

Report to UNOLS Council - 29 March 2005

R/V Maurice Ewing Replacement the R/V Marcus Langseth

At 2155 on March 9, the *R/V Maurice Ewing* was moored in Quonset Point, Rhode Island after her final research cruise. The *Ewing* had completed 173 cruise legs, totaling 4212 operating days, and cruising over a half million nautical miles. In 15 years of operation she has undertaken research programs from the Antarctic to the Arctic and circumnavigated the globe. The *Ewing* was moored astern of the vessel which will be the replacement, the *R/V Marcus G. Langseth* (ex. *Western Legend*).

Columbia University took title of the *Langseth* on 20 September 2004 has begun the process which was used in 1990 to bring the *Ewing* into the UNOLS fleet. Current status of the conversion is:

Reflagging- Originally LDEO had hoped to be able to use an Coast Guard approved Alternative Compliance Process(ACP) for reflagging. The Coast Guard allows several types of vessels to use ACP however oceanographic research vessels are not included and a request submitted to the Coast Guard requesting authorization to use ACP for reflagging was denied. As a result the Coast Guard Marine Safety Center and MSO Providence is overseeing the reflagging.

In terms of the reflagging all the plan submissions are now into the Coast Guard. Several determinations have been made regarding the *Langseth*. These include:

- Bulkheads will be required subdividing the Engineroom and the Recording Room. Two major issues here are the impact on ventilation and ship wireways.
- Halon fire suppression will have to be replaced and a CO2 system installed.

Change of Class- All required drawings have been submitted to ABS and a shipboard survey has been completed. An interim class certificate has been issued and we await final issuance of class.

Capabilities

Multibeam – Kongsberg Simrad EM120 has been ordered and it will eventually be upgraded to the digital EM121

SBP120- The frames for the Subbottom Profiler are ordered for installation in the transducer pod.

Crane- Effer articulated crane has been ordered.

A Frame and Stern telescoping boom- Equipment for over the side handling and deployment of instruments has been ordered. The A-Frame and Boom are to be designed using Coast Guard rating of 150% of the breaking strength of the wire. The

wire used for the design was .680" fiber optic cable with a breaking strength of 46,000lbs. The frame and boom will be rated for a SWL of 40,000lbs. Both A Frame and telescoping boom will have a horizontal clearance from the ship of at least 12 ft.

Workboat, rescueboat and davits- The industry representative on EROCC emphasized the importance of an industry workboat to support MCS. LDEO was able to identify a used workboat and davit. The workboat and davit was surveyed by a class surveyor. The boat is a 23 ft Springer with 300 hp jet drive considered by industry to be a suitable light workboat. In addition a new Coast Guard approved rescueboat davit has been ordered. The current intent is to crossdeck the *Ewing* rescueboat that is Coast Guard approved.

Multichannel equipment and streamer: As part of the acquisition of the *Langseth*, 29 km of used seismic streamer as well as other associated MCS equipment has been purchased through WesternGeco for outfitting of the *Langseth*. The *Langseth* will have the ability to tow 4- 6km streamers.

Sound source: A stated goal for the new ship's sound source is to maintain the current safety radius for marine mammal mitigation. This has entailed modeling of linear air gun arrays which John Diebold of LDEO has worked on. The intent is to tow four linear arrays. Each of these arrays will have 10 airguns. This permits several of the guns in each array to serve as in water spares when the array is deployed. Currently LDEO has 20 Bolt guns and a recommendation will be made by EROCC as to whether the additional guns to be purchase will be Bolt guns 1900LL or SSI/Sercel G guns.

IT and Data System- A plan for the IT and Data System is currently posted on the web. This plan can be found at <http://www.ldeo.columbia.edu/res/fac/oma/replacement/index.html>. There is a link from the UNOLS website. We look forward to receiving community comment.

DP System: Five options for enhanced track line following and/or DP were considered. The key for trackline following is an interface with SPECTRA the multi channel seismic navigation software. One system specifically for trackline following was the STS 500. Four companies offering DP packages and only one, Kongsberg, had experience interfacing with SPECTRA. Other systems claimed they were capable of this interface although had not actually interfaced. There was a range of quotes for these systems quote. Committee was generally inclined to recommend Kongsberg.

Berthing: Remains an issue for discussion with the 8 person clusters presenting a challenge. This has continued to be a matter of discussion with EROCC general inclining for a normal berthing capacity of 50 and with a surge to 56.d

ADA: We have awaited the draft of from FIC. It has generally been felt that visually impaired and hearing impaired could be effectively responded to. Addressing the issues of mobility impaired remains a matter of concern for an existing ship.

Shipyard Specifications

Shipyard specifications completion have been delayed. We expect to put the final package of specifications before EROCC this next month after which they will be submitted to NSF for review and approval.

Sale of the R/V Maurice Ewing

Several potential buyers for the *Ewing* have expressed interest in the vessel. All funds from the sale of the ship will be applied to the conversion. Currently efforts are underway to crossdeck equipment from the *Ewing* to the *Langseth* .