

Ryan Chouest daily data transmission and report

Period covered: 1019 hrs 07/02/2010-1000hrs 07/03/2010

50.126 - Nautical miles of data coverage

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Cruise notes:

The ship continued its path along the planned route (Figure 1) collecting underway sensor data. The ship safety briefing went as planned at 1300hrs, 07/02/2010, ending with member acknowledgement. At 1530 hrs 07/02/2010, the Ryan Chouest stopped and a vertical cast was conducted to a depth of 15m to test the repaired pump and the revised reel. The underway system was resumed after the successful cast.

Severe weather warning was issued to us by Captain Glen at ~2000hrs, 07/02/2010, we decided to pull pump out of water to prevent damage. The ship temporally anchored at the shallow water off the Panama City.

Received update to the cruise 6 route from Simon Lisescki at 0815hrs, 07/03/2010. The new track runs east towards the Florida coast at along the 30°N latitude and SE along the Florida continental shelf from 30°N, 86° 40'W to 26°10'N, 84°6'W and deviates from 25°30'N, 84°40'W to the MC252 site .The pump was placed into the water at 0945hrs and began heading towards the SE segment of the track at 0950hrs from our anchored position off the coast of Panama City.

Science results and preliminary interpretation:

Fluorometry results

The ERMA situation status map changed significantly from June 29th to July 2nd: the oil slicks previously extending close to the Florida coast was cleared. The Chelsea, Trios, and Contros fluorometry data show low inferred hydrocarbon concentrations over the track travelled (Figures 2-4).

Surface Observations

Only seaweed and convergence lines observed throughout track.

Geochemistry

In order to confirm the level of contamination introduced by the long hose for vertical cast, we compared the chemical composition of water samples collected through the long hose, long hose after 1h of purging, short hose, directly collected from the sea surface and MQ water blank. Up to 0.25ppm of toluene and 0.59ppb level of naphthalene were detected compared to 0.001ppm of toluene and 0.03ppb of naphthalene in the water sample collected from the short hose. 1h of purging significantly reduced the Toluene concentration down to 0.16ppm.

We proposed two ways to minimize the background levels either by continuously purging the hose or replacing the hose with drink water delivery hose. Note that if the HC concentration in the water samples to be tested is well above the levels above, the chemical information achieved from the vertical cast using the long hose should be still reliable.

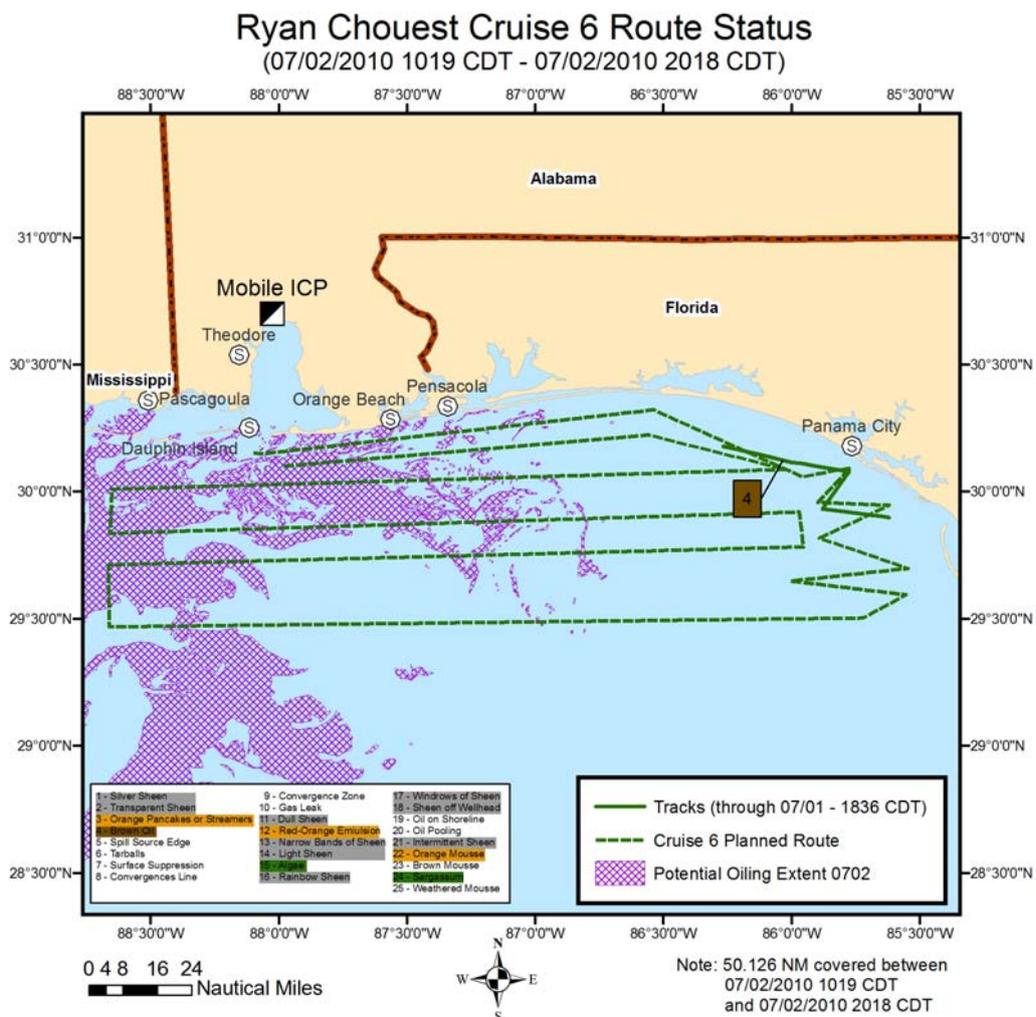


Figure 1: Planned course plotted for Cruise 6. Purple shaded area represents outline extent of the slick from 07/02 ERMA composite.

Ryan Chouest Cruise 6 Data Chelsea- Fluorometer (07/02/2010 1019 CDT - 07/02/2010 2018 CDT)

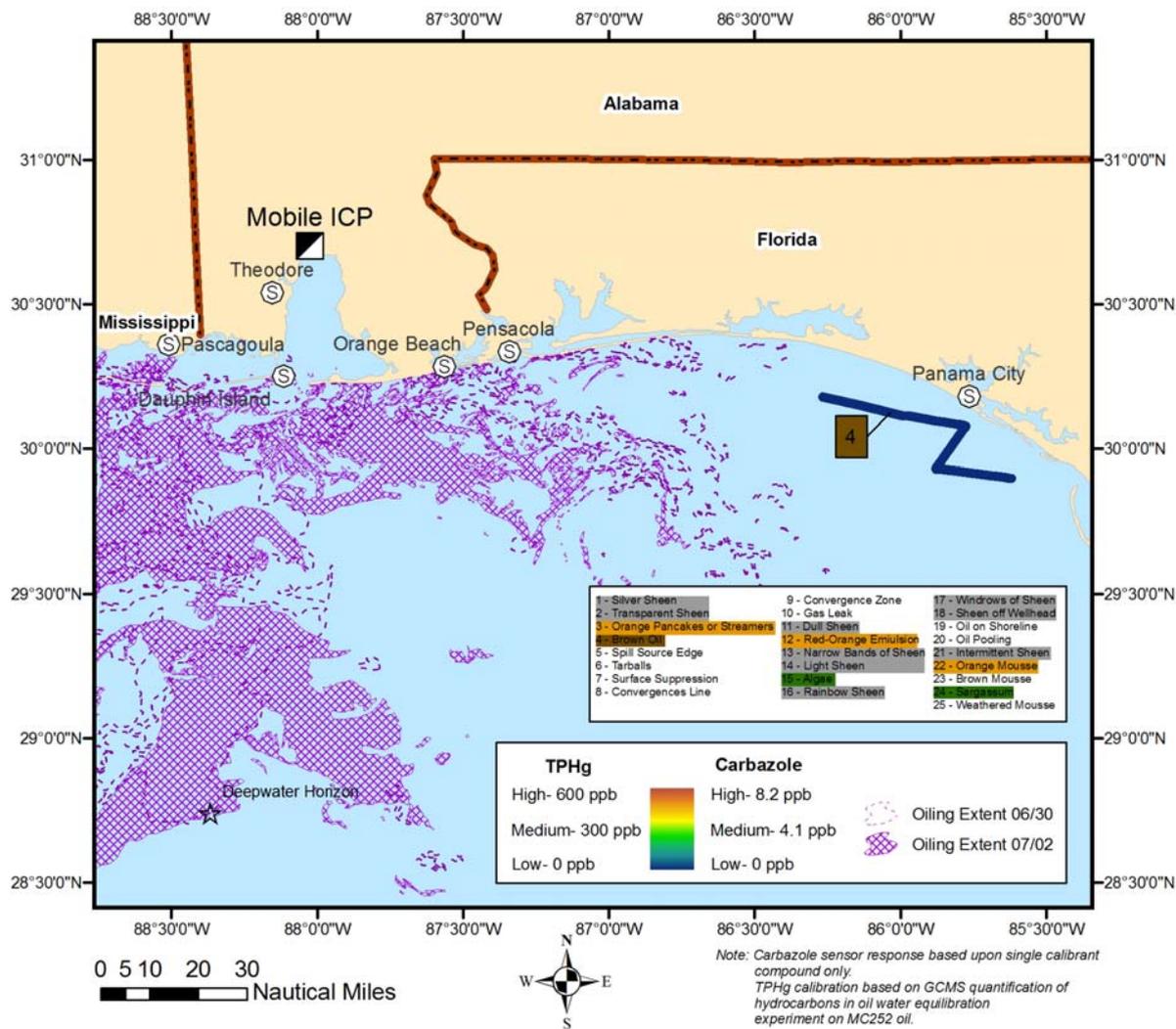


Figure 2. Chelsea fluorometer results plotted with location on cruise 6 track.

Ryan Chouest Cruise 6 Data Trios- Fluorometer (07/02/2010 1019 CDT - 07/02/2010 2018 CDT)

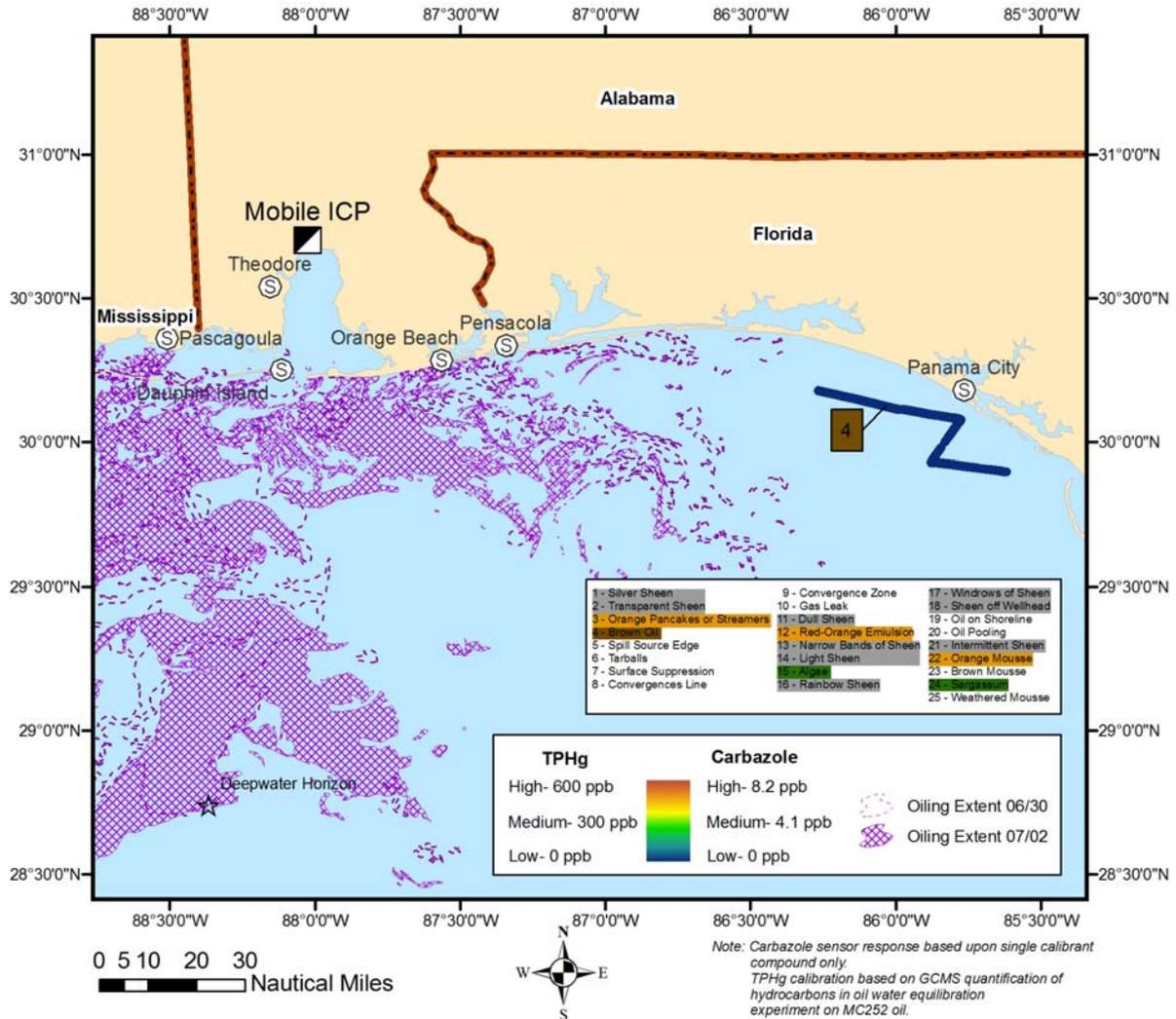


Figure 3. Trios fluorometer results plotted with location on cruise 6 track.

Ryan Chouest Cruise 6 Data
Contros- Fluorometer
 (07/02/2010 1019 CDT - 07/02/2010 2018 CDT)

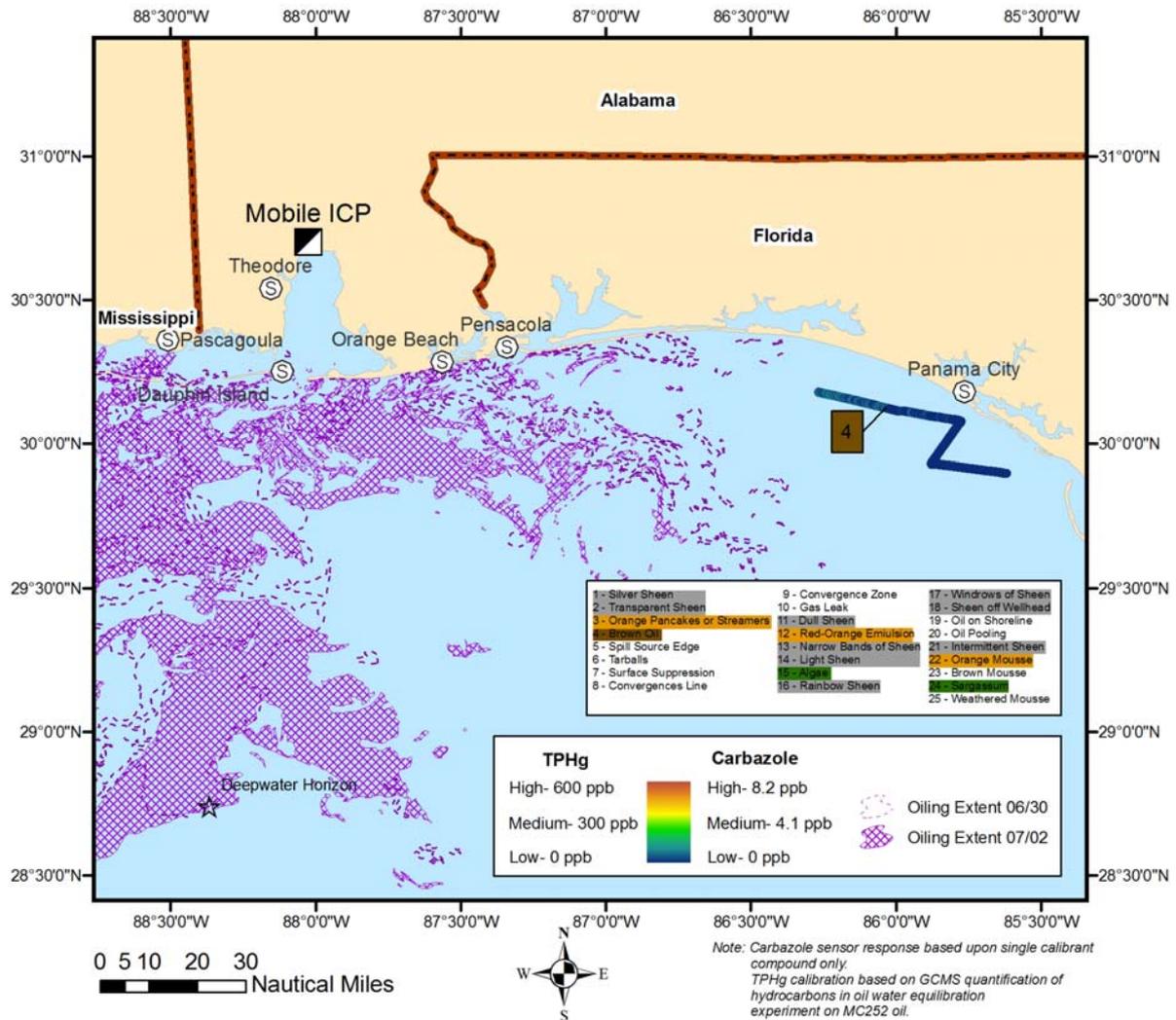


Figure 4. Contros fluorometer results plotted with location on cruise 6 track.

Problems/operational issues:

Epileptic internet access persists. Awareness about loose and impeding materials on the deck of ship was raised.

Planned activities for next 24 hours:

Sail along the new track forwarded by Simon targeting on the loop current area unless further update received from NOAA.