

Appendix XI

ALVIN / SEA CLIFF Proposal

Introduction

- Decommissioning SEA CLIFF - loss of US manned 6000 m science capability
- Strong support for continued manned presence to 6000 m
- SEA CLIFF too large, heavy, expensive for science community
- Important to retain resident capabilities of ALVIN

Engineering Study for a Replacement U.S. 6000-meter Manned Research Submersible WHOI/DSG- June 1998

Background

- Design of MIRs and NAUTILE indicate 18,000 lb savings compared to SEA CLIFF
- Transfer of SEA CLIFF offers:
 - 6000 m Ti sphere
 - valuable 6000 m syntactic
 - advanced VB system
 - updated CTFM sonar system
- Review importance of viewport location from both science and engineering perspectives

Study

- GOAL
 - Best method for obtaining 6000 m manned submersible with improved capability and reliability
 - Develop design, capability, and cost matrix
 - Determine best utilization of SEA CLIFF assets
- METHODS
 - Evaluate other 6000m submersibles
 - Study options with regard to spheres/viewport locations
 - Literature search/ industry dialog concerning new technology
 - Consider design review and certification issues

- REPORT

- Cost and engineering analysis to facilitate evaluation of feasible options
- Recommendation for optimum path to effective, reliable, and affordable 6000m manned submersible