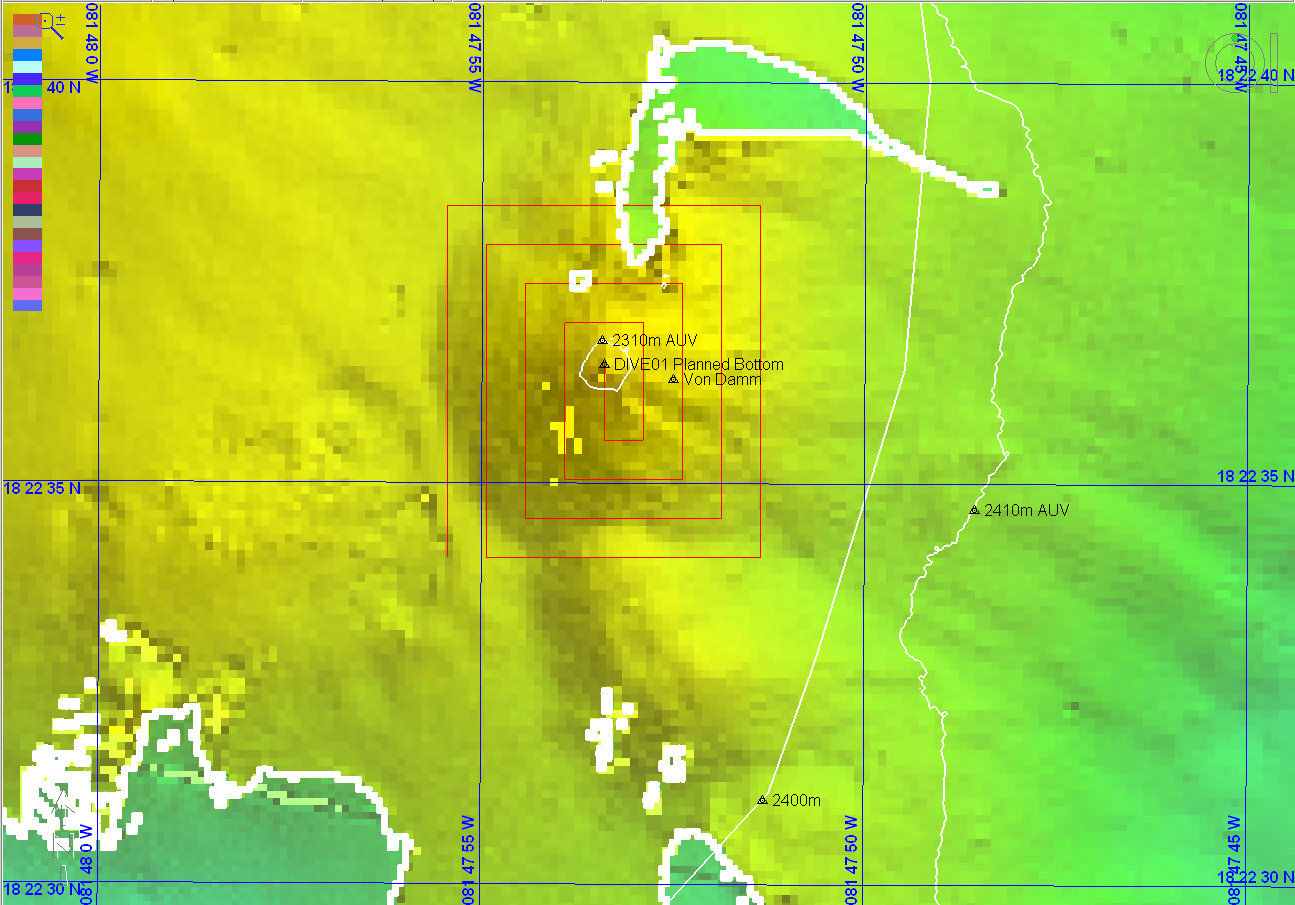
*Science Team develops draft dive track two days before a planned dive. Expedition Leader responds overnight based on ship capabilities, programmatic considerations, and constraints. Plan is finalized the day before a dive*

**Site Name:** Von Damm Hydrothermal Field

**Approximate Location:** 18° 22.65’N, 81° 47.875’W; 2300m

**Dive Date (local):** August 5th, 2011



**Brief Explanation of Exploration Objectives and Rational for the Desired Dive Track:**

Science Rationale:

To locate and characterize the full extent of the Von Damm site in a systematic survey covering an area of ~150m on a side. Key objectives will be:-

1. To locate the center of the field using the sonars on the vehicles and confirm its precise location relative to the fixes currently provided from our UK colleagues.
2. To survey the surrounding area covering as much of the entire field as possible within this first dive to constrain its outer limits
3. To obtain an overview of the geologic features that determine the size/scale of the site
4. To identify biological (or other) “hotspots” by dropping way-points during this dive in anticipation of more detailed studies at each of those locations during one or more subsequent dives later in the program.

Operations Response/Rationale:

The ship plans to launch the ROV at 0800 over the peak of the mound. Time from launch to the bottom is approximately 2 hours. Once the ROV finds the peak of the mound, we will conduct a systematic survey in the shape of the spiral outlined in the image above, moving at 0.2knots, for a bottom time of 5.5 hours. The time to return to the surface and secure the ROV on deck is approximately 2 hours, and the ROV is expected to be secured on deck at 1830.

**ROV Track Waypoints Table:**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| *DESIRED WAYPOINTS TO EXPLORE -*  *(COMPLETED BY SHORE-SIDE LEAD SCIENTIST)*  *(not including launch)* | | | | *ACTUAL WAYPOINTS TO EXPLORE-*  *(COMPLETED BY SHIPBOARD EXPEDITION LEADER)* | | | |
| **WAYPOINT NAME** | **LATITUDE (N)** | **LONGITUDE (W)** | **APPROX DEPTH** | **WAYPOINT NAME/SEQUENCE** | **LATITUDE** | **LONGITUDE** | **APPROX**  **DEPTH** |
| Launch |  |  |  | Launch |  |  |  |
| MCR001 | 18o 22.608’ | 81 o 47.890’ | 2310m |  |  |  |  |
| Conduct a counter-clockwise spiral with 15m spacing outward from the peak of the mound. Ship will maneuver in DP to have *Seirios* follow spiral. *Little Herc* will range ~10m to each side of Seirios’ path to cover all ground | | | |  |  |  |  |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |

**ANCILLARY INFORMATION:**

*COMPLETED BY SCIENCE TEAM LEAD*

**Are there additions operations recommended in the target area prior to the ROV dive?**

|  |  |  |  |
| --- | --- | --- | --- |
|  | **LATITUDE** | **LONGITUDE** | **APPROX DEPTH** |
| **CTD CASTS** | | | |
| 1 | None | None |  |
| 2 |  |  |  |
| 3 |  |  |  |
| 4 |  |  |  |
| **MULTIBEAM BOUNDING COORDINATES** | | | |
| 1 | None | None |  |
| 2 |  |  |  |
| 3 |  |  |  |
| 4 |  |  |  |