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| *Seabed Sampling and Baited Camera Operations* | |
| Vessel | R/V Gyre |
| Summary Report Number | 06 |
| Operating equipment | MEGA Corer (12 core unit)  ROBIO Lander |
| Date | 27 September 2010 |
| Completed casts (12 hr) | 4 MEGA Corer 1 ROBIO Deployment |
| Report compiled by | Richard Bowen |

Seabed Sampling Locations



All cores were processed and stored in accordance with SOPGY01. GC/MS and toxicology testing was conducted offshore. Samples were prepared and stored for hydrocarbon, trace metal, BTEX, grainsize, total inorganic carbon, total organic carbon, meiofauna, macrofauna and microbiology testing and analysis onshore.

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| **Station NF\_013**  **Lat: 28.738786**  **Long: -88.335619**  Cores recovered: 12 out of 12  Supernatant water  *Visible contamination*: None  *Olfactible contamination*: None  *Toxicology*: tested using an Azur Microtox 500 water purity monitoring system which measures the bioluminescence inhibition of the bacteria Vibrio fischeri after sample exposure at various sample concentrations. No appreciable inhibition was exhibited after periods of 5 and 15 minutes indicating that the bacteria had not been exposed to the toxic effects of typical pollutants.  Sediment  *Visible contamination*: There is possible oil contamination in the top two layers (0–10 cm).  *Olfactible contamination*: None observed.  *Description*: 28cm of soft grey clay overlaid with 9cm less compressed grey clay topped with 1cm of brown ooze.  *Gas Chromatography & Mass Spectroscopy*: The top 3cm of sediment core was sampled and analysed for EPA priority pollutant PAHs and Corexit 9500 dispersant. The sample was also screened for the source oil fingerprint. None of the target analytes were detected. No source oil was detected. |  |

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| **Station NF\_014**  **Lat: 28.719603**  **Long: -88.3447**  Cores recovered: 12 out of 12  Supernatant water  *Visible contamination*: None  *Olfactible contamination*: None  *Toxicology*: tested using an Azur Microtox 500 water purity monitoring system which measures the bioluminescence inhibition of the bacteria Vibrio fischeri after sample exposure at various sample concentrations. No appreciable inhibition was exhibited after periods of 5 and 15 minutes indicating that the bacteria had not been exposed to the toxic effects of typical pollutants.  Sediment  *Visible contamination*: Possible oil contamination in top 8cms.  *Olfactible contamination*: Not observed in this sample.  *Description*: Approx 28 cms soft gray clay overlaid with 5cm less compressed gray clay topped by 3cm dark brown ooze.  *Gas Chromatography & Mass Spectroscopy*: The top 3cm of sediment core was sampled and analysed for EPA priority pollutant PAHs and Corexit 9500 dispersant. The sample was also screened for the source oil fingerprint. Target analytes were detected. Initial screening indicates the presence of source oil. |  |

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| **Station ALT\_NF\_015**  **Lat: 28.709925**  **Long: -88.366436**  Cores recovered: 11 out of 12  Supernatant water  *Visible contamination*: None  *Olfactible contamination*: None  *Toxicology*: tested using an Azur Microtox 500 water purity monitoring system which measures the bioluminescence inhibition of the bacteria Vibrio fischeri after sample exposure at various sample concentrations. This sample exhibited a greater degree of inhibition (after periods of 5 and 15 minutes) than any of the other samples taken to date. An elevated percent effect indicates exposure to the toxic effects of typical pollutants.  Sediment  *Visible contamination*: Possible contamination in top 8 cms.  *Olfactible contamination*: None  *Description*: 30 cms soft grey clay overlaid with 6cm less compressed grey clay topped by 2cm dark brown soupy ooze.  *Gas Chromatography & Mass Spectroscopy*: The top 3cm of sediment core was sampled and analysed for EPA priority pollutant PAHs and Corexit 9500 dispersant. The sample was also screened for the source oil fingerprint. None of the target analytes were detected. No source oil was detected although small concentrations of higher molecular weight compounds were present in the sample. |  |

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| **Station LBNL-17**  **Lat: 28.696767**  **Long: -88.384875**  Cores recovered: 11 out of 12  Supernatant water  *Visible contamination*: None  *Olfactible contamination*: None  *Toxicology*: tested using an Azur Microtox 500 water purity monitoring system which measures the bioluminescence inhibition of the bacteria Vibrio fischeri after sample exposure at various sample concentrations. No appreciable inhibition was exhibited after periods of 5 and 15 minutes indicating that the bacteria had not been exposed to the toxic effects of typical pollutants.  Sediment  *Visible contamination*: Possible contamination in top 9 cms.  *Olfactible contamination*: None  *Description*: 29 cm soft grey clay overlaid with 6 cm less compressed grey clay. The top 3 cm were given to gas chromatograph (GC) for analysis.  *Gas Chromatography & Mass Spectroscopy*: The top 3cm of sediment core was sampled and analysed for EPA priority pollutant PAHs and Corexit 9500 dispersant. The sample was also screened for the source oil fingerprint. None of the target analytes were detected. No source oil was detected. |  |

**Station ROBIO-07**

**Lat: 28.705361**

**Long: -88.401894**

ROBIO-07 was deployed on the 27th October 2010 but not recovered until the 28th October 2010.