# *Queen Anne's Revenge* Field Operations – Fall 2009

Chris Southerly, Chief Archaeologist/Field Director

## I. Purposes/Goals

a. Place two new mooring blocks on site to allow better research vessel positioning for future expeditions.
b. Locate and mark four existing mooring blocks.
c. Locate and reattach aluminum anode to north anchor (A3) for passive corrosion study or attach new anode if necessary.
d. Place reference metals and sensor on site for baseline corrosion and environmental monitoring.
e. Collect sand elevations from established locations.
f. Possibly recover grapnel anchor if environmental conditions have detached it from the main ballast pile.
g. Examine and take corrosion readings on one or more cannon in the south holding area.

## II. Participants

a. NC UAB-*QAR* (* approved diver)
    i. *Chris Southerly – *QAR* Chief Archaeologist, Field Operations Director, Dive Safety Officer
    ii. *Mark Wilde-Ramsing – *QAR* Project Director; UAB Archaeologist
    iii. *Richard Lawrence – UAB Archaeologist Supervisor; NC Deputy State Archaeologist, Underwater
    iv. *Nathan Henry – UAB Archaeologist, Conservator
    v. *Julep Gillman-Bryan – UAB Dive Safety Officer, Vessel Captain
    vi. *Wendy Welsh – *QAR* Conservator
    vii. Karen Browning – *QAR* Digital Technology Specialist
    viii. Shanna Daniel – *QAR* Conservator
b. North Carolina Maritime Museum
    i. *Dave Moore – Archaeologist, Historian
    ii. Joe Schwarzer – Director NC Maritime Museums
c. North Carolina Marine Fisheries (R/V *Shell Point*)
    i. Clay Caroon – Shellfish Section & Vessel Operations
    ii. Tom Piner – Captain, Vessel Operations, Surface Support
    iii. As Assigned – Mate, Vessel Operations, Surface Support
d. US Coast Guard Sector North Carolina - Fort Macon
    i. CAPT June Ryan
    ii. CDR Derek Dorazio
    iii. MKCS Guy Brunell
e. Visiting Scientists/VIP Guests (possible)
    i. Joe Hoyt – Archaeologist, NOAA Monitor NMS
    ii. Lynn Harris – Archaeologist, ECU Program in Maritime Studies
    iii. Susanne Grieve – Conservator, ECU Program in Maritime Studies
    iv. Topside Observers – Coordinated and approved in advance with Project Director and Field Director

## III. Decision Making/Authority

a. Project Operations – Chris Southerly will supervise and coordinate all project operations.
b. Vessel Operations – Tom Piner, in consultation with project and diving supervisors, will have final authority regarding cancellation or termination of field operations because of adverse sea or weather conditions.
c. Diving Operations – All diving operations will adhere to the guidelines set forth in the NC UAB Diving Safety Manual (2004 revision). Julep Gillman-Bryan (UAB DSO) will have final authority regarding cancellation or termination of diving activity. The DSO with advisement from the Diving Control Board members will have final authority to determine individual diver competency (staff or visiting) to participate in diving operations.
d. Artifact Recovery – The field director in conjunction with the field conservator will be responsible for determining recovery status and procedures of any artifact or object according to conservation/documentation protocols and within the operational parameters of the vessel captain.
e. Internal Communications – Mark Wilde-Ramsing or Chris Southerly will coordinate communication with State Archaeologist, Steve Claggett; NCMM Director, Joe Schwarzer; and DCR Public Affairs Office, Fay Mitchell regarding the progress of field activities, significant discoveries, or any changes to the plan or scheduling.
f. External Communication – Mark Wilde-Ramsing or Chris Southerly will be primary point of contact for media interviews and scheduling.

## IV. Methodology

a. Reconnaissance – All areas will be carefully examined for erosive scour and all newly exposed remains will be mapped. No excavation is anticipated in these areas. Only exposed artifacts that are deemed diagnostic or fragile/endangered will be considered for recovery.
b. Elevations – Sand levels data will be collected at established locations.
c. Excavation – Sand overburden will be removed with a 6-inch water-induction dredge and placed off site in designated areas. Any excavation near the cultural layer will be done with a 3-inch water induction dredge. Excavated sand from the 3-inch will pass through a gravity sluice and screening system for potential small artifact recovery. Sluice sediment will be field processed by screening and panning after completion to determine the presence of any micro-archaeological evidence.
d. Mapping/Documentation – Major artifacts and concretions within units will be tagged and labeled by the documentation diver. The object will then be sketch mapped and plotted showing general shape and orientation. Once tagged and sketched the object will be removed from the unit and set aside for recovery.
e. Recovery – All artifacts to be recovered will follow the *Conservation and Artifacts Documentation Protocol* established by the *QAR* Conservation Lab.
f. Ballast uncovered by excavation will not be individually tagged or mapped. Distinct features will be noted on the unit sketch map prior to the ballast being placed in recovery baskets to be brought to the surface at the completion of the individual unit excavation. Features could include concentrations, clustering, boundary margins, and individual anomalies.

g. Photography/Videography – Digital images will be taken of all excavation units as visibility allows to document *in situ* orientation of artifacts. Additional "working" images will document the excavation and mapping process as visibility allows. .
h. Standardized daily work logs will be kept for diving operations, unit excavation-documentation-recovery, and overall site operations and conditions.

## V. Logistics

a. Platform
    i. R/V *Shell Point* (NC Marine Fisheries) will be the primary platform for all field operations.
b. Operations
    i. Site Setup
        1. Moorings will be placed on the West, North, East, and South
        2. New moorings will be placed outside the margin of the site area, or in previously cleared areas, to allow better vessel positioning for future excavations.
        3. Baseline will be laid and reference lines from the moorings in to the baseline will be placed for convenience and low visibility navigation.
        4. 5'x5' units will be trilaterated in from the baseline and marked in the SW corner and secondary corners as appropriate.
        5. Once referenced, a rigid floating grid will be used to define the excavation units.
    ii. Mapping
        1. The site will be subject to visual reconnaissance and all areas previously unmapped (recently uncovered), will be drawn and measured in to the baseline for updates to the site map.
        2. All field drawings (including in progress drawings) will be scanned at the end of each field day.
        3. *In situ* digital photos will be downloaded from the camera and copies renamed with *QAR*/Field numbers for scaling and insertion in the CAD site map in unit folders.
        4. Photos will be scaled, drawn, and placed in AutoCAD based on sketch map coordinates for each object.
        5. No object will be removed from the units until fully documented by the mapping diver and tagged by the recovery diver.
    iii. Excavation
        1. Excavation will be done by a diver-controlled water induction dredge system.
        2. The pump on R/V *Shell Point* will be used with a diverter manifold so multiple intakes may operate simultaneously.
        3. Sand overburden in the units will be placed in a designated area off the site, accessible for excavation backfilling.
        4. Excavation within the cultural layer will have all outflows pass through a gravity/sedimentation sluice and a ¼ inch mesh screen for small artifact recovery.
        5. All sluice sediment will be kept for detailed micro-processing and analysis.

iv. Digital Photography/Videography
    1. Photography will be done using a digital camera in an underwater housing. A secondary (backup) camera will be held in reserve, on site.
    2. Film/slide photography will be available using a Nikonos V camera system.
    3. Video will be done using a HD digital camera system.
    4. Camera downloads will take place immediately post dive to the UAB laptop for photo review and the photographer/diver will coordinate with the documentation technician to create a text reference file of the shots at that time.
    5. Digital imagery will be done of any exposures from recent erosive scour.
    6. Backups will be made of all digital imagery to a secondary recording device at the end of each day and prior to deletion from camera storage media.
v. Field Conservation, Stabilization, Documentation
    1. All artifacts recovered will follow the *Conservation and Artifacts Documentation Protocol* established by the *QAR* Conservation Lab.
vi. Diving
    1. All diving operations will conform to the guidelines set forth by the NC UAB Diving Safety Manual and will be conducted on open-circuit SCUBA.
    2. All working divers will be equipped with full-face mask and wireless communications.
vii. Shore support
    1. Monitoring of site operations will be done via the site security camera from the *QAR* office at IMS.
    2. Air fills for empty SCUBA cylinders will be obtained from Discovery Diving of Beaufort.

c. Personnel Housing
    i. Fort Macon State Park

## VI. Public Relations

a. A mutually agreeable public statement about the expedition will be discussed and decided upon prior to the initiation of fieldwork regarding:
    i. Purpose
    ii. Contributors
    iii. Expected Results
    iv. Continued Work
b. Richard Lawrence, Mark Wilde-Ramsing, and Chris Southerly, will determine the content of the above statement.
c. Chris Southerly and Mark Wilde-Ramsing will be the main points of contact for media interviews and scheduling. Joe Schwarzer will handle all museum oriented media inquiries.
d. All participants likely to interact with the public or press will be briefed on the above expedition statement.

e. Official press releases will be channeled through Fay Mitchell at the DCR Office of Public Affairs using standard *QAR* "boilerplate" and additional information to be provided in the "message" mentioned above.
f. Active media participation during the project is not encouraged. A public viewing may be scheduled following grapnel anchor recovery for media and interested persons to view the anchor prior to transport to the conservation facility.
g. All media contacts will be reported promptly to the DCR Office of Public Affairs and the State Archaeologist.

**VII. Planned Operation Time**

a. 19 October 2009 – 23 October 2009.
b. Daily operations will commence by 0800 at the USCG Station Fort Macon dock, with the research vessel leaving the site to return to dock by 1530, unless work and conditions dictate otherwise.
c. Barring weather constraints, field operations on site will be conducted Tuesday 20 October – Thursday 22 October, with Friday 23 October as a weather day.
d. R/V *Shell Point* will arrive on-station for operations 19 October 2009 and will depart by 23 October 2009.
e. Grapnel anchor recovery could take place on any operational day (Wednesday 21 October preferred) and will be dictated by sea conditions.