*Please use this as a template for documenting your recommendations for high-priority dive targets. Be sure to include a rationale for the dive as well as specific protocols (if applicable), and any known previous work or potential hazards at the site. Please include only generalized location information for any marine archaeology sites.*

*The form also includes fields for mapping targets and CTD cast locations.*

*Please send the completed form to* *Kelley.Elliott@noaa.gov* *and Jamie Austin (**Jamie@utig.ig.utexas.edu**)*

**Site Name:** WR0325

**Approximate Location:** 26.6N -91.1W,

**Depth:** 1923 meters

**Dive Date (local):** TBD

**Site map:** Side-scan sonar image of target discovered during a Chevron Oil survey in 2010



Figure 1 The AUV passed directly between the two targets and the subbottom profiler image shows an acoustic void where crossing the target(s) indicating this is likely one continuous object. If so, the target measures approximately 230' x 20' x 17' and is a line

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

Deepwater shipwrecks represent both the physical remnants of our cultural past and unique micro-ecosystems. To more fully understand them research must be multi-disciplinary, incorporating both archaeological and environmental studies. Investigations of the 2013 Monterrey wrecks, the 2008 Lophelia II Rigs, Reefs, and Wrecks Projects, and the 2004 DeepWrecks has provided thefirst detail glimpse of the complex dynamics of deepwater shipwrecks in the Gulf of Mexico. As research moves forward a broader data sample is needed to better understand the processes at work on these sites. Each shipwreck site is important to expanding our wreck site data. Baseline characterization is the first step towards more detailed studies of these wrecks. Using visual data from these investigations scientists will make initial archaeological assessments and begin preliminary documentation of biological communities on the sites. The resulting information will be used to plan and prioritize future detailed investigations. It may also be integrated in a limited manner with current data from ongoing studies to provide a more diverse sampling from a broader range of water depths. The data also help managers to determine the site’s preliminary potential for nomination to the National Register of Historic Places. Finally, scientists will use this exploration data to develop detailed research designs to guide future research in the quest to get a clearer perspective on the cultural aspects of deepwater shipwreck sites as well as a better understanding of the processes related to their formation, evolution, and function as marine ecosystems.

Site WR0325 was initially located as a subbottom and side-scan sonar contact during an AUV survey for Chevron Oil in 2010. The survey report states, “The AUV passed directly between the two targets and the subbottom profiler image shows an acoustic void where crossing the target(s) indicating this is likely one continuous object. If so, the target measures approximately 230' x 20' x 17' (70 meters by 7 meters with 3.5 meter of relief) and is a linear object with significant relief at each end." The collected data shows a wood or metal hulled vessel with high relief on each end indicative of a late 19th or 20 century ship. It is unknown at this time whether Site WR0325 represents a significant historical resource.

The dive track should start with a perimeter survey to identify potential hazards and diagnostic features warranting further investigation. Follow-on actions should include systematic and spaced survey transects along the longitudinal axis. Investigation of diagnostic artifacts and features should be completed separately from survey transects. Objects and rational are:

1. Collect multibeam data in area around wreck. This may be part of the initial site reconnaissance that is standard in preparing for ROV operations.
2. Collect subbottom data from hull mounted system over the site location to provide a better understanding of the site’s buried characteristics. Surveying a grid over and around the site with the subbottom profiler will provide a better understanding of potential scour around the site, and an opportunity to study deepwater currents around embedded seafloor features.
3. Preliminary archaeological assessment of the site to gather data that will allow planning a more comprehensive investigation of the site in the future.
4. Image diagnostic artifacts and features that can characterize the site’s age, nationality, function and cultural affiliation.
5. Determine site extents including debris field using cameras and sector-scanning sonar
6. Initial assessment of biological processes and fauna on the site.
7. Potential for sessile biota on and near the site makes it of interest biologically.
8. Determining impact of the wreck in the biological systems in deepwater.
9. Determine whether there have been any anthropogenic impacts to the site..
10. No impact to the site by the ROV or investigation will occur; this will be strictly a mapping and imaging mission.

**Has previous work been conducted here? Are there potential hazards in the area?**

This target was discovered during an AUV survey for the oil and gas industry which collected the only image available for the site (see page 1). The side-scan sonar data indicates 3.5 m relief at each end of the site which should be accounted for in ROV operations.

**ROV Track Waypoints Table:**

|  |  |
| --- | --- |
| *DESIRED WAYPOINTS TO EXPLORE -**(COMPLETED BY SHORE-SIDE SCIENTIST)* *(not including launch)* | *ACTUAL WAYPOINTS TO EXPLORE-* *(COMPLETED BY SHIPBOARD EXPEDITION LEADER)* |
| **WAYPOINT NAME/SEQUENCE** | **LATITUDE** | **LONGITUDE** | **APPROX DEPTH** | **WAYPOINT NAME/SEQUENCE** | **LATITUDE** | **LONGITUDE** | **APPROX****DEPTH** |
| Launch |  |  |  | Launch |  |  |  |
| WP1 |  |  |  | WP1 |  |  |  |
| WP2 |  |  |  | WP2 |  |  |  |
| WP3 |  |  |  | WP3 |  |  |  |
| WP4 |  |  |  | WP4 |  |  |  |
| WP5 |  |  |  | WP5 |  |  |  |
| Recovery |  |  |  | Recovery |  |  |  |

**ANCILLARY INFORMATION:**

Another shipwreck target is located within approximately 1 mile of site WR0325 and could be used as an alternative/additional dive location. WR325 is located at 26.6N -91.1W in 1926 meters of water. Dimensions are 70 x 6.09 x 5.1 meters. The site was discovered during an AUV survey in 2010. See image below.



Figure 2 Site WR325

**mapping and CTD operations REQUEST / Recommended operations in the target area prior to or after ROV dive**

*Please include requests for in situ sensors (LSS, DO, ORP) to be added to the CTD cast here, and specifics on the type of mapping operation requested (multibeam, subbottom, single beam).*

|  |  |  |  |
| --- | --- | --- | --- |
|  | **LATITUDE** | **LONGITUDE** | **APPROX DEPTH** |
| **CTD CASTS** |
| 1 |  |  |  |
| 2 |  |  |  |
| 3 |  |  |  |
| 4 |  |  |  |
| **MULTIBEAM BOUNDING COORDINATES** |
| North |  |  |  |
| East |  |  |  |
| South |  |  |  |
| West |  |  |  |