**Brooks McCall Status Report - Cruise 13 - Day 3 - 19 July 2010**

**Complied by: Alison Lane, Ecosystem Management and Associates Inc. (for BP)**

**Site conditions**

Seas gentle with 1 to 2 foot wave height and light winds all day. Seismic and acoustic survey work all day prevented access closer than approximately 7 nm to the wellhead or at times considerably further.

**Air Quality**

VOC monitoring was conducted at regular intervals at each sample site throughout the day by Bob Miller, Industrial Hygiene Specialist with Bureau Veritas. VOC maximum, recorded at BM137 was 2.8 ppm. Two crew, Paul Clark and Larry Lane were fitted with passive diffusion monitors from 0700 hours to end of deck work at 1900 hours.

**Equipment**

The CTD behaved all day, with no problems encountered on any cast thanks to the expert efforts of CTD technician Paul Clark, who deserves a medal!

**Findings**

The following definition has been adopted to provide common terminology on subsurface oil:

*Oil Plume:* "Concentration of oil (above background) in the water column that appears to be part of a larger pattern of dispersed oil based on real-time fluorometry and LISST particle data analysis."

There were 4 casts completed, as summarized below and shown in the figure (over page).

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| **Station** | **Position from wellhead** | **Fluorescence**  **signal** | **Signal depth** | **Comment** |
| BM137 | 14 km E | None |  | No peaks in fluorescence or decreases in DO were observed at this site. Surface oil increased during our stay at the site until there was both sheen and patches of emulsified oil. |
| BM138 | 14 km SE | None |  | No peak in fluorescence but several small decreases in the DO at depths often associated with fluorescence peaks. No surface oil observed. |
| BM139 | 17 km SE | None |  | No peak in fluorescence but a small decrease in the DO at depth often associated with fluorescence peaks. No surface oil observed. |
| BM140 | 14 km SE | None |  | No peak in fluorescence and no decrease in DO. No surface oil observed. |

**BM137** was located 14km to the east of the wellhead. Initially there was no sign of surface oil but by the end of the cast 2 hours later there was small amounts of sheen and patches of emulsified oil. There were no peaks in fluorescence or decreases in DO where these are generally associated with the fluorescence peaks. The only small particles detected by LISST were in surface samples. DO minimum was between 400m and 600m depth.

**BM138** was located 14km to the south east of the wellhead, There was no surface oil observed at the station although the water was unusually green and with reduced water clarity than has been seen by us in the past month. There was no peak in fluorescence but a decrease in DO at depths of 1050m down to 1300m relative to background. The only small particles detected by LISST were in surface samples. The DO minimum was between 370m and 600m depth.

**BM139** was located 17km to the south east of the wellhead, continuing away from BM138 as permission to move further south was not granted due to seismic operations. There was no surface oil observed at the station although the water was unusually green and with reduced water clarity than has been seen in the past month. There was no peak in fluorescence but a decrease in DO at depths of 1200m down to 1250m relative to background. The DO minimum was between around 500m depth. LISST analysis did not detect an increase in small particles at this depth.

**BM140** was located 14km to the south east of the wellhead between BM137 and BM138. Access to the south was still prohibited. There was no surface oil observed at the station. There was no peak in fluorescence and no dip in DO at depths commonly associated with a plume signal. The DO minimum was between 400m and 600m depth. The only small particles detected by LISST were in surface samples.

**Toxicity Testing**

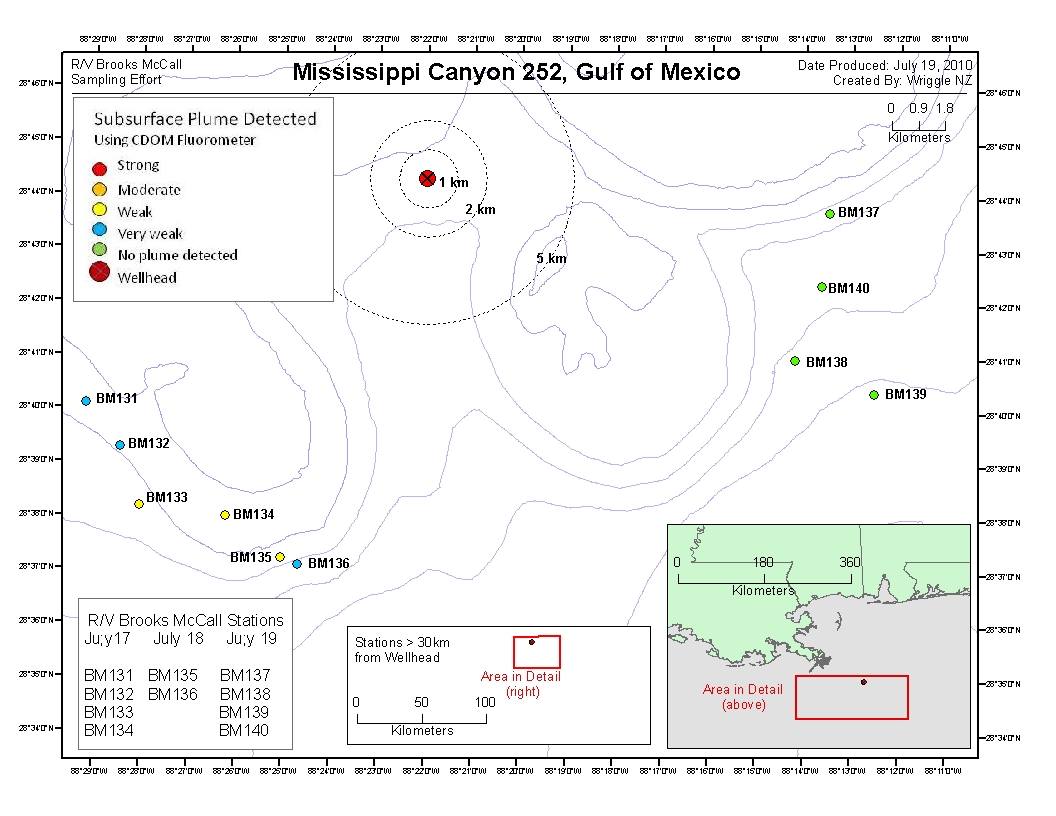
Rotox tests started today for sample stations BM137 to BM140 with results due to be reported on 20 July 2010. Tests were completed today for stations BM135 and BM136 with no significant mortality seen in these tests.

**LISST and Fluorometry**

The LISST analysis demonstrated a slight increase in small particles in surface water samples at all sites. All fluorescence ratio intensities were low, indicating well dispersed oil. Today’s LISST and fluorometry report is attached in the daily deliverables for today.

**Summary**

Day 3 of the Brooks McCall Cruise 12 sampled 14 and 17 kilometers to the south east of the wellhead. The choice of locations was based on findings reported to us by the S/V *Ferrel*, the Fugro modeling along with serious limitations to sample sites as a result of seismic vessel operations. No plume signal in the fluorescence was detected at depth at any of the stations. The lowest recorded DO reading using the handheld Extech probe was 4.18mg/L in the DO minimum at 500 meters at site BM140.



**Crew Manifest**

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| OPEL, Chris | Master | TDI BROOKS |
| MAJNI, Geno | Chief Mate | TDI BROOKS |
| KAMAL, Wasib | Chief Engineer | TDI BROOKS |
| McCLUSKEY, Ben | Oiler | TDI BROOKS |
| FELIX, Frank | A/B | TDI BROOKS |
| MAJNI, Ann | OS | TDI BROOKS |
| NARCISIS, Paul | Cook | TDI BROOKS |
| MACDONALD, Ian | Crew Chief | TDI BROOKS |
| GREEN, Billy | Winch Operator | TDI BROOKS |
| LANE, Larry | Deck | TDI BROOKS |
| LANE, Alison | Chief Scientist | EM&A |
| HILL, Stephanie | Data Manager | CSS |
| ESSEX, Laura | Rototox testing | EM&A |
| CLARK, Paul | CTD Tech | GERG/TEXAS A&M |
| KEPKAY, Paul | LISST and fluorometry | DFO |
| RYAN, Scott | LISST and fluorometry | DFO |
| SUSDORF, Gary | Water sampling | ENTRIX |
| McTHENIA, Andy | Water sampling | ENTRIX |
| WANNER, Brandon | Water sampling | ENTRIX |
| MILLER, Robert | Industrial Hygienist | BV |
| TODD, Brandi | EPA representative | EPA |

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