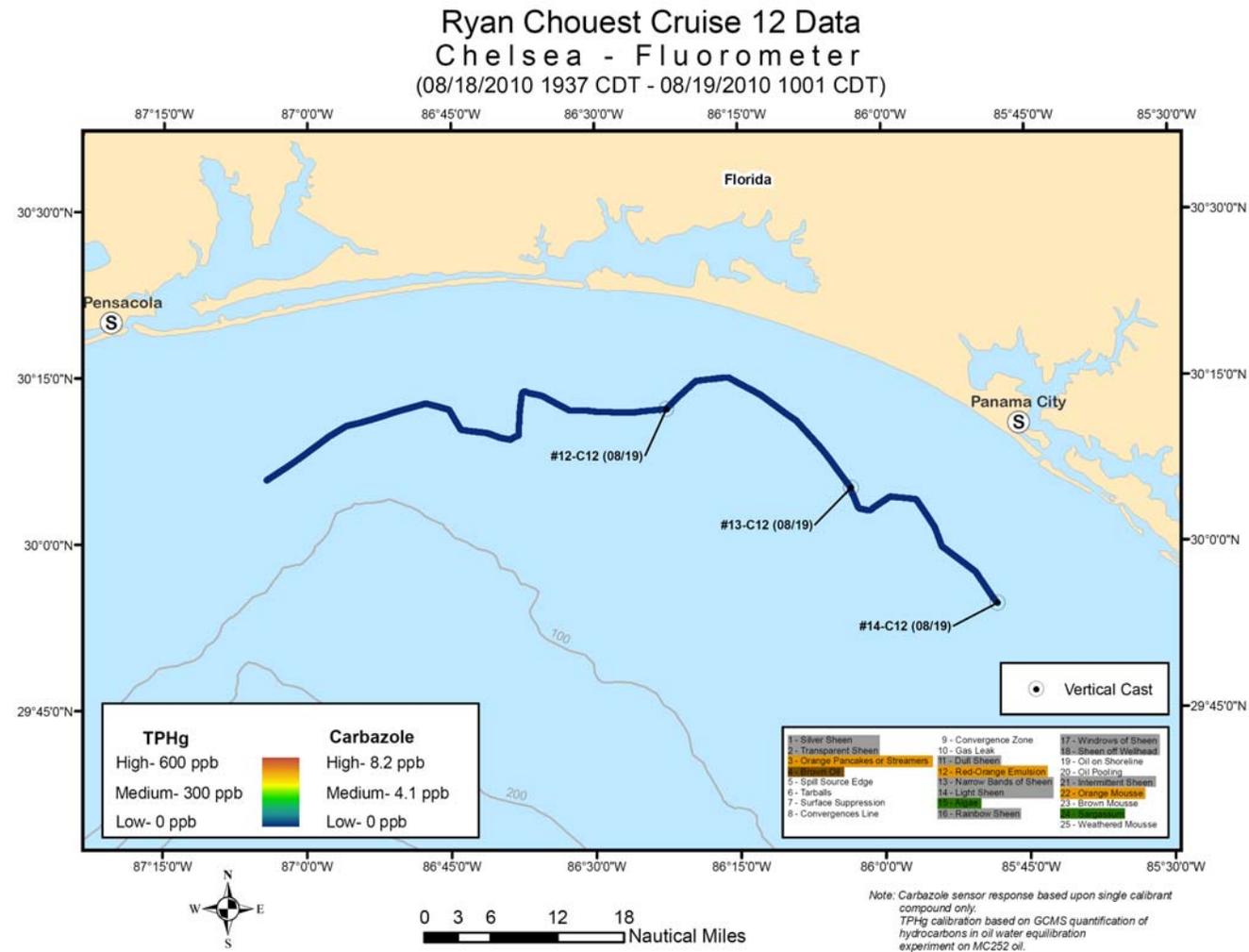


Figure 2. Chelsea fluorometer results plotted with location on cruise track 12. Breaks in data occur when either data quality is poor or the systems were turned off due to pump problems. Purple lines represent depth contours of 100 m intervals.

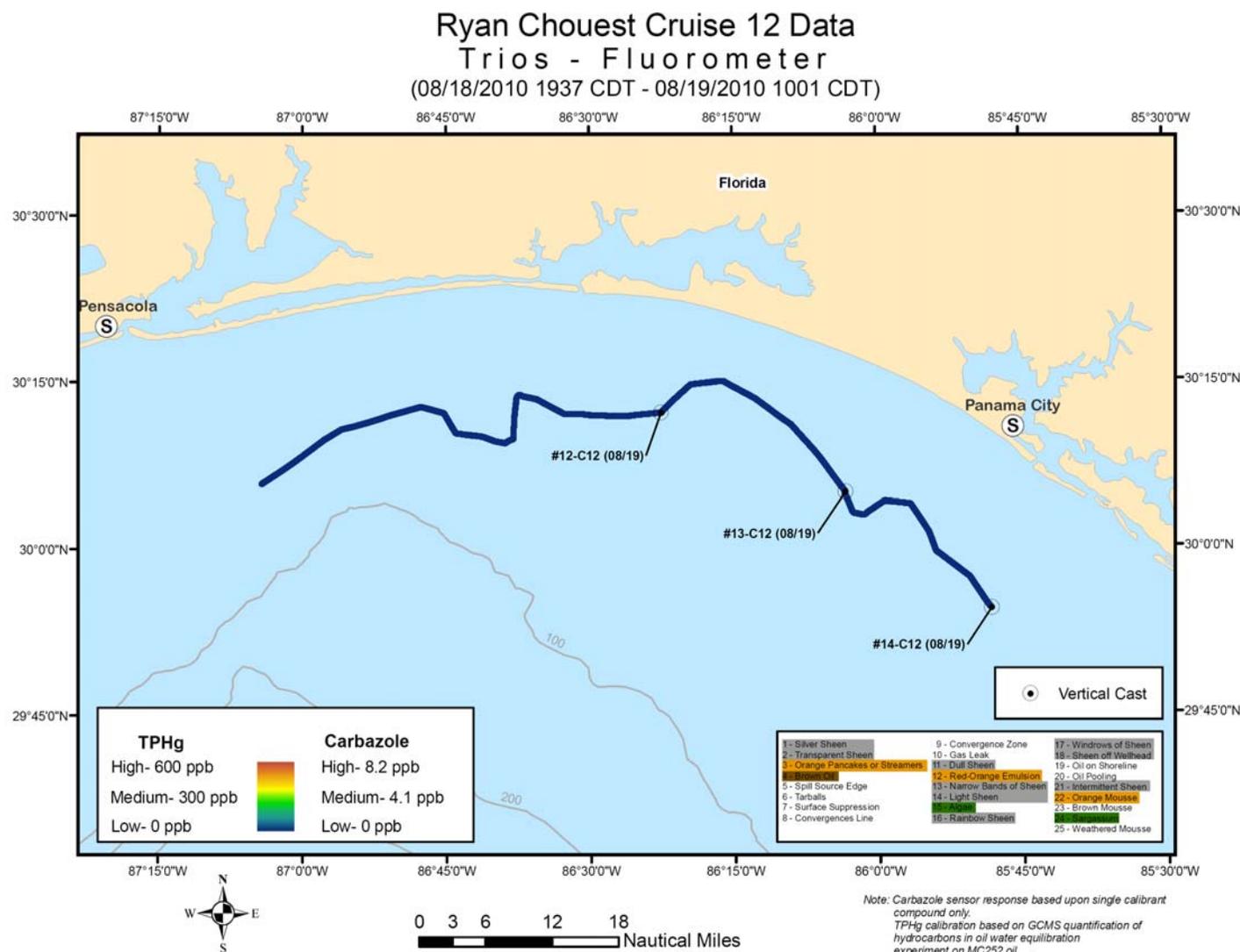


Figure 3. Trios fluorometer results plotted with location on cruise track 12. Breaks in data occur when either data quality is poor or the systems were turned off due to pump problems. Purple lines represent depth contours of 100 m intervals.

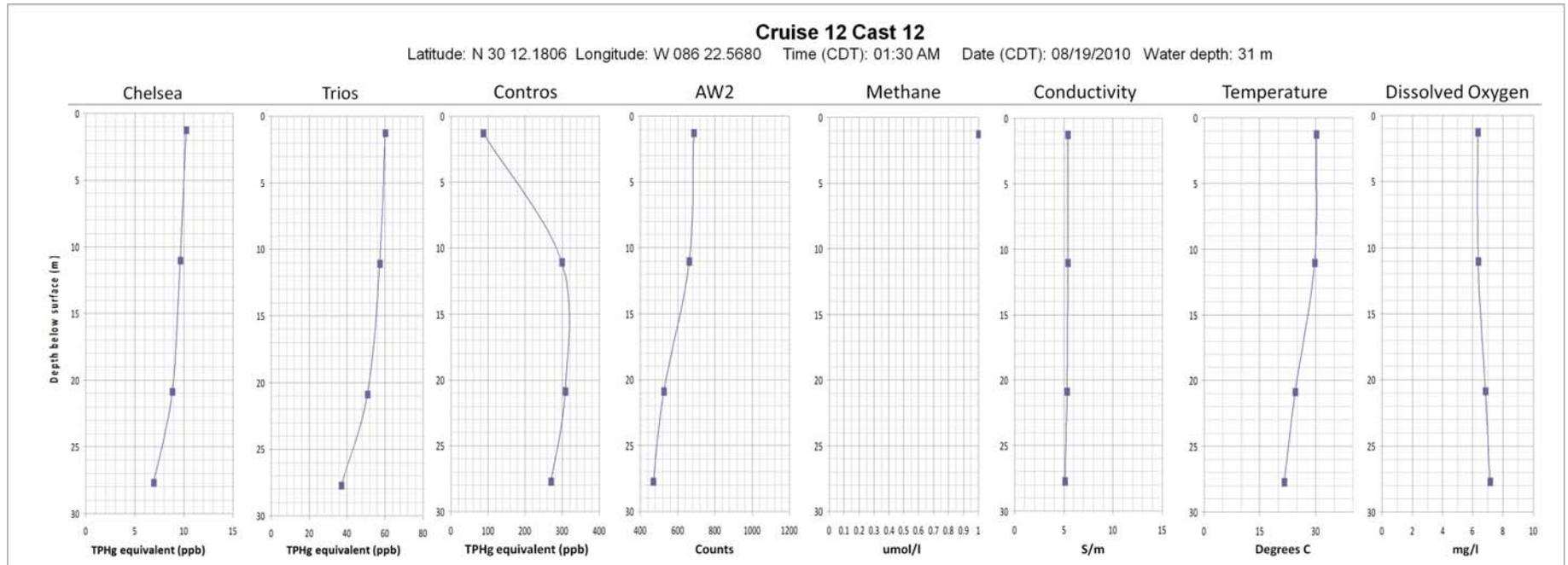


Figure 4. The results obtained for Cruise 12 vertical cast 12 (#12-C12) down to 28 m. The sensor fluorometry results for the Chelsea, Trios and Contros sensors and water samples were obtained from waters pumped to the surface. Conductivity, temperature, depth and dissolved oxygen measurements were obtained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

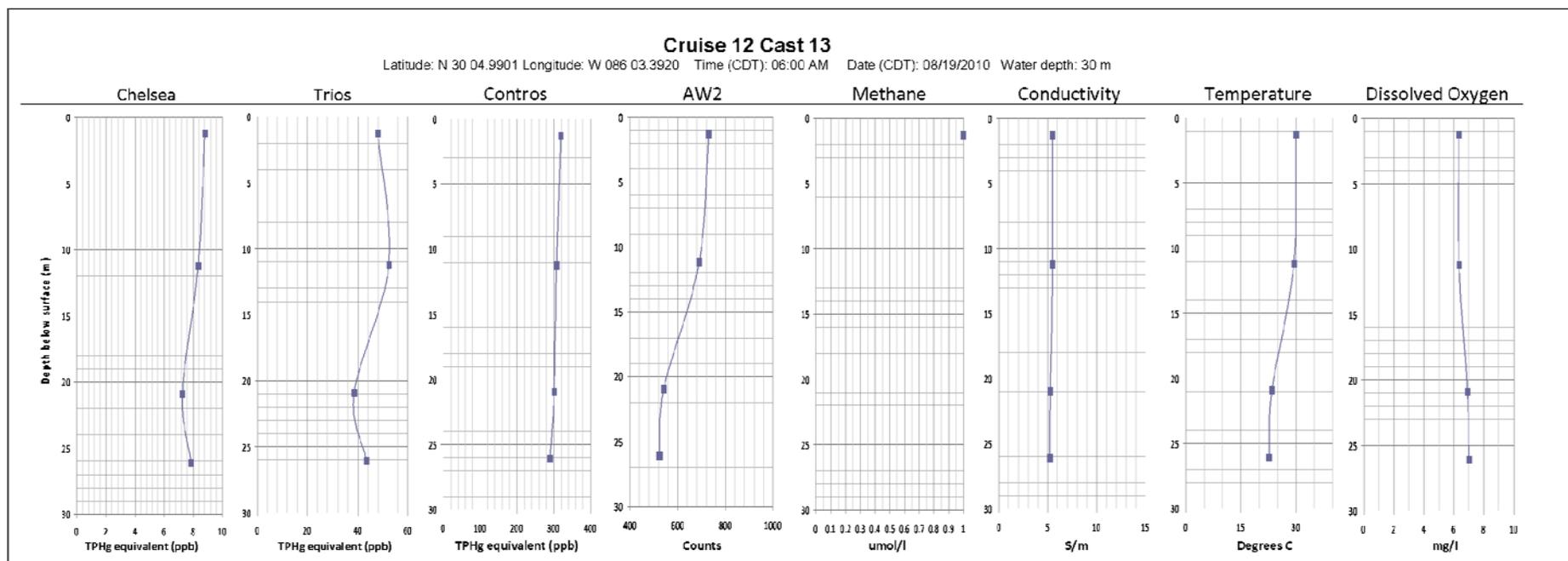


Figure 5. The results obtained for Cruise 12 vertical cast 13 (#13-C12) down to 26 m. The sensor fluorometry results for the Chelsea, Trios and Contros sensors and water samples were obtained from waters pumped to the surface. Conductivity, temperature, depth and dissolved oxygen measurements were obtained 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.

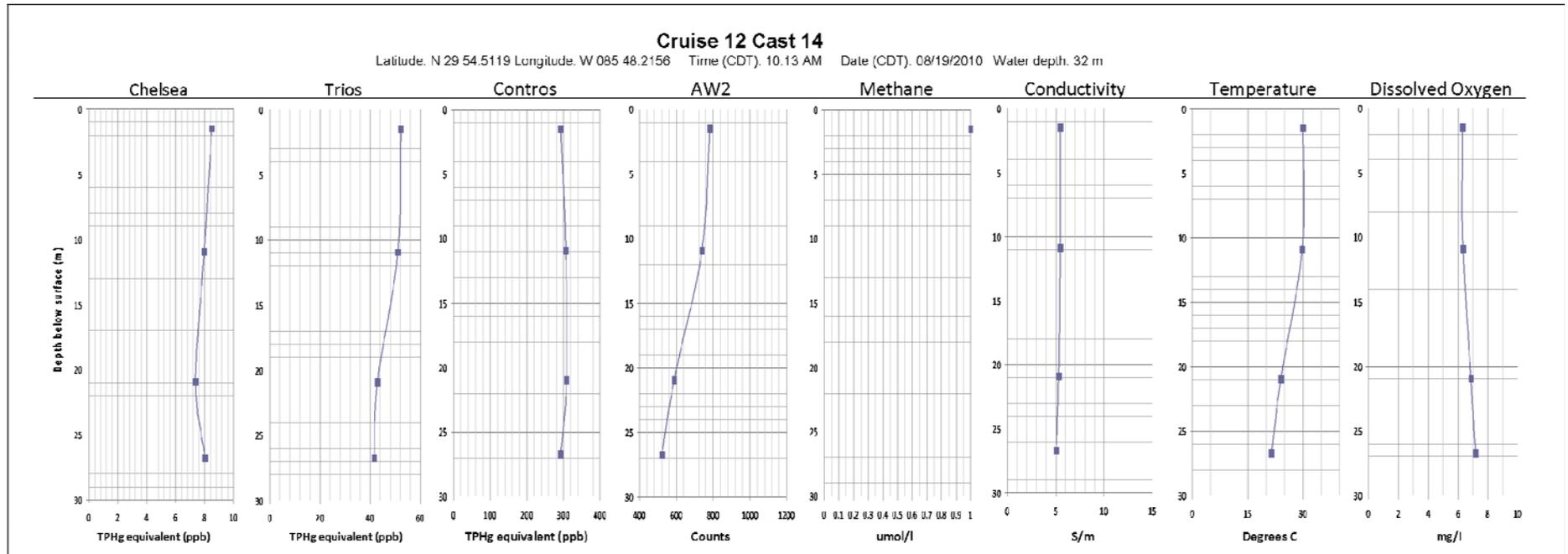


Figure 6. The results obtained for Cruise 12 vertical cast 14 (#14-C12) down to 27 m. The sensor fluorometry results for the Chelsea, Trios and Contros sensors and water samples were obtained from waters pumped to the surface. Conductivity, temperature, depth and dissolved oxygen measurements were obtained 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 are 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:

A leak was detected on the fuel pump on the generator unit that supplies the C&C container. As a precaution, the unit was shut down and the survey personnel were relocated to the bridge. The new science team had problem connecting to the internet and the problem was fixed by resetting the bridge router by the Stratas technical support.

Selected Photographs:

No photographs were taken during the reporting period.

Planned activities for next 24 hours:

The *Ryan Chouest* will continue on its cruise 13 track.

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 Revill	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		

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