



Dwight Look College of
ENGINEERING
TEXAS A&M UNIVERSITY

Previously Proposed

Self-Propelled Jack-up Rig:
Mobil Ocean Research Facility



Present Status

- Proposed by A&M for Major Equipment NSF limited-submission Funding last year
- Not selected by University
- Investigators:
 - Bob Randal (lead)
 - Jens Figlus
 - Bert Sweetman

Challenge at the time

- Very short time-frame to develop proposal
 - Primary mission unknown
 - Instrumentation needs poorly defined
 - Vessel operating conditions poorly defined
 - Size required was speculative



Vision: Self-Propelled Jack-up Rig

- 50 feet by 30 feet deck
- Accommodations: 3 crew plus 6 scientists
- Cost Estimate: \$2 Million (very rough)

Self-Propelled Jack-up Rig

- Based in Galveston
- Portable to any Coastal Zone in Texas
- Deployed at a fixed location for months
- Hard-wired sensor array
 - Near-beach deployments
 - Estuarine deployments
 - Dredge-area deployments

Novel Interdisciplinary Research Platform

Research Mission needs Specificity:

- What needs to be measured
- In what environmental conditions

Broad Objective to Monitor:

- Ocean Processes
- Atmospheric Processes
- Coastal Processes

Main Suggestions for future proposal:

Rigorously define field data gaps:

- Determine extent of existing data
- Calibrate numerical models to that data
- Identify data needs

Facility – Based on data needs:

- Required instrumentation space
- Required crew/scientist space
- Required operational weather severity



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